



TRS Board of Trustees Meeting

September 12 – 13, 2013

**TEACHER RETIREMENT SYSTEM OF TEXAS MEETING
BOARD OF TRUSTEES**

AGENDA

September 12, 2013 – 8:15 a.m.

September 13, 2013 – 9:30 a.m.

TRS East Building, 5th Floor, Boardroom

NOTE: The Board may take up any item posted on the agenda during its meeting on Thursday, September 12, 2013, or the following day beginning at the time and place specified on this agenda.

The open portions of the September 12-13, 2013 Board meetings are being broadcast over the Internet. Access to the Internet broadcast of the Board meeting is provided on TRS' Web site at www.trs.state.tx.us.

*The September 12-13, 2013 meeting of the TRS Board of Trustees will be held by telephone conference call as authorized under Texas Government Code Section 551.130. The Board intends to have a quorum physically present at **1000 Red River Austin, Texas 78701 in the TRS East Building, 5th Floor, Boardroom.***

1. Call roll of Board members. *[Estimated time 8:15 – 8:30]*
2. Consider administrative matters, including the following – David Kelly: *[Estimated time 8:15 – 8:30]*
 - A. Consider the approval of the July 26, 2013 Board meeting minutes.
 - B. Consider the election of the Board Vice-Chair.
 - C. Consider consenting to the Board Chair's appointment of committee members, and receive the Board Chair's announcement of committee chairs.
 - D. Consider Board and committee meeting dates for calendar year 2014, including any off-site meeting locations.
3. Receive public comment – David Kelly. *[Estimated time 8:15 – 8:30]*

NOTE: The Board meeting likely will recess after the last item above for committee meetings and resume Thursday afternoon to take up items listed below.

4. Receive the Executive Director's report, including matters related to – Brian Guthrie: *[Estimated time 1:30 – 1:45]*
 - A. Executive Director's agency goals and objectives for Fiscal Year 2014, including strategic planning and identified priorities.

- B. An update on recent and upcoming educational opportunities.
 - C. Review upcoming agendas.
 - D. Administrative operations and other financial, audit, legal, staff services, and special project matters.
5. Discuss and consider investment matters, including the following items: *[Estimated time 1:45 – 4:45]*
- A. Performance Review: Second Quarter 2013 – Brady O’Connell and Steve Voss, Hewitt EnnisKnupp.
 - B. Review Quarterly Portfolio Performance and market update – Britt Harris.
 - C. Receive a presentation on emerging markets entitled, “The Post-BRICS World” – Ruchir Sharma, Morgan Stanley.
 - D. Review the report of the Investment Management Committee on its September 12, 2013 meeting, and consider related matters – Committee Chair.
 - E. Review the report of the Risk Committee on its September 12, 2013 meeting, and consider related matters – Committee Chair.
6. Review the report of the Compensation Committee on its September 12, 2013 meeting, and consider proposed amendments to and ratification of the Performance Incentive Pay Plan for the period beginning October 1, 2013 – Committee Chair. *[Estimated time 4:45 – 5:00]*
7. Review the report of the Policy Committee on its September 12, 2013 meeting, and consider related matters – Committee Chair: *[Estimated time 5:00 – 5:15]*
- A. Consider proposed changes to the Investment Policy Statement.
 - B. Consider proposed changes to the Employment At-Will Policy.
 - C. Consider final adoption of proposed amended TRS Rule 34 Tex. Admin Code § 47.17 of Chapter 47, Qualified Domestic Relations Orders, relating to calculation for alternate payee benefits before a member’s benefit begins.
 - D. Consider final adoption of proposed amended TRS-ActiveCare Rule 34 Tex. Admin. Code § 41.41, relating to premium payments.

NOTE: *The Board meeting likely will recess after the last item above and resume Friday morning to take up items listed below.*

- 8. Receive the Deputy Director’s report, including an update on legislative implementation – Ken Welch. *[Estimated time 9:30 – 9:45]*

9. Receive a presentation from the TEAM Program Independent Program Assessment (IPA) Vendor – Michael Johnson, Bridgepoint Consulting. *[Estimated time 9:45 – 10:30]*
10. Receive an update on the TEAM Program, including details on the Pension Line of Business Proof of Concept and the Financial System Replacement project – Barbie Pearson, Jamie Michels, and David Cook *[Estimated time 10:30 – 11:00]*
11. Receive the report of the Audit Committee on its September 13, 2013 meeting, and discuss and consider adoption of the proposed Audit Plan for Fiscal Year 2014 – Committee Chair. *[Estimated time 11:00 – 11:15]*
12. Receive the Chief Financial Officer’s report under § 825.314(b), Government Code, of expenditures that exceed the amount of operating expenses appropriated from the general revenue fund and are required to perform the fiduciary duties of the Board – Don Green. *[Estimated time 11:15 – 11:30]*
13. Review the report of the General Counsel on pending or contemplated litigation, including updates on litigation involving benefit-program contributions, retirement benefits, health-benefit programs, and open records, and discuss the determination of whether to seek lead plaintiff status in securities class action litigation – Carolina de Onís. *[Estimated time 11:30 – 12:00]*
14. Consider personnel matters, including the appointment, employment, evaluation, compensation, performance, duties, discipline, or dismissal of the Executive Director, Chief Investment Officer, or Chief Audit Executive – David Kelly.
15. Consult with the Board's attorney(s) in Executive Session on any item listed above on this meeting agenda as authorized by Section 551.071 of the Texas Open Meetings Act (Chapter 551 of the Texas Government Code) – David Kelly.

Tab 2 B



Teacher Retirement System of Texas

Minutes of the Board of Trustees

July 26, 2013

The Board of Trustees of the Teacher Retirement System of Texas met on July 26, 2013, in the boardroom located on the fifth floor of the TRS East Building offices at 1000 Red River Street, Austin, Texas. The following board members were present:

David Kelly, Chair
Todd Barth
Karen Charleston
Charlotte Clifton
Joe Colonna
Eric McDonald
Chris Moss
Anita Palmer
Nanette Sissney

Others present:

Brian Guthrie, TRS	Rebecca Smith, TRS
Ken Welch, TRS	Susan Wade, TRS
Amy Barrett, TRS	Tim Wei, TRS
Carolina de Onís, TRS	Angela Vogeli, TRS
Howard Goldman, TRS	Yimei Zhao, TRS
Don Green, TRS	Steve Voss, Hewitt EnnisKnupp
T. Britton Harris IV, TRS	Brady O'Connell, Hewitt EnnisKnupp
Betsey Jones, TRS	Philip Mullins, Austin Retired Teachers Association
Amy Morgan, TRS	Ronnie Jung, Texas Retired Teachers Association
Marianne Woods Wiley, TRS	Tim Lee, Texas Retired Teachers Association
Jase Auby, TRS	Victor Ferreira, HP Enterprise Services
Michelle Bertram, TRS	Ernie Sanders, HP Enterprise Services
Ronnie Bounds, TRS	Andy Tonkovich, HP Enterprise Services
David Cook, TRS	Pat Del Rio, Aetna
Janie Duarte, TRS	Shannon Meroney, Aetna
Edward Esquivel, TRS	Ann Fickel, Texas Classroom Teachers Association
Dennis Gold, TRS	Ted Melina Raab, Texas American Federation of Teachers
Janis Hydak, TRS	Steve Huff, Reinhart Boerner Van Deuren
Dan Herron, TRS	Pati McCandless, BCBSTX
Bob Jordan, TRS	Carol Riley, BCBSTX
Dan Junell, TRS	David Runyan, Express Scripts
Lynn Lau, TRS	Craig Kessler, ESI
Scot Leith, TRS	Jeff Lambert, State Street
Rebecca Merrill, TRS	Craig teDuits, State Street
Jamie Michels, TRS	Joe Newton, Gabriel Roeder Smith & Company
Melinda Nink, TRS	Bill Hickman, Gabriel Roeder Smith & Company
Noel Sherman, TRS	Amy Cohen, Gabriel Roeder Smith & Company

Mr. Kelly called the meeting to order at 8:09 a.m.

1. Call roll of Board members.

Ms. Lau called the roll. All trustees were present.

2. Consider approval of the June 13-14, 2013 Board meeting minutes – David Kelly.

On a motion by Ms. Palmer, seconded by Ms. Charleston, the board unanimously approved the minutes for the June 13-14, 2013 meeting.

3. Recognize the service of outgoing Trustees – David Kelly.

Ms. Clifton expressed her appreciation to current and former trustees and staff. She also recognized the Texas Classroom Teachers Association and Texas Retired Teachers Association for their support of TRS. She closed by highlighting significant events during her term.

Mr. McDonald expressed his appreciation to the board and staff and highlighted significant events during his term.

Ms. Sissney, Mr. Moss, Mr. Barth, Mr. Harris, Mr. Guthrie, and Mr. Palmer expressed their appreciation to Ms. Clifton and Mr. McDonald for their services. On behalf of the board, Mr. Kelly read the following resolutions into the record to recognize Ms. Clifton and Mr. McDonald for their services:

Whereas, Charlotte Clifton has served as a member of the Board of Trustees of the Teacher Retirement System of Texas (TRS) from February 2008 through August 2013, mindful of her duty as caretaker of a trust to those who teach or otherwise serve our state's children and thereby shape its future; and

Whereas, She has provided leadership to the system during a time when the retirement system grew to more than 1.3 million members and annuitants; management controls were strengthened, new investment allocations and procedures were adopted and implemented, the State Auditor's Office reports provided unqualified opinions with no material findings, and TRS annually received the "Certificate of Achievement for Excellence in Financial Reporting" from the Government Finance Officers Association; and

Whereas, She served TRS in numerous ways, including as vice chair of the board since 2011; chair of the Benefits Committee and Ethics Committee; and a member of the Audit, Benefits, Budget, Policy, and Compensation Committees; and

Whereas, She represented TRS on the National Council on Teacher Retirement (NCTR) Resolutions Committee in 2012; and

Whereas, She served on the board at a time when TRS conducted an important legislative study on pension fund sustainability, which enabled the legislature to make modifications that made the pension fund actuarially sound, allowing for the first permanent cost-of-living increase for a majority of retirees in more than a decade; and

Whereas, She played an active role in selecting a new executive director for TRS in February 2011; and

Whereas, She served on the board during the time of TRS' 75th anniversary and joined other trustees in commemorating that special event; and

Whereas, She helped guide the agency through prudent oversight of trust assets during a challenging period of extreme capital market volatility, including one of the nation's most serious recessions, after which the TRS Pension Fund rebounded from \$67 billion in March 2009 to approximately \$116 billion as of June 30, 2013; now, therefore, be it

Resolved, That the Board of Trustees and staff of the Teacher Retirement System of Texas recognize the accomplishments and contributions of Charlotte Clifton and express appreciation on behalf of TRS members both present and future; and be it further

Resolved, That a copy of this resolution be presented to Charlotte Clifton and entered into the record of the board for July 26, 2013.

Whereas, Eric McDonald has served as a member of the Board of Trustees of the Teacher Retirement System of Texas (TRS) from March 2009 through August 2013, mindful of his duty as caretaker of a trust to those who teach or otherwise serve our state's children and thereby shape its future; and

Whereas, He has provided leadership to the system during a time when the retirement system grew to more than 1.3 million members and annuitants; management controls were strengthened, new investment allocations and procedures were adopted and implemented, the State Auditor's Office reports provided unqualified opinions with no material findings, and TRS annually received the "Certificate of Achievement for Excellence in Financial Reporting" from the Government Finance Officers Association; and

Whereas, He served TRS in numerous ways, including as chair of the Risk Committee as well as a member of the Audit, Policy, Investment Management, and Risk Committees; and

Whereas, He served on the board at a time when TRS conducted an important legislative study on pension fund sustainability, which enabled the legislature to make modifications that made the pension fund actuarially sound, allowing for the first permanent cost-of-living increase for a majority of retirees in more than a decade; and

Whereas, He played an active role in selecting a new executive director for TRS in February 2011; and

Whereas, He served on the board during the time of TRS' 75th anniversary and joined other trustees in commemorating that special event; and

Whereas, He helped guide the agency through prudent oversight of trust assets during a challenging period of extreme capital market volatility, including one of the nation's most serious recessions, after which the TRS Pension Fund rebounded from \$67 billion in March 2009 to approximately \$116 billion as of June 30, 2013; now, therefore, be it

Resolved, That the Board of Trustees and staff of the Teacher Retirement System of Texas recognize the accomplishments and contributions of Eric McDonald and express appreciation on behalf of TRS members both present and future; and be it further

Resolved, That a copy of this resolution be presented to Eric McDonald and entered into the record of the board for July 26, 2013.

Whereupon the meeting recessed at 8:42 a.m., and board members gathered in the hall just outside the boardroom for the ceremonial event of having a group picture taken with their outgoing colleagues.

The board members returned to their seats at 8:46 a.m.

4. Provide opportunity for public comments – David Kelly.

Mr. Philip Mullins of Austin Retired Teachers Association addressed the board on agenda item 17. He stated his concern about the board's going into executive session to deliberate the selection of fiduciary counsel during executive session. He acknowledged that HB 3357 passed by the 83rd legislature authorized TRS to conduct an executive session for board procurements such as fiduciary counsel, but he said that the board did not have to exercise that authority. He urged the board not to conduct the selection during executive session. He noted that the premiums for the directors' and officers' liability insurance in the board materials for agenda item 12 had been redacted. He stressed the importance of upholding the state open government practices.

Mr. Kelly noted that respondents had expressed concern about discussing proprietary information with the board in open session. Mr. Guthrie noted that TRS was concerned about disclosing its negotiating position to competing vendors.

Mr. Tim Lee of TRTA expressed his appreciation to Ms. Clifton and Mr. McDonald for their services to the system. He stated that he hoped that TRS would continue to inform and involve the members' organizations in future discussions relating to both the pension and health benefit plans. He also complimented Mr. Guthrie's service in leading the agency.

5. Review and discuss the Executive Director's report on the following matters – Brian Guthrie:

- A. An update on new trustee orientation.**
- B. Discuss upcoming TRTA presentations.**
- C. Board operational matters, including a review of draft agendas for upcoming meetings.**
- D. Enterprise Risk Management program.**
- E. Retirement plan benefits and operations.**
- F. Investment activity and operations.**
- G. Health-benefit programs and operations.**

H. Administrative operations, including financial, audit, legal, staff services, board administration activities, and special projects.

Mr. Guthrie discussed the new trustee orientation. He noted that each trustee would be given the opportunity to comment on training needs.

Mr. Guthrie presented a list of upcoming TRTA presentations.

Mr. Guthrie reported that the State Street contract was in the negotiation stage. He presented a list of proposed new services to be provided by State Street in the proposed new contract. He stated that State Street would provide an overview of their services at the October board meeting.

Mr. Harris summarized the Strategic Partnership Network (SPN) summit held in New York. He stated that staff would review the summit in more detail at the September board meeting.

Mr. Guthrie outlined the proposed agendas for the September and October board meetings. Mr. Kelly asked trustees to provide the topics they would like to include on the board-education agenda for the February 2014 board meeting.

6. Review the report of the Deputy Director, including a report on legislative implementation and a TEAM update – Ken Welch.

Mr. Welch highlighted recent, major legislation affecting TRS. He described the on-going process of implementing the legislation.

Mr. Welch provided an update on the TEAM program. He updated the board on the vendor selection process for Line of Business (LOB) and Financial System Replacement (FSR) procurements.

After recessing at 9:50 a.m., the meeting reconvened at 10:08 a.m.

7. Discuss and consider a resolution directing staff to prepare for the payment of a cost of living adjustment consistent with the provisions of Senate Bill 1458 as passed by the 83rd Texas Legislature – Ken Welch.

Mr. Welch reviewed the cost-of-living adjustment (COLA) provision in Senate Bill 1458 passed by the 83rd Legislature.

On a motion by Ms. Clifton, seconded by Mr. McDonald, the board voted to adopt the following resolution directing staff to pay the authorized COLA:

Whereas, The Texas Legislature has enacted legislation providing for the Teacher Retirement System of Texas (TRS) to make a one-time cost-of-living adjustment (adjustment or COLA) payable to eligible annuitants receiving a monthly death or retirement annuity, as provided by section 2 of Senate Bill 1458 (to be codified as new section 824.702 of the Texas Government Code to be effective September 1, 2013); and

Whereas, New section 824.702 requires the adjustment to be made beginning with an annuity payable for the month of September 2013 and the TRS Board of Trustees

(board) to determine the eligibility for and the amount of any adjustment in monthly annuities under section 824.702; now, therefore, be it

Resolved, That the board directs the Executive Director and his designees to determine the annuitants eligible for a COLA and the amount to pay to them and to take all necessary action to timely pay the COLA in accordance with section 824.702.

8. Discuss and consider the following TRS-Care matters – Brian Guthrie; Betsey Jones; and William Hickman, Gabriel, Roeder, Smith and Company:

A. Receive the report on the June 4, 2013 Retiree Advisory Committee meeting.

Ms. Jones provided a report on the June 4, 2013 Retiree Advisory Committee meeting.

B. Discuss the role of the Retirees Advisory Committee.

Ms. Jones profiled the Retiree Advisory Committee (RAC), including its structure, appointment process, and responsibilities. Mr. Guthrie said that some current RAC members wanted the board to give them guidance on what role the RAC should play. He stated that those members would like to be more involved in discussing issues relating to retirees' pension and health benefit plans. Mr. Kelly requested that a discussion on the role of the RAC be put on the agenda of an upcoming meeting. He asked staff to invite the RAC members to address the board with their concerns. After a brief discussion, the board decided to have the item taken up at the September meeting.

C. Adopt premiums and plan design for TRS-Care, the retiree health benefits program, including (i) adopting premiums and plan design for the three standard plans and the fully-insured Medicare Advantage Plans and (ii) adopting plan design for the Medicare Part D Plans.

Ms. Jones profiled the TRS-Care plans and described their current enrollment status. Responding to a question from Mr. Moss and Mr. McDonald regarding enrollment in the Medicare Advantage (MA) plans, Ms. Jones stated that current enrollment was 70%, which was higher than the 60% target originally set by staff. She stated that each enrollment in a MA plan would result in savings for TRS-Care. She confirmed for Mr. Kelly that, at the current enrollment rates, the TRS-Care fund was projected to be solvent through the 2014-2015 biennium. She said that the next opportunity to enroll in a MA plan would be between October 15, 2013 and November 15, 2013. She did not expect a massive movement into the MA plans because many of those who were not currently enrolled had opted out the year before, and this year they would not be auto-enrolled in a MA plan but would have to take action to opt in.

Ms. Jones explained the impact of the recent legislation passed by the 83rd Legislature on TRS-Care plans. Presenting the FY 2014 cost distribution pie chart, Ms. Jones clarified for Mr. Kelly that the "Other Contributions" category referred to federal funds and interest. She also clarified for Ms. Palmer that the "Investment Income" category listed in the TRS-Care Funding Projection table referred to the short-term interest from the state treasury. She explained for Ms. Palmer the assumptions underlying the projected eventual increase in premiums for the MA plans in the out-years. Ms. Jones described the impact of the premium increases.

In conclusion, Ms. Jones said staff recommended that no changes be made to the benefits or premiums for the TRS-Care standard plans effective September 1, 2013, or to the MA plans and Medicare Part D plans effective January 1, 2014. She referred the board to the letter supporting staff's recommendations from TRS' health benefits consultant, Gabriel, Roeder, Smith & Company.

On a motion by Ms. Sissney, seconded by Mr. Barth, the board unanimously adopted the following resolution concerning the premiums and plan design for the three TRS-Care standard plans and the MA plans, and the plan design for the Medicare Part D plans:

Whereas, Chapter 1575, Insurance Code, authorized the Teacher Retirement System of Texas ("TRS"), as trustee, to implement and administer the uniform group health benefits program under the Texas Public School Retired Employees Group Benefits Act ("TRS-Care"), as described in the statute;

Whereas, TRS-Care offers coverage in three standard plans ("TRS-Care Standard plans"), historically known as TRS-Care 1, TRS-Care 2, and TRS-Care 3; in two qualified fully-insured Medicare Advantage plans ("TRS-Care Medicare Advantage plans"), available to eligible TRS-Care 2 and TRS-Care 3 participants who have Medicare Parts A and B; and in two Medicare Prescription plans ("TRS-Care Medicare Prescription plans"), available to eligible TRS-Care 2 and TRS-Care 3 participants who have either Medicare Part A or Medicare Part B or both;

Whereas, Due to the funding available to TRS-Care, TRS staff and the TRS health benefits consultant, Gabriel, Roeder, Smith & Company ("GRS") have recommended that for the 2014 plan year, beginning September 1, 2013, premium rates at all levels of coverage in the TRS-Care Standard plans remain unchanged from the current premium rates for the 2013 plan year;

Whereas, TRS staff and GRS have further recommended that for the plan year commencing on January 1, 2014, premium rates in the TRS-Care Medicare Advantage plans remain unchanged from the current premium rates for the plan year that commenced on January 1, 2013;

Whereas, TRS staff and GRS have further recommended that for the 2014 plan year, beginning September 1, 2013, benefit plan designs for TRS-Care Standard plans remain unchanged from the current benefit plan designs for the 2013 plan year;

Whereas, TRS staff and GRS, have further recommended that for the plan year commencing on January 1, 2014, benefit plan designs for the TRS-Care Medicare Advantage Plans and the TRS-Care Medicare Prescription plans remain unchanged from the current benefit plan designs for the plan year that commenced on January 1, 2013; and

Whereas, The TRS Board of Trustees ("Board") desires to adopt the recommendations of TRS staff and GRS; now, therefore, be it

Resolved, That for the 2014 plan year, beginning September 1, 2013, and for all plan years thereafter until further action by the Board, the Board hereby adopts and authorizes the premium rates at all levels of coverage in the TRS-Care Standard plans that are currently in place for the 2013 plan year;

Resolved, That for the plan year commencing on January 1, 2014, and for all plan years thereafter until further action by the Board, the Board hereby adopts and authorizes the premium rates in the TRS-Care Medicare Advantage plans that are currently in place for the plan year that commenced on January 1, 2013;

Resolved, That for the 2014 plan year, beginning September 1, 2013, and for all plan years thereafter until further action by the Board, the Board hereby adopts and authorizes the benefit plan designs at all levels of coverage in the TRS-Care Standard plans that are currently in place for the 2013 plan year;

Resolved, That for the plan year commencing on January 1, 2014, and for all plan years thereafter until further action by the Board, the Board hereby adopts and authorizes the benefit plan designs for the TRS-Care Medicare Advantage plans and the TRS-Care Medicare Prescription plans that are currently in place for the plan year that commenced on January 1, 2013;

Resolved, That the Board finds that, considering the actions taken in the resolutions above, TRS-Care is projected to remain financially solvent during the currently funded biennium; and

Resolved, That for the plan year commencing on September 1, 2013 for the TRS-Care Standard plans, and for the plan year commencing on January 1, 2014 for the TRS-Care Medicare Advantage plans and the TRS-Care Medicare Prescription plans, and for all plan years thereafter until further action by the Board, the Board authorizes the Executive Director or his designees to take any actions that he or his designee in his or their discretion deem to be necessary or advisable to implement this resolution, and to otherwise implement and continue the TRS-Care Standard plans, the TRS-Care Medicare Advantage plans, and the TRS-Care Medicare Prescription plans until further action by the Board.

D. Discuss and consider automatic enrollment and dis-enrollment provisions for the Aetna Medicare Advantage and Express Scripts Medicare Part D plans for TRS-Care participants turning 65 years of age – Betsey Jones and William Hickman, Gabriel, Roeder, Smith & Company

Ms. Jones stated that staff recommended that automatic enrollment be established for TRS-Care 2 and TRS-Care 3 enrollees into the Medicare Advantage (MA) plans and Medicare Part D drug plans in the TRS-Care program with the opt-out option. Mr. Moss suggested communicating the automatic enrollment to members to avoid confusion.

On a motion by Mr. McDonald, seconded by Mr. Barth, the board unanimously adopted the following resolution to establish the automatic enrollment for the MA plans and Medicare Part D drug plans:

Whereas, Chapter 1575, Insurance Code, authorized the Teacher Retirement System of Texas ("TRS"), as trustee, to implement and administer the uniform group health benefits program under the Texas Public School Retired Employees Group Benefits Act ("TRS-Care"), as described in the statute;

Whereas, during its July 2012 meeting, the TRS Board of Trustees ("Board") adopted a resolution entitled "Resolution Establishing Enrollment Opportunities and Opt Out Provisions for the Medicare Advantage plans and Medicare Prescription Plans in the TRS-

Care Program" (the "July 2012 Medicare Plans Enrollment Resolution"), and authorized thereby for plan years commencing on or after January 1, 2013, among other things, (i) initial enrollment opportunities for the Medicare plans under TRS-Care, as set out in Exhibit A attached to that resolution, (ii) annual enrollment opportunities for the Medicare plans under TRS-Care, as set out in Exhibit B attached to that resolution, and (iii) opt out provisions for the Medicare plans under TRS-Care, as set out in Exhibit C attached to that resolution;

Whereas, TRS staff has recommended that the Board adopt a set of automatic enrollment provisions, which are contained in Exhibit A, attached to this resolution and incorporated herein by reference, to be effective as soon as administratively feasible as determined by the Executive Director or his designees in his or their discretion and to remain effective thereafter until further action by the Board, for individuals who are enrolled in either TRS-Care 2 or TRS-Care 3 and who then enroll in Medicare Parts A and/or B because they turn age 65; and

Whereas, The Board desires to adopt the recommendations of TRS staff; now, therefore, be it

Resolved, That the Board hereby adopts and authorizes the set of automatic enrollment provisions set out in Exhibit A, attached hereto and incorporated herein by reference, to be effective as soon as administratively feasible as determined by the Executive Director or his designees in his or their discretion, and to remain effective thereafter until further action by the Board, for individuals who are enrolled in either TRS-Care 2 or TRS-Care 3 and who then enroll in Medicare Parts A and/or B because they turn age 65;

Resolved, That the part of Exhibit A to the July 2012 Medicare Plans Enrollment Resolution Board that addresses individuals who are enrolled in either TRS-Care 2 or TRS-Care 3 and who then enroll in Medicare Parts A and/or B because they turn age 65 shall terminate when the automatic enrollment provisions set out in Exhibit A, attached hereto, become effective;

Resolved, That all remaining portions of Exhibit A to the July 2012 Medicare Plans Enrollment Resolution not altered by the automatic enrollment provisions noted above, along with Exhibits B and C to the July 2012 Medicare Plans Enrollment Resolution, shall remain in place until further action by the Board; and

Resolved, That the Board authorizes the Executive Director or his designees to take any actions that he or his designee in his or their discretion deem to be necessary or advisable, in accordance with applicable law, to implement this resolution, to adjust the timing of disenrollment from the Medicare Advantage plans and the Medicare Prescription plans in unusual circumstances, and to otherwise create, implement, and continue the Medicare Advantage plans and the Medicare Prescription plans until further action by the Board.

Exhibit A

Automatic Enrollment in the TRS-Care Medicare Advantage
Plans and the TRS-Care Medicare Prescription Plans for Individuals
who are Enrolled in Either TRS-Care 2 or TRS-Care 3 and who
Then Enroll in Medicare Parts A and/or B Because They Turn Age 65

As soon as administratively feasible, as determined by the Executive Director or his designees in his or their discretion, automatic enrollment will begin as detailed herein. An individual enrolled in either TRS-Care 2 or TRS-Care 3 who then becomes enrolled in Medicare Parts A and/or B because he turns age 65 shall be automatically enrolled in a TRS-Care Medicare Advantage plan and/or a TRS-Care Medicare Prescription plan according to the following automatic enrollment provisions:

- Subject to other applicable eligibility criteria and the timing of the completion of the Age 65 Additional Enrollment Opportunity, an individual who is enrolled in TRS-Care 2 or TRS-Care 3 and who then becomes enrolled in Medicare Parts A and B because he turns age 65 shall be automatically enrolled in a TRS-Care Medicare Advantage plan and a TRS-Care Medicare Prescription plan, in a manner and when deemed to be necessary or advisable by the Executive Director or his designees in his or their discretion.
- Subject to other applicable eligibility criteria and the timing of the completion of the Age 65 Additional Enrollment Opportunity, an individual who is enrolled in TRS-Care 2 or TRS-Care 3 and who then becomes enrolled, because he turns age 65, in Medicare Part A or Medicare Part B, but not both, shall remain enrolled in the TRS-Care medical plan and shall be automatically enrolled in a TRS-Care Medicare Prescription plan, in a manner and when deemed to be necessary or advisable by the Executive Director or his designees in his or their discretion.
- Notwithstanding anything to the contrary, a dependent may only choose available plans within the same TRS-Care level of coverage (*i.e.*, TRS-Care 1, TRS-Care 2, or TRS-Care 3) in which the retiree or surviving spouse is enrolled.

Mr. Kelly announced that the board would take up agenda item 4 again to hear additional public comment.

4. Provide opportunity for public comments – David Kelly.

Ms. Ann Fickel of Texas Classroom Teachers Association expressed her concern about eliminating the TRS-ActiveCare 3 Plan (Plan 3). She stated that there were members with serious medical issues and willing to pay a higher premium under Plan 3. She recommended that Plan 3 be offered to existing enrollees at least until the end of the 2014 school year to provide time for members to make necessary adjustments. She also suggested making adjustments elsewhere to help lower the premiums of Plan 3. She stated that if the board decided to eliminate Plan 3, she hoped that staff would inform and educate members about the change and the available options and resources.

9. Provide an update on TRS-ActiveCare, the active employee health benefits program, and discuss and consider eliminating TRS-ActiveCare 3 and moving TRS-ActiveCare 3 participants to TRS-ActiveCare 2 – Betsey Jones and William Hickman, Gabriel, Roeder, Smith & Company.

Ms. Jones stated that the funding for TRS-ActiveCare had not changed since the inception of the program. She stated that the current premiums for TRS-ActiveCare 3 (Plan 3) were still not adequately priced. Even with the 25% premium increase, she said, it was subsidized by the TRS-ActiveCare 1 High Deductible (HD) Plan. She stated that eliminating Plan 3 would not justify lowering premiums for other TRS-ActiveCare plans. She stated that if the board voted to eliminate Plan 3, the current Plan 3 enrollees would be moved to TRS-ActiveCare 2, or they

could enroll in TRS-ActiveCare 1-HD or an HMO, if they were eligible. Responding to questions from trustees regarding the TRS-ActiveCare plans, Ms. Jones and Mr. Hickman detailed the total enrollments and deductibles of the plans.

The board members discussed the projected impact of the staff proposal and options besides eliminating Plan 3. Ms. Sissney suggested keeping Plan 3 for those who had enrolled in the plan for the 2014 school year until the end of the school year to allow them time to review their options. Mr. Howard confirmed for Mr. Guthrie that either keeping or eliminating the plan for people who had already enrolled for the 2014 school year would be administratively feasible. Ms. Clifton and Mr. McDonald concurred with Ms. Sissney's suggestion. Mr. Howard stated that new language could be added to the proposed resolution to incorporate Ms. Sissney's suggestion.

Ms. Moss suggested that staff work with the healthcare actuary to study possible design changes and options remaining after closing Plan 3 and present them for the board's consideration in February 2014.

Mr. Kelly stated that the board would take up this item again later when staff presented a proposed amended resolution that would eliminate Plan 3 for new enrollees beginning September 1, 2013, grandfather those who had enrolled in Plan 3 for the 2014 plan year, and permanently discontinue the plan effective August 31, 2014. On a motion by Mr. McDonald, seconded by Ms. Sissney, the board voted unanimously to postpone this item until the revised resolution was ready for consideration.

10. Discuss the performance evaluation of Gabriel, Roeder, Smith and Company (GRS) as the provider of health benefits consulting services and consider a two-year extension to the existing health benefits consulting contract between TRS and GRS – Betsey Jones.

Ms. Jones presented the summary of work performed by Gabriel, Roeder, Smith & Company (GRS). She complimented GRS' timely services, which she said, had met or exceeded staff's expectations. She stated that switching to another health benefits consultant would be difficult in light of the major issues facing the health benefit plans in the next legislative session. She said staff recommended that the contract with GRS be extended for two years. Mr. Kelly asked if the health benefit assumptions and projections needed to be reviewed by an independent consultant. Ms. Jones noted that the health benefit assumptions and projections were short-term and adjusted in real time. Mr. Welch suggested adding health benefit assumptions to the next audit. Mr. Guthrie stated that staff would look into Mr. Kelly's suggestion and report back to the board with available options.

On a motion by Mr. Moss, seconded by Mr. Barth, the board unanimously adopted the following resolution to extend the existing health benefits consulting contract with GRS:

Whereas, Chapter 1575, Insurance Code, authorizes the Teacher Retirement System of Texas ("TRS"), as trustee, to implement and administer the uniform group health benefits program under the Texas Public School Retired Employees Group Benefits Act ("TRS-Care"), as described in the statute;

Whereas, Chapter 1579, Insurance Code, authorizes the TRS, as trustee, to implement

and administer the uniform group health benefits program under the Texas School Employees Uniform Group Health Coverage Act ("TRS-ActiveCare"), as described in the statute;

Whereas, During its June 2008 meeting, the TRS Board of Trustees ("Board") authorized a contract with Gabriel, Roeder, Smith & Company ("GRS") to provide health care consulting and actuarial services to TRS and the Board;

Whereas, Effective September 1, 2008, TRS entered into a contract ("Current Contract") with GRS to provide health care consulting and actuarial services to TRS and the Board;

Whereas, The Current Contract is set to expire on August 31, 2014;

Whereas, TRS staff recommends that the Current Contract be extended for an additional two (2) year period, effective from September 1, 2014 through August 31, 2016;

Whereas, The Board desires to adopt the recommendation of TRS staff; now, therefore, be it

Resolved, That the Board, pursuant to Chapters 1575 and 1579 of the Insurance Code, hereby authorizes the Executive Director or his designees to negotiate, with the assistance and advice of legal counsel, a two (2) year extension, effective from September 1, 2014 through August 31, 2016, of the Current Contract with GRS to provide health care consulting and actuarial services to TRS and the Board; and, if negotiations are deemed by the Executive Director, in his discretion to be successful, then the Executive Director is hereby authorized to execute the two (2) year extension of the Current Contract with GRS on such terms and conditions as the Executive Director deems, in his discretion, to be in the best interest of TRS, and further to execute and deliver all such other documents that the Executive Director may deem necessary or appropriate to effect this resolution, as conclusively evidenced by the taking of the action or the execution and delivery of the documents, and to incur, approve and pay any budgeted expenses or costs reasonably necessary or advisable with respect to such contract extension, it being understood that the Board's approval of a contract extension pursuant to this resolution shall not be construed as a binding agreement or obligation to extend the Current Contract, and there shall be no binding agreement among the parties until a full and final written contract extension is negotiated and signed by both parties.

11. Discuss and consider selecting a pension fund actuarial services firm, including receiving staff's recommendation on the selection of a firm; and considering a resolution selecting the pension fund actuarial services firm – Rebecca Merrill.

Ms. Merrill reviewed the selection process of the pension fund actuary. She reported that staff received two responses to the bid, with one of them being disqualified because of its untimely submission. She stated that staff recommended that GRS be selected as the provider of pension fund actuarial services. General discussion followed about the actuarial industry and the lack of responses to the procurement opportunity.

On a motion by Mr. Colonna, seconded by Mr. Barth, the board unanimously adopted the following resolution to select GRS as the actuarial valuation and pension consulting service provider for the TRS pension fund:

Whereas, Section 825.206(a) of the Government Code and TRS Bylaws subsection 1.8(o) provides that the Board of Trustees (Board) of the Teacher Retirement System of Texas (TRS) shall select, designate, and evaluate an actuary as its technical advisor;

Whereas, Section 825.206(c) of the Government Code provides that the Board shall redesignate its actuary every four years after advertising for and reviewing proposals from providers of actuarial services;

Whereas, Section 825.101 of the Texas Government Code states that the Board is responsible for the general administration and operation of the retirement system and its assets, and Section 825.103 of the Texas Government Code provides that the Board has exclusive authority over the purchase of goods and services when using trust funds, including the purchase of actuarial valuation and pension consulting services;

Whereas, TRS Bylaws subsections 5.6(b) and 5.6(e) delegate authority to the TRS executive director to contract for the purchase of services and the execution of vouchers for payments, in accordance with actions of the Board;

Whereas, TRS conducted a competitive procurement for actuarial valuation and pension consulting services;

Whereas, The Board wishes to authorize the executive director to enter into a contract for actuarial valuation and pension consulting services; now, therefore be it

Resolved, That the Board, pursuant to Section 825.206 of the Texas Government Code, hereby authorizes the executive director or the deputy director of TRS to negotiate, with the assistance and advice of legal counsel, a contract with Gabriel Roeder Smith and Company to provide actuarial valuation and pension consulting services for the TRS pension fund; and

Resolved, That, if negotiations are deemed in his or her discretion to be successful, then the executive director or the deputy director is hereby authorized to execute a contract on such terms and conditions as such officer may deem, in his or her discretion, to be in the best interest of TRS, and further to execute and deliver all such other documents, including all future extensions or amendments to the contract, that such officer may deem necessary or appropriate to effect this resolution, as conclusively evidenced by the taking of the action or the execution and delivery of the documents, and to incur, approve and pay any budgeted expenses or costs reasonably necessary or advisable with respect to such contract or amendments.

12. Consider authorizing the Executive Director to purchase directors' and officers' and fiduciary liability insurance for fiscal year 2014 through the State Office of Risk Management – Ken Welch.

Mr. Welch described the directors' and officers' (D&O) and fiduciary liability insurance provided for the trustees and certain TRS key employees. He explained for Mr. Kelly the process of setting the policy limits.

On a motion by Mr. McDonald, seconded by Mr. Moss, the board unanimously voted to adopt the following resolution to authorize the Executive Director to purchase the D&O and fiduciary liability insurance for FY 2014:

Resolved, That, pursuant to Texas Government Code Section 825.112, the Executive Director or his designee is authorized to purchase directors and officers insurance coverage, including fiduciary liability and employment practices liability insurance with coverage limits of up to \$25 million under each policy for fiscal year 2014, at a cost to be determined by the Executive Director, and to negotiate and agree to such terms and conditions of coverage as the Executive Director or his designee may deem in his or her discretion to be in the best interest of TRS, and to execute and deliver any authorizations to bind coverage and such other documents, applications, contracts, amendments, extensions, agreements, certificates, or affidavits, or modifications as may be necessary or desirable in connection with acquiring and maintaining such insurance.

13. Consider adopting proposed amendments to Rule 34 Tex. Admin. Code § 25.1, relating to Full-Time Service – Rebecca Smith.

Ms. Smith stated that proposed amendments to TRS rule §25.1 had been published under the authority of the Executive Director without being considered by the Policy Committee because there was not sufficient time between the June and July board meetings to meet the required timelines for public-comment publication before adoption. She stated that the proposed amendments carved out a specific minimum eligibility requirement for adjunct faculty members, which would allow adjunct faculty to teach the equivalent of three 3-hour classes without establishing eligibility for membership in TRS. She stated that the proposed amendments would avoid a conflict for employers with the anticipated requirements under the Affordable Care Act and alleviate adjunct faculty members' concern about having to teach fewer courses. She stated that the proposed amendments also included a definition of adjunct faculty for TRS purposes. Prior to publication of the proposed amendments in the *Texas Register*, she said, representatives of Texas Community College Teachers Association (TCCTA) and Texas Association of Community Colleges (TACC) indicated they favored the proposed amendments.

On a motion by Ms. Clifton, seconded by Ms. Palmer, the board unanimously adopted the following resolution to adopt the proposed amendments to § 25.1 without changes to the published text of the proposed rule:

Whereas, Section 825.102 of the Texas Government Code authorizes the Board of Trustees (board) of the Teacher Retirement System of Texas (TRS) to adopt rules regarding eligibility for membership, the administration of the funds of the system, and the transaction of the business of the board;

Whereas, The standards for membership eligibility in TRS are established in TRS rule §25.1 and provide that employment for one-half or more of the standard full-time work load, for a period of four and one-half months or more, with pay at a rate comparable to the rate of compensation for other persons employed in similar positions is eligible for membership and consistent application of this standard is difficult when the work load is expressed in terms of the number of semester hours or course credits taught by faculty employed in institutions of higher education rather than in clock hours;

Whereas, The adopted related rule amendments in April 2013 establishing the same ratio for converting semester hours or course credits to clock hours for the purpose of determining eligibility for membership as that used for the purpose of determining the number of hours worked by a retiree under the one-half time exception to employment after retirement and the conversion ratio of two clock hours for every hour of instruction

in the classroom or lab reflects the instructional time as well as preparation, grading, and other time typically associated with one hour of instruction;

Whereas, Providing the same conversion ratio for membership eligibility and employment after retirement reduces confusion, eases communication, and improves consistent administration of the standard;

Whereas, The latest proposed amendments to TRS rule §25.1 would establish an eligibility requirement specifically for adjunct faculty, a group of employees to whom it has proven historically difficult to consistently apply the membership eligibility requirements;

Whereas, The proposed amendments to TRS rule §25.1 would effectively allow an adjunct faculty employee to teach one additional 3-hour class without becoming eligible for membership in TRS and would also establish a definition for an adjunct faculty position to aid in the consistent administration of the membership eligibility requirements for adjunct faculty;

Whereas, The latest proposed amendments to TRS rule §25.1 were published for public comment in the June 21, 2013 issue of the *Texas Register* under the executive director's authority in §5.7 of the board's bylaws, and the public had at least 30 days' notice of TRS' intention to adopt the proposed amendments before the board considered their adoption, and TRS received a positive written comment in support of the proposed amendments; and

Whereas, The board desires to adopt the proposed amendments without changes to the published texts of the proposed rule; now, therefore, be it

Resolved, That the board hereby:

- 1) Adopts amended TRS rule 34 TEX. ADMIN. CODE §25.1 without changes to the text of the proposed rule as published for public comment in the June 21, 2013 issue of the *Texas Register* (38 TexReg 3888);
- 2) Incorporates by reference into this Resolution, as though fully set out in it, the applicable policy committee and board meeting materials, discussions and actions, including the approved rule text and reasoned justification for its adoption as presented in those meeting materials, discussions and actions;
- 3) Grants the TRS staff authority to prepare and to file all documents required by this Resolution, to work with the Office of the Secretary of State in preparing and filing such documents, and to make any technical changes required for publication of the adopted rule; and
- 4) Grants the board chairman the authority to sign an order showing the action of the board.

14. Consider a resolution certifying to the State Comptroller of Public Accounts the estimated amount of state contributions to be received by the retired school employees group health benefit fund for the fiscal year ending August 31, 2014 – Don Green.

After a short discussion about the requirement under §1575.209 of the Insurance Code concerning the estimate of state contributions for the next fiscal year, the board adopted the following resolution on a motion by Mr. Barth, seconded by Ms. Clifton:

At its meeting on July 26, 2013, the Board of Trustees of the Teacher Retirement System, on a motion by Todd Barth, seconded by Charlotte Clifton voted to certify \$277,711,984 as the estimated amount of state contributions to be received by the retired school employees group insurance fund (TRS-Care) for the 2014 fiscal year under the appropriations authorized by Chapter 1575 of the Insurance Code, the Texas Public School Employees Group Benefits Program. This amount includes \$247,531,484 authorized in the General Appropriations Act (Senate Bill 1, 83rd Legislature, Regular Session), less an amount of (\$19,819,500) due to fiscal year 2013 payroll costs less than estimates. These contributions are based on 1.0 percent of the salary of each active public school employee. The amount certified also includes an estimated amount of \$50,000,000 due to provisions in Rider 4, paragraph b, of TRS bill pattern (Senate Bill 1, 83rd Legislature, Regular Session) which allows for any general revenue available in excess of the amount required to provide for a state contribution rate of 6.8 percent in fiscal year 2014 to be appropriated for deposit to the Texas Public School Retired Employees Group Insurance Trust Fund.

This estimate of state contributions is required by Section 1575.209 of the Insurance Code.

15. Review the reports of the Chief Financial Officer – Don Green:

A. Report under § 825.314(b), Government Code, of expenditures that exceed the amount of operating expenses appropriated from the general revenue fund and are required to perform the fiduciary duties of the Board.

Pursuant to section 825.314(b) of the Government Code, Mr. Green reported on the expenditures paid during the month of May 2013 that were required to perform the fiduciary duties of the board.

B. Financial reports on TRS programs.

Mr. Green provided the quarterly financial reports on TRS programs as of May 31, 2013.

16. Review the report of the Chief Benefit Officer, and consider the following related matters – Marianne Woods Wiley:

A. Approve members qualified for retirement.

Ms. Woods Wiley presented the list of members and beneficiaries receiving initial benefit payments during the reporting period from March 1, 2013, through May 31, 2013. She referred the board to the detailed list of payments made available for their review.

On a motion by Mr. Colonna, seconded by Mr. McDonald, the board unanimously approved the list of members and beneficiaries who qualified for retirement, disability, DROP, PLSO, survivor, or death benefits initiated during the reporting period.

B. Approve minutes of Medical Board meetings.

Ms. Woods Wiley presented the minutes of the March 19, 2013, and May 14, 2013 Medical Board meetings. On a motion by Ms. Clifton, seconded by Ms. Sissney, the board approved the

minutes of the Medical Board meetings as presented, thereby ratifying the actions of the Medical Board reflected in those minutes.

After a recess at 12 p.m., the meeting reconvened at 12:23 p.m.

Mr. Kelly announced that the board would take up agenda item 9 again to consider the revised proposed resolution discussed earlier in the meeting.

9. Provide an update on TRS-ActiveCare, the active employee health benefits program, and discuss and consider eliminating TRS-ActiveCare 3 and moving TRS-ActiveCare 3 participants to TRS-ActiveCare 2 – Betsey Jones and William Hickman, Gabriel, Roeder, Smith & Company.

Mr. Kelly read into the record the revised proposed resolution relating to the changes made to the TRS-ActiveCare 3 plan. On a motion by Mr. Moss, seconded by Ms. Sissney, the board voted unanimously to adopt the following resolution presented by staff at the meeting:

Whereas, Chapter 1579, Insurance Code, authorizes the Teacher Retirement System of Texas (“TRS”), as trustee, to implement and administer the uniform group health benefits program under the Texas School Employees Uniform Group Health Coverage Act (“TRS-ActiveCare”), as described in the statute;

Whereas, TRS staff and the TRS health benefits consultant, Gabriel, Roeder, Smith & Company (“GRS”), have recommended that beginning with the 2013-2014 plan year, which commences on September 1, 2013, enrollment in TRS-ActiveCare 3 should be closed to individuals who are not enrolled in TRS-ActiveCare 3 for the 2012-2013 plan year;

Whereas, The TRS Board of Trustees (“Board”) desires to direct TRS staff to explore all options available in devising the benefit plan design and premium structure of TRS-ActiveCare 3 for the 2014-2015 plan year; and

Whereas, The Board desires to adopt the recommendations of TRS staff and GRS; now, therefore, be it

Resolved, That commencing with the 2013-2014 plan year, and for all plan years thereafter until further action by the Board, enrollment in TRS-ActiveCare 3 shall be closed to individuals who are not enrolled in TRS-ActiveCare 3 for the 2012-2013 plan year;

Resolved, That the Board hereby directs TRS staff to explore all options available in devising the benefit plan design and premium structure of TRS-ActiveCare 3 for the 2014-2015 plan year; and

Resolved, That the Board hereby directs the Executive Director or his designees to take any actions that he or his designee in his or their discretion deem to be necessary or advisable to implement this resolution.

17. **Discuss and consider selecting Board fiduciary counsel, including considering a finding that deliberating or conferring on the selection of fiduciary counsel in open meeting would have a detrimental effect on the position of the retirement system in negotiations with a third person; receiving an overview on the responsibilities of fiduciary counsel and the process used to select the finalist firms; interviewing finalist firms for the position; and considering a resolution selecting fiduciary counsel – David Kelly.**

The board interviewed representatives of four law firms, as shown below:

Cohen Milstein Sellers and Toll PLLC, represented by Suzanne Dugan, Luke Bierman, and Dan Sommers;

Crain Cabbage Healy Hedgpeth Johnson and Wilson, pllc, represented by Riva Johnson and Patti Hedgpeth;

Strasburger and Price, LLP, represented by Gary Lawson; and

Reinhart Boerner Van Deuren s.c., represented by Steve Huff and Keith Johnson.

On a motion by Mr. Barth, seconded by Mr. McDonald, the board voted unanimously to enter into closed session on agenda item 17 under §825.115(e) of the Government Code based on the board's finding and determination that deliberating or conferring in an open meeting about this fiduciary counsel procurement would have a detrimental effect on TRS' position and negotiation with a third person.

Whereupon, the open session recessed at 2 p.m.

After completing the closed session, Mr. Kelly announced that the open session reconvened at 2:40p.m.

After deliberations, on a motion by Ms. Sissney, seconded by Ms. Clifton, the board unanimously adopted the following resolution to select Reinhart Boerner Van Deuren s.c. as fiduciary counsel and authorize a two-year contract with the firm, and, if further authorized by the board, a subsequent two-year contract with the firm:

Resolved, That the Board of Trustees (the "board") of the Teacher Retirement System of Texas ("TRS") hereby selects the law firm of Reinhart Boerner Van Deuren s.c. to serve as fiduciary counsel; and

Resolved, That the board authorizes the Executive Director to negotiate an outside counsel contract with fiduciary counsel for a term of two fiscal years commencing on September 1, 2013 and, if authorized by the board, a second two year term commencing on September 1, 2015, and to obtain approval from the Office of the Attorney General for the engagement of such outside counsel; and, if negotiations are deemed by the Executive Director in his discretion to be successful, then the Executive Director is hereby authorized to execute such contract, including future amendments, with fiduciary counsel on such terms and conditions as the Executive Director may deem in his discretion to be in the best interest of TRS, and further to execute and deliver all such other documents

that the Executive Director may deem necessary or appropriate to effect this resolution as conclusively evidenced by the taking of the action or the execution and delivery of the documents, and to incur, approve, and pay any budgeted expenses or costs associated with such contract and deemed in the discretion of the Executive Director, or his designee, to be reasonably necessary or advisable with respect to such contract.

After a brief recess around 2:45 p.m., the board reconvened at 2:58 p.m.

18. Receive a presentation from Focus Consulting on the evaluation of the Chief Audit Executive, Chief Investment Officer, and Executive Director – Keith Robinson, Focus Consulting.

Mr. Robinson provided a summary of the evaluation of the Chief Audit Executive, Chief Investment Officer, and Executive Director. He explained the evaluation process and components.

The board meeting recessed at 3:07 p.m. to allow the Audit Committee to meet.

The board meeting reconvened at 3:54 p.m.

Mr. Kelly announced that the board would go into executive session on agenda items 19 and 20 under §551.074 of the Texas Open Meeting Act to deliberate the personnel matters described in those items. He asked all members of the public and staff not needed for the executive session to leave the meeting room and take their belongings with them.

Whereupon, the open session of the board meeting recessed at 3:55 p.m. to go into executive session.

The board meeting reconvened in open session at 7:19 p.m. Mr. Kelly announced that the board would take up agenda item 19A to hear the report of the Audit Committee.

19. Discuss and consider personnel and compensation matters, including the following items:

A. Review the report of the Audit Committee on its July 26, 2013 meeting, and discuss and consider the evaluation and compensation of the Chief Audit Executive – Chris Moss.

Mr. Moss, Committee Chair, provided the following report of the Audit Committee:

The Audit Committee met at 3:07 p.m., on Friday, July 26, 2013, in the fifth floor boardroom. The Audit Committee discussed and approved the recommendation to the Board of Trustees regarding the annual performance appraisal for the Chief Audit Executive. The Audit Committee deferred consideration of any salary increase to the Board of Trustees.

Upon a motion by Mr. Moss as the committee chair, the board unanimously approved the annual performance appraisal of the Chief Audit Executive for FY 2013.

Mr. Kelly announced that the board would also take up agenda item 20, in conjunction with the remaining business concerning the Chief Audit Executive's salary under item 19.

- 19. Discuss and consider personnel and compensation matters, including the following items:**
 - A. Review the report of the Audit Committee on its July 26, 2013 meeting, and discuss and consider the evaluation and compensation of the Chief Audit Executive – Chris Moss.**
 - B. Discuss and consider the evaluation, compensation, and duties of the Chief Investment Officer and provide input to the Executive Director – David Kelly.**
 - C. Discuss and consider the evaluation, compensation, and duties of the Executive Director – David Kelly and Keith Robinson, Focus Consulting.**
- 20. Discuss and consider the adoption of a resolution regarding salary limits for the following particular employees: Chief Investment Officer, Deputy Director Investment Officer, Deputy Administrative Officer, and the Investment Fund Directors listed as exempt positions in the 2014 - 2015 General Appropriations Act – David Kelly.**

On a motion by Mr. Barth, seconded by Ms. Clifton, with Ms. Charleston voting in opposition, the board authorized the Executive Director to grant a 4% salary increase to the Chief Audit Executive on top of the 1% that was given by the Legislature, thereby approving a 5% increase in the salary of the Chief Audit Executive.

On a motion by Mr. McDonald, seconded by Mr. Moss, with Ms. Charleston voting in opposition, the board adopted the following resolution to raise the salary limit for the listed exempt positions in the 2014-2015 General Appropriations Act and grant the Executive Director the authority for up to a 5% increase:

Whereas, Section 825.208 Government Code provides that, notwithstanding any other law, the Board of Trustees (the "Board") shall approve the rate of compensation of all persons it employs;

Whereas, TRS Bylaws delegate authority to the Executive Director and subsection 4.1.2(c) specifically provides that the Executive Director assumes responsibility for the compensation of all TRS personnel, with limited exceptions for the Executive Director and Chief Audit Executive whose salaries are set by the Board;

Whereas, The General Provisions in the TRS Budget for Fiscal Year (FY) 2014 adopted by the Board provide direction to the Executive Director regarding salaries and specifically authorize the Executive Director to set the annual base salary rate for all exempt positions, other than the Executive Director position, within the not-to-exceed amounts listed in the General Appropriations Act that becomes effective September 1, 2014 (the "GAA"), or any amended limits adopted by the Board from time to time;

Whereas, During the 83rd Session of the Texas Legislature, lawmakers increased the salary of most state employees by three percent; however, any salary increase for TRS exempt positions must be approved by the Board;

Whereas, The GAA, consistent with general law, provides that notwithstanding the compensation amounts set in the GAA, the Board may determine the salaries of the positions listed in the Schedule of Exempt Positions without limitation;

Whereas, The Board wishes to amend the limits by adopting a percentage increase in the not-to-exceed amounts provided in the GAA for the positions, other than the Executive Director position, listed in the Schedule of Exempt Positions for the purpose of allowing the Executive Director to exercise his discretion in setting salaries under Bylaw 4.1.2(c) and under the General Provisions of the TRS Budget for FY 2014; now, therefore be it

Resolved, That effective September 1, 2013, the Board hereby increases the not-to-exceed amounts shown in the GAA for TRS exempt positions as follows:

Chief Investment Officer (incumbent Thomas B. (Britt) Harris)	increase the monthly salary amount listed in the GAA by 5%
Deputy Director Investment Officer (incumbent Jerry G. Albright)	increase the monthly salary amount listed in the GAA by 5%
Deputy Administrative Officer (incumbent Ken Welch)	increase the monthly salary amount listed in the GAA by 5%
Investment Fund Director (incumbent Chi K. Chai)	increase the monthly salary amount listed in the GAA by 5%

Resolved, That nothing in the adoption of this resolution alters the at-will nature of employment that TRS has with its employees, creates a contract between TRS and any TRS employee, or confers on any TRS employee the right to continued employment with TRS, including any employee holding a position in the Schedule of Exempt Positions.

On a motion by Mr. McDonald, seconded by Mr. Moss, with Ms. Charleston voting in opposition, the board adopted the following resolution to grant a 10% salary increase to the Executive Director:

Whereas, Section 825.208 of the Texas Government Code provides that, notwithstanding any other law, the Board of Trustees (the "Board") shall approve the rate of compensation of all persons it employs;

Whereas, Subsection 1.8(d) of the Board's bylaws provides that the Board shall be responsible for the selection, job description, assignment of duties, performance evaluation, compensation, and discipline, including dismissal, of the Executive Director;

Whereas, During the 83rd Session of the Texas Legislature, lawmakers significantly increased the compensation of most top state agency executives; however, any salary increase for the Executive Director of TRS must be approved by the Board;

Whereas, The Board wishes to amend the salary of the Executive Director; now,

therefore be it

Resolved, That effective September 1, 2013, the Board hereby increases the monthly salary of the Executive Director as follows:

Executive Director's salary (the incumbent is Brian K. Guthrie): Increase the monthly base salary amount for FY 2014 by 10% of FY 2013 monthly base salary; and

Resolved, That nothing in the adoption of this resolution alters the at-will nature of employment that TRS has with any of its employees, creates a contract between TRS and any TRS employee, or confers on any TRS employee the right to continued employment with TRS, including the Executive Director or any other employee holding a position in the Schedule of Exempt Positions.

Whereupon, the meeting adjourned at 7:25 p.m.

Tab 4

Teacher Retirement System of Texas



Executive Director's Report

Brian Guthrie
September 13, 2013





- Agency goals and objectives for fiscal year 2014.
- Recent and upcoming educational opportunities.
- Upcoming agendas.



Agency Goals and Objectives

Fiscal Year 2014



FY 2014 Goals and Objectives

- Focus on both health care programs.
 - Substantial portion of the February meeting will address TRS-Care and TRS-ActiveCare.
 - Update the TRS-Care Study, and expand it to include TRS-ActiveCare issues.
 - Complete the procurements for TRS-ActiveCare.

- Continue trust fund earnings growth.
 - Outperform TRS benchmarks net of fees.
 - Conduct study of trust asset allocation in accordance with investment policy.
 - Continue work toward becoming the preferred destination for large and attractive long-term investments.



FY 2014 Goals and Objectives

- Advance the TEAM Program.
 - Enter into negotiations and finalize the procurement for the Line of Business (LOB) vendor.
 - Complete negotiations and secure the procurement on the Financial System Replacement (FSR).

- Continue developing agency culture.
 - Incorporate core values into the agency's strategic plan.
 - Work them into job descriptions and evaluations.
 - Identify and celebrate regularly those employees that exemplify the core values.





FY 2014 Goals and Objectives

- Identify a long-term space plan for TRS.
 - Examine and implement space adjustments at Red River Campus.
 - Create a task-force to identify options for the lease at 816 and to develop long-term space plan for the entire agency.
 - Include long-term facility needs in the 2015 Legislative Appropriations Request (LAR).

- Develop additional avenues of member outreach
 - Offer members Beneplace. A web site that provides discounts on a variety of products and services.
 - Become a resource for members on financial literacy without crossing into the realm of providing legal, financial, or tax advice.
 - Offer Benefit Value Advisor, which identifies for TRS-ActiveCare members cost-efficient health care service providers for many standard medical procedures.



FY 2014 Goals and Objectives

- Prepare for the new Government Accounting Standards Board (GASB) requirements.
 - Work with the Comptroller on reporting requirements.
 - Identify the best process for providing school districts with necessary information.

- Improve trustee orientation and education.
 - Utilize recent survey results to better trustee orientation, including possible adjustments to content and delivery method.
 - Continue to identify trustee educational opportunities.
 - Identify improvements in the preparation process and materials for Senate Confirmation.



FY 2014 Goals and Objectives

- Provide additional opportunities for staff professional development.
 - Conduct the next round of the Leadership Development Program.
 - Explore development of mentor program.
 - Continue to recruit and retain highly talented professionals across all facets of the agency.
- Continue to raise TRS' national profile.
 - Maintain existing and develop additional strong relationships with investment partners, such as the Strategic Partnership Network.
 - Host and participate in conferences on both the national and international level, including presenting at the National Council on Teacher Retirement (NCTR) 2013 conference, hosting the 2014 NCTR Directors Conference, and co-hosting the 2016 CEM Conference on Pension Administration Benchmarking.
 - Work with prominent organizations as opportunities arise to conduct valuable pension, health care, and investment- focused research.



Recent and Upcoming Educational Opportunities



Educational Opportunities

- National Association of State Retirement Administrators (NASRA) conference – August 2013.
- National Council on Teacher Retirement (NCTR) Trustee meeting – August 2013.
- Trustee State Street visit – August 2013.
- Alternative Investments Forum, Southwest Forum – September 2013.
- LBJ School of Public Affairs Professional Development Center, Transformative Leadership Training – September 2013.
- NCTR Annual Conference – October 2013.



Educational Opportunities

- State Street Leadership Forum – October 2013.
- Institutional Investor Forum – November 2013.
- Emerging Manager Conference – January 2014.
- Host the NCTR Directors Meeting and the NCTR Deputy Directors, Communications, and Administrative Professionals Meeting – April and June 2014.



Upcoming Agendas



Upcoming Agendas

October 18, 2013

One day meeting.

No committee meetings.

Major agenda items include the following:

- Comprehensive overview from State Street on the services provided.
- Presentation from CEM on pension administration benchmarking survey results.
- Lay out amendments to Trustee and employee ethics policies for adoption in December.



2013 Board Agendas (Cont'd)

December 12-13, 2013 Major items include:

Board

- Dr. Brown educational presentation.
- Review Comprehensive Annual Financial Report (CAFR).
- Review actuarial valuations.
- Make the TRS-ActiveCare procurements.
- Adopt ethics policy amendments.
- Adopt rules as necessary to implement legislation.
- Adopt amendments to Proxy Voting Policy.
- Select new Retirees Advisory Committee members.

Committees

- Review Tactical Asset Allocation, Strategic Asset Allocation, Risk Strategies, and Strategic Partnership Network.
- Begin review of Mission Statement.
- Review of the Commission Sharing Credits (CSA) and Soft Dollar Policy.
- Review of the Securities Lending Policy.
- Receive report on Enterprise Risk Management.



2013 Board Agendas (Cont'd)

February 12-14, 2014

Three day “Board retreat” meeting to be held in Corpus Christi this year.

Do not anticipate committee meetings.

Major agenda items include the following:

- Substantial focus on TRS-Care and TRS-ActiveCare.
- Investment educational presentations.
- TEAM.
- Long-term space planning.
- Training on ethics and fiduciary, including qualifications for office.
- Training on open meetings and open records.

Tab 5 A



Teacher Retirement System of Texas

Performance Review: Second Quarter 2013
September 2013

Hewitt ennisknupp

An Aon Company

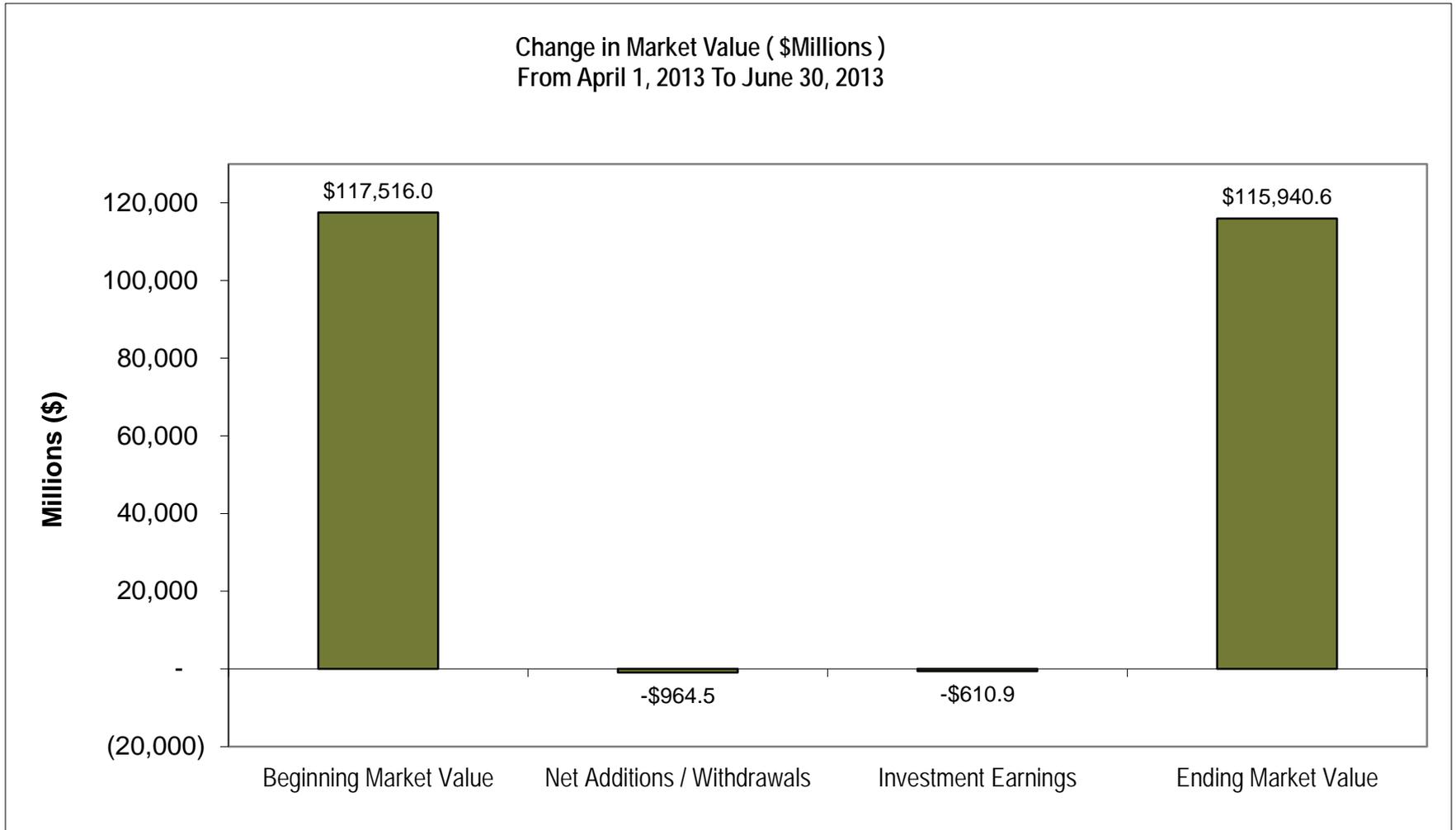
Summary

- Capital markets were volatile during the second quarter as concern arose regarding the future of Federal Reserve intervention in markets
 - U.S. equities remained positive for the quarter, despite giving up ground in June
 - Emerging markets experienced a significant decline of 8.1% during the quarter
 - Bond markets struggled broadly as rates rose
- TRS lost 0.5% during the second quarter but outperformed its benchmark by 22 basis points
 - Intermediate period results (year-to-date, 12 months) remain strong on relative basis
 - TRS also exceeded its performance benchmark during the trailing 3, 5, and 10 year periods
- Major sources of outperformance during the second quarter included:
 - Global Equity
 - Private Equity
 - Non-U.S. Developed
 - Emerging Markets
- Investments that detracted from relative results included:
 - Commodities
 - U.S. Large Cap
 - Real Assets (both underperformance and underweight)

1. Market Summary – Second Quarter 2013

	Second Quarter	YTD	One Year	Three Years	Five Years	Ten Years
Global Equity:						
MSCI USA Standard	2.7%	13.7%	20.7%	18.6%	6.9%	7.4%
MSCI USA Small Cap	2.8	16.0	25.9	19.9	10.6	10.5
MSCI EAFE + Canada Index	-1.6	3.0	17.1	9.4	-0.8	7.9
MSCI Emerging Markets Index	-8.1	-9.6	2.9	3.4	-0.4	13.7
HFRI Fund of Funds Composite Index	0.0	3.3	7.2	3.0	-0.6	3.4
State Street Private Equity Index (qtr lagged)	3.4	6.9	8.9	12.5	4.0	12.6
Global Equity Policy Benchmark	-0.2	5.1	13.7	12.0	3.7	--
Stable Value:						
Barclays Capital Long Treasury Index	-5.6%	-7.8%	-8.4%	6.2%	7.6%	6.1%
HFRI Fund of Funds Conservative Index	0.5	3.3	6.9	2.9	-0.6	2.7
3 Month LIBOR + 2%	0.6	1.1	2.3	2.4	2.7	4.2
90 Day US Treasury Bill	0.0	0.0	0.1	0.1	0.3	1.7
Stable Value Policy Benchmark	-3.9	-4.9	-4.6	5.6	6.4	--
Real Return:						
Barclays Capital US Treasury TIPS Index	-7.1%	-7.4%	-4.8%	4.6%	4.4%	5.2%
NCREIF ODCE (qtr lagged)	2.4	4.6	9.7	14.0	-1.7	--
Goldman Sachs Commodities Index	-5.9	-5.4	2.0	4.7	-15.2	1.4
MSCI US REIT	-1.6	6.4	9.0	18.3	7.6	10.8
Real Return Policy Benchmark	0.0	1.5	5.7	11.3	1.9	--
TRS Policy Benchmark	-0.8%	2.6%	8.7%	11.1%	4.5%	7.0%

2. Market Value Change



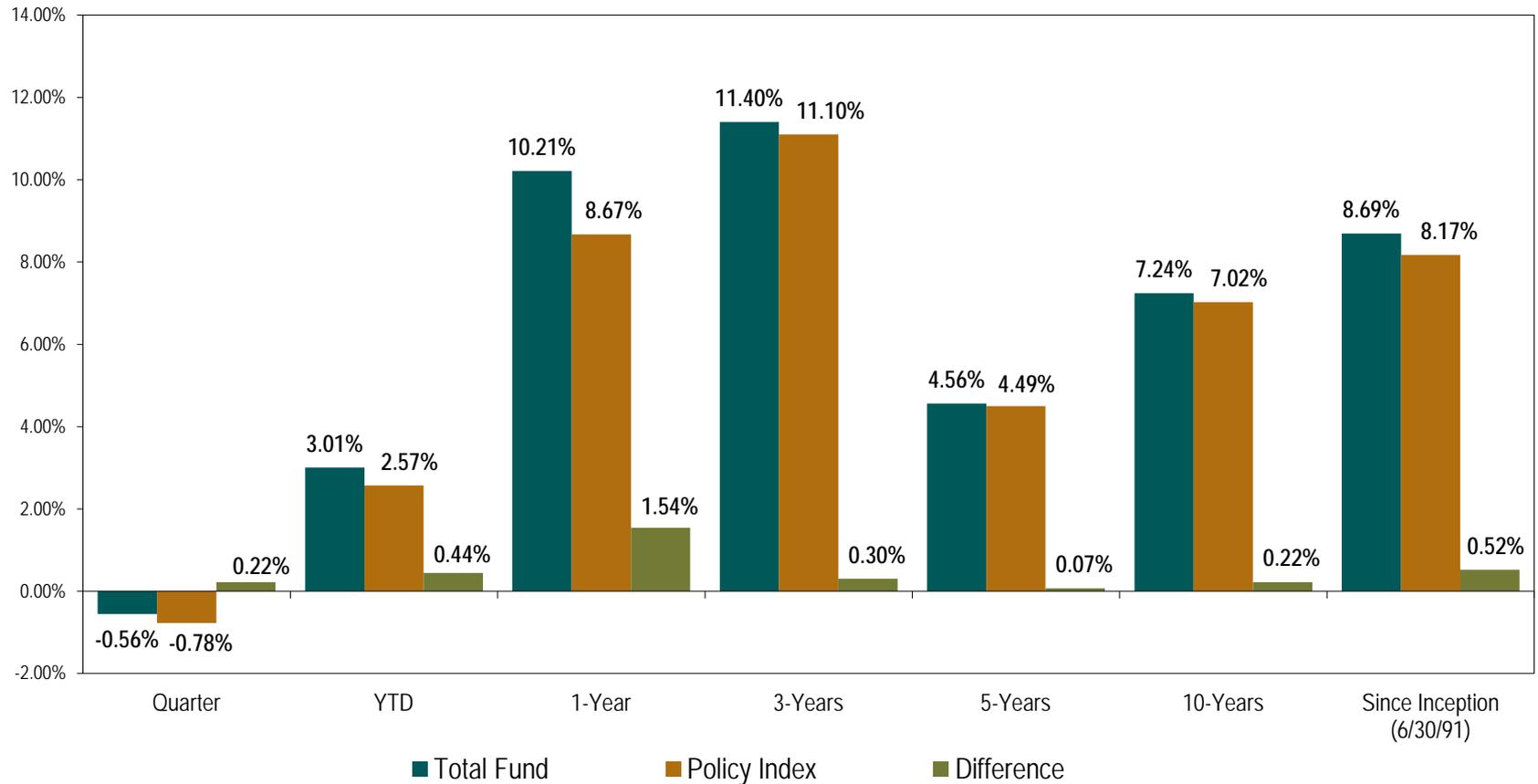
3. Asset Allocation Detail

	Market Value (\$ in millions) as of 6/30/2013		Policy Target	Relative Allocation to Policy Target	Ranges
	(\$)	(%)			
Total Fund	\$115,941	100%	100%	---	--
U.S. Large	\$20,462	17.6%	18%	-0.4%	13-23%
U.S. Small	\$4,400	3.8%	2%	+1.8%	0-7%
Non-U.S. Developed	\$17,688	15.3%	15%	+0.3%	10-20%
Emerging Markets	\$12,076	10.4%	10%	+0.4%	5-15%
Directional Hedge Funds	\$5,832	5.0%	5%	+0.0%	0-10%
Private Equity	\$14,060	12.1%	12%	+0.1%	7-17%
Global Equity	\$74,517	64.3%	62%	+2.3%	55-69%
Long Treasuries	\$14,289	12.3%	13%	-0.7%	0-20%
Stable Value Hedge Funds	\$4,293	3.7%	4%	-0.3%	0-10%
Absolute Return (including OAR)	(\$289)	-0.2%	0%	-0.2%	0-20%
Cash	\$1,158	1.0%	1%	+0.0%	0-5%
Stable Value	\$19,451	16.8%	18%	-1.2%	13-23%
TIPS	\$5,848	5.0%	5%	+0.0%	0-10%
Real Assets	\$15,701	13.5%	15%	-1.5%	5-20%
Commodities	\$424	0.4%	0%	+0.4%	0-5%
Real Return	\$21,973	19.0%	20%	-1.0%	15-25%

Note: Actual allocations above are based upon Account Level information

4. Total TRS Performance Ending 6/30/2013

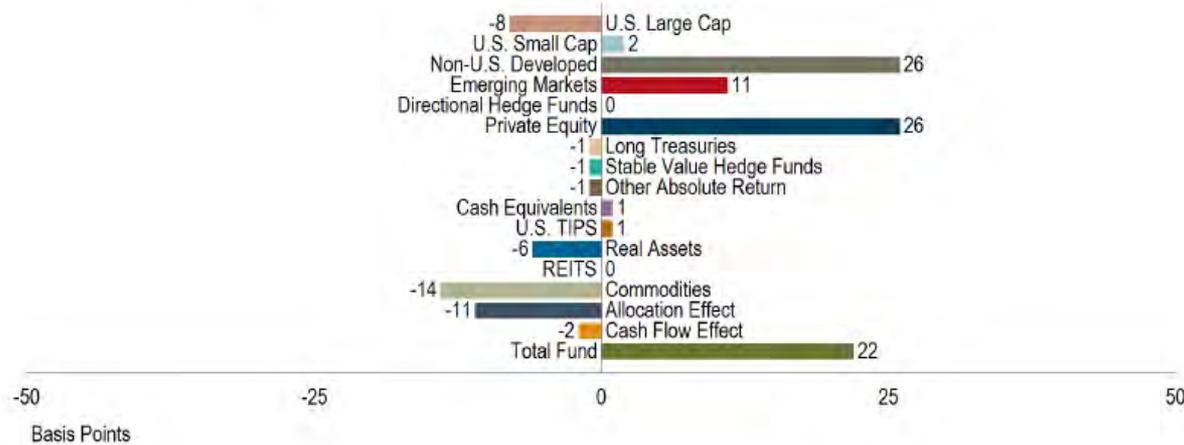
Investment Results As of 6/30/2013



Note: The excess returns shown above may not be a perfect difference between the actual and benchmark returns due entirely to rounding.

5. Total Fund Attribution - Quarter Ending 6/30/2013

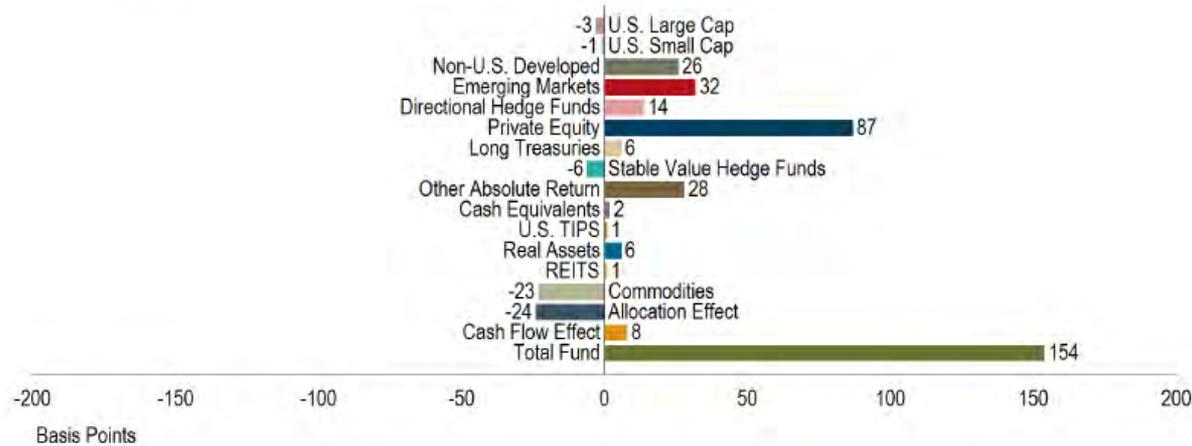
TOTAL FUND ATTRIBUTION ANALYSIS
3 MONTHS ENDING 6/30/13



Asset Class	Allocation Effect (in bps)
U.S. Large Cap	3
U.S. Small Cap	1
Non-U.S. Developed	3
Emerging Markets	-6
Directional Hedge Funds	0
Private Equity	-1
Long Treasuries	0
Stable Value Hedge Funds	0
Other Absolute Return	1
Cash Equivalents	0
U.S. TIPS	-1
Real Assets	-7
REITS	0
Commodities	-4
Total Allocation Effect	-11

5. Total Fund Attribution – Trailing One Year Ending 6/30/2013

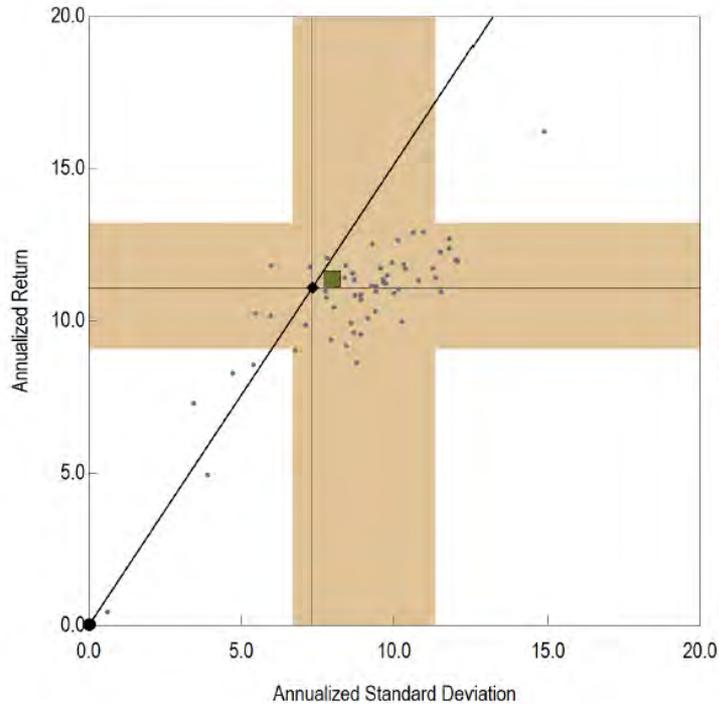
TOTAL FUND ATTRIBUTION ANALYSIS
1 YEAR ENDING 6/30/13



Asset Class	Allocation Effect (in bps)
U.S. Large Cap	8
U.S. Small Cap	-2
Non-U.S. Developed	-12
Emerging Markets	-12
Directional Hedge Funds	0
Private Equity	0
Long Treasuries	17
Stable Value Hedge Funds	1
Other Absolute Return	-7
Cash Equivalents	-5
U.S. TIPS	-3
Real Assets	-3
REITS	0
Commodities	-6
Total Allocation Effect	-24

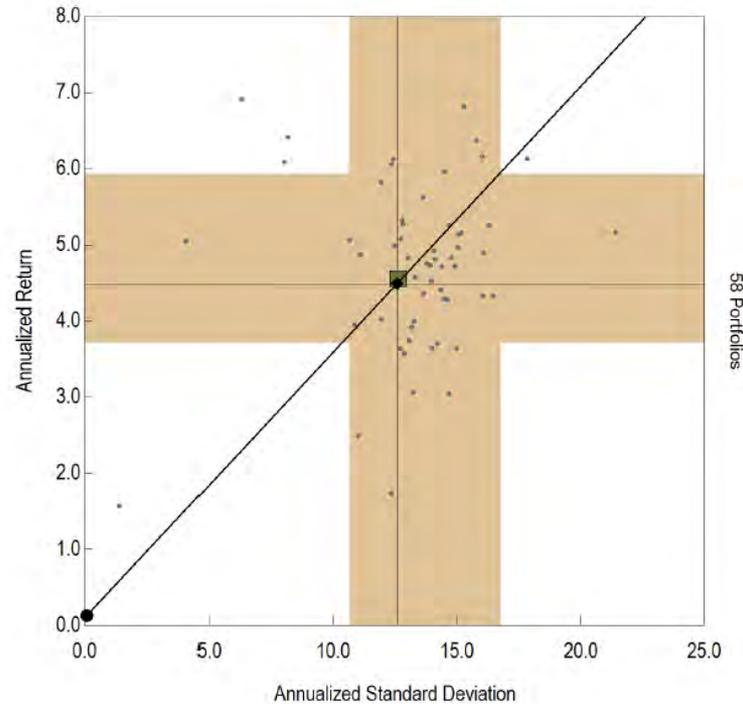
6. Risk Profile: Total Fund Risk-Return vs. Peers

Annualized Return vs. Annualized Standard Deviation
3 Years Ending June 30, 2013



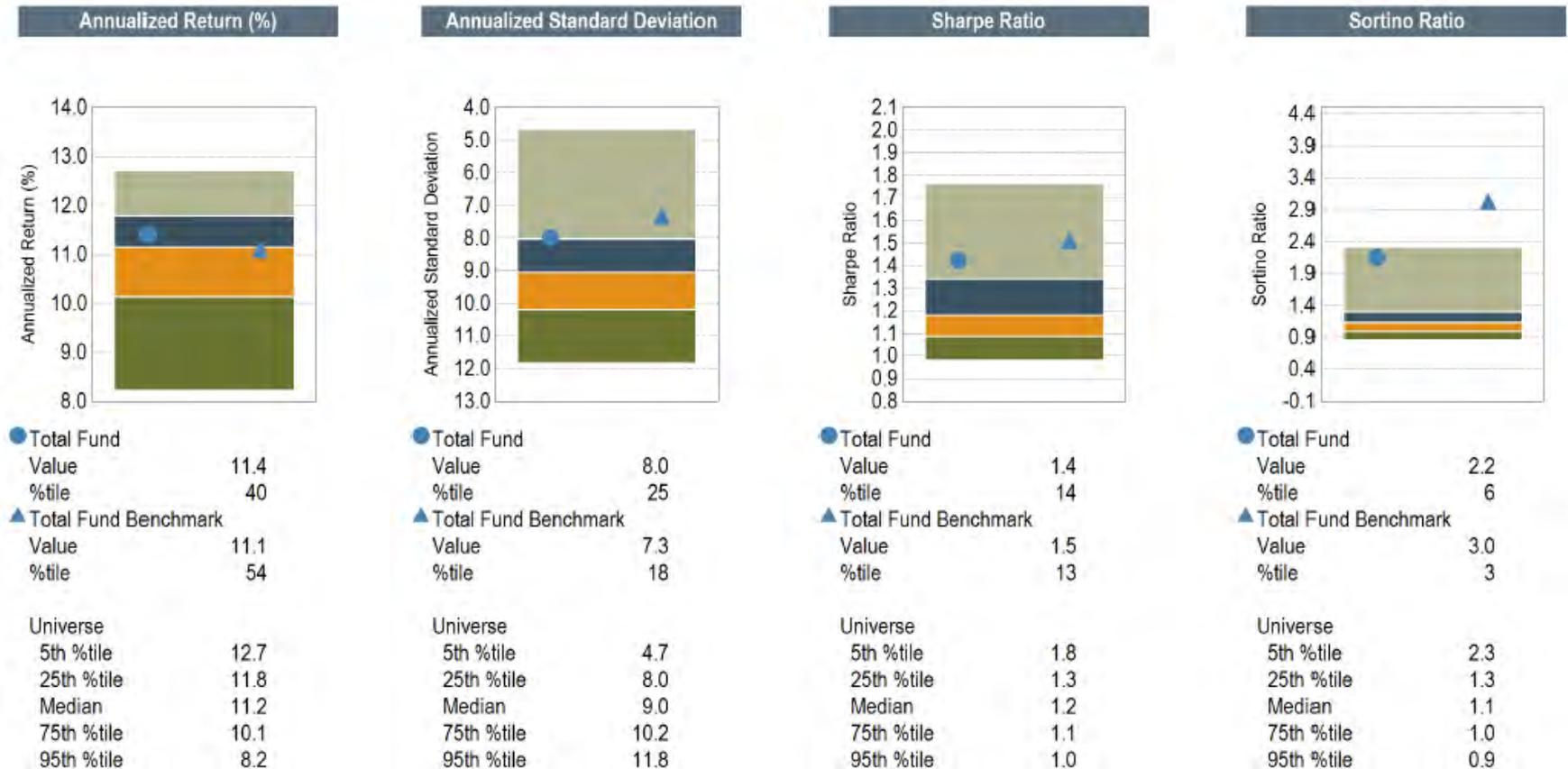
- Total Fund
- Total Fund Benchmark
- Risk Free
- 68% Confidence Interval
- Public Funds >\$1B Net

Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2013



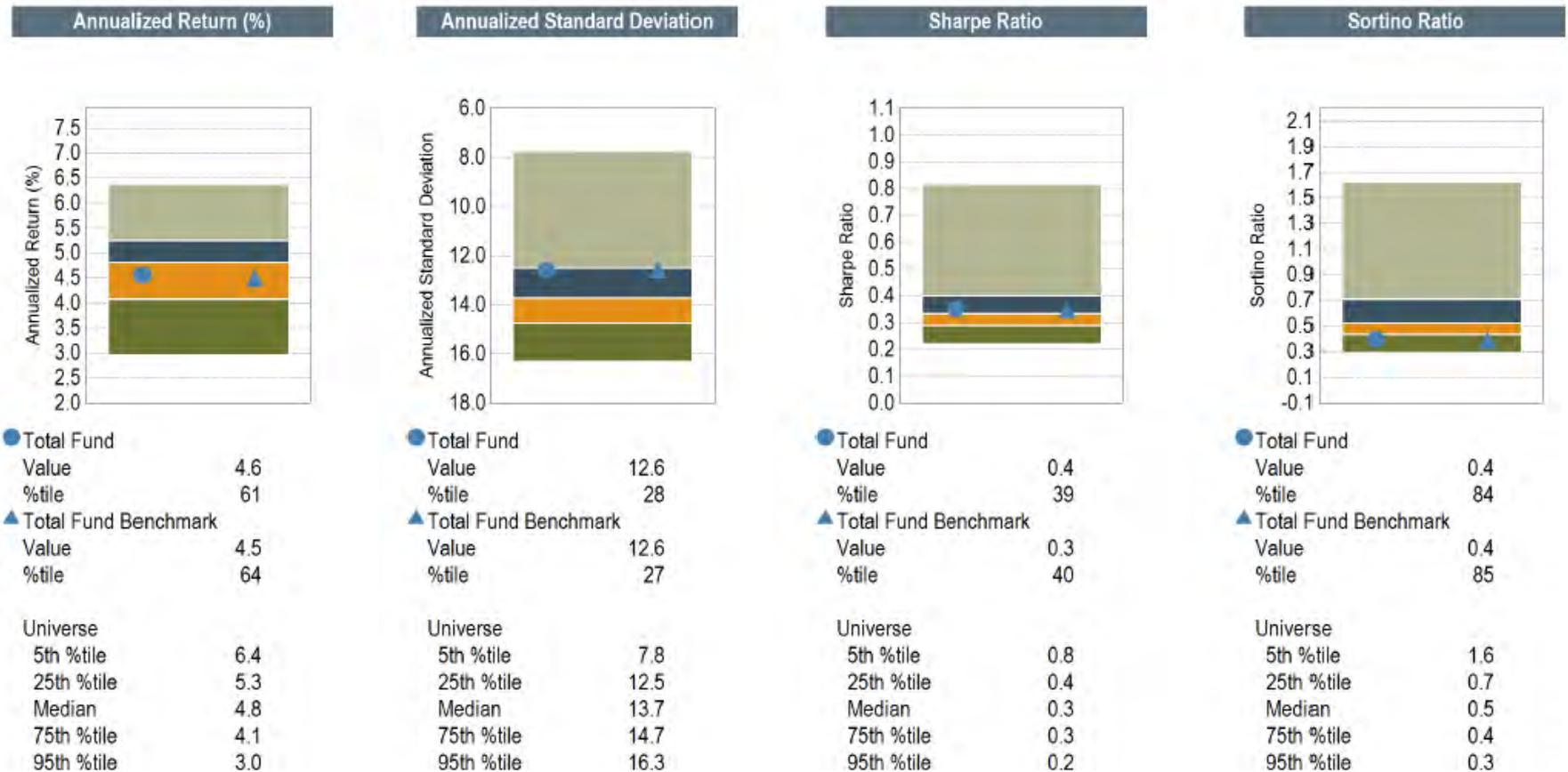
- Total Fund
- Total Fund Benchmark
- Risk Free
- 68% Confidence Interval
- Public Funds >\$1B Net

6. Risk Profile: Trailing 3-Year Risk Metrics Peer Comparison



Universe: **Public Funds > \$1B Net**

6. Risk Profile: Trailing 5-Year Risk Metrics Peer Comparison



Universe: **Public Funds > \$1B Net**

7. Global Equity: Performance Summary Ending 6/30/2013

	Second Quarter	YTD	One Year	Three Years	Five Years
Total Global Equity	0.7%	6.0%	15.8%	12.3%	3.5%
Global Equity Benchmark	-0.2	5.1	13.7	12.0	3.7
<i>Difference</i>	+0.9	+0.9	+2.1	+0.3	-0.2
Total U.S.	2.5	12.7	20.9	17.7	7.0
U.S. Benchmark	2.7	13.9	21.2	18.5	7.1
<i>Difference</i>	-0.2	-1.2	-0.3	-0.8	-0.1
<u>U.S. Large Cap</u>	2.3	12.4	20.5	17.6	-
Large Cap Benchmark	2.7	13.7	20.7	18.4	-
<i>Difference</i>	-0.4	-1.3	-0.2	-0.8	-
<u>U.S. Small Cap</u>	3.3	16.7	23.9	21.3	11.4
Small Cap Benchmark	2.8	16.0	25.9	19.9	9.8
<i>Difference</i>	+0.5	+0.7	-2.0	+1.4	+1.6
Non-U.S. Equity	-3.0	-0.6	13.0	7.5	0.5
Non-U.S. Benchmark	-4.2	-2.2	11.3	7.1	-0.3
<i>Difference</i>	+1.2	+1.6	+1.7	+0.4	+0.8
<u>Non-U.S. Developed</u>	0.1	4.9	18.7	10.3	0.1
MSCI EAFE + Canada	-1.6	3.0	17.1	9.4	-0.8
<i>Difference</i>	+1.7	+1.9	+1.6	+0.9	+0.9
<u>Emerging Markets</u>	-7.1	-7.7	5.6	4.2	-0.2
MSCI Emerging Markets	-8.1	-9.6	2.9	3.4	-0.4
<i>Difference</i>	+1.0	+1.9	+2.7	+0.8	+0.2

Note: The excess returns shown in this presentation may differ from State Street statements due entirely to rounding. These differences are generally within a few basis points and are not material.

7. Global Equity: Performance Summary Ending 6/30/2013 (cont'd)

	Second Quarter	YTD	One Year	Three Years	Five Years
Directional Hedge Funds	0.0%	4.8%	10.0%	--	--
HFRI Fund of Funds Composite Index	0.0	3.3	7.2	--	--
<i>Difference</i>	+0.0	+1.5	+2.8	--	--
Total Public Equity	-0.5	5.1	15.7	11.5	2.8
Public Equity Benchmark	-1.0	4.6	14.8	11.6	2.9
<i>Difference</i>	+0.5	+0.5	+0.9	-0.1	-0.1
Total Private Equity	5.8	10.1	16.7	15.9	6.7
Private Equity Benchmark	3.4	6.9	8.9	12.5	8.2
<i>Difference</i>	+2.4	+3.2	+7.8	+3.4	-1.5

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8. Stable Value: Performance Summary Ending 6/30/2013

	Second Quarter	YTD	One Year	Three Years	Five Years
Total Stable Value	-3.9%	-4.6%	-2.7%	6.7%	6.9%
Total Stable Value Benchmark	-3.9	-4.9	-4.6	5.6	6.4
<i>Difference</i>	+0.0	+0.3	+1.9	+1.1	+0.5
Long Treasuries	-5.6	-7.8	-7.9	6.9	8.6
Treasury Benchmark	-5.6	-7.8	-8.4	6.2	7.6
<i>Difference</i>	+0.0	+0.0	+0.5	+0.7	+1.0
Stable Value Hedge Funds	0.4	2.7	5.5	2.9	0.8
Hedge Funds Benchmark	0.5	3.3	6.9	3.5	3.3
<i>Difference</i>	-0.1	-0.6	-1.4	-0.6	-2.5
Other Absolute Return	-2.9	2.2	28.8	14.6	-
Other Absolute Return Benchmark	0.6	1.1	2.3	2.4	-
<i>Difference</i>	-3.5	+1.1	+26.5	+12.2	-
Cash Equivalents	0.4	0.7	1.5	0.2	0.1
Cash Benchmark	0.0	0.0	0.1	0.1	0.3
<i>Difference</i>	+0.4	+0.7	+1.4	+0.1	-0.2

Note: Performance of Cash Equivalents is shown net of fees paid to TRS Strategic Partners

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9. Real Return: Performance Summary Ending 6/30/2013

	Second Quarter	YTD	One Year	Three Years	Five Years
Total Real Return	-1.5%	0.3%	4.6%	10.6%	1.6%
Real Return Benchmark	0.0	1.5	5.7	11.3	1.9
<i>Difference</i>	-1.5	-1.2	-1.1	-0.7	-0.3
TIPS	-7.0	-7.3	-4.5	4.9	4.3
U.S. TIPS Benchmark	-7.1	-7.4	-4.8	4.6	3.5
<i>Difference</i>	+0.1	+0.1	+0.3	+0.3	+0.8
Real Assets	2.1	5.5	10.3	15.1	1.2
Real Asset Benchmark	2.4	4.6	9.7	14.0	-1.2
<i>Difference</i>	-0.3	+0.9	+0.6	+1.1	+2.4
Commodities	-28.1	-36.2	-29.9	-9.7	-20.0
Commodities Benchmark	-5.9	-5.4	2.0	4.7	-15.2
<i>Difference</i>	-22.2	-30.8	-31.9	-14.4	-4.8

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Appendix – Supplemental Reporting

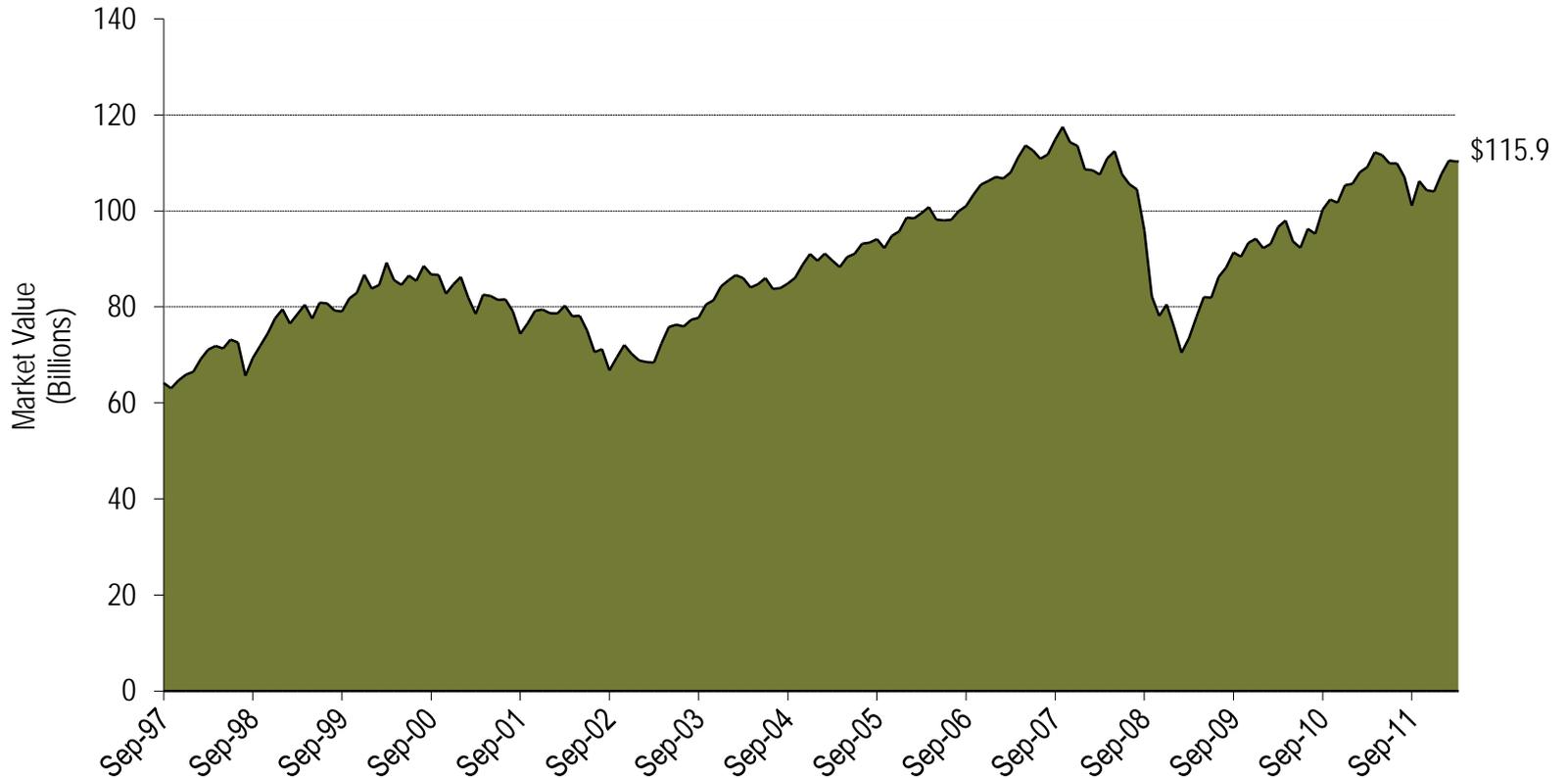
Historical Excess Performance

Quarterly and Cumulative Excess Performance
Total Fund vs. Total Fund Benchmark



TRS Asset Growth

Total Fund Historical Growth (September 1997 - June 2013)



External Manager Program: Public Equity Performance as of 6/30/2013

	Allocation (\$ in billions)	Second Quarter	YTD	One Year	Three Years
EP Total Global Equity	\$31.6	-0.6%	5.2%	16.3%	11.3%
EP Global Equity Benchmark	--	-1.2	3.9	14.0	11.1
<i>Difference</i>	--	+0.6	+1.3	+2.3	+0.2
EP U.S. Large Cap	\$8.0	1.8	11.6	21.1	18.0
EP Large Cap Benchmark	--	2.7	13.7	20.7	18.5
<i>Difference</i>	--	-0.9	-2.1	+0.4	-0.5
EP U.S. Small Cap	\$2.1	3.5	16.1	24.0	18.4
EP Small Cap Benchmark	--	2.8	16.0	25.9	19.9
<i>Difference</i>	--	+0.7	+0.1	-1.9	-1.5
EP Non-U.S. Developed	\$5.8	0.9	5.0	19.5	8.8
MSCI EAFE + Canada Index	--	-1.6	3.0	17.1	9.4
<i>Difference</i>	--	+2.5	+2.0	+2.4	-0.6
EP Emerging Markets	\$6.3	-7.2	-7.2	5.8	4.1
MSCI Emerging Markets Index	--	-8.1	-9.6	2.9	3.4
<i>Difference</i>	--	+0.9	+2.4	+2.9	+0.7
EP World Equity	\$4.3	0.5	8.5	20.8	13.4
EP World Equity Benchmark	--	-0.4	6.1	16.6	12.4
<i>Difference</i>	--	+0.9	+2.4	+4.2	+1.0
EP Directional Hedge Funds	\$5.1	0.3	5.9	12.1	--
HFRI Fund of Funds Composite Index	--	0.0	3.3	7.2	--
<i>Difference</i>	--	+0.3	+2.6	+4.9	--

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External Manager Program: Stable Value/Total Program Performance as of 6/30/2013

	Allocation (\$ in billions)	Second Quarter	YTD	One Year	Three Years
<u>EP Total Stable Value</u>	\$4.4	0.3%	3.4%	10.5%	6.0%
EP Stable Value Benchmark	--	0.0	0.0	0.2	1.2
<i>Difference</i>	--	+0.3	+3.4	+10.3	+4.8
<u>EP Stable Value Hedge Funds</u>	\$4.3	0.4	2.7	5.5	2.9
EP Stable Value Hedge Funds Benchmark	--	0.5	3.3	6.9	3.5
<i>Difference</i>	--	-0.1	-0.6	-1.4	-0.6
<u>EP OAR</u>	\$0.1	-2.8	31.7	78.6	27.1
EP OAR Benchmark	--	0.6	1.1	2.3	2.4
<i>Difference</i>	--	-3.4	+30.6	+76.3	+24.7
<u>Total External Public Program</u>	\$36.0	-0.5	5.0	15.6	10.0
EP External Public Benchmark	--	-1.0	3.9	12.9	9.0
<i>Difference</i>	--	+0.5	+1.1	+2.7	+1.0

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Public Strategic Partnership Program (SPN): Performance Summary as of 6/30/2013

	Allocation (\$ in billions)	Second Quarter	YTD	One Year	Three Years
Public Strategic Partnership	\$6.0	-1.3%	3.1%	11.5%	12.4%
Public SPN Benchmark	--	-2.4	1.5	8.7	11.6
<i>Difference</i>	--	+1.1	+1.6	+2.8	+0.8
Blackrock	\$1.3	-1.3%	2.2%	9.7%	11.8%
J.P. Morgan	\$1.4	-1.3%	3.8%	13.8%	12.9%
Neuberger Berman	\$1.4	-2.9%	1.9%	10.0%	11.4%
Morgan Stanley	\$1.3	0.7%	5.3%	12.9%	13.5%
Barclays Capital	\$0.6	-2.6%	1.8%	10.2%	--

- The Public SPNs in aggregate outperformed the benchmark during all time periods shown above
 - Neuberger Berman was the only SPN with a 3-year return below benchmark
 - Barclays Capital lagged the benchmark during the quarter but outperformed over the trailing twelve months

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Benchmarks

- **Total Fund Performance Benchmark** – 18% MSCI US Standard, 2% MSCI US Small Cap, 10% MSCI Emerging Markets, 15% MSCI EAFE plus Canada, 5% HFRI FoF Composite Index, 12% State Street Private Equity (1 qtr lagged), 13% BC Long Term Treasury, 4% HFRI FoF Conservative Index, 1% Citigroup 3 Mo T-Bill, 5% BC US TIPS, and 15% NCREIF ODCE (1 qtr lagged)
- **Global Equity Benchmark**– 24% MSCI EAFE plus Canada, 29% MSCI US Standard, 3% MSCI US Small Cap, 16% MSCI Emerging markets index, 8% HFRI FoF Composite Index, and 19% State Street Private Equity (1 qtr lagged)
 - US Large Cap Benchmark - MSCI US Standard Index
 - US Small Cap Benchmark - MSCI US Small Cap Index
 - Emerging Markets Benchmark – MSCI Emerging Markets
 - Non-US Developed Benchmark– MSCI EAFE plus Canada
 - Directional Hedge Funds – HFRI Fund of Funds (FoF) Composite Index
 - Private Equity Benchmark - State Street Private Equity (1 qtr lagged)

Note: Returns and market values (based on account level) reported are provided by State Street. Net additions/withdrawals are reported on a gross (adjusted for expenses) total fund level as provided by State Street. All rates of return for time periods greater than one year are annualized. The excess returns shown in this presentation may differ from State Street statements due entirely to rounding. These differences are generally within a few basis points and are not material.

Benchmarks (cont'd)

- **Stable Value Benchmark** – 22% HFRI FoF Conservative Index, 72% BC Long Term Treasury, and 6% Citigroup 3 mo T-Bill.
 - US Treasuries Benchmark – Barclays Capital (BC) Long Term Treasury
 - Stable Value Hedge Funds – HFRI Fund of Funds (FoF) Conservative Index
 - Other Absolute Return Benchmark - 3 Mo LIBOR + 2%
 - Cash Benchmark - Citigroup 3 Mo T-Bill
- **Real Return Benchmark** – 25% BC US TIPS and 75% NCREIF ODCE
 - US TIPS Benchmark - BC US TIPS Index
 - Real Assets Benchmark –NCREIF ODCE (1qtr lagged)
 - Commodities Benchmark - Goldman Sachs Commodity Index

Note: Returns and market values (based on account level) reported are provided by State Street. Net additions/withdrawals are reported on a gross (adjusted for expenses) total fund level as provided by State Street. All rates of return for time periods greater than one year are annualized. The excess returns shown in this presentation may differ from State Street statements due entirely to rounding. These differences are generally within a few basis points and are not material.

Description of Performance Attribution

- A measure of the source of the deviation of a fund's performance from that of its policy benchmark. Each bar on the attribution graph represents the contribution made by the asset class to the total difference in performance. A positive value for a component indicates a positive contribution to the aggregate relative performance. A negative value indicates a detrimental impact. The magnitude of each component's contribution is a function of (1) the performance of the component relative to its benchmark, and (2) the weight (*beginning of period*) of the component in the aggregate.
- The individual Asset Class effect, also called Selection Effect, is calculated as
$$\text{Actual Weight of Asset Class} \times (\text{Actual Asset Class Return} - \text{Asset Class Benchmark Return})$$
- The bar labeled Allocation Effect illustrates the effect that a Total Fund's asset allocation has on its relative performance. Allocation Effect calculation = $(\text{Asset Class Benchmark Return} - \text{Total Benchmark Return}) \times (\text{Actual Weight of Asset Class} - \text{Target Policy Weight of Asset Class})$.
- The bar labeled Cash Flow Effect describes the impact of asset movements on the Total Fund results.
$$\text{Cash Flow Effect calculation} = (\text{Total Fund Actual Return} - \text{Total Fund Policy Return}) - \text{Current Selection Effect} - \text{Current Allocation Effect}$$
- The bar labeled Benchmark Effect results from the weighted average return of the asset classes' benchmarks being different from the Total Funds' policy benchmark return. Benchmark Effect calculation = $\text{Total Fund Policy Return} - (\text{Asset Class Benchmark Return} \times \text{Target Policy Weight of Asset Class})$
- Cumulative Effect
$$\text{Cumulative Effect calculation} = \text{Current Effect } t \times (1 + \text{Cumulative Total Fund Actual Return } t-1) + \text{Cumulative Effect } t-1 \times (1 + \text{Total Fund Benchmark Return } t)$$

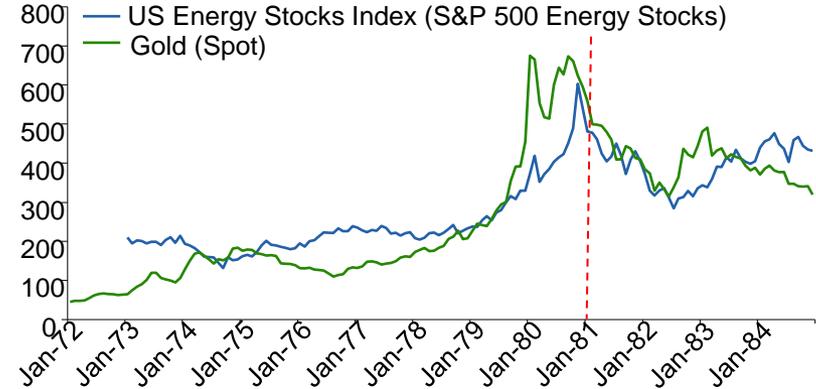
Tab 5 C

The Post BRICS World

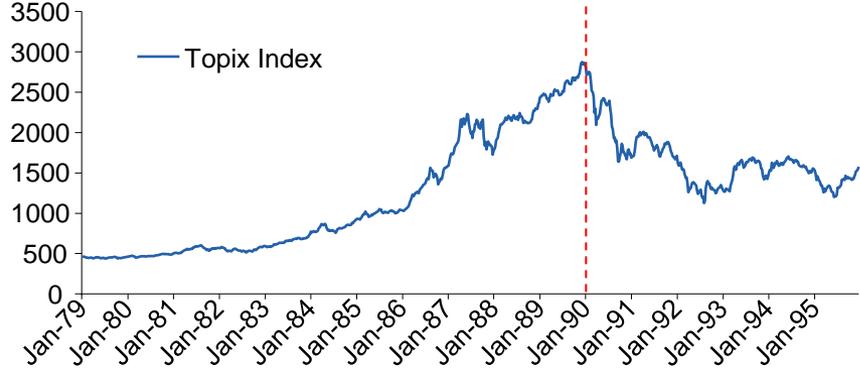
Ruchir Sharma
August 2013

Winners of One Decade Rarely Winners of the Next

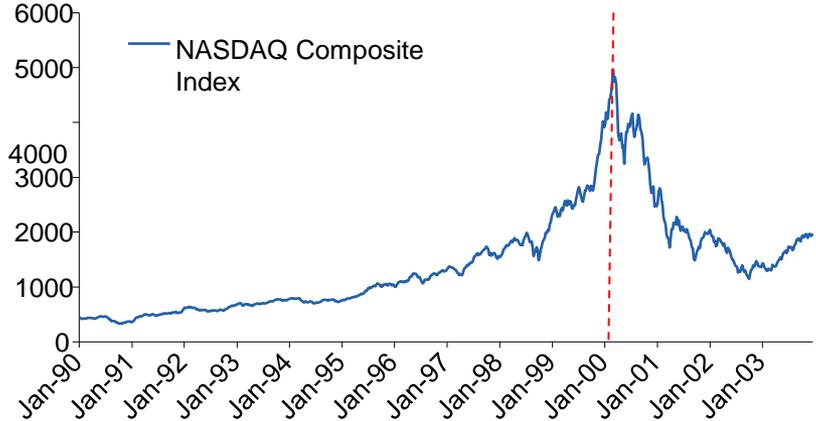
1970'S Winners: Gold and Energy Stocks



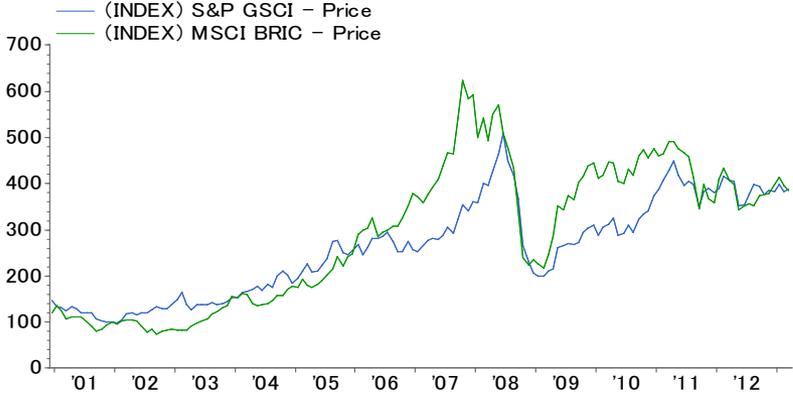
1980's Winner: Japanese Equities



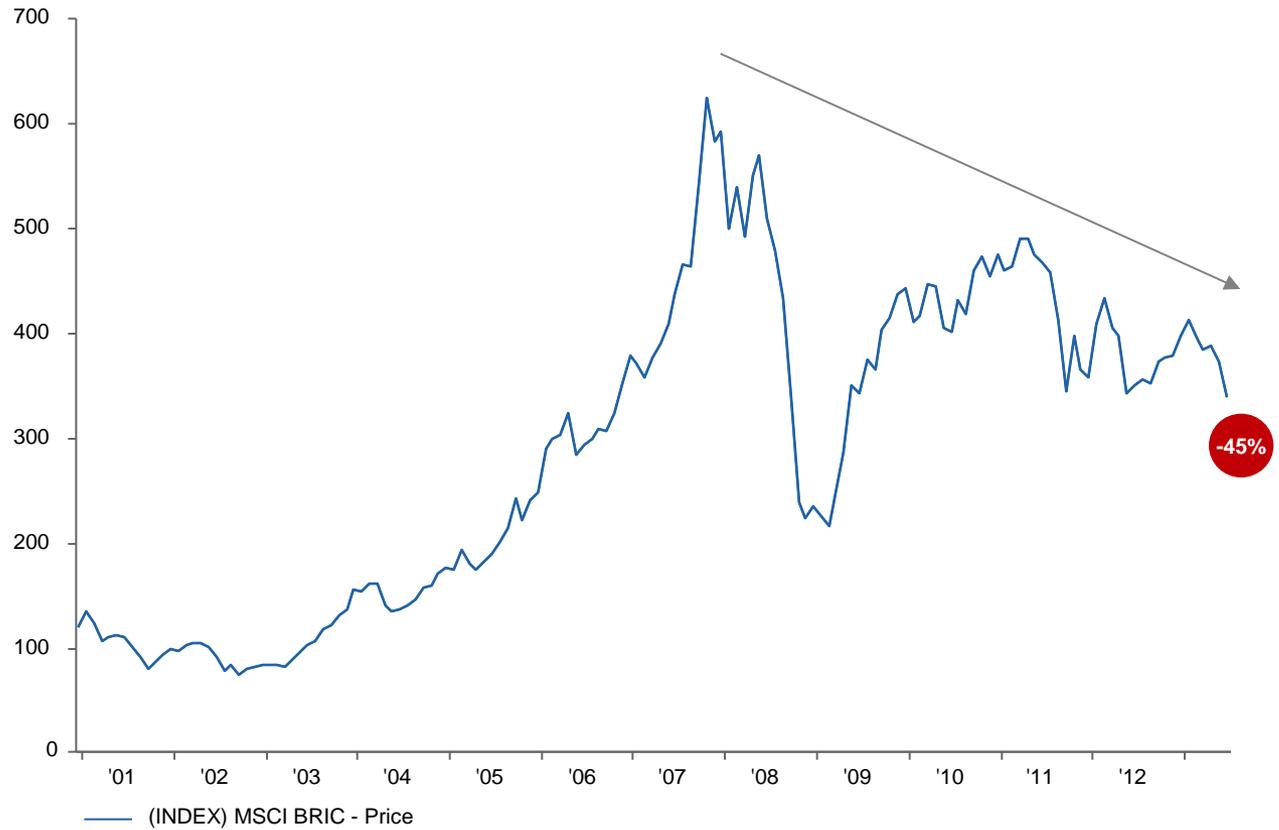
1990's Winner: Technology Stocks



2000's Winners: BRICS and Commodities



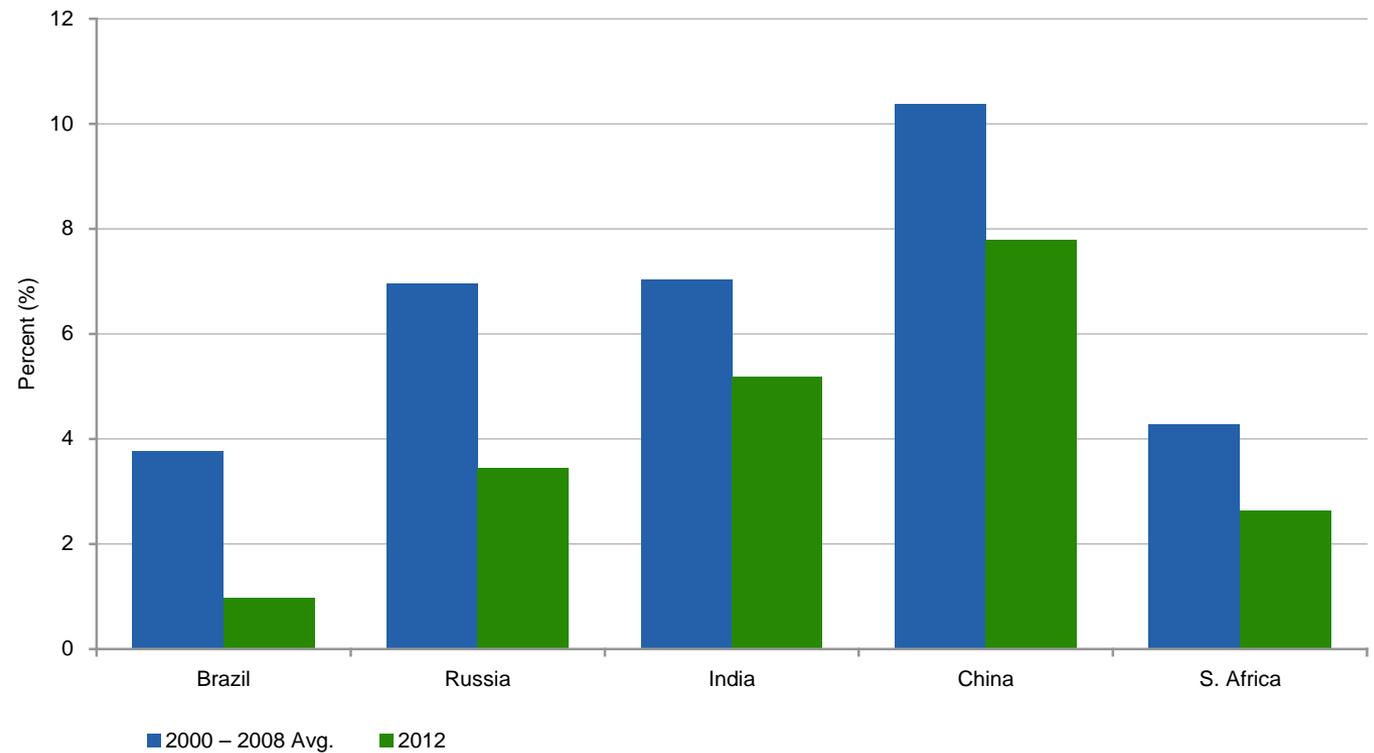
Rule And Ruin



Source: MSIM Emerging Markets Research, FactSet, Datat as of July 2013

Broken BRICS

Real GDP Growth

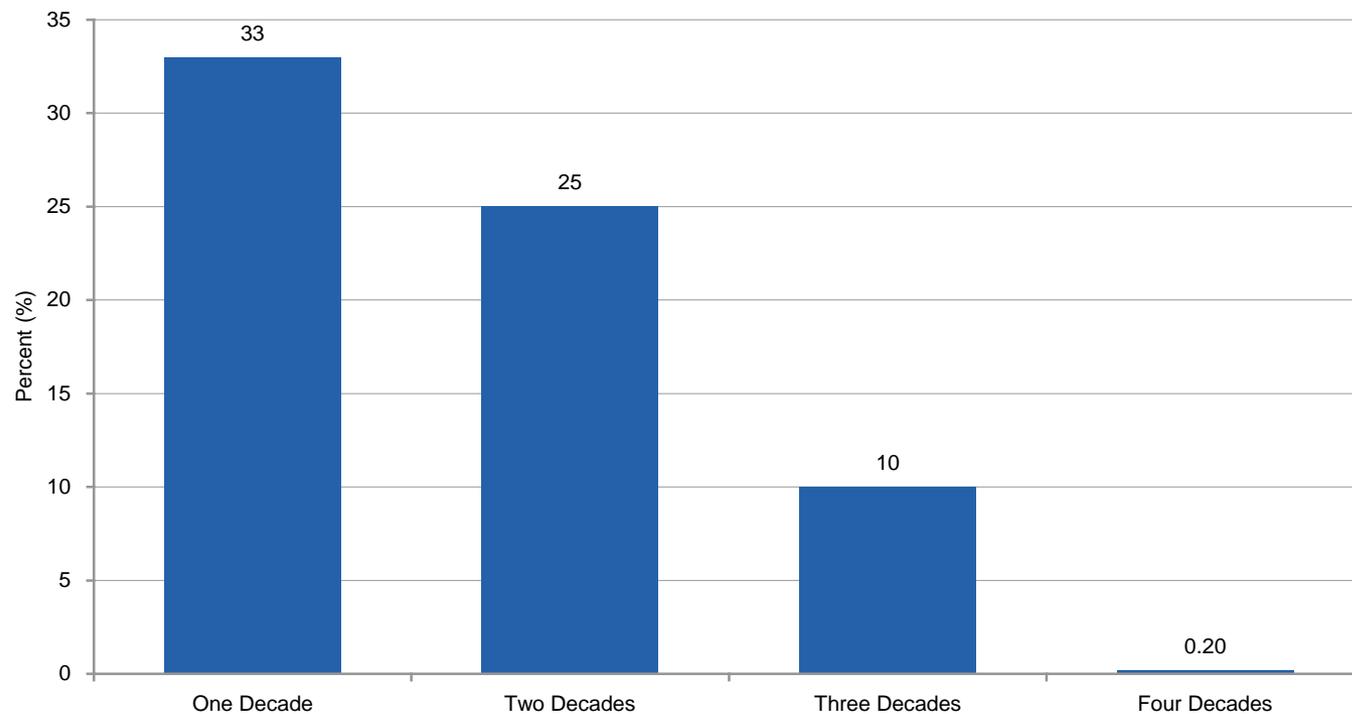


Source: MSIM Emerging Markets Research, Haver. Data as of April 2013

Growth Is Hard To Sustain

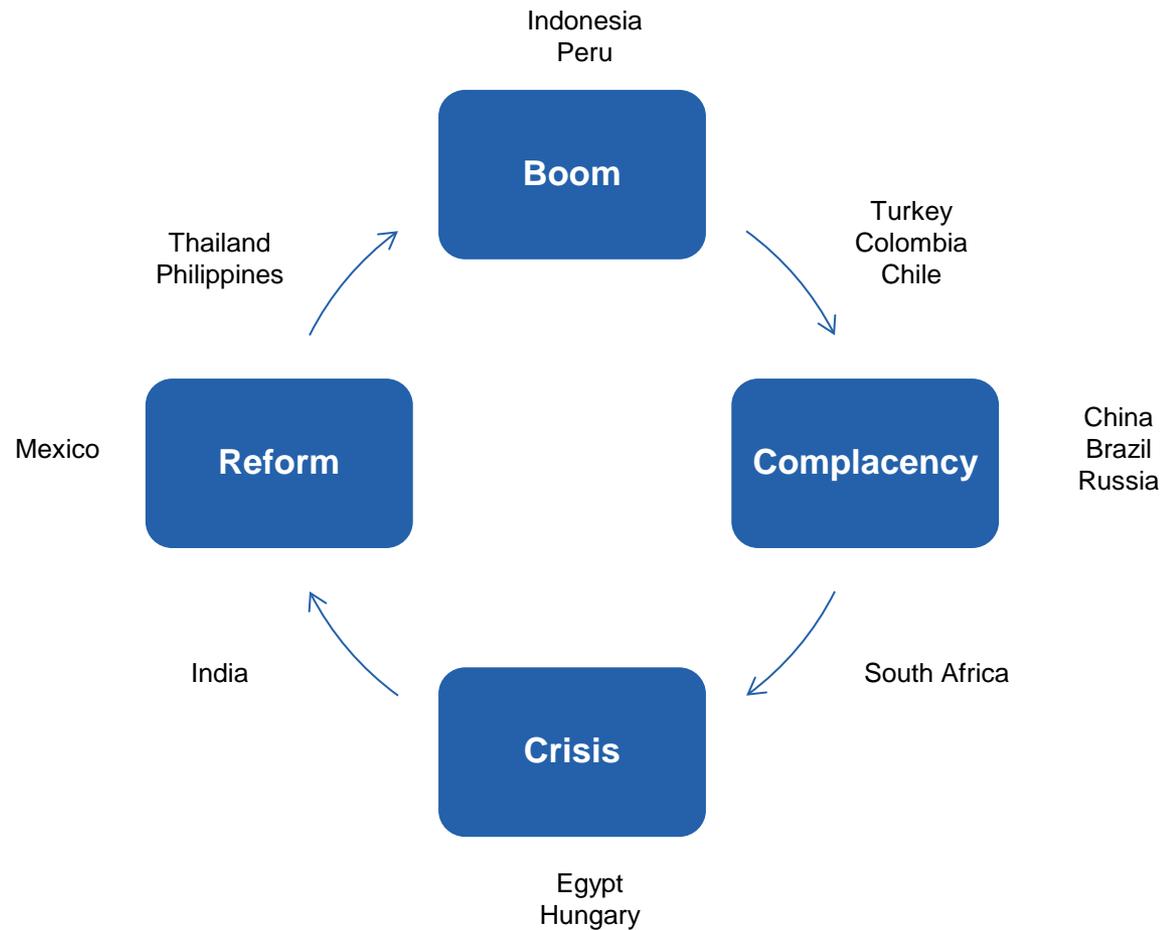
The longer a boom lasts, the less likely it is to continue

Percent of Emerging Market's Averaging Growth Above 5%, by Number of Decades Since 1950
Real GDP Growth



Source: MSIM Emerging Markets Research, Conference Board. Data as of December 2011

The Circle Of Life



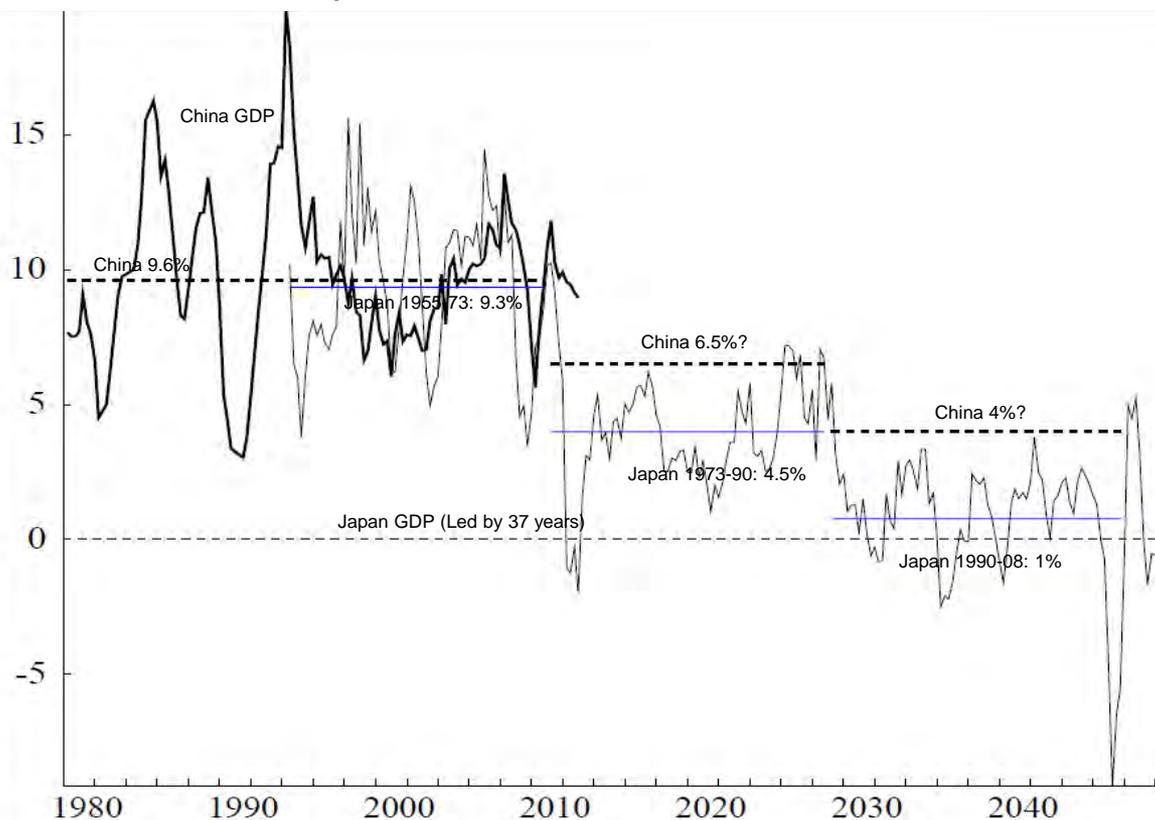
China's Slowdown Is Natural At This Stage Of Development

Japan, South Korea, and Taiwan began to slow from 9 or 10 percent growth to around 5 or 6 percent when their per capita incomes reached upper middle-income levels

In all three cases the major warning sign of a slowdown was what economists call "structural inflation"

China could be like Japan in mid 1970s, a period when Japan began to downshift, but remained a compelling growth story for 15 years

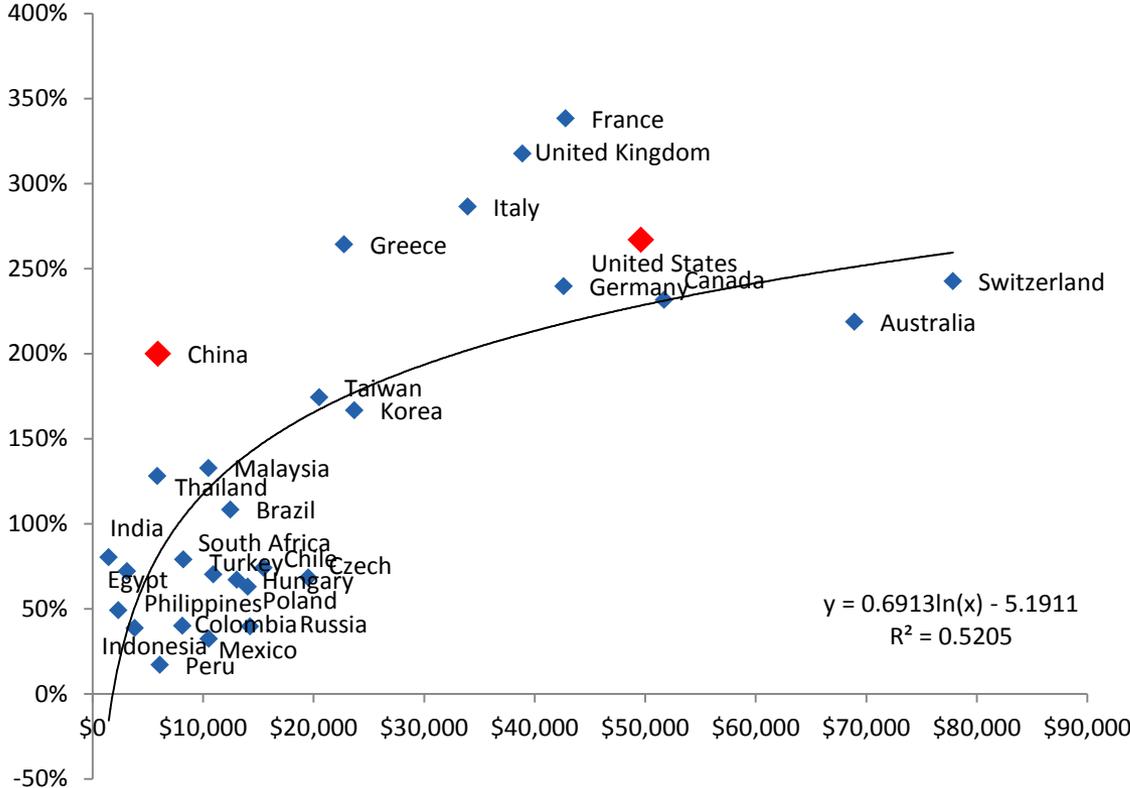
China GDP from 1980 vs. Japan GDP from 1955



Source: Morgan Stanley Investment Management

China: The Invisible Debt Problem

Total Debt To GDP versus GDP per capita

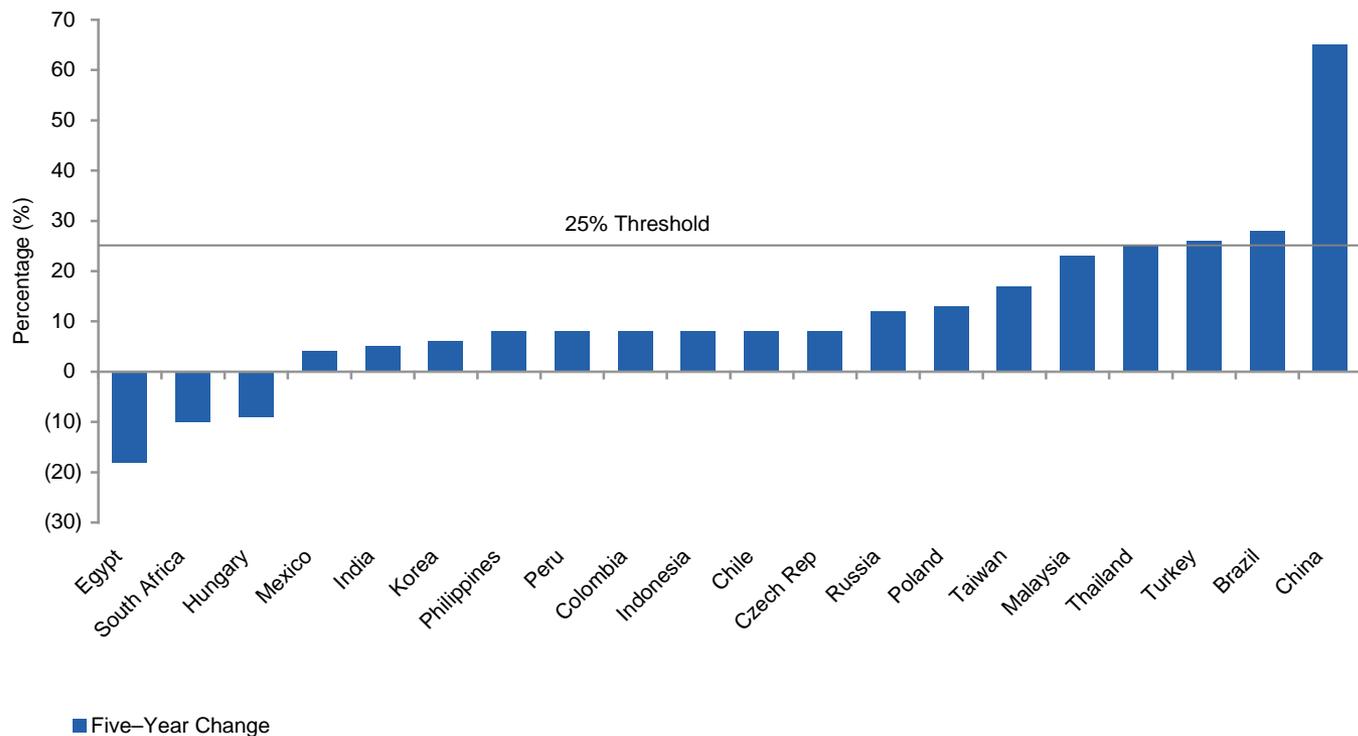


Source: Morgan Stanley Investment Management, UBS. As of December 2012

China's Debt Is Flashing Red

When credit growth exceeds GDP growth by 5% a year for 5 years, it is a red flag

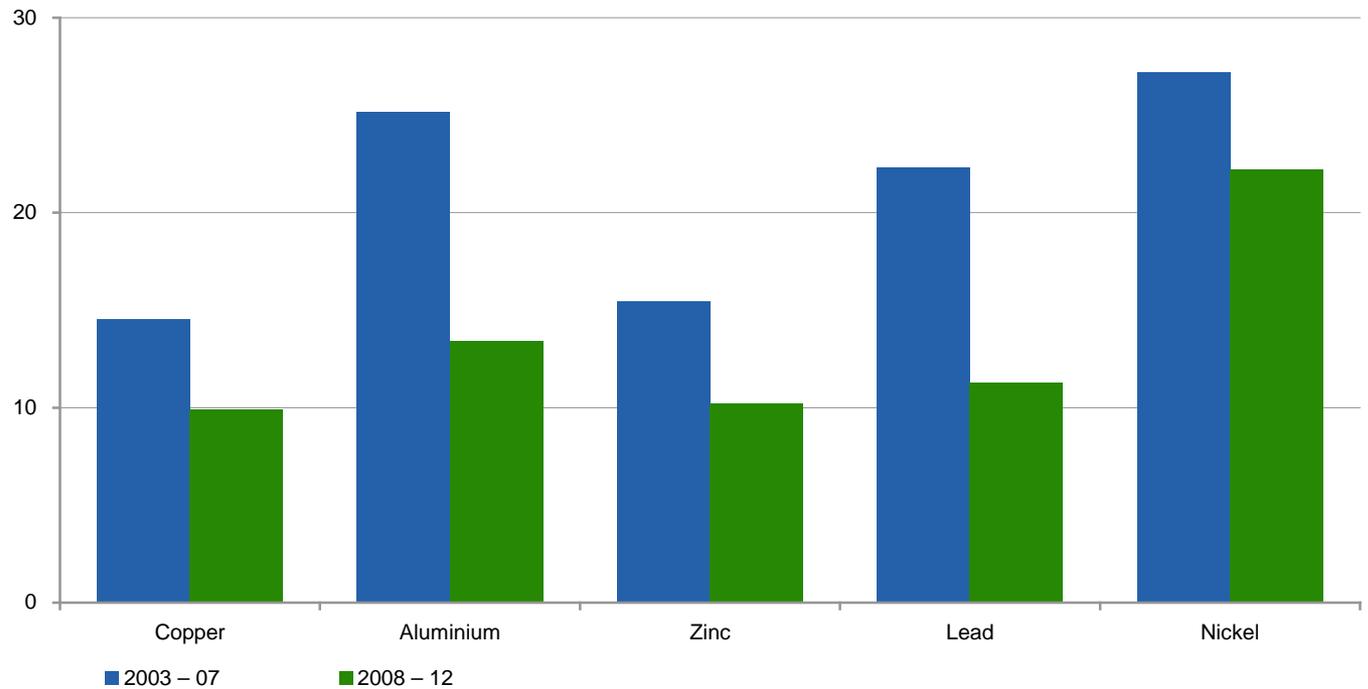
Change in Credit to GDP over 5 Years



Source: IMF, MSIM. As July, 2013 (Based on IMF Methodology: Change in credit to GDP ratio over 5 years)

Slowdown In China Reducing Commodity Demand

China's Demand For Metals



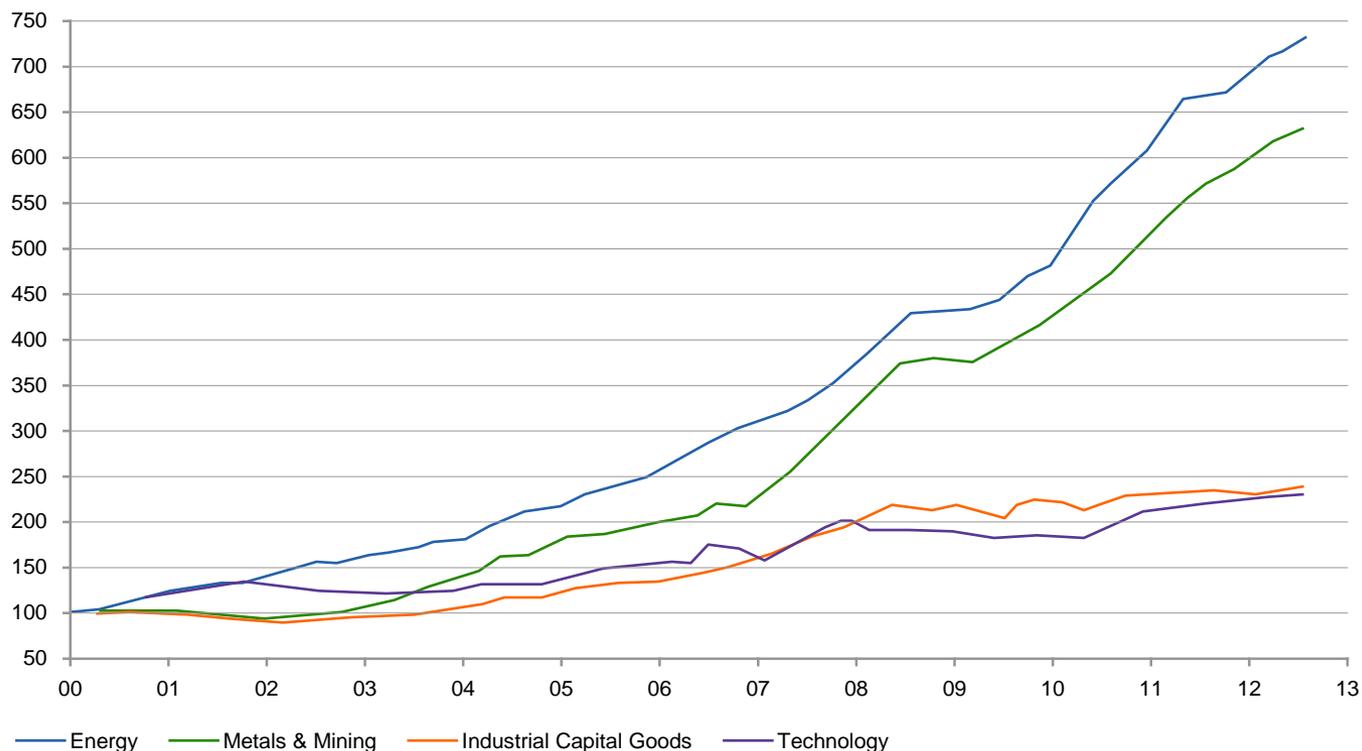
Annual % increase in demand

Source: Credit Suisse, Wood MacKenzie

Massive Supply Response In Commodity Sectors

Energy, Metals & Mining, Industrial Capita Goods and Technology Stocks Worldwide Property, Plant and Equipment Indices

(January 2000=100)¹ 2000 Through February 2013



Source: Corporate Reports, Empirical Research Partners Analysis

1. Data smoothed on a trailing six-month basis.

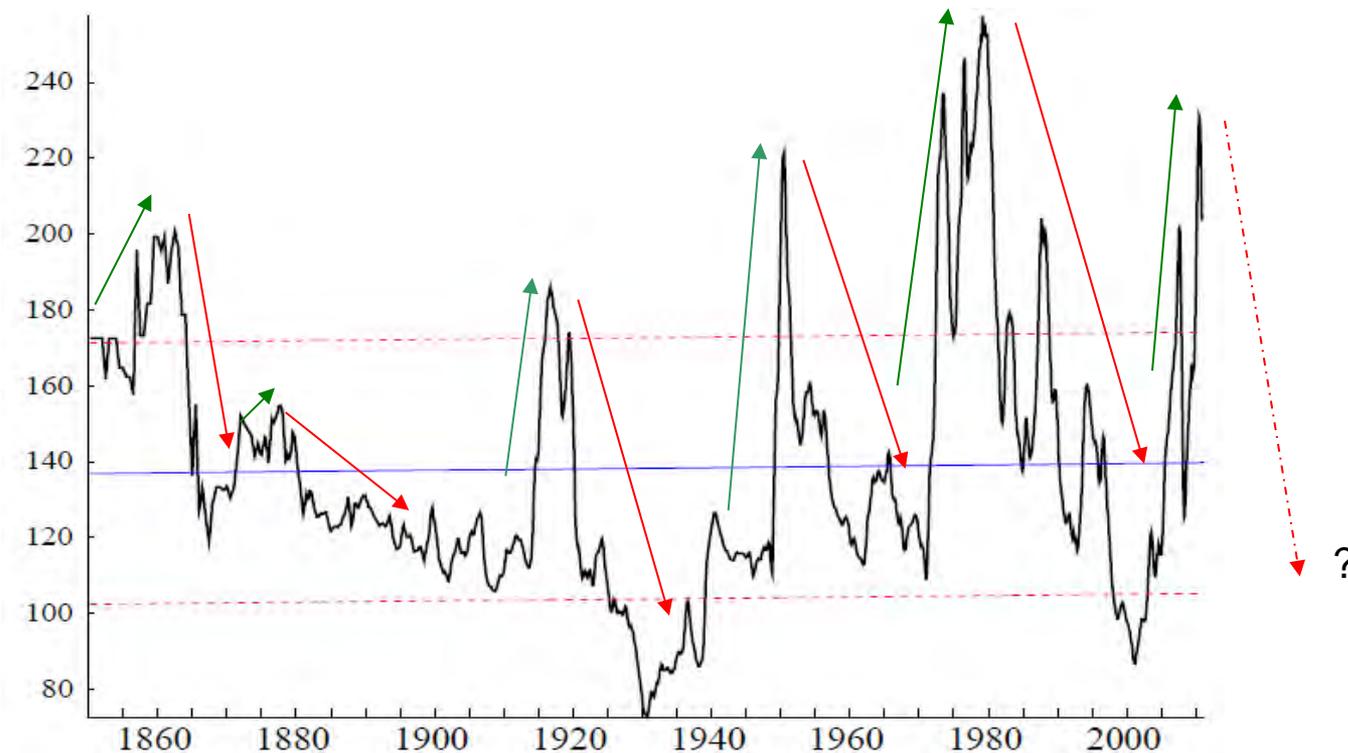
Commodities Reverting To Their Long Term Pattern

Over the last 200 years, the prices of commodities as a group have been flat

Prices rise continuously for a decade, then prices fall for two decades

Real Prices: Economist All-Commodity Index

Series Ann. Return 0.1%, Series Trend Return 0.0%

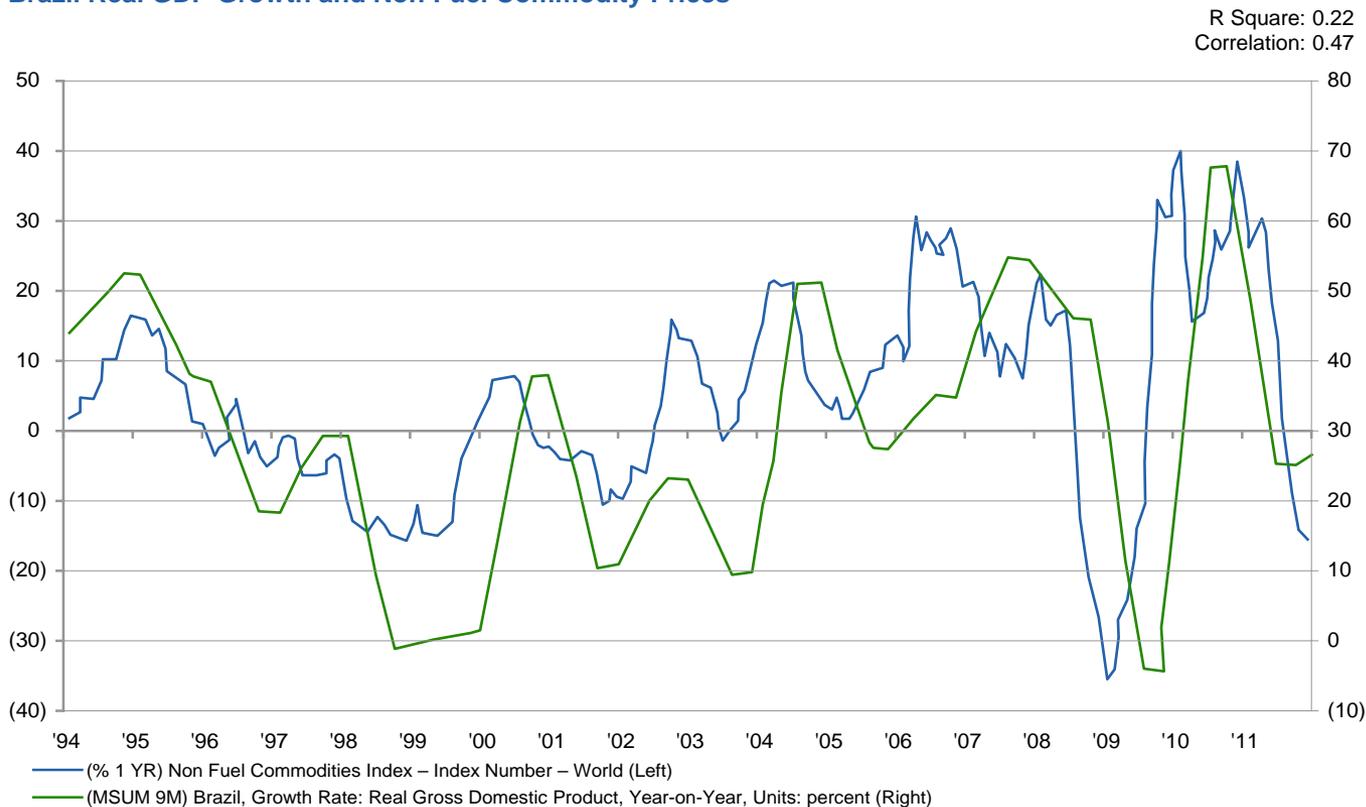


Source: Global Financial Data, Global Insight, The Economist, Morgan Stanley Investment Management. Data as of 1/30/2012

Brazil: Just A Commodity Play

Since the early 1980s Brazil's growth rate has oscillated around an average of 2.5 percent, spiking only with price swings for Brazil's key commodity exports

Brazil Real GDP Growth and Non Fuel Commodity Prices



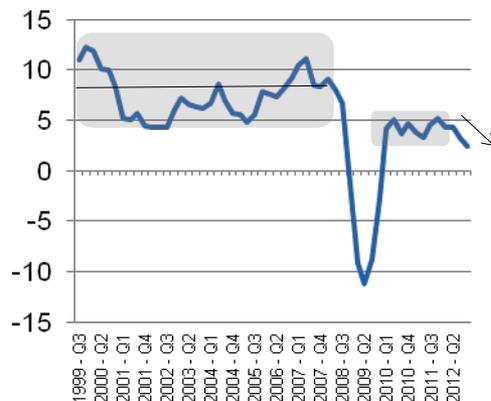
Source: FactSet. As of June, 2012

Russia: Running Out Of Growth Drivers

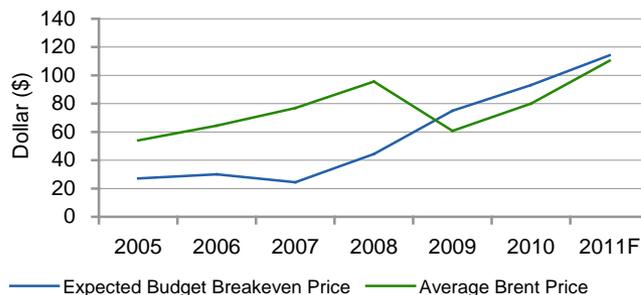
The Russian budget which balanced at ~\$30 oil in 2005, now balances at an oil price of \$115

The challenge of growing from a per capita income of \$13,000 is very different from that of growing from \$1,500 a decade ago

Russia Real GDP (%)



Russia Budget Breakeven Oil Price



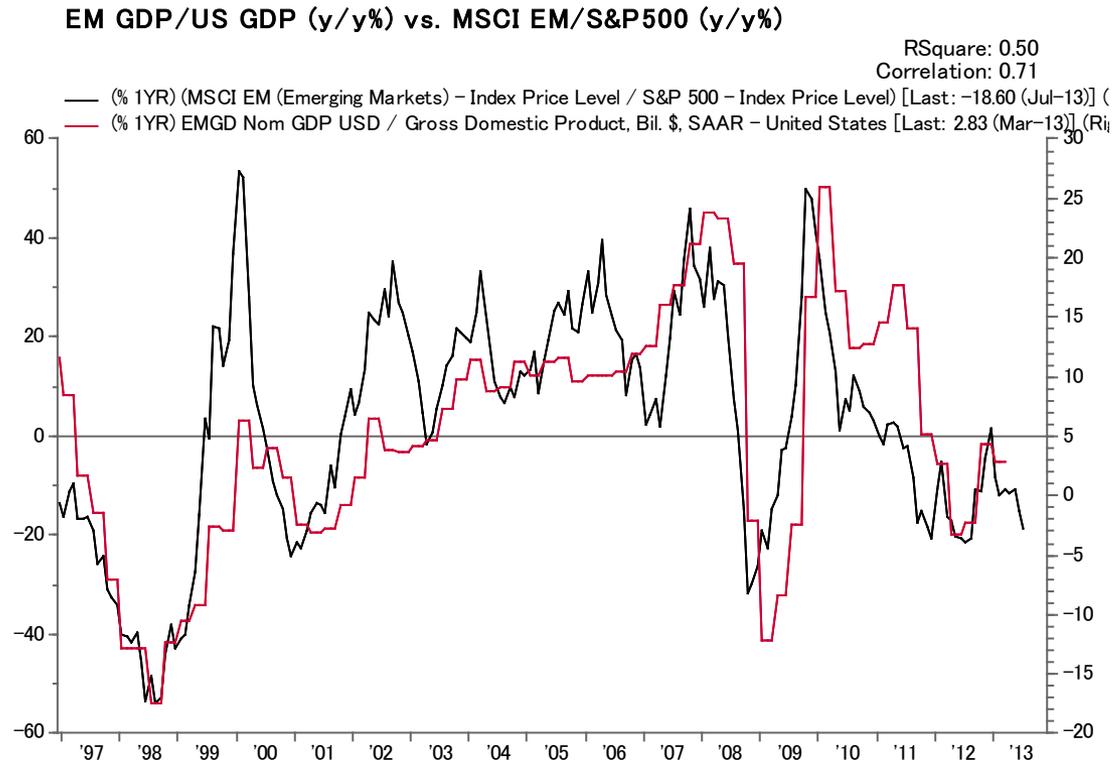
Source: DB, Ministry of Finance, MSIM. As of December, 2011

Source: FactSet. As of December, 2011

Relative Growth Linked to Relative Equity Performance

In a way, this is reflecting the recent EM growth slowdown

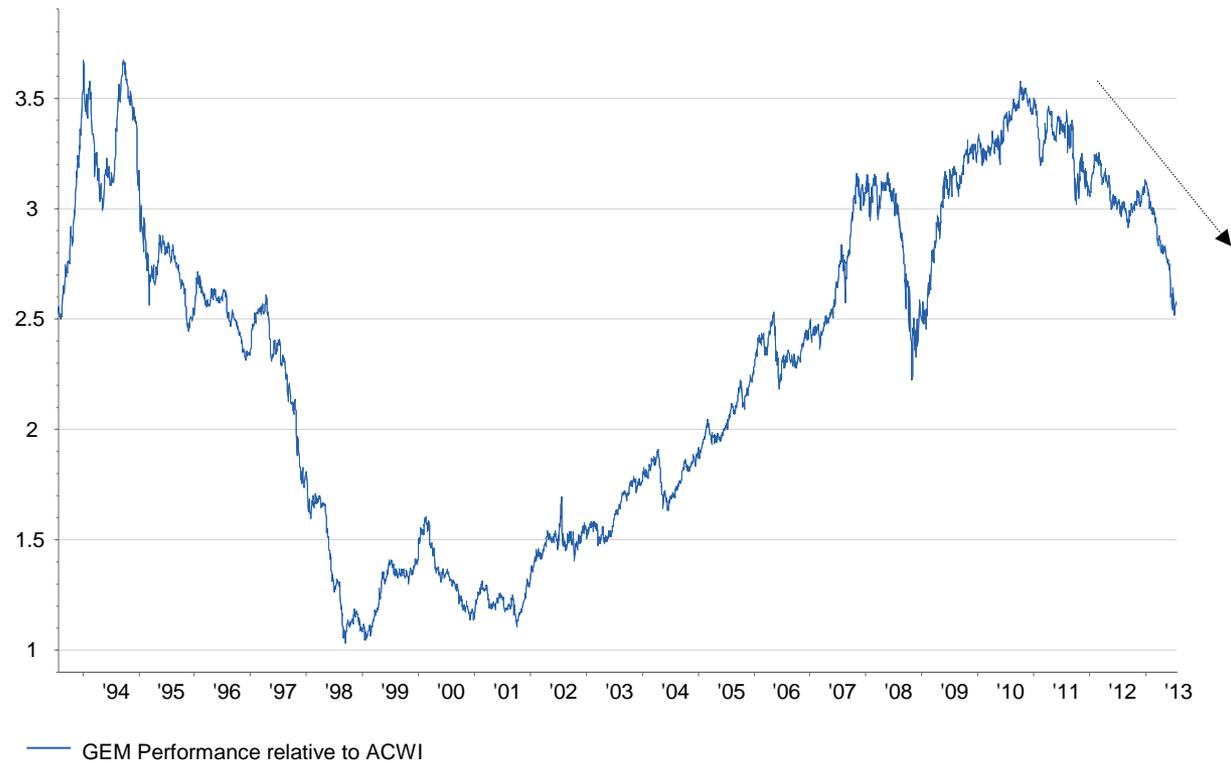
Historically, when the growth differential between the US and EM closes, EM relative performance (y/y%) falls



Source: FactSet, Haver, MSIM. Data as of Q1 2013

EM Stuck At Base Camp While DM Is Rallying

EM Versus ACWI Performance



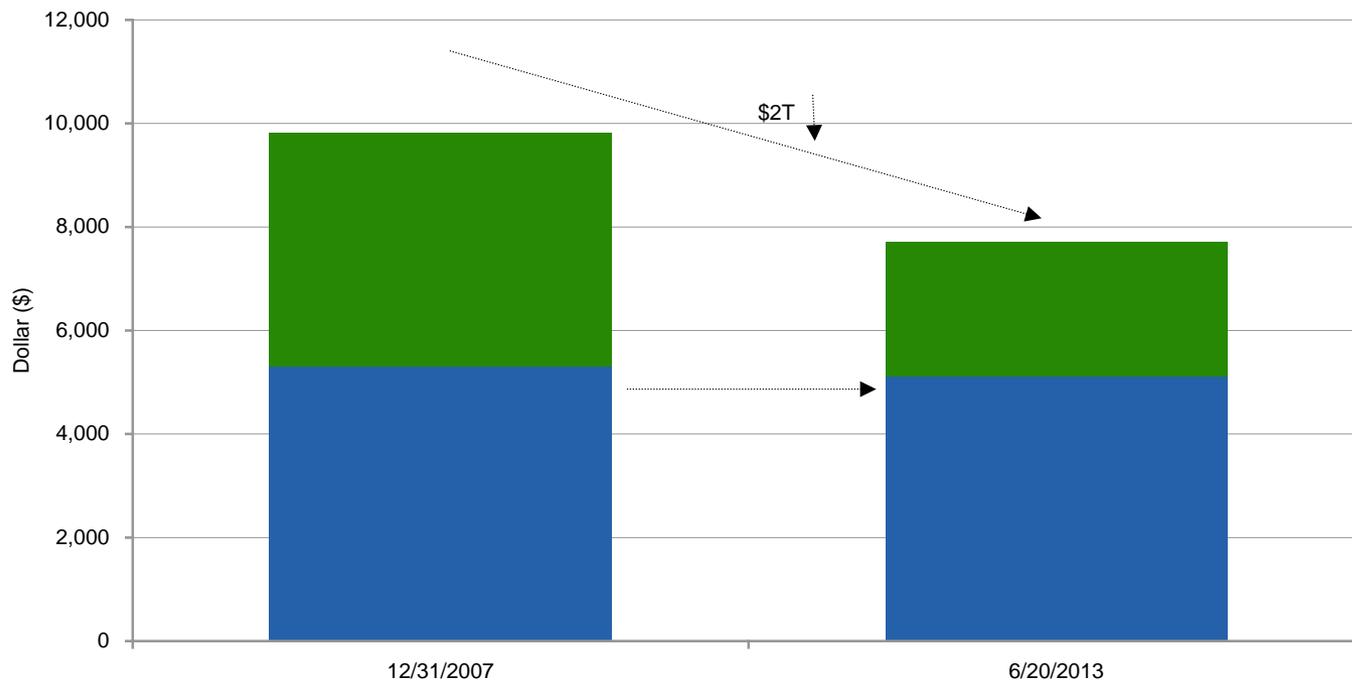
Source: MSIM Emerging Markets Research, Factset

Emerging economies have lost nearly \$2 trillion in stock-market value since the global financial crisis hit in late 2007

The full blame for this meltdown, and then some, can be placed at the door of their state-owned companies, which account for a third of these economies' roughly \$9 trillion market capitalization

An Under Appreciated Factor Behind the \$2 Trillion Downturn

Private And State Controlled Companies' Market Value

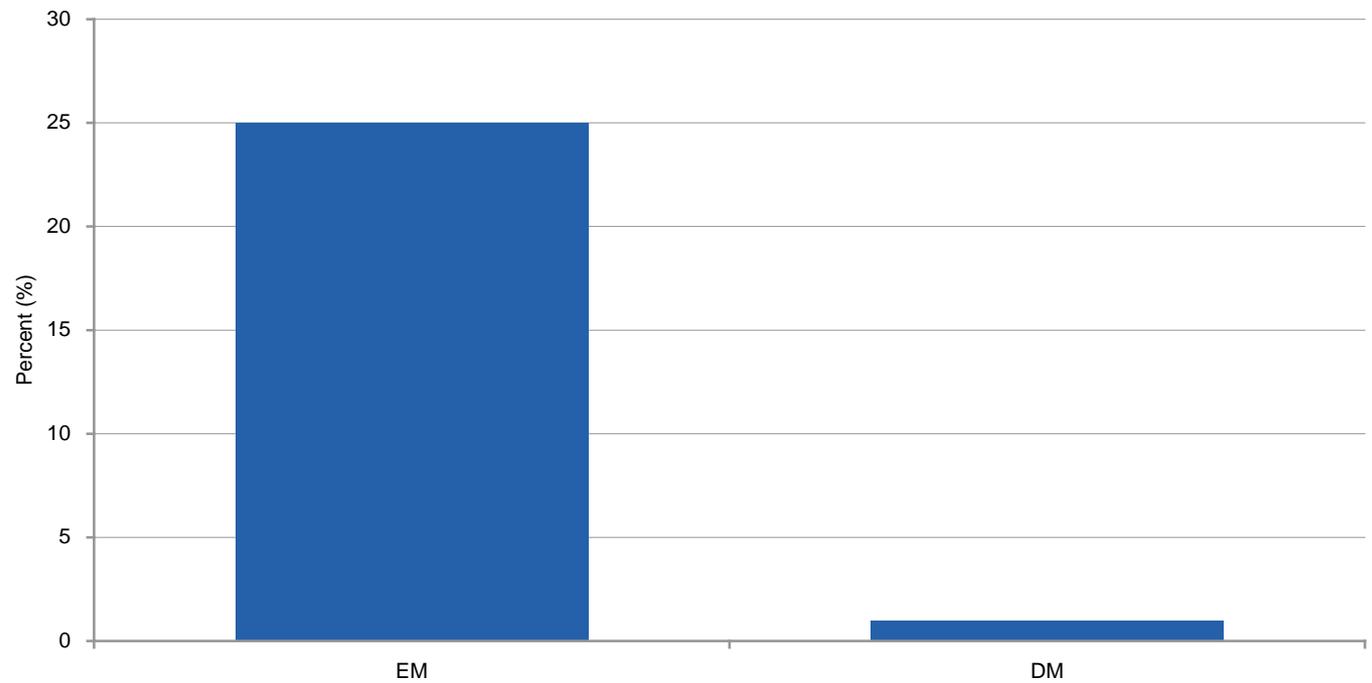


■ Private Companies ■ State Controlled Companies

Source: MSIM Emerging Markets Research, MSCI, Bloomberg

The State Plays a Much Bigger Role in EM

Share of State Companies in Market Cap

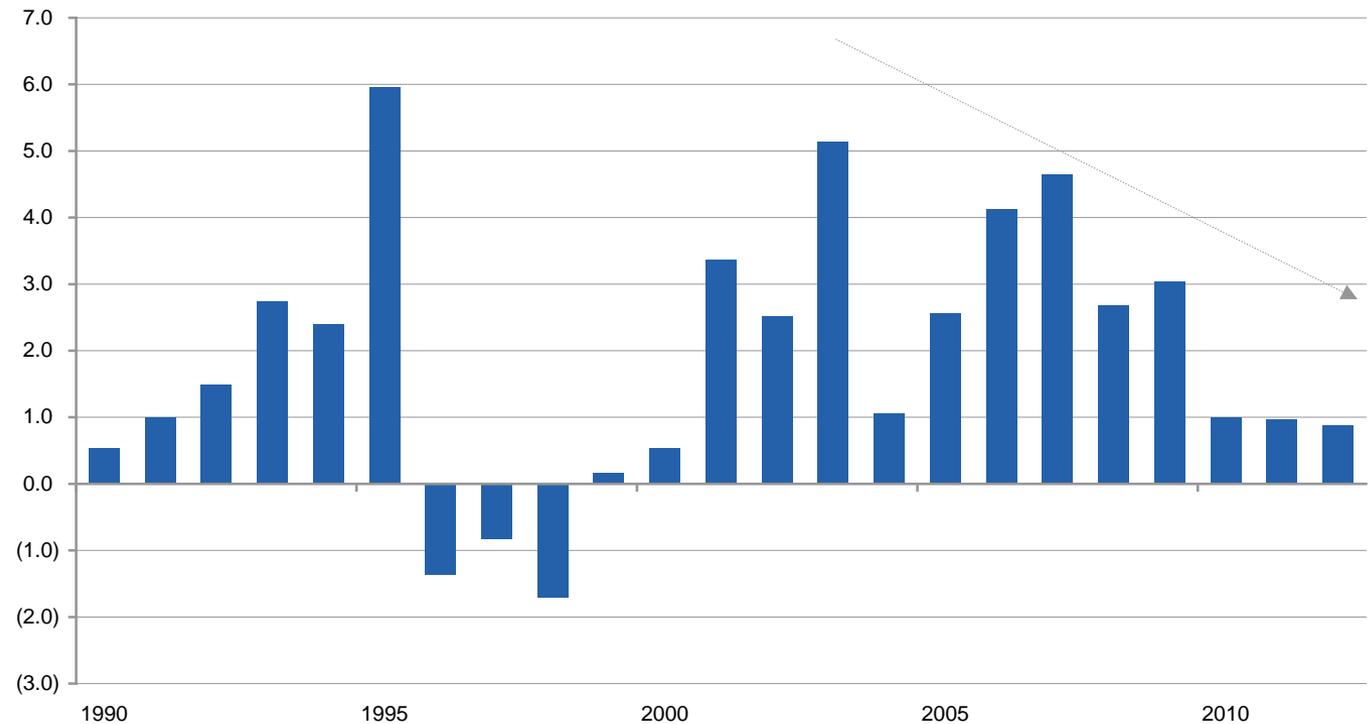


■ Share of State Companies in Market Cap

Source: MSIM Emerging Markets Research, MSCI, Bloomberg

Leading To A Narrowing Productivity Gap

Difference In Total Factor Productivity Growth Rates Between EM and US



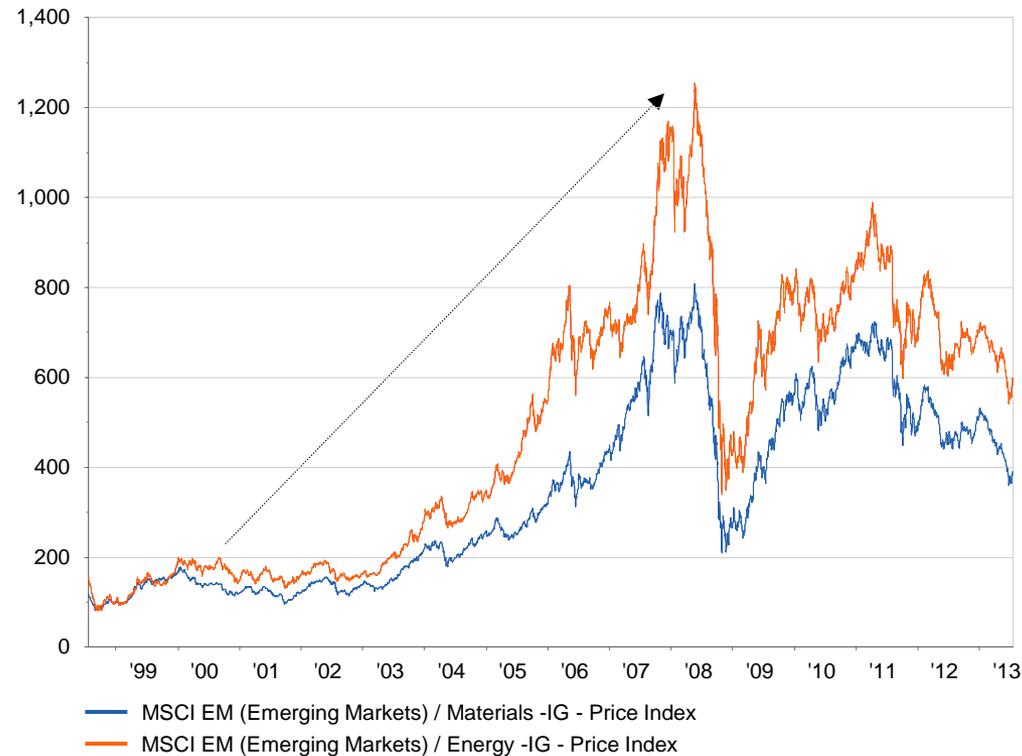
Source: Conference Board, UBS estimates

Data as of 7/1/2013. Estimates are subject to change and may not necessarily come to pass.

In 2000s State Companies Rode the Commodity Boom

Betting that rising demand from China would continue to drive up prices for industrial commodities, investors poured money into any company involved in energy or raw materials – industries often controlled by the government in the emerging world.

MSCI EM Energy and Materials

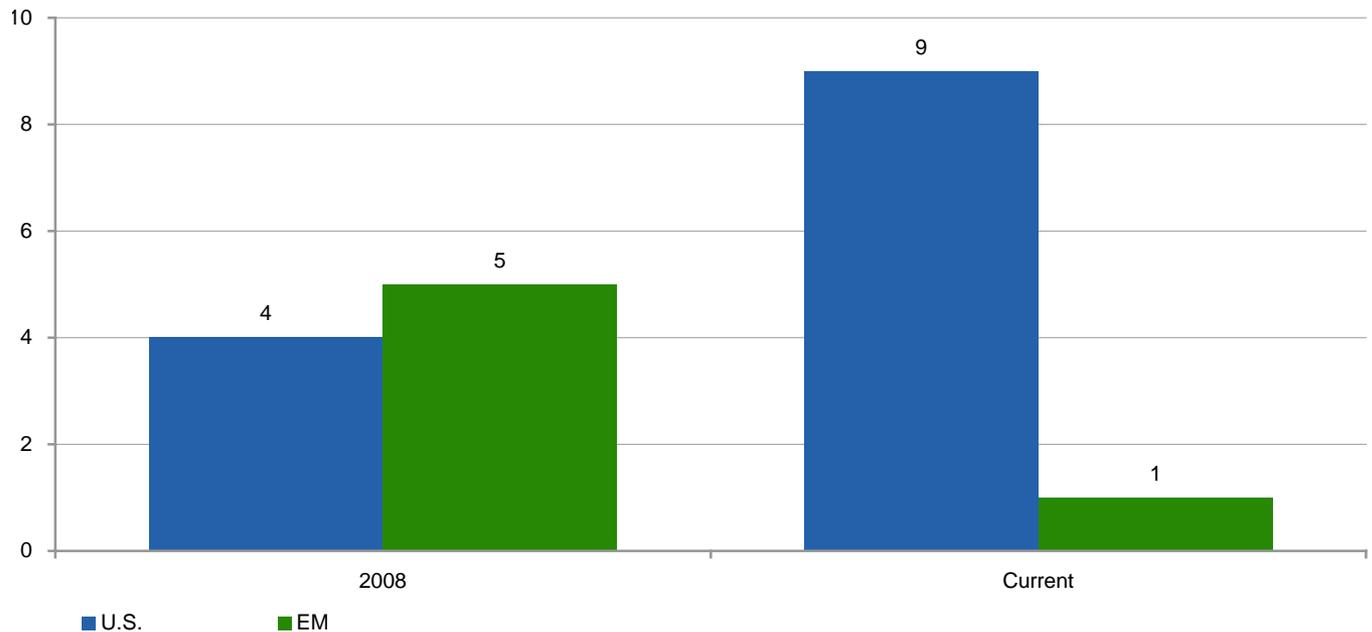


Source: MSIM Emerging Markets Research, Factset,

Markets Rediscover Technology and the West

World-wide, investors are also shifting money to technology from commodities. This helps to explain why the U.S. – a center of tech innovation – now accounts for nine of the 10 most valuable companies in the world. Meanwhile, state-owned companies in the emerging world aren't being able to keep pace. Technological innovation has never been a forte of bureaucrats

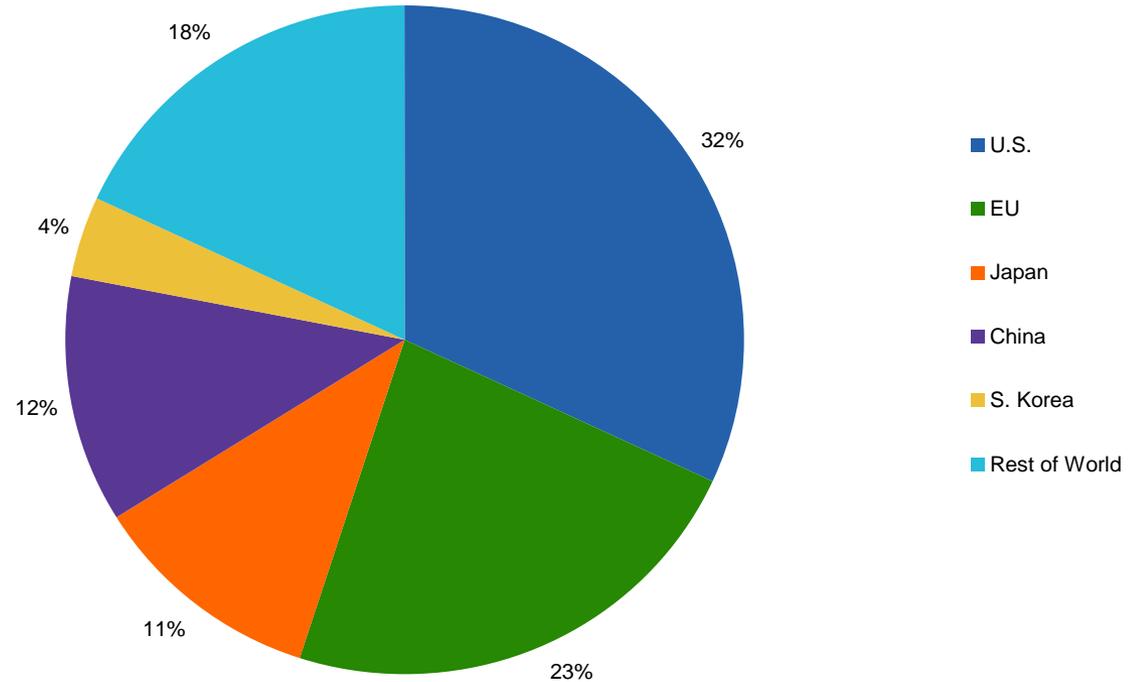
Top 10 Companies by Market Cap: U.S. Companies vs. EM Companies



Source: Bloomberg LP. Data as of July 10, 2012

U.S. Dominates Global R&D Spending

Gross R&D expenditures, 2009 (world total \$1,276B)

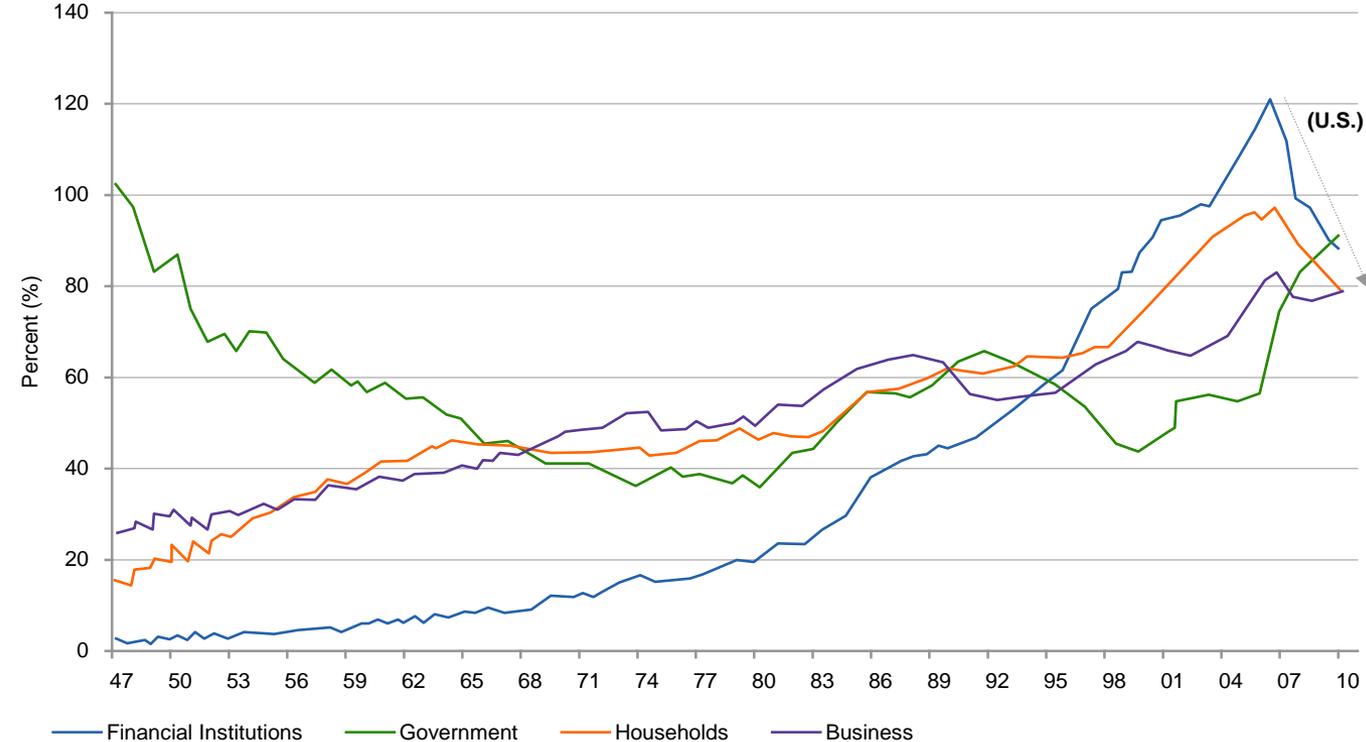


Source: Bruegel. Data as of December 2009

U.S. Winning The Deleveraging Race

United States is one of only three major developed economies—alongside Australia and Germany—that since 2008 has lowered its total debt as a share of GDP

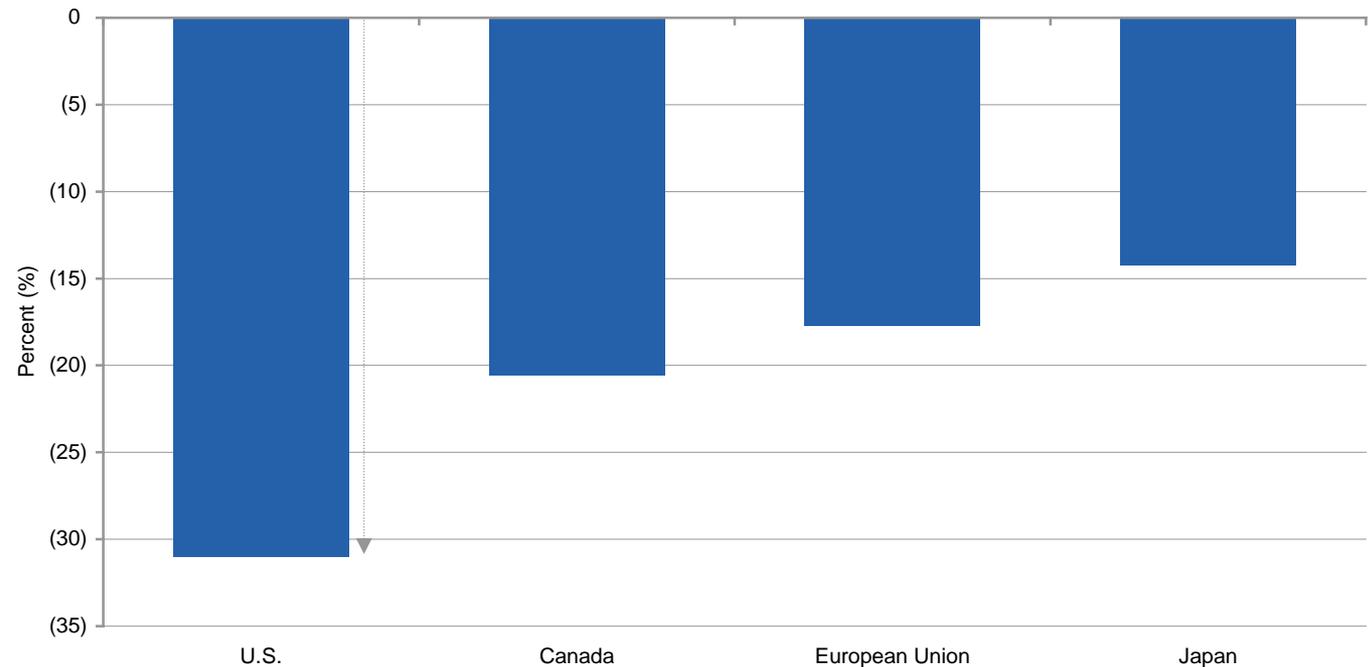
Outstanding Domestic Credit as % of GDP



Source: Deutsche Bank, EcoWin

Manufacturing Renaissance: A Flexible Labor Force

U.S., Canada, EU 27 and Japan Changes in Manufacturing Employment 2012 vs. 2000¹



Source: Haver, IMF
 U.S. Census Bureau, Canada Statistics, EuroStat, Japan Statistics Bureau

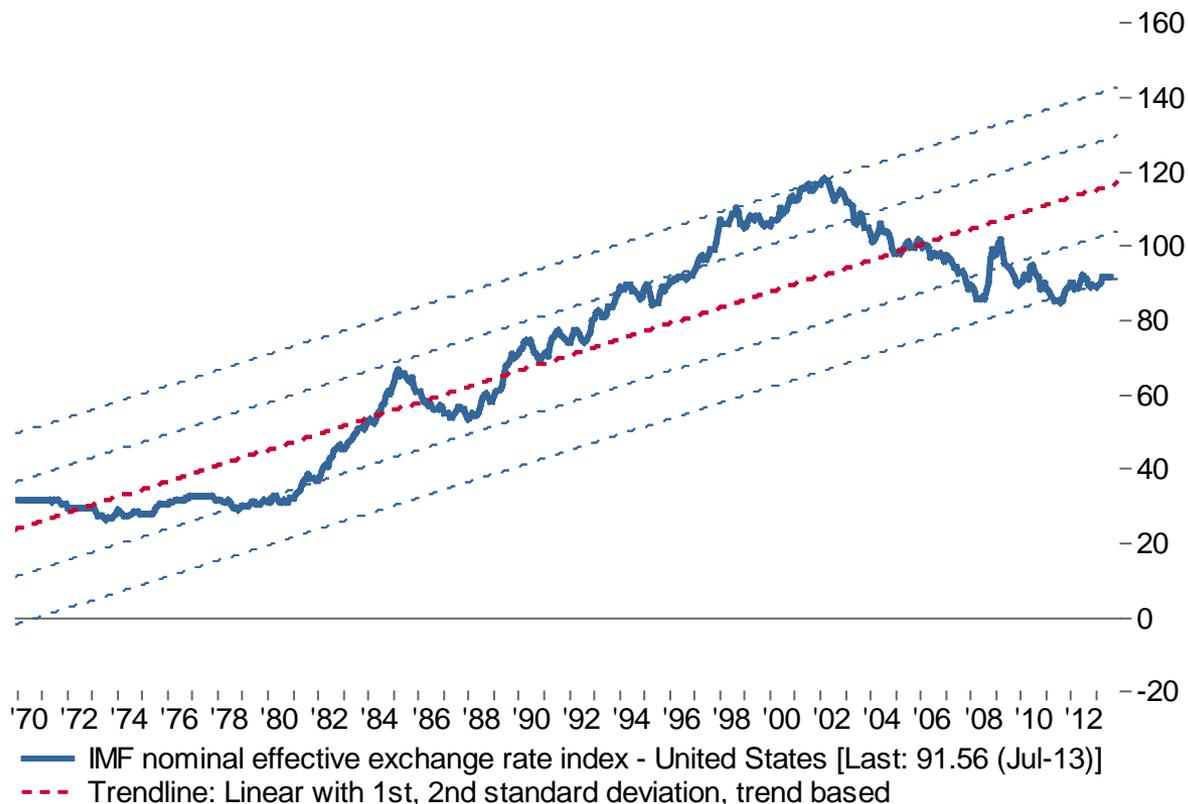
1. 2012 vs. 2002 for Japan, Q1 – Q3 2012 for European Union.

In the 2000s, U.S. manufacturers cut back wages, replaced expensive American suppliers with foreign ones, and cut 30 percent of factory jobs, far more than Canada, Europe, or Japan

The Dollar Advantage

The falling dollar is making U.S. exports more affordable abroad. As a result, the U.S. share of global exports is currently up a full 1.5 percentage points from its all-time low of 7.5 percent, hit in 2008

The Dollar is very competitive

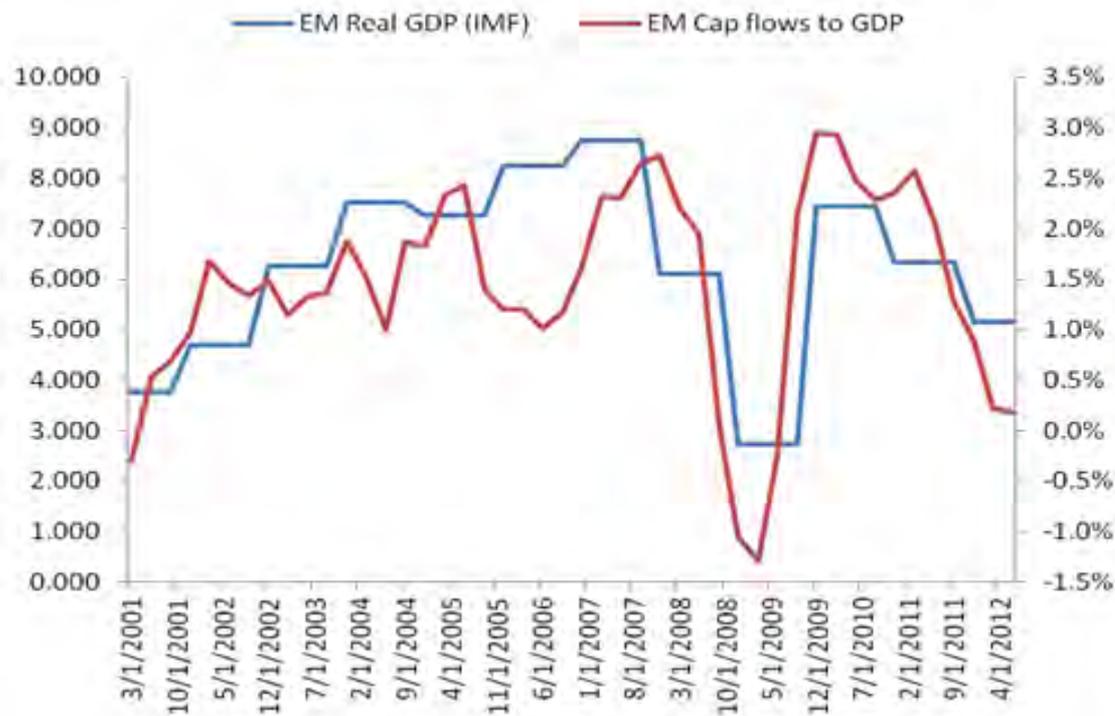


Source: FactSet, Federal Reserve. Data as of July 2013

The Easy Money Is Gone For EM

Now the easy money is gone, and global economy is returning to its normal state of churn, producing few winners and many laggards

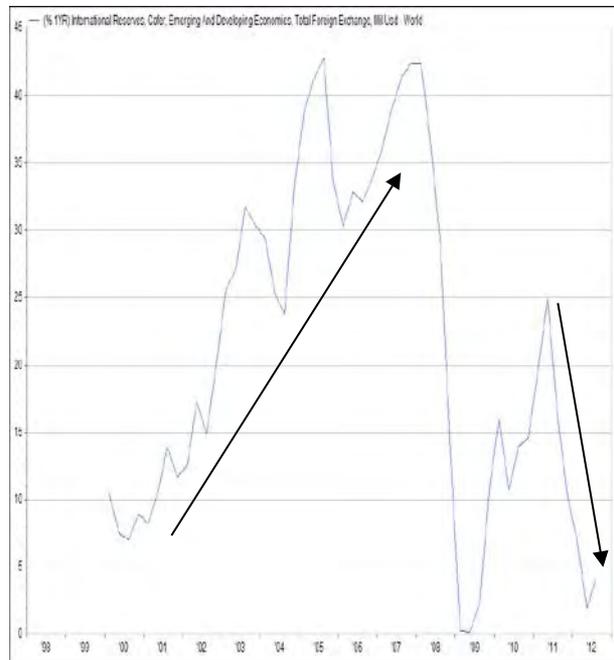
EM Real GDP Growth And Net Capital Flows as a Share of EM GDP



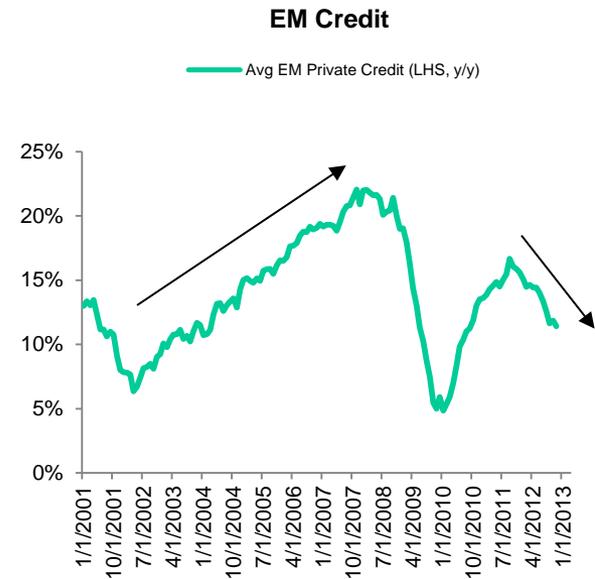
Source: MSIM Emerging Markets Research, Haver. As of December 2012

Lowering Growth In EM

YoY change in forex reserves



YoY change in credit growth



Source: FactSet, Haver. .

The New Normal For EM–I

- The rebalancing of capital flows is reducing the supply of credit in EM, dragging on their economic growth
- The blind optimism about growth in many emerging markets has dimmed, as many face structural problems
- Brazil, Russia and SA may grow more slowly than the global average over the next few years
- Inflows remain high in some of the reform oriented economies such as Philippines and Mexico
- Many EMs need to introduce more market oriented reforms which can serve as catalysts for change
- Emerging nations still represent 80 percent of the world's population, and 40 percent of global GDP, so there is room for growing prosperity. Just not in every nation, all the time

The New Normal For EM-II

In the past decade EM growth rates have been lifted by:

Catch-up following serial crises

Easy money

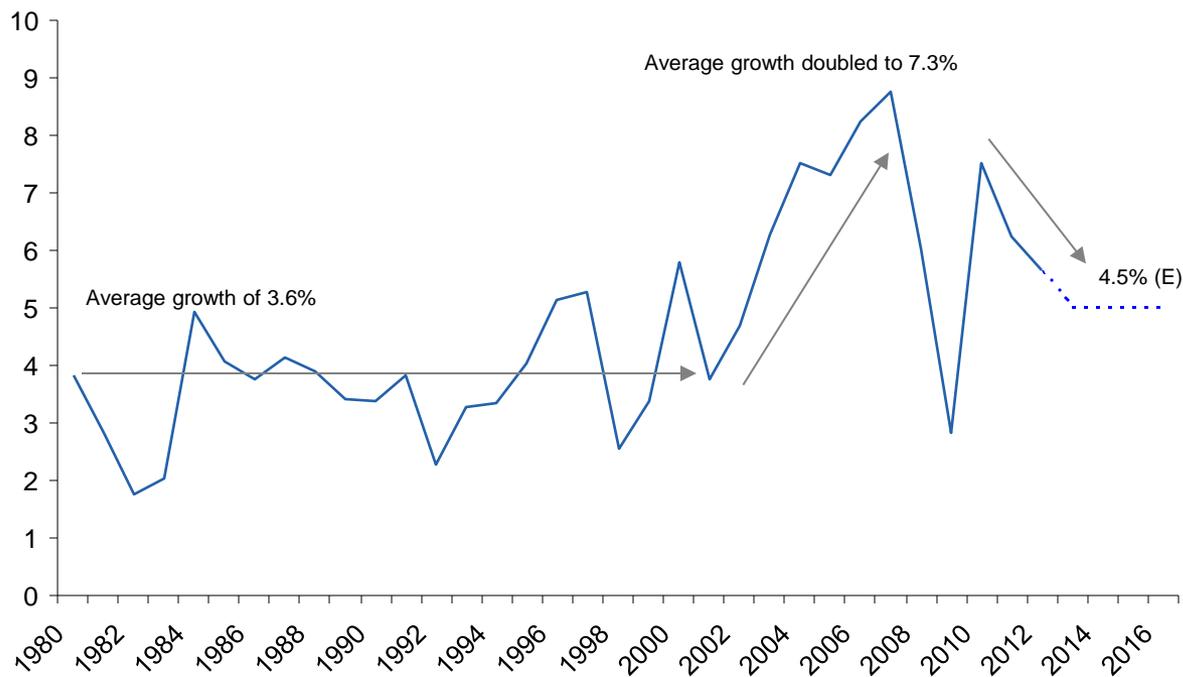
Powerful forces of convergence

Increased global trade

Better macroeconomic policy management

Emerging Markets Real GDP Growth

(1980-2012, 2013 Estimates through 2016) (%)

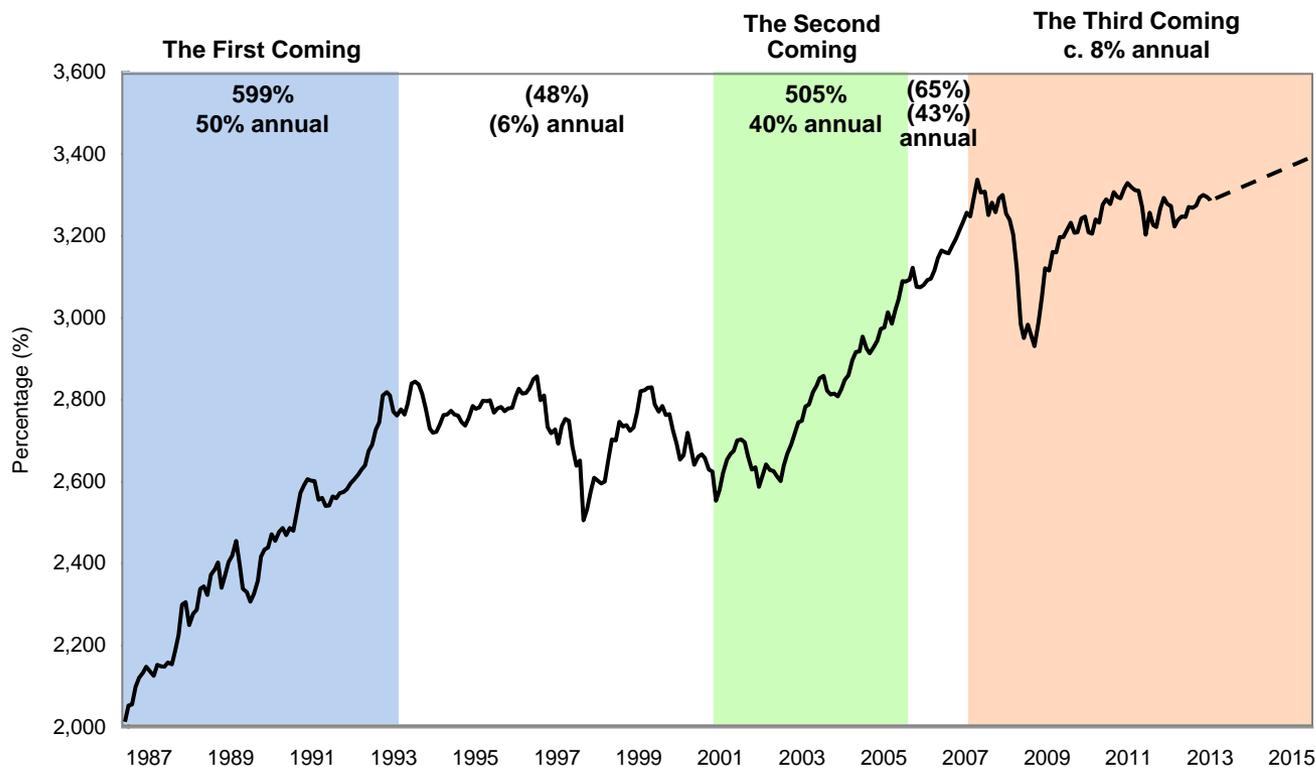


Source: MSIM Emerging Markets Research, IMF. As of December 2012

The Evolution Of Emerging Markets

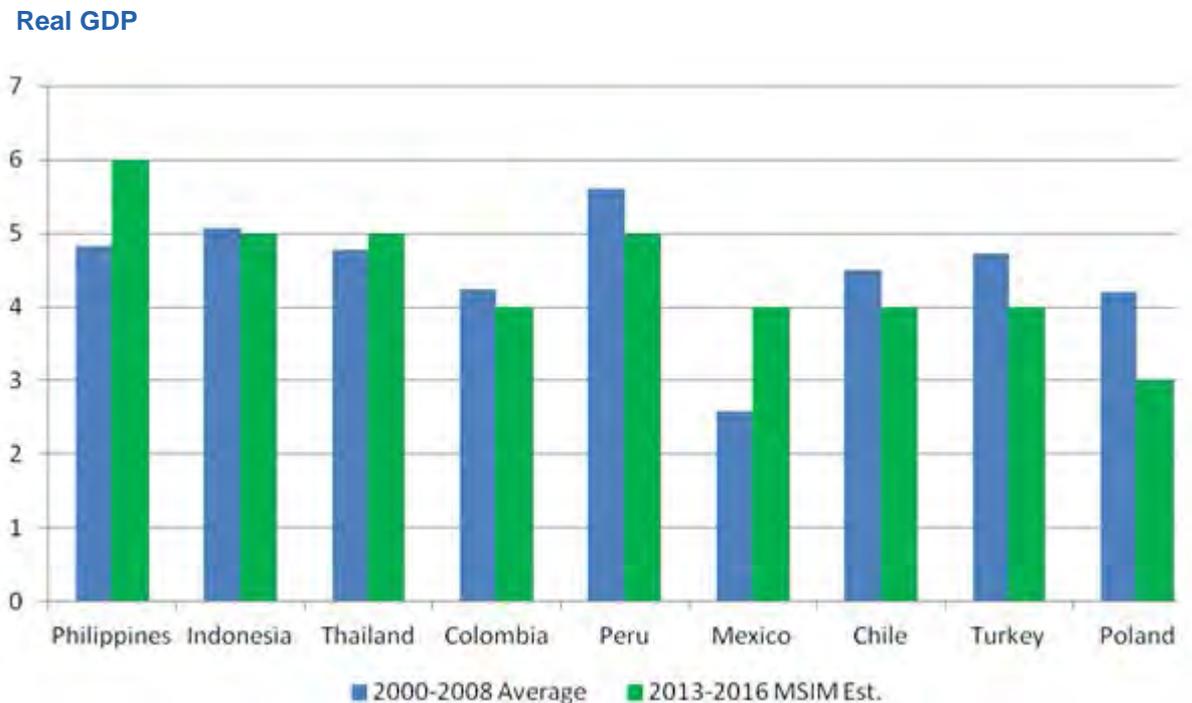
The Third Coming is an era potentially defined by:

- Moderate growth relative to past decade with modest inflation
- We are in a “Post-China” world - Breakout Nations leading the pack
- Less contribution to returns from currency
- Breakup of herd behavior



Source: MSCI, MSIM Emerging Markets and FactSet. Data as of April 30, 2012

The Breakout Stars Of This Decade

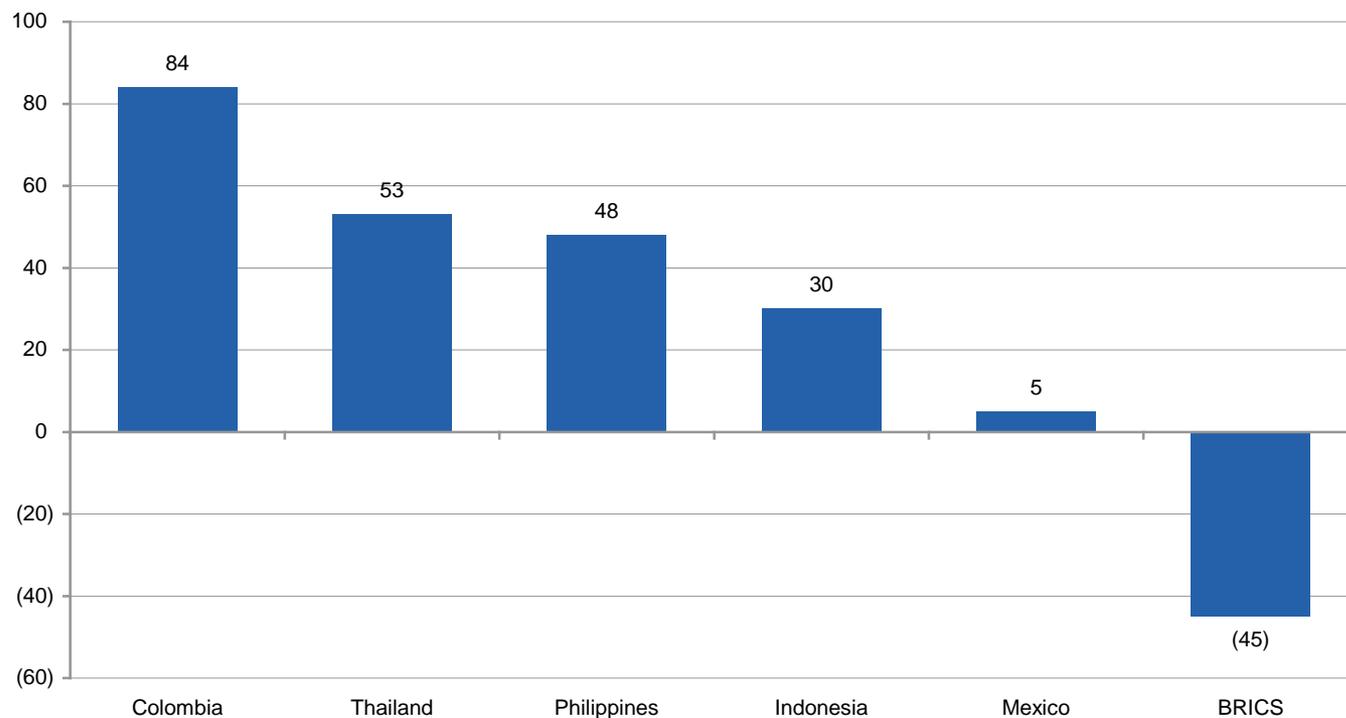


Source: MSIM Emerging Markets Research, Haver. As of April, 2013

Leadership Churn In EM

There is a leadership churn in EM. Mid tier EMs are outperforming and the index is being held back by large cap markets

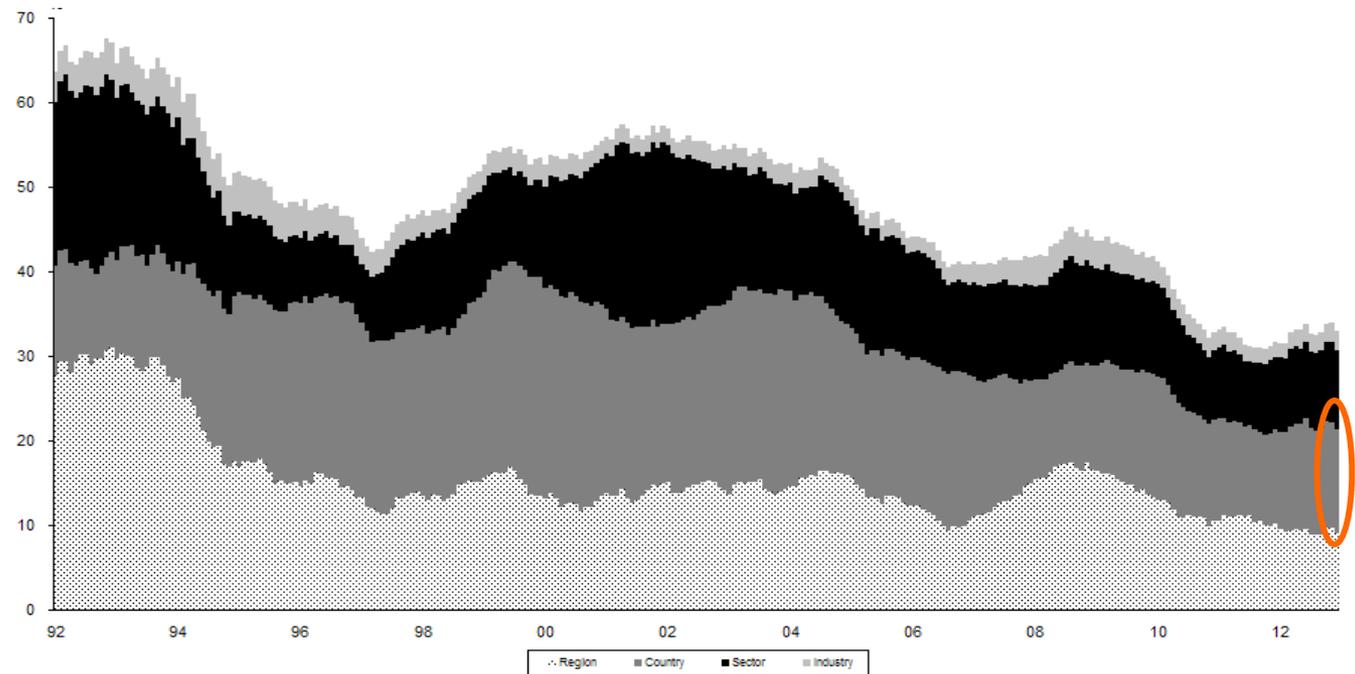
Equity Performance (%) since EM Peak (Oct 2007)



Source: FactSet. Data as of July 2013. Forecasts/estimates are subject to change and may not necessarily come to pass

Country Effect Dominates In EM

Emerging Markets Decomposition of Nominal Returns¹
 1992 Through 2012 (%)



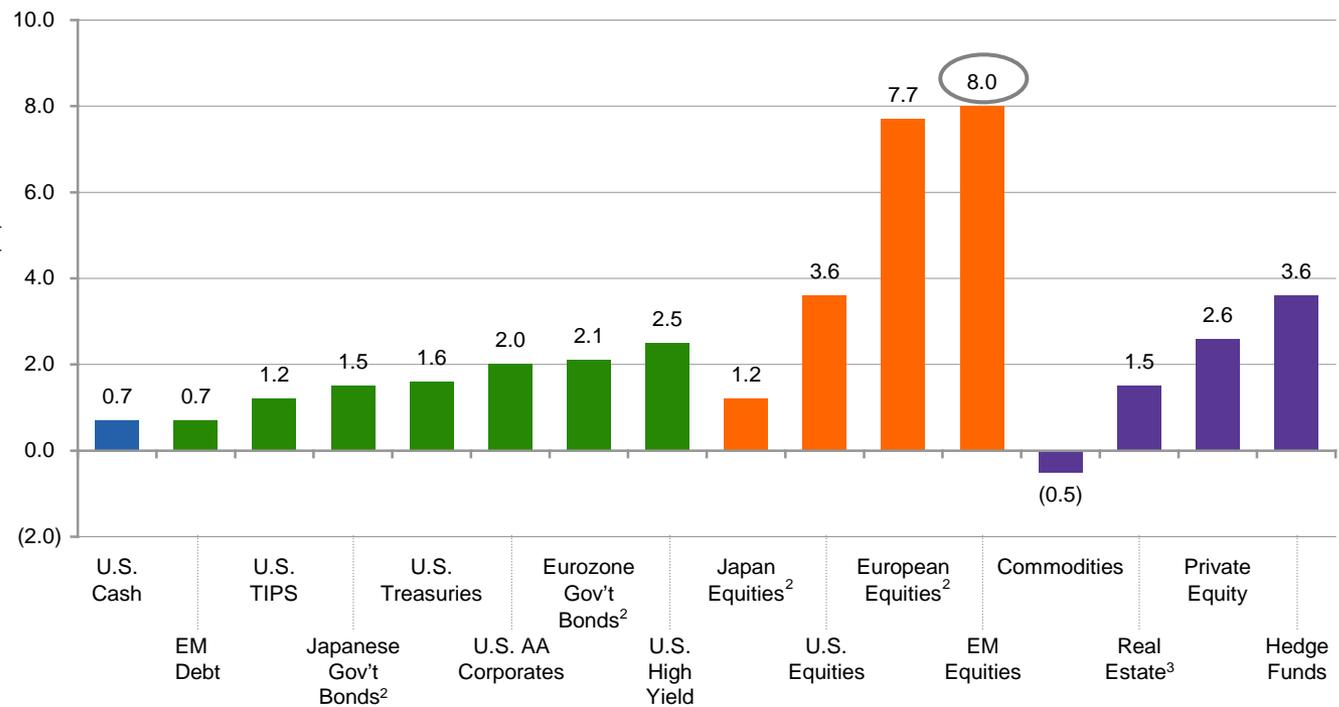
Source: Empirical Research Partners Analysis.

¹ Computed using capitalization-weighted returns. Attribution of monthly USD returns to various factors. Data smoothed on a trailing two-year basis.

Source: Empirical Research Partners Analysis, As of September 30, 2009

Long-Term Expected Returns Favor EM

Five-Year Expected Nominal Returns¹



Source: Morgan Stanley Investment Management Global Asset Allocation Team analysis. Data as of December 31, 2012

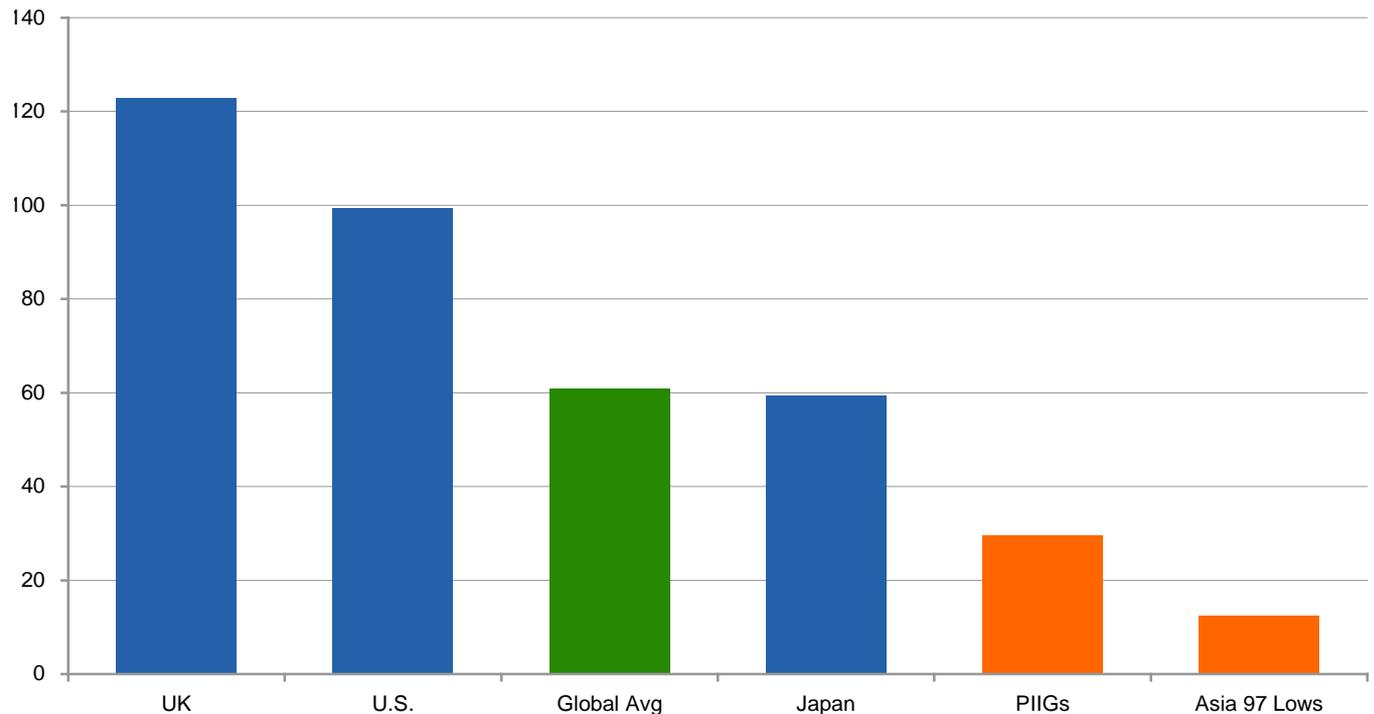
1. Excludes Manager Alpha.
2. Hedged back to U.S. Dollar.
3. U.S.REITs.

There Is Value In European Markets

Greece, Portugal, Ireland, Italy and Spain stock market were worth less than the top company on the S&P 500 at the lows

At the bottom in Asia, the affected markets (Indonesia, Thailand, Malaysia, and South Korea) were worth \$250 billion, or less than the top three companies on the Dow 30

Market Cap to GDP



Source: Morgan Stanley Investment Management, Bloomberg

Summary

- Winners of one decade are rarely winners of the next
- BRICS seem broken
- Commodity complex deflating with China's slowing growth
- US comeback led by cheap dollar, deleveraging, technology and a manufacturing renaissance
- The preponderance of state owned companies in the large Emerging Markets has also been holding back their stock market performance
- There is a new normal in EM with growth slower than the last decade but still faster than the developed world due to lower per capita levels
- EM outperformance should return once markets adjust to the lower growth profile

New Breakout Stars emerging this decade as BRICS fade

Tab 6



Legal Services

Memorandum

TO: Compensation Committee and Board of Trustees

FROM: Office of the General Counsel

COPY: Brian Guthrie, Ken Welch, Don Green, Britt Harris,
Jerry Albright, Mary Chang, Janet Bray

DATE: August 28, 2013

RE: Compensation Committee agenda item 2
Board agenda item 6
Amendment, ratification, and confirmation of Performance Incentive
Pay Plan effective October 1, 2013

In September 2012, the board reviewed and adopted the Plan, with some minor revisions, for Performance Periods commencing October 1, 2012 and after. In anticipation of this year's allocation to energy and natural resources in the Investment Policy Statement, the 2012 Plan added a new Natural Resources investment area to Plan Addendum A. As of September 2012, the board intended to review the Plan every two years. After adoption, the State Auditor's Office recommended that the board annually confirm the Plan to evidence the board's monitoring of the Plan and to create an annual record of board-approved continuation of the Plan.

Section 4.1(c) has been added to the plan to implement the SAO's recommendation.

The Compensation Committee will consider recommending to the board the adoption, ratification, and continuation of the Plan for Performance Periods beginning October 1, 2013.

The following resolution can be used for adoption at the September board meeting:

Resolved, That the Board hereby adopts the amended Performance Incentive Pay Plan as recommended by the Compensation Committee, and hereby ratifies and confirms continuation of the Plan, as amended, for the Performance Periods beginning October 1, 2013.



Teacher Retirement System of Texas

PERFORMANCE INCENTIVE PAY PLAN

Effective October 1, 2013~~2~~

This version of the Plan is effective for Performance Periods beginning on or after October 1, 2013~~2~~. Any awards for performance in prior Performance Periods can become earned and payable subject to the terms and conditions stated in the versions of the Plan effective for those Performance Periods. No modification of the Plan may be given retroactive effect except as required to comply with applicable law, including federal tax laws and regulations.

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1. PERFORMANCE INCENTIVE PLAN PURPOSE AND AUTHORIZATION

To remain competitive in its efforts to attract and retain high caliber Investment Management Division (IMD) employees, the Teacher Retirement System of Texas (TRS) strives to offer a competitive compensation package. Awards of performance incentive pay based on specified performance criteria are an industry standard practice in the private investment sector and are rapidly becoming a standard practice in the public sector. By offering both a competitive base salary and performance incentive award opportunity, TRS enhances its ability to fulfill its mission to “prudently invest and manage the assets held in trust for members and beneficiaries in an actuarially sound system administered in accordance with applicable fiduciary principals.” Therefore, pursuant to the laws governing TRS, the TRS Board of Trustees (the “Board”) has determined that establishing and expending funds for this Performance Incentive Pay Plan (the “Plan”) is consistent with and in furtherance of the fiduciary duties of the Board in administering the retirement system.

2. PLAN OBJECTIVES AND STRATEGY

2.1 Plan Objectives

The Plan serves a number of objectives:

- To attract and retain IMD employees who have outstanding ability;
- To create incentives for IMD employees to develop a strong commitment to the long-term investment performance of the assets for which TRS has been delegated investment responsibility; and
- To motivate investment professionals to focus on maximizing real, long-term returns for all funds managed by TRS while assuming appropriate levels of risk.

2.2 Plan Strategy

The Plan strategy includes:

- Base salaries, targeted at competitive levels, as defined by the Executive Director and the Board with actual individual base salaries determined by an employee’s experience, education, knowledge, skills, and overall job performance.
- Performance incentive pay award opportunities, calculated as a percentage of an employee’s base salary for performance above pre-determined standards, earned contingent upon continued employment in an Eligible Position at specified times and generally payable in two annual installments, subject to deferral as set forth in Section 4.8(b).

3. BASE SALARY ADMINISTRATION

3.1 Salary Structure

- (a) Notwithstanding any other law, the Board approves the rates of compensation of all IMD employees. Under state law, the Board’s Bylaws, and as part of the annual TRS budgeting process, the Board authorizes the Executive Director to determine and propose base salary rates of compensation generally based on the salary schedules, position classifications and salary administration practices of Article IX of the General Appropriations Act, Chapter 659 of the Texas Government Code and other relevant legislation to the extent the Executive Director determines a particular provision is in the best interest of the system and not in conflict with applicable law, fiduciary duty, or TRS policy.
- (b) Under the terminology of the state compensation program, “classified” employees are those employees whose position classification titles, pay groups and ranges, and pay administration

practices are based on the State Position Classification Plan and related salary administration provisions.

- (c) Upon hiring or promotion, classified employees are assigned to a classification title that is consistent with assigned responsibilities. Initial base salaries for classified employees are set between the minimum and maximum of the assigned pay group, considering the employee's experience, education, knowledge and skills, and issues of external competitiveness and internal equity.
- (d) "Exempt" employees' job titles, pay groups and ranges, and pay administration practices are not based on the State Position Classification Plan and related salary administration system. For purposes of the Plan, the Chief Investment Officer and the Investment Fund Directors are considered exempt employees, while the remainder of IMD employees are considered classified for compensation and other purposes. Employees who are exempt from the salary classification schedules do not have base salary ranges. As part of the annual TRS budgeting process, the Board authorizes the Executive Director to determine base salaries for exempt positions up to a not-to-exceed rate specified in the General Provisions of the TRS Budget. Initial base salaries for exempt employees are set by the Executive Director at or below the applicable not-to-exceed rate, considering the employee's experience, education, knowledge and skills, and issues of external competitiveness and internal equity.

3.2. *Salary Adjustments*

- (a) Classified employees may receive base salary increases for a number of reasons, including but not limited to career ladder promotions, and merit increases for individual performance. Exempt employees may receive base salary adjustments (increase within the not-to-exceed rate or decrease) at the discretion of the Executive Director.
- (b) Notwithstanding subsection 3.2(a), all base salary changes will be executed in accordance with TRS salary administration procedures.

4. INCENTIVE PAY PLAN

4.1. *Purpose of the Plan and Effective Date; Board Continuation Requirement*

- (a) The purpose of the Plan is to provide the opportunity for IMD employees to receive performance incentive pay based on specific criteria relative to TRS's investment performance and the employee's job performance.
- (b) This version of the Plan is effective for Performance Periods beginning on or after the effective date shown on the cover page. A Potential Award for performance in prior Performance Periods can become earned and payable subject to the terms and conditions stated in the version of the Plan effective for those Performance Periods.
- (c) **Effective for Performance Periods beginning on or after October 1, 2013, Potential Awards may be earned for a Performance Period only if the Board has confirmed continuation of the Plan for such Performance Period during the calendar quarter preceding the first day of such Performance Period.**

4.2. *Performance Period*

For purposes of the Plan, the "Performance Period" begins on October 1st of each year and ends the following September 30th.

4.3. *Participation in the Plan*

- (a) An IMD employee who is in an "Eligible Position" on October 1 of the Performance Period is eligible to participate in the Plan (a "Participant") during that Performance Period.

- (b) Notwithstanding Section 4.3(a) above, an IMD employee who first begins employment in an Eligible Position (through new hire, promotion or reassignment) after the beginning of the Performance Period will become a Participant as follows:
- (i) If an IMD employee begins employment in an Eligible Position with an official hire date or effective date after October 1 but no later than January 1 the employee will become a Participant on January 1 and the Participant's award opportunity will be prorated to 75% of the Potential Award for that Performance Period.
 - (ii) If an IMD employee begins employment in an Eligible Position with an official hire date or effective date after January 1 but no later than April 1 the employee will become a Participant on April 1 and the Participant's award opportunity will be prorated to 50% of the Potential Award for that Performance Period.
 - (iii) If an IMD employee begins employment in an Eligible Position with an official hire date or effective date after April 1 but no later than July 1 the employee will become a Participant on July 1 and the Participant's award opportunity will be prorated to 25% of the Potential Award for that Performance Period.
 - (iv) If an IMD employee begins employment in an Eligible Position with an official hire date or effective date after July 1 of a Performance Period the employee will not become a Participant until the beginning of the next Performance Period (assuming such employee is employed by TRS in an Eligible Position on October 1 of the Performance Period).
 - (v) If a Participant leaves an Eligible Position during a Performance Period and begins TRS employment in a non-Eligible Position, the Participant's Potential Award for the partial Performance Period will be prorated based on the number of completed calendar quarters worked in all Eligible Positions during that Performance Period.
- (c) Generally, all permanent, full time employee positions assigned to the IMD are Eligible Positions under the Plan. Each Eligible Position within the IMD is assigned to an investment area that determines the profit center allocations included in the Participant's Potential Award calculation under Addendums A and B.
- (d) Secondees, contract workers, and other temporary workers are not TRS employees and are not eligible to participate in the Plan.
- (e) An Eligible Position in one Performance Period is not automatically an Eligible Position in any subsequent Performance Period.
- (f) The Director of Human Resources will certify to the Executive Director in writing the name, base salary, hire date, effective date, Eligible Position title, and investment area assignment of each eligible Participant for the applicable Performance Period, including Participants employed in an Eligible Position for only a portion of the Performance Period.
- (g) After the beginning of a Performance Period, if a Participant moves from one Eligible Position to another Eligible Position with a different position title or area assignment, the Participant's Potential Award for that Performance Period and the measurement of the Participant's performance will be prorated between the award calculated for the former Eligible Position title or investment area assignment and the award calculated for the new Eligible Position or investment area assignment as follows:
- (i) If a Participant moves to a new Eligible Position or investment area assignment after October 1 but no later than January 1 the Participant's Potential Award and the measurement of the Participant's performance will be based on the former Eligible Position or investment area assignment for the period October 1 through December 31,

and on the new Eligible Position or investment area assignment for the period January 1 through September 30.

- (ii) If a Participant moves to a new Eligible Position or investment area assignment after January 1 but on or before April 1 the Participant's Potential Award and the measurement of the Participant's performance will be based on the former Eligible Position or investment area assignment for the period October 1 through March 31, and on the new Eligible Position or investment area assignment for the period April 1 through September 30.
 - (iii) If a Participant moves to the new Eligible Position or investment area assignment after April 1 but no later than July 1 the Participant's Potential Award and the measurement of the Participant's performance will be based on the former Eligible Position or investment area assignment for the period October 1 through June 30, and on the new Eligible Position or investment area assignment for the period July 1st through September 30.
 - (iv) If a Participant moves to a new Eligible Position or investment area assignment after July 1 of a Performance Period the Participant's Potential Award will be based on the former Eligible Position or investment area assignment for the entire Performance Period.
- (h) An employee will cease to be a Participant in the Plan on the earliest to occur of:
- (i) Except as specifically provided in Section 4.3(b)(v) with respect to continued TRS employment, the date the employee is no longer employed in an Eligible Position;
 - (ii) The date of termination of the employee's employment with TRS for any reason. (For purposes of the Plan, the date of termination is the employee's last day worked and does not include any leave the employee was allowed to use to extend their employment for payroll purposes.); or
 - (iii) The date of termination of the Plan.

4.4. *Investment Performance Components, Qualitative Components, and Potential Award*

- (a) Participants' Potential Awards will be based on a combination of investment performance and qualitative performance components.
- (b) The investment performance components comprise two performance categories: 1) performance measured against pre-determined benchmarks and applicable excess return targets, and 2) performance measured against pre-determined peer groups.
 - (i) The benchmark index category of the investment performance component will determine 50% of the total Potential Award.
 - (ii) The peer group category of the investment performance component will determine 30% of the total Potential Award.
- (c) Notwithstanding that the Performance Period is October 1 through September 30, due to the delay in availability of final performance data for Private Equity and Real Assets, performance measurements for these two investment areas will experience a one quarter time lag, such that all incentive calculations involving Private Equity and Real Assets performance will use data for the one and three year periods ending each June 30.
- (d) Each Eligible Position will be assigned specific weightings for Total Fund and investment area performance as shown in Addendums A and B.
 - (i) To encourage a focus on the "big picture" and a sense of shared mission, the investment performance component (both benchmark and peer group categories) for all Eligible Positions will have a Total Fund weighting of at least 20%. Weightings for investment area performance categories will be divided among the Eligible Position's primary

investment area and other investment areas with which the Eligible Position has regular interaction.

- (ii) Where no investment area peer group performance measures are available, that investment area peer group performance weighting allocation is added to the Total Fund peer group performance weighting allocation.
- (e) The qualitative performance component will be measured as part of each Participant’s annual performance appraisal process and may include multi-rater feedback regarding a variety of contributions and behaviors needed for organizational success that are not directly measured in the investment performance component, such as interpersonal relationship skills, accountability, effective teamwork, etc.
 - (i) Regardless of a Participant’s performance towards the qualitative performance component, a Potential Award will only include the portion attributed to qualitative performance if the Participant has attained at least the threshold level of performance in the investment performance component.
 - (ii) To encourage appropriate organizational behaviors, the qualitative performance component for all Eligible Positions will be weighted at 20% of the Potential Award.
- (f) A Potential Award is the gross award amount calculated based on the actual performance achieved in the Performance Period. Depending on performance, the Potential Award in a Performance Period varies from zero to 100% of the Maximum Potential Award. The Maximum Potential Award that can become earned and payable under the Plan is limited to the percentage of a Participant’s Base Salary in an Eligible Position that is listed opposite each Eligible Position in the table below. The Maximum Potential Award applies regardless of whether a Participant has exceeded the stated maximum performance targets or the gross amount of the Potential Award calculated under the Plan.

ELIGIBLE POSITION	MAXIMUM POTENTIAL AWARD
Chief Investment Officer	125%
Deputy CIO	125%
Senior Managing Director	125%
Managing Director	125%
Senior Director	110%
Director	110%
Senior Investment Manager	90%
Investment Manager	85%
Senior Associate	65%
Associate	50%
Senior Analyst	35%
Analyst	25%
Administrative Assistants	5%

- (g) Notwithstanding the Maximum Potential Award listed in Section 4.4(f) above, those Participants titled “Senior Investment Manager” who remain in the Eligible Position that was titled “Lead Investment Manager” or “Lead Trader” in the Plan effective October 1, 2007, will continue to have a Maximum Potential Award of 100% of Base Salary. If the Participant transfers to a different Eligible Position with a title other than Senior Investment Manager, the Maximum

Potential Award will change to that appropriate for the new Eligible Position and be prorated as set forth in Section 4.3(g).

- (h) For each investment area, the profit center weighting and excess return relative to each assigned excess return target will combine to determine the Potential Award for each Eligible Position.
 - (i) The Potential Award includes a threshold, a maximum, and intermediate levels of Potential Award that correspond to specific levels of investment performance.
 - (ii) Intermediate levels of the Potential Award for investment performance are determined by linearly interpolating between the threshold and maximum.
 - (iii) For the qualitative component, intermediate levels of the Potential Award will be based on a system of annual performance evaluation approved by the Executive Director.

4.5. *Compliance with TRS Policies*

- (a) IMD employees exercise fiduciary responsibilities delegated by the Board under applicable law. Investment professionals manage the portfolio according to the Board's policies, advise and inform the Executive Director and the Board about investments, and recommend modifications to the Investment Policy Statement. In addition, all IMD employees are responsible for complying with TRS policies, including without limitation the Investment Policy Statement, Ethics Policy, and the Fraud, Waste and Abuse Policy.
- (b) Excess performance by a Participant or Participants resulting from a failure to manage the assets of TRS in accordance with applicable law, the Investment Policy Statement, or TRS Ethics Policy will result in the forfeiture for that portion of the Potential Award for those Participants resulting from that excess performance for the Performance Period in which the noncompliance occurred. The Executive Director will make this determination on a case-by-case basis.
- (c) Serious violations of the TRS Investment Policy Statement, Ethics Policy, Fraud, Waste and Abuse Policy, or other TRS policy by a Participant, as determined by the Executive Director, will result in forfeiture of all Potential Awards for the Performance Period in which the violation(s) occurred, as well as for earlier Performance Periods that have not yet become earned (including without limitation any Potential Awards that are unearned and deferred as set forth in Section 4.8(b) below). Additionally, during the investigation of possible serious violations of law or policy, the Executive Director or the Board may suspend earning and payment of Potential Awards until the conclusion of the investigation.

4.6. *Performance Standards and Measurements*

- (a) Investment Performance (for both benchmark and peer group categories) is measured on one year and three year historical performance data, weighted at 33% for one year performance (i.e., performance during the Performance Period) and 67% for the historical three year performance that includes the Performance Period. Investment Performance is measured relative to appropriate pre-defined benchmarks as detailed in the asset allocation and benchmarks table, including applicable footnotes, in the Board's Investment Policy Statement ("IPS"), as amended from time to time. For the purposes of this Plan, changes to the IPS benchmarks during a Performance Period will be effective from and after the effective date of such changes in the IPS, subject to revisions to the Plan adopted by the Board of Trustees. In no event may benchmark changes be applied retroactively except as required to comply with applicable law, including federal tax laws and regulations.
- (b) Notwithstanding Section 4.6(a), the performance of any new profit center will be calculated for purposes of the Plan as follows:

- (i) The investment performance of any new profit center (for both benchmark and peer group categories) will commence with the first full Performance Period commencing on or after the date the profit center is created;
 - (ii) For a new profit center's first full Performance Period, the profit center's investment performance will be based 100% on the profit center's performance data for the first full Performance Period;
 - (iii) For a new profit center's second full Performance Period, the profit center's investment performance will be weighted (x) 50% on the profit center's performance during the second full Performance Period, and (y) 50% on the profit center's two-year performance during the first and second full Performance Periods.
 - (iv) For all Performance Periods commencing after the second full Performance Period, the investment performance of a new profit center will be weighted (x) 33% on the profit center's performance during the one-year Performance Period just ended, and (y) 67% on the profit center's three-year performance during the three full Performance Periods just ended.
 - (v) For the purposes of this Plan, no investment performance will be calculated for a Performance Period for a new profit center created during that Performance Period, unless it existed on October 1 of that Performance Period.
- (c) The qualitative performance component is measured annually as part of the Participant's current annual performance appraisal process.

4.7. *Potential Award Calculations*

- (a) Following the end of each Performance Period, the Executive Director will review the actual performance of each Participant relative to the applicable performance components.
- (b) Potential Awards are calculated based on the Participant's level of performance achieved in the applicable investment performance and qualitative performance components in each Performance Period.
- (c) Relative performance data and calculations may be reviewed by an external independent source selected by the Executive Director, but final calculations are approved by the Executive Director.

4.8. *Earning Potential Awards and Payouts*

- (a) Notwithstanding the Executive Director's approval of Potential Award calculations, Potential Awards will only become earned and payable as stated below:
 - (i) Subject to Section 4.8(b), if a Participant is employed by TRS on January 1 following the end of the Performance Period for which that employee was a Participant, 50% of the Potential Performance Incentive Award will become earned and payable. Payment of this award will generally be processed with that January payroll for delivery on or about February 1 of that calendar year; provided however that in no event will payment be made later than February 15 of that calendar year.
 - (ii) Subject to Section 4.8(b), if a Participant is employed by TRS on January 1 following the first anniversary of the end of the Performance Period for which that employee was a Participant, the remaining 50% of the Potential Performance Incentive Award will become earned and payable. Payment of this award will generally be processed with that January payroll, for delivery on or about February 1 of that calendar year; provided however that in no event will payment be made later than February 15 of that calendar year.

The payment dates in respect of a Performance Period shall be the same for all Participants.

- (b) Notwithstanding subsection 4.8(a), no Potential Awards will become earned or payable following a Performance Period in which the Fund experiences a total return of zero or less. If this occurs, Potential Awards for that Performance Period that otherwise would have become earned on the January 1 next following the end of that Performance Period will not become earned until January 1 following the next Performance Period in which the Total Fund has a return greater than zero during a Performance Period, subject to the requirement that the employee be employed by TRS on that January 1. Payment of this award will be processed with the January payroll, typically issued on or about February 1 of that calendar year; provided however that in no event will payment be made later than February 15 of that calendar year.
- (c) If an employee ceases to be a Participant before the end of a Performance Period due to termination of employment with TRS for any reason other than involuntary termination of employment due to a Reduction in Force, death, or disability within the meaning of Section 409A of the Internal Revenue Code, a Potential Award for that Performance Period will not become earned and will not be paid. Potential Awards from earlier Performance Periods that have not yet become earned (as set forth in Section 4.8(b) above) will not become earned and will not be paid.
- (d) If an employee ceases to be a Participant before the end of a Performance Period due to involuntary termination of employment with TRS because of a Reduction in Force, death, or disability within the meaning of Section 409A of the Internal Revenue Code, a Potential Award for that Performance Period will not become earned and will not be paid. Notwithstanding Sections 4.8(a) – (b), Potential Awards from earlier Performance Periods will immediately become earned and payable. Payments under this subsection will be made to the terminated employee, or to the estate of the deceased employee, or to the disabled employee, or as otherwise provided by law. These payments will be made as soon as administratively practicable, but no later than 2½ months after the end of the calendar year in which the Reduction in Force, death or disability occurred.
- (e) If an employee ceases to be a Participant before the end of a Performance Period due to termination of the Plan (as provided for in Section 5.1), a Potential Award for that Performance Period will not become earned and will not be paid. Potential Awards from earlier Performance Periods that have not yet become earned (as set forth in this Section 4.8), can become earned and be paid according to the terms in this Section 4.8, if the Board determines that such payments continue to be consistent with and in furtherance of the fiduciary duties of the Board in administering the retirement system, and if such payments are not prohibited by applicable law.

5. PLAN AUTHORITY AND RESPONSIBILITY

5.1 Plan Modification, Suspension and Termination

The Board shall have the right in its sole discretion to modify the Plan or any portion thereof at any time. The Board shall have the right in its sole discretion to suspend or terminate the Plan entirely or any portion thereof at any time. For avoidance of doubt, no modification, amendment, suspension, or reinstatement of this Plan may be given retroactive effect in the administration of this Plan except as required to comply with applicable law, including federal tax laws and regulations.

5.2 Plan Administration

Consistent with the provisions of the Plan, the Executive Director has the sole discretion to administer and interpret the Plan. The Executive Director may adopt such procedures and practices as deemed advisable to carry out the Plan.

5.3 *Record Keeping and Reporting*

All employee performance, salary and incentive pay records for the Plan shall be maintained by the Director of Human Resources.

5.4 *Compliance with State and Federal Law*

If the Executive Director or a court with appropriate jurisdiction determines that any provision of the Plan violates applicable state or federal law, that provision shall not be given effect. The remaining provisions of the Plan shall remain in full force and effect to the maximum extent possible, and any amendments or modifications that are necessary to give effect to the remaining provisions will be deemed to have been made to allow proper administration of the Plan.

6. AT-WILL EMPLOYMENT

Nothing in the adoption of this Plan or the awarding of performance incentive pay alters the at-will nature of TRS employment, creates a contract between TRS and any TRS employee, confers on any TRS employee the right to continued employment with TRS, or affects in any way the right of TRS to terminate the employment of employees at any time.

7. OTHER PLAN PROVISIONS

7.1 *Non-assignment and Non-transferability of Awards*

Potential Awards or the actual awards under the Plan are non-assignable and non-transferable and are not subject to anticipation, adjustment, alienation, encumbrance, garnishment, attachment or levy of any kind.

7.2 *Plan Does Not Create a Property Interest, Trust, or Entitlement*

- (a) Neither the establishment of the Plan, the calculation of Potential Awards or the actual awards shall be deemed to create a property interest, trust or entitlement. The Plan is an unfunded, unsecured liability of TRS to make payments in accordance with the provisions of the Plan. Any amounts budgeted by TRS for awards earned under the Plan are TRS assets, and no employee or third party shall have any property, security, or other interest in any assets of TRS by reason of the Plan.
- (b) Nothing in the Plan shall be deemed to create or confer any right, interest, or title to any specific property of TRS to any Participant, or to any personal representative or beneficiary of a Participant.

7.3 *Tax and Other Deductions*

All payments under the Plan shall be subject to any deductions (1) for tax and withholding required by federal, state, or local law at the time of payment and (2) for any and all amounts owed by the employee to TRS at the time of payment. TRS is not obligated to advise an employee of the existence of any tax or the amounts that TRS will be required to withhold.

7.4 *Payments Not Eligible for Retirement Purposes*

Any payments made pursuant to the Plan are fringe benefits and are not eligible compensation for TRS pension plan purposes.

7.5 *Grievances*

All grievances related to the Plan will be addressed according to the TRS Grievance and Appeals Policy or any successor policy, as amended from time to time.

8. DEFINITIONS

Base Salary for use in the Plan is the Participant's annualized monthly salary as of October 1 of the applicable Performance Period (not including longevity or benefit replacement pay), or the annualized monthly salary of new Participants as of the date they first become a Participant, as certified by the Director of Human Resources.

Eligible Position is defined in Section 4.4(f). Eligible Position refers to the position, not the actual Participant in the position, and includes all positions assigned to the Investment Division and listed in Section 4.4(f).

Investment areas are listed in the first column of Addendums A and B.

Maximum Potential Award is defined in Section 4.4(f) and is the maximum Potential Award that can become earned and payable with respect to an Eligible Position during a Performance Period.

Participant is an employee in an Eligible Position on October 1 of the Performance Period, or who first is employed in an Eligible Position after the beginning of the Performance Period based on the schedule detailed in the Plan, as certified by the Director of Human Resources.

Performance Period is the period beginning on October 1 of each year and ending on September 30 of the following year.

Potential Award is defined in Section 4.4(f) and is the amount calculated based on the Participant's performance achieved in the applicable investment performance and qualitative performance components. A Potential Award is capped at the Maximum Potential Award, regardless of whether the Participant exceeds the stated maximum performance. The phrase "award opportunity" is synonymous with Potential Award.

Profit centers are listed in the first row of Addendum A, except that Trade Management is also listed as a profit center in the first row of Addendum B only for peer allocation purposes.

Reduction in Force for use in the Plan refers to termination of an employee due to elimination of the employee's position caused by a required reduction in the number of TRS Full-Time Equivalents (FTEs) or by a required reduction in expenses within the TRS operating budget. The Executive Director has sole discretion in determining whether an employee's termination is due to a Reduction in Force.

SAA means the Strategic Asset Allocation investment area.

SPN means a Strategic Partner Network investment area. TRS has both private markets and public markets SPNs.

TAA means the Tactical Asset Allocation investment area.

Total Fund means the TRS total or overall investment portfolio and includes all pension assets held in trust by TRS and invested by the IMD to provide retirement, death, and disability benefits administered by the system, including cash and cash equivalents. For avoidance of doubt, for the purposes of the Plan the Total Fund does not include the assets of health plans administered by TRS and held in trust by the Board of Trustees.

Administrative Policy

Current effective date: October 1, 2013^{2*}

First issued: October 1, 2007

Last reviewed: September 13, 2012

Reviewers: Executive Director, Chief
Investment Officer, Human
Resources, Legal Services

Review Cycle: Biennial

Next review due: August, 2014

Authorized by: Board of Trustees

Date authorized: September 13, 2012

Approved:

By: _____

Date approved: September ____, 2013²

Brian K. Guthrie,
Executive Director

*This version of the Plan is effective for performance periods beginning on or after October 1, 2013². Any awards for performance in prior Performance Periods can become earned and payable subject to the terms and conditions stated in the versions of the Plan effective for those Performance Periods.

Addendum A

Performance Payout Allocation and Maximum Payout Targets vs. Passive Benchmark (50% of Potential Award)

Fund Level	Total Fund	Internal Public	External Public	Private Equity	Risk ¹	Stable Value / SAA	Real Assets	TAA	Public and Private SPN and Opportunistic ²	Natural Resources	Emerging Managers	Total
Index	Total Fund Policy Composite Index	Global Equity Portfolio vs. MSCI ACWI Free (net)	Daily Weighted Excess Return Based on Actual Portfolio Weights	State Street Private Equity Index	Daily Weighted Excess Return Based on Actual Portfolio Weights	Daily Weighted Excess Return Based on Actual Portfolio Weights	NCREIF ODCE	Total Profit & Loss for Incentive Period/Total Trust Average Daily Balance	Daily Weighted Excess Return Based on Actual Portfolio Weights	Daily Weighted Excess Return Based on Actual Portfolio Weights	Daily Weighted Excess Return Based on Actual Portfolio Weights	
Excess Return Target	100 bps	50 bps	100 bps	300 bps	75 bps	35 bps	250 bps	25 bps	175 bps	175 bps	100 bps	
CIO / Deputy CIO	75.00%					5.00%	5.00%		5.00%	5.00%	5.00%	100.00%
Risk	50.00%	5.00%	5.00%	5.00%	20.00%	5.00%	5.00%	5.00%				100.00%
Internal Public Markets	30.00%	60.00%	5.00%	5.00%								100.00%
External Public Markets	30.00%	5.00%	60.00%	5.00%								100.00%
Private Equity	30.00%	5.00%	5.00%	60.00%								100.00%
Stable Value / SAA	50.00%					50.00%						100.00%
Real Assets	30.00%						60.00%			10.00%		100.00%
Tactical Asset Allocation (TAA)	30.00%							60.00%	10.00%			100.00%
Public and Private SPN / Opportunistic	30.00%							10.00%	60.00%			100.00%
Natural Resources	30.00%	10.00%								60.00%		100.00%
Emerging Managers	30.00%		10.00%	10.00%			10.00%				40.00%	100.00%
Trade Management Group	30.00%	20.00%	10.00%			20.00%		20.00%				100.00%
Investment Operations	50.00%	10.00%	10.00%	5.00%		10.00%	5.00%	10.00%				100.00%

Notes: ¹ Risk group allocation excludes Trust hedging activities. ² Benchmark for Public SPN is the SPN Composite Index.

Addendum B
Performance Payout Allocation and Maximum Payout Targets vs. Peer Group Comparison
(30% of Potential Award)

Fund Level	Total Fund	Trade Management Group	Private Equity	Real Assets	Total
Index	TUCS Public Funds > \$10 Billion Universe	ITG / Plexus	TUCS Private Equity > \$1 billion Universe	Real Estate vs. TUCS Real Estate > \$1 billion Universe	
Excess Return Target	100 bps	8 bps	300 bps	250 bps	
CIO / Deputy CIO	90.00%	0.00%	5.00%	5.00%	100.00%
Risk	90.00%	0.00%	5.00%	5.00%	100.00%
Internal Public Markets	95.00%	0.00%	5.00%	0.00%	100.00%
External Public Markets	95.00%	0.00%	5.00%	0.00%	100.00%
Private Equity	40.00%	0.00%	60.00%	0.00%	100.00%
Stable Value / SAA	70.00%	30.00%	0.00%	0.00%	100.00%
Real Assets	40.00%	0.00%	0.00%	60.00%	100.00%
Tactical Asset Allocation (TAA)	100.00%	0.00%	0.00%	0.00%	100.00%
Public and Private SPN / Opportunistic	90.00%	10.00%	0.00%	0.00%	100.00%
Natural Resources	90.00%	0.00%	0.00%	10.00%	100.00%
Emerging Managers	80.00%	0.00%	10.00%	10.00%	100.00%
Trade Management Group	50.00%	50.00%	0.00%	0.00%	100.00%
Investment Operations	50.00%	40.00%	5.00%	5.00%	100.00%

Tab 7 A



Proposed Modifications to Investment Policy

Ashley Baum
Investment Manager
September 2013

Agenda

- The Investment Management Division (“IMD”) is today proposing modifications to the Investment Policy Statement (“IPS”) to the Policy Committee
 - In keeping with the Board’s decision to move to a biennial review schedule, the IPS was not reviewed in full for 2013
 - Instead, a limited number (four) changes are proposed
- Additional items enclosed for your review and reference are:
 1. Memorandum from Hewitt EnnisKnupp
 2. Memorandum from Dr. Keith Brown
 3. Memorandum from Reinhart Boerner Van Dueren S.C.
 4. Revised IPS (marked copy)
 5. Revised IPS (clean copy)
 6. Board Resolution to amend the IPS

Proposed Modifications

- The IMD propose the following modifications to the IPS:

Modification Number	Description
1	Add a 3% allocation to Energy and Natural Resources
2	Adjust the Emerging Managers allocation
3	Adjust Iran restrictions to conform to new statute
4	Clarify and expand TRS investment representation

Modification 1

Add a 3% allocation to Energy and Natural Resources

Background Information

- A new Energy and Natural Resources strategy was presented to the Board in June 2013

Rationale

- Enhance Trust's inflation-sensitivity and expertise in a technical sector of increasing importance

Proposal

- Add a 3% allocation to Energy and Natural Resources to the Trust asset allocation
 - Funded from a 1% reduction in Private Equity and a 2% reduction in Real Assets
- Implement restrictions consistent with other external portfolios

Asset Class	Benchmark	% of Trust	
		Current	Revised
Private Equity	State Street Private Equity Index	12%	11%
Real Assets	NCREIF ODCE Index	15%	13%
Energy and Natural Resources	75% Cambridge Natural Resources Index (reweighted ¹) 25% Consumer Price Index--one quarter lagged	NA	3%

Reviewed by:

- | | |
|---|---|
| <input checked="" type="checkbox"/> HEK | <input checked="" type="checkbox"/> Audit |
| <input checked="" type="checkbox"/> Keith Brown | <input checked="" type="checkbox"/> Legal |

¹ Energy and Upstream/Royalties segments held at equal weight

Modification 2

Adjust the Emerging Managers allocation

Background Information

- Emerging Managers Target Allocation of \$1.65 billion was added to IPS in 2009
- The \$1.65 billion in policy now is a commitment target

Rationale

- Match Board understanding that \$1.65 billion is a net market value target

Proposal

- Adjust policy to specify the allocation is based on net market value

Reviewed by:

- | | |
|---|---|
| <input checked="" type="checkbox"/> HEK | <input checked="" type="checkbox"/> Audit |
| <input checked="" type="checkbox"/> Keith Brown | <input checked="" type="checkbox"/> Legal |

Modification 3

Adjust Iran restrictions to conform to new statute

Background Information

- The IPS currently has restrictions on investments in companies with active business operations with Iran
- In the 2013 Legislative Session, new Iran restrictions were passed by the Legislature prohibiting certain investments by TRS without a fiduciary finding

Rationale

- Compliance with new statute

Proposal

- Update the IPS to reflect the statutory Iran restriction
- Consolidate all IPS language on restrictions in Iran, Sudan, and prurient interest in sex

Modification 4

Clarify and expand TRS investment representation

Background Information

- The IPS currently allows TRS professionals to serve as advisory board representatives on any private markets investment vehicle
- The language does not explicitly consider underlying TRS investments or TRS investments from other areas

Rationale

- Recognize need for TRS to exercise its fiduciary duties in situations not currently authorized (serving as a Board observer or on the Board of a Private Equity Principal Investment, serving on a Hedge Fund advisory board, etc.)

Proposal

- Update the IPS to reflect that TRS professionals may represent TRS on External Advisory Committees or Boards and as Board Observers
- Authorize IMD to represent TRS or engage an independent third-party to represent TRS on the governing body of a non-public (private) or a publicly-traded business entity under the conditions listed in Appendix G
- Require annual reporting to the Board of any positions held by employees or third party representatives serving as Board observers or on the Board of a TRS Investment

Reviewed by:

- | | |
|---|---|
| <input checked="" type="checkbox"/> HEK | <input checked="" type="checkbox"/> Audit |
| <input checked="" type="checkbox"/> Keith Brown | <input checked="" type="checkbox"/> Legal |

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Memo

To: **Board of Trustees, Teacher Retirement System of Texas**

From: Brady O'Connell, CFA; Steve Voss

Date: August 22, 2013

Re: 2013 Review of Investment Policy Statement

Comments:

The Board has generally reviewed the TRS Investment Policy Statement (IPS) on an annual basis, making changes to reflect the evolving investment portfolio, legal and regulatory developments, and input from parties both outside and within TRS. The review for 2013 is brief—and purposely so—as we transition to a practice that sees the IPS reviewed in great detail every other year.

Despite the changes being relatively minor for 2013 compared to years past, the review process remains important. The IPS is an important instrument for the Board's delegation of authority to TRS staff (IMD, legal, audit, etc.), and it is also an important articulation of the high level investment strategy to be used in the future. As in years past, the IMD has led the review process, but solicited feedback and input from others.

We endorse the changes presented at the September Board meeting and recommend the Board adopt the changes proposed. We comment on the specific changes in more detail below, providing our view and interpretation.

Modification #1: Formal Adoption of Energy and Natural Resources (ENR) Allocation

While the ENR allocation and strategy were discussed in detail at the June meeting, the formal creation of an asset allocation for the category as well as a benchmark is not official until the IPS is changed to reflect the new strategy. The 3% target is created and will be partially funded through the re-categorization of portions of the Private Equity and Real Asset portfolios. While ENR as an asset class is not standard among institutional investors, it does leverage TRS's geography and a unique skill set that has been developed to invest in energy and resource related deals. Investors certainly have exposure to energy and natural resources, but many keep these as part of more broadly defined private equity or real asset portfolios (as has been the TRS practice heretofore). We think the elevation of these investments to a standalone class can be a relative strength for TRS but we would

be cautious about broader movements to investing based on sectors as in doing so, the Board gives up some latitude on how much of the portfolio is invested in equities vs. debt and in public markets vs. private markets (ENR investments can be implemented in a number of different ways as is listed in the policy statement).

Benchmarking the ENR portfolio is a challenge. We surveyed our own client base as well as the broader institutional investor landscape and have not identified an elegant benchmark that fits the anticipated composition of the ENR portfolio. We have, however, worked with the IMD in the development and testing of the proposed benchmark, which combines a private market peer benchmark from Cambridge Associates that focuses on natural resource investments along with a lagged CPI component. The inclusion of the CPI serves to reduce the volatility of the ENR benchmark and reflects the intention of the ENR portfolio to be less volatile than what is included in the Cambridge benchmark (in addition to dampening volatility over time, it will also likely dampen the return relative to the Cambridge benchmark). We think what has been proposed is the best benchmark available, but this is an area that may be revisited in future reviews of policy. We understand that the reweighting scheme being applied to the Cambridge Associates portion of the benchmark will be conducted by State Street, so we are comfortable that an independent party will be calculating this unique and customized benchmark.

Changes made to incorporate the ENR portfolio also including vesting in the head of ENR similar investment authority as that provided to the head of Private Equity and Real Assets.

Modification #2: Clarification on Measurement of Emerging Manager Allocation

The change is straightforward and clarifies that the target for the emerging manager allocation will be measured in net asset value terms and not commitment terms. While there was some confusion as to the original intent, the end result of this change is an effective increase in the allocation to the emerging manager space when switching the measurement mechanism from commitment to net market value.

Modification #3: Update and Clarification of Investment Restrictions

Driven by a change in the restrictions on Iran investments, these proposed modifications update the policy language and consolidate the three main areas of restriction: Iran, Sudan, and investments with “a prurient interest in sex.” Good fiduciary duty requires the Board to make decisions based on the best interest of the beneficiaries, but the Board must also comply with the law.

Modification #4: Clarification on Ability to Serve on External Boards or Committees

As the alternative investment portfolio has become larger and more complex, the need for oversight and monitoring has grown. Private market investments often offer important opportunities to monitor illiquid investments through Advisory Committee seats. With a shift towards more principal investments, there now may be a need to serve as a Board Observer or perhaps some point as a formal director on a corporate board. These duties are pursued in order to make sure TRS's best interests are represented.

Important additions to the policy include 1) the formal recognition that TRS employees may represent TRS interests in these three capacities (Advisory Committee, Board Observer, Board Member) , 2) authorizes the use of 3rd parties to represent TRS, and 3) the requirement of reporting of all positions held by either TRS employees or 3rd party representatives on an annual basis. Appendix G also provides important language on some of the legal and insurance implications of opting to serve in this capacity.

We are comfortable with this change and suspect that the need to oversee and monitor complex investments will continue to grow. Therefore removing ambiguity regarding the ability to serve and the reporting requirements is helpful. We understand that the IMD will undertake a cost/benefit analysis when deciding when and where TRS should serve. Importantly, those serving for TRS will be fiduciaries representing the best interest of TRS beneficiaries and individuals will not receive compensation for serving on Advisory Committees, Board, or Advisory Boards.

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DEPARTMENT OF FINANCE
THE UNIVERSITY OF TEXAS AT AUSTIN

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MEMORANDUM

To: Board of Trustees
The Teacher Retirement System (TRS) of Texas

From: Keith C. Brown 
Advisor to the TRS Board

Re: Proposed Changes to the TRS Investment Policy Statement

Date: August 22, 2013

I have reviewed the several changes to the Investment Policy Statement (IPS) that have been proposed recently by the Investment Management Division (IMD). *Overall, I endorse these modifications and recommend their adoption.*

In what follows below, I have included discussion on all four of the changes that have been proposed by the IMD staff. (Note: For the sake of clarity, the headers for the various entries are based on those used in the notes accompanying the IMD's "Proposed Modifications to Investment Policy" presentation to the Board of August 20, 2013.)

- *Add an Asset Class Allocation to Energy and Natural Resources*

In what is very likely the most significant modification being proposed, this amendment would create a new asset allocation line item for Energy and Natural Resources (ENR) investments. This change essentially creates ENR as a separate asset class distinct from either Real Assets or Commodities, as detailed in the newly added Article 6 in the IPS. The initial proposal would specify a 3% target allocation in ENR, with a permissible tactical range of 0% to 8%. The "budget" for this new allotment would come from reductions in Private Equity (1%) and Real Assets (2%), which are presumably the categories where those investments are categorized now.

At the June 2013 meeting of the Investment Management Committee, the Board heard a persuasive presentation for why it makes sense to collect IMD staffing resources in one place with respect to ENR investments. In a sense, this proposal can be viewed as a

natural extension of that effort. However, it is important for the Board to recognize that how the responsibility for ENR investments is staffed and the creation of ENR as its own asset class within the IPS are separate events that should be judged—and adopted or not—on their own merits.

Ultimately, I do not have any substantive objections to treating ENR as a separate asset class, but neither do I have any strong arguments to make as to why it should be. Presumably, this modification does not expand the universe of assets in which the IMD can make investments; in fact, as noted in the Chief Risk Officer's analysis at the June 2013 Board meeting, 12.0% of existing Trust funds are invested in ENR assets, 2.3% of which would transfer to the new ENR portfolio. Conversely, if the point is that this is a sector of the economy that is strategically important—both in general economic terms and to TRS in particular—it seems that a similar argument could be made for other market sectors as well (e.g., health care). The Board should be convinced that this modification is not the first step in an evolution that could result in an IPS that becomes too “granular” to be effective.

The proposed benchmark for the new ENR allocation is a hybrid consisting of 75% of the Cambridge NR index (reweighted) & 25% of the CPI (lagged one quarter). Strictly speaking, this benchmark is not investible, which means that its role as an expression of the true opportunity cost for the allocation is somewhat diminished. The justification for its adoption (which was part of the June 2013 presentation) is that changes in historical levels of this benchmark are highly correlated with past movements in the actual ENR portfolio, which is a reasonable and appropriate argument. Nevertheless, given the importance of this designation for performance measurement and compensation purposes, the Board should monitor the effectiveness of this hybrid index on an on-going basis.

Finally, the Board should also be comfortable that it has sufficient understanding as to which assets will be placed in the ENR asset class and which assets will not. That is, the creation of any new asset class at the IPS level creates the need for a well-defined mandate categorization procedure that is tractable and transparent. It is impossible to make prudent decisions about target allocation limits without understanding exactly into which asset class any particular investment will be placed. (Recall from above that the Trust currently has 12.0% of ENR investments but only 2.3% of those assets will be placed in the ENR portfolio, meaning that the remaining 9.7% will be accounted for outside of the ENR allocation.) The Board needs to be comfortable that such a categorization procedure is in place and makes sense in the context of how the proposed allocation limits have been set.

- *Adjust the Emerging Managers Allocation*

This modification clarifies that the \$1.65 billion target allocation in the Emerging Managers program pertains to the total net asset value (i.e., invested value) in the program rather than the cumulative value of the initial commitment levels. As amended, the policy is now consistent with the Board's understanding when the program was initiated in 2009.

One aspect of the target allocation for this program that may merit future consideration is that it appears to be the only set of allocation limits in the IPS expressed in explicit dollar terms rather than as a percentage of total assets under management for the System. (For example, the allocation limits for the Emerging Manager program in Appendix C are listed in dollars whereas the approval limits for Manger Organization allocations in Appendix B are expressed as a percentage of Total Fund value.) This is not necessarily a problem, but it does create a situation that the Emerging Manager program may become “capped” artificially due to its own success or becomes a smaller percentage of the overall portfolio over time.

- *Adjust Iran Investment Restrictions to Conform to New Statute*

New language has been added to Article 1.8 (and removed from Articles 2.8 and 3.5) in order to modify and consolidate the IPS in a manner consistent with new restrictions on Iran-related investments that were mandated by the 2013 Legislative Session. The document now consolidates the discussion of myriad investment restrictions (e.g., Iran, Sudan, pornography) into one place.

- *Clarify TRS Investment Representation on Boards and Committees*

This modification adds new language to the IPS to clarify and expand the rules on how and when TRS professionals can serve as representatives on advisory boards for any investment vehicle in which the System has a direct or indirect position. As detailed in a newly added appendix (i.e., Appendix G), the proposal indicates (i) which advisory bodies that TRS representatives are eligible to included on, (ii) which TRS employee may be included and who in the organization is responsible to making that appointment, and (iii) the procedure for appointing someone who is not currently a TRS employee.

Both the general intent and specific language of this proposal are reasonable and serve to fill in a gap in the current IPS, which only allows TRS employees to serve on advisory boards for private market investments. Further, the general intention of the proposed policy is that the staffing of these positions—as well as the decisions for their appointments—should be managed within the IMD, which is entirely appropriate given the investment-related nature of the function involved. Language has also been added to the IPS requiring the IMD to make an annual report to the Board of all such appointments.

There are two important exceptions to the IMD-oriented control for these staffing decisions. First, when the advisory board positions in question involve a publicly traded security, the approval of the Executive Director must be obtained in conjunction with that of the Chief Investment Officer. Second, the consultation (but not the explicit approval) of the Executive Director is also necessary for the appointment of a non-employee third

party to any advisory position. These additional layers of organizational oversight are appropriate given the increased scrutiny that public market positions or appointments of “outsiders” are likely to engender.

Finally, it is worth noting that accepting any such advisory position is an action for which TRS is likely to incur both substantial benefits (e.g., increased information flow, better monitoring of invested capital) and substantial costs (e.g., constraints on staff time, travel expenses, insurance). As with any economic judgment, it is crucial that the relevant decision-makers have a thorough appreciation of the benefit-cost tradeoff and only make appointments when the former is clearly expected to exceed the latter. Language has been added to Article 1.8 to underscore this point.



CLIENT MEMORANDUM

CONFIDENTIAL ATTORNEY/CLIENT COMMUNICATION

To: Board of Trustees
Date: August 23, 2013
Client: Teacher Retirement System of Texas ("TRS")
Subject: Proposed Investment Policy Statement ("IPS") Revisions

We reviewed the proposed changes to the IPS to be presented to the Board of Trustees ("Board") at its September 2013 meeting.

A. Proposed Changes 1, 2 and 3. We reviewed and commented on the proposed changes with regard to the Energy and Natural Resources ("ENR") portfolio, emerging managers allocation, and restrictions on investments in Iran in light of the Board's fiduciary duties and best practices in these areas. The proposed revisions to the ENR portfolio, emerging managers allocation and restrictions on Iran investments appear consistent with materials previously presented to the Board and applicable statutory requirements. As a component of TRS's overall review and risk management processes, TRS intends to manage the unique risks associated with an ENR portfolio, such as taxation and regulatory issues.

B. Proposed Change 4. We also reviewed and commented on the proposal to allow TRS employees to serve as voting members or observers on boards of TRS investees.

1. Policy. As we have discussed with TRS, the following items included in the draft policy located in the IPS and Appendix G should be helpful to the Trustees in monitoring and TRS in implementing the program, and we support their inclusion:

a. TRS established a written policy in section 1.8 and Appendix G of the IPS, and TRS will prepare a procedure, to provide parameters for the program. *See IPS section 1.8 and Appendix G.*

b. General Counsel will be consulted prior to authorization of an employee's service on an investee board. *See IPS Appendix G section B(3).*

c. Separate requirements are included for service as voting members of a board or for service on advisory committees or as non-voting observers of a board. Separate rules are appropriate because the duties and potential liabilities related to these roles differ greatly. *See IPS Appendix G sections A and B.*

d. The policy includes an approval process in which the CIO or Deputy CIO approve employee service, and the Executive Director approves of CIO or Deputy CIO service. *See IPS Appendix G section B(3).*

e. The investment-related agreements themselves may provide for these positions. *See IPS Appendix G sections A and B.*

f. The employee's primary responsibilities are to TRS. *See IPS Appendix G section B(1)(c).*

g. Any compensation or reimbursement of expenses will be paid to TRS, rather than the employee. *See IPS Appendix G section B(1)(e).*

h. The company's insurance and indemnification will be structured to be primary to any available TRS liability and indemnification coverage. *See IPS Appendix G section B(1)(d).*

i. IMD will report to the Board if an individual is planning to take an advisory or board seat and provide an annual report to the Board regarding service on a governing body. *See IPS sections 1.7(d)(xi) and 1.7(n).*

2. Procedure. The IPS and Appendix G provide the framework for the Board's policy on board or advisory/observer service. We discussed with TRS that the following matters should be addressed in written procedures (made available to the Board) to implement the policy. TRS will address a number of these issues during the due diligence process for each position accepted or after acceptance of the position.

a. TRS individuals who serve on boards and in advisory positions should receive training about conflicts of interest when they are selected for a position, including recognition of potential conflicts of interest, disclosure and recusal procedures, and seeking disinterested member designations when necessary.

b. TRS should evaluate the industry in which a company operates and its competitors before authorizing a TRS employee to fill a board opportunity with that company in order to avoid antitrust issues. TRS should consider whether board positions with two competing companies (even if filled by two different individuals) could create potential antitrust allegations.

c. TRS should provide training to board representatives or observers about whether company-level communications would be subject to open records disclosure under Texas law.

d. The procedure could describe how potential claims arising from an employee's service on the investee board will be defended.

e. Related to the Appendix G section B(1)(d) requirement that the investee company's insurance and indemnification will be primary, TRS's procedure could require determination at renewal of the current fiduciary liability or director's and officer's coverage whether policies provide for secondary coverage for potential liability related to the employee's service, and, if not, attempt to obtain a rider.

f. The procedure could specify the basis on which TRS will determine whether to require the investee company to provide a legal opinion on TRS's liability protections in the arrangement.

g. The procedure could specify whether there should be a maximum limit on the number of boards on which an individual employee may serve at the same time.

h. The procedure should document that the Employee Ethics Policy applies to an employee in his or her work on the board.

i. Although TRS will determine on a case by case basis whether preference will be given to an observer or advisory position as opposed to a voting board member position, the procedure could specify factors to be considered in the determination.



INVESTMENT POLICY STATEMENT

(Adopted September ~~13, 2012~~ [], 2013 to be effective October 1, ~~2012~~2013)

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EXECUTIVE SUMMARY

This Executive Summary is not intended to replace, and must be read in conjunction with, the Investment Policy Statement. In the event of a conflict between the Executive Summary and the Investment Policy Statement, the Investment Policy Statement shall govern.

Total Fund and Portfolio Design;
[Restrictions](#)

#1

The Investment Policy Statement provides a formal plan for investing pension trust fund and health insurance program assets. The policy defines the roles and responsibilities of the Investment Division and other parties within that plan.

The Internal Investment Committee is established and assigned the authority to review and approve investments. The IIC's authority is limited by the size of the investments it can approve without also obtaining approval from the Board. The limitations are 0.5% for initial allocations, 1% for follow-on allocations, 3% total to any one organization in each of External Public Markets, Private Equity, Real Assets and [Energy and Natural Resources](#) and 6% total to any one organization in the total Trust with each of the foregoing percentage stated as a percentage of the Total Trust and calculated at time of investment. In addition, the CIO has Special Investment Opportunity authority of up to \$1 billion. See "Appendix B – IIC Approval Authority and Manager Organization Allocation Limits."

The Trust's objectives are to (a) control risk and (b) achieve a long-term rate of return that exceeds (i) the assumed actuarial rate of return adopted by the Board, (ii) inflation plus 5% and (ii) the Trust's Policy Benchmark. The Trust is subject to a "prudent person" standard of care under the Texas Constitution.

#4 &
[Consolidation](#)

[Within the constraints of the IPS, the Investment Division is authorized to engage advisors and consultants, authorize commitments to be funded over an extended period of years, serve or hire independent third-parties to serve on External Advisory Committees or Boards, as Board Observers or on the governing body of a non-public \(private\) or a publicly-traded business entity, allow short positions, engage in overlay strategies, rebalance the portfolio, and transfer, withdraw or terminate its investments. Private Market and External Public investments will be submitted to the Board for authorization if the appropriate consultant or advisor does not concur with the investment or at the request of any Board member.](#)

#3

[Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively.](#)

[Consolidation](#)

[TRS will not invest in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.](#)

See "Article 1 – Total Fund and Portfolio Design-; [Restrictions.](#)"

Asset Allocation

#1

<u>Asset Class</u>	<u>Target</u>
<u>Global Equity</u>	
US Large Cap	18%
US Small Cap	2
Non-US Developed	15
Emerging Markets	10
Directional Hedge Funds	5
Private Equity	12 11
<u>Stable Value</u>	
US Treasuries	13%
Absolute Return	0
Stable Value Hedge Funds	4
Cash	1
<u>Real Return</u>	
Global Inflation Linked Bonds	5%
Real Assets	15 13
<u>Energy and Natural Resources</u>	<u>3</u>
Commodities	0
Total	100%

In addition to the target, each asset class has minimum and maximum allocations which, with certain exceptions, are +/-5% around the target allocation.

See “Section 1.6 – Total Fund Asset Mix and Benchmarks.”

Measurement and Reporting

#4

Investment performance, policy compliance, asset allocation, external investments activities, derivatives usage, risk limits, liquidity, leverage, private markets strategy, staffing, [board and board observer seats](#), use of placement agents and other information will be monitored and reported to the Board. See “Section 1.7 – Total Fund Measurement and Reporting Criteria.”

Public Markets Portfolios

Consolidation

The portfolios are authorized to invest in publicly traded or Rule 144A (either through an exchange or over-the-counter) assets such as equities, exchange-traded funds, equity-linked notes, options, futures, swaps, forwards, corporate debt, sovereign or sovereign-sponsored entity debt (including US Treasuries), mortgage-backed securities, collateralized mortgage obligations, commercial mortgage-backed securities, asset-backed securities, any investment in one of the public markets benchmarks, mutual funds, closed end funds, structured notes, structured credit transactions, repurchase transactions, State of Texas pooled investment funds, foreign currencies, short sales, local access products and other investments. See “Section 2.2 –Public Markets Portfolios Authorized Investments.”

Certain restrictions apply to the internally managed portfolios including restrictions on ~~(a)~~ the amount of equity of any company that can be held (not more than 20%), ~~(b)~~ investments linked to a prurient interest in sex, ~~(c)~~ investments linked to Sudan and ~~(d)~~ investments linked to Iran. [those listed in Section 1.8.](#) See “Section 2.3 – Public Markets Portfolios Restrictions.”

External Public Markets Portfolio

The portfolio is comprised of (a) externally managed public investments that do not qualify as Hedge Funds (limited to less than 30% of the Trust), (b) Hedge Funds (limited to less than 10% of the Trust) and (c) other absolute return portfolios (includes credit-sensitive investments). Hedge Fund is defined in Section 2.6.

<p>#3 & Consolidation</p>	<p>Any Board member can require that any investment in the External Public Markets Portfolio be submitted for consideration to the Board. The Investment Division can engage advisors and consultants with respect to the portfolio, allow short positions, engage in overlay strategies, rebalance the portfolio and terminate managers within the portfolio. The separate account investments within the portfolio will adhere to the Sudan and Iran restrictions. See “Section 2.7 – Authorized Investments for the External Public Markets Portfolio” and “Section 2.8 – External Public Markets Portfolio Restrictions.”</p>
<p>Private Markets Portfolio</p>	<p>General principles of investing in private markets apply to both the Private Equity and, Real Assets and Energy and Natural Resources portfolios. The Investment Division is authorized to engage advisors and consultants, authorize commitments to be funded over an extended period of years, serve on limited partner or investment advisory committees, engage in rebalancing and engage in overlay strategies. Investments will be submitted to the Board for authorization if the appropriate consultant or advisor does not concur with the investment or at the request of any Board member. The Investment Division can transfer, withdraw or terminate its investments. In certain circumstances, restrictions apply to the portfolios regarding investments linked to a prurient interest in sex, Sudan and Iran. See “Article 3 – Private Markets Portfolios.”</p>
<p>#1, #3 & Consolidation</p>	
<p>Private Equity Portfolio</p>	<p>The portfolio makes investments either through funds or directly in equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments. Private equity strategies are often classified as venture capital, mezzanine, buyout, emerging markets and special situation. See “Article 4 – Private Equity Portfolio.”</p>
<p>Real Assets Portfolio</p>	<p>The portfolio makes investments either through funds or directly in equity, debt, rights, warrants or other investments in real estate, infrastructure, timber, agriculture, oil and gas, mortgage-related investments, real estate investment trusts, master limited partnerships, non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified as core, core-plus, value-added and opportunistic. Non real estate investments are restricted to 5% or less of the Total Fund. See “Article 5 – Real Assets Portfolio.”</p>
<p>#1</p>	
<p>Energy and Natural Resources Portfolio</p>	<p>The portfolio makes investments in energy and natural resources related assets through public funds, private equity funds, or directly through equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments whether public or private. Energy and natural resource investments are often classified by resource type and where the investment is in the resource value chain (upstream, midstream or downstream). See “Article 6 – Energy and Natural Resources Portfolio.”</p>
<p>#1</p>	
<p>Emerging Managers Program</p>	<p>The Investment Division will make a good-faith effort to invest a target allocation of \$1.65 billion with qualified emerging managers in the External Public Markets Portfolio, Private Equity Portfolio and the Real Assets Portfolio. Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations generally with less than \$2 billion assets under management or a performance track record of less than five years. See “Article 67 – Emerging Managers Program” and “Appendix C – Emerging Managers.”</p>
<p>Overlay Portfolios</p>	<p>Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund. Overlay portfolios are restricted by the asset allocation limits of the Trust. In addition, certain uses of currency overlays are</p>

restricted to less than (a) 5% to all non-US dollar currencies, (b) 2% to any one developed market currency (except the US dollar) and (c) 1% to any emerging market currency, each calculated as a percentage of the Trust. See “Article [78](#) – Overlay Portfolios.”

Derivatives

Derivatives are authorized only if they efficiently manage and reduce the risk of the overall investment portfolio. Derivatives can be used to (a) implement investment strategies in a lower cost or efficient manner, (b) efficiently manage the Total Fund portfolio, (c) construct portfolios that could not be efficiently constructed using cash market securities, (d) hedge and control risks and (e) facilitate transition trading.

Over-the-counter derivatives may not have a tenor of greater than six years (or, thirty years in the case of interest rate swaps). Derivatives may only invest in legally permissible policy asset categories and may not be used to circumvent the asset allocation or other policy restrictions. All use of derivatives must be properly documented. All over-the-counter derivatives must be executed using ISDA documentation or, if centrally cleared, clearing agreements. All counterparties must have a credit rating of at least A- (Standard & Poor’s or Fitch) or A3 (Moody’s). In addition, the net market value of derivatives positions with any counterparty may not exceed \$500 million (calculated net of collateral) and may not exceed 5% of the total market value of the Fund (without consideration of collateral).

See “Article [89](#) – Authorized Uses of Derivatives.”

Risk Management

The Investment Division will monitor and manage risk of the Total Fund Portfolio including:

Market Risk – will be managed and measured using at a minimum a quantified estimate of downside risk (e.g., value-at-risk), asset allocation limits, private markets holdings analysis, and a quantified estimate of risk relative to the benchmark (tracking error).

Foreign Exchange Risk – will be managed according to a Policy Hedge Ratio established by the Board. The current Policy Hedge Ratio is set ~~at~~ 0%.

Credit Risk – the primary sources of credit risk are ~~derivatives~~ derivative counterparty risk (mitigated by credit provisions in the derivatives documentation), the risk from repurchase agreements (limited to 5% of the Trust market value) and securities lending.

Liquidity Risk – a prudent liquidity management will be established to ensure that the Fund maintains ample liquidity to meet its funding commitments, especially disbursements of benefits and TRS investment activities.

Leverage Risk – the permitted uses of leverage are defined. Leverage will not be used to exceed the asset allocation ranges of the policy.

Other managed risks include operations risk, settlement risk and legal risk.

Compliance cure periods or corrective action plan periods established for violations of policy or other compliance limits are 90 days for passive violations (a violation due to changing market or credit conditions) and 15 days for active violations (a violation due to entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor).

See “Article [910](#) – Risk Management and Oversight.”

Health Insurance Program	Authorized investments for the Health Insurance Program Portfolio are conservative, short-term securities consistent with the guidelines employed by the Comptroller when investing State funds. See “Article 10 11 – Health Insurance Program Portfolio.”																						
Political Contributions; Improper Influence; Placement Agents and Finders	<p>The purpose of this policy is to ensure the integrity of all TRS investment transactions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either. The Investment Division shall obtain full disclosure of all matters having the potential to harm TRS’s reputation or the integrity of TRS’s investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process. Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. Adequate disclosure must be made in connection with any investment in the form of “Appendix F – Political Contributions; Improper Influence; Placement Agents and Finders Questionnaire.”</p> <p>See “Article 1112 – Political Contributions; Improper Influence; Placement Agents and Finders.”</p>																						
Tracking Error	<p>Neutral tracking error targets are established for certain portfolios of the Trust:</p> <table> <tr> <td colspan="2"><u>Internal</u></td> </tr> <tr> <td>Equity (Global Best)</td> <td>100 bp</td> </tr> <tr> <td colspan="2"><u>External</u></td> </tr> <tr> <td>Equity (US; Large-Cap)</td> <td>300 bp</td> </tr> <tr> <td>Equity (US; Small-Cap)</td> <td>500</td> </tr> <tr> <td>Equity (International; Developed, EAFE)</td> <td>300</td> </tr> <tr> <td>Equity (International; Emerging Markets)</td> <td>300</td> </tr> <tr> <td>Equity (World Equity)</td> <td>300</td> </tr> <tr> <td>Stable Value Hedge Funds</td> <td>400</td> </tr> <tr> <td>Directional Hedge Funds</td> <td>600</td> </tr> <tr> <td>Total Public Fund Tracking Error</td> <td>100</td> </tr> </table> <p>In addition, Total Global Inflation Linked and Total Public Fund have maximum tracking error limits of 200 bp and 300 bp, respectively. See “Appendix A – Tracking Error Neutral (in annualized basis points).”</p>	<u>Internal</u>		Equity (Global Best)	100 bp	<u>External</u>		Equity (US; Large-Cap)	300 bp	Equity (US; Small-Cap)	500	Equity (International; Developed, EAFE)	300	Equity (International; Emerging Markets)	300	Equity (World Equity)	300	Stable Value Hedge Funds	400	Directional Hedge Funds	600	Total Public Fund Tracking Error	100
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Total Public Fund Tracking Error	100																						
Authority	<p>The employee titles in the Investment Group are specified and three types of investment authority are described including (i) general authority for investment matters, (ii) over-the-counter derivatives contracts and (iii) transfers of funds or assets; fund or account redemptions and withdrawals. In addition, the employees of the Financial Group, Executive Group and Trading Group are also specified and their authority is described. See “Appendix E – Authority Resolution (TRS 477).”</p>																						

ARTICLE 1 – TOTAL FUND AND PORTFOLIO DESIGN

1.1. Introduction

The Teacher Retirement System of Texas (“TRS”) administers a pension trust fund and other health insurance programs for retirees and certain active public education employees under State of Texas constitutional and statutory provisions. TRS is governed by a Board of Trustees (the “Board”). TRS provides service and disability retirement benefits and death and survivor benefits for Texas public education employees and their beneficiaries. Benefits are funded by state and member contributions and investment returns.

1.2. Purpose and Design

The purpose of this Investment Policy Statement (this “Policy”) is to provide a formal plan for investing pension trust fund and health insurance program assets to achieve defined investment objectives consistent with the TRS mission statement adopted by the Board and with applicable law.

This Policy also defines the roles and responsibilities of the various entities involved in the investment process and facilitates internal and external communication of investment policy.

The appendices to this Policy are incorporated into and form part of this Policy for all purposes. Capitalized terms not defined in this Policy have the meanings assigned to them in the “TRS Glossary of Investment Terms” (“Glossary”), which definitions are also incorporated into and form part of this Policy for all purposes. Modifications to the appendices or the Glossary that would have a substantive effect on this Policy require Board consideration and adoption.

1.3. Roles of Board, Staff, and Advisors

The Board has the primary fiduciary responsibility for investing TRS trust assets in accordance with Article XVI, Section 67 of the Texas Constitution and with applicable law. The Board establishes investment objectives and policy, obtains expert advice and assistance, and oversees the employment of a qualified and competent investment staff (“Investment Division”) and legal staff. The Board also monitors the actions of staff and advisors to ensure compliance with its policies. The Board has a Policy Committee of the Board (“Policy Committee”), an Investment Management Committee of the Board (“IMD Committee”) and a Risk Management Committee of the Board (“Risk Management Committee”), each of which is a standing committee of the Board charged with those responsibilities set forth in the Bylaws of the Board. The Board and the Investment Division are assisted by outside investment consultants and internal and external legal counsel.

- a. Investment Counsel (“Investment Counsel”) selected by the Board provides education, advice, commentary, and discussion as requested at Board meetings, assists with development and review of investment policies and procedures, performs due diligence and recommends managers or investments, reports on the progress of the Fund in meeting its investment objectives, and compares the performance of the portfolio to established benchmarks. The Investment Division and Investment Counsel provide information as needed to assist the consulting actuary in performance of actuarial services.
- b. The Investment Division has fiduciary responsibilities delegated by the Board under applicable law. [The](#) Investment Division manages the Fund according to the Board's policies, advises and informs the Executive Director and the Board about investments, and recommends modifications to this Policy. The Investment Division executes all transactions, performs risk-management functions, and prepares investment reports.
- c. The Internal Investment Committee (“IIC”) is hereby established to review, consider, and authorize proposed external manager engagements and investments as required by this Policy for the External Public Markets Portfolio and the Private Markets Portfolios. Additionally, the IIC will manage the foreign exchange policy hedge ratios (set forth in Appendix D) and review as needed.

The permanent IIC membership consists of the Chief Investment Officer (“CIO”), the Deputy CIO, the Chief Risk Officer (“CRO”), and the Investment Division Senior Managing Directors (“SMD’s”). The CIO will establish procedures and guidelines for the operations of the IIC. The IIC procedures and guidelines may provide that the CIO may appoint and remove select Directors as non-permanent voting members to the IIC. The IIC procedures and

guidelines will define a quorum and establish the vote required to authorize an investment or external manager engagement or, if required by this Policy, recommend an investment or external manager engagement to the Board, which vote may not be less than a majority of the then-incumbent IIC members present and voting at a meeting at which a quorum is present. The CIO shall have the power to veto any investment or delegation of investment discretion authorized or recommended by the IIC pursuant to a vote of its members. Termination of a member's TRS employment terminates IIC membership as of the date the employee or TRS gives notice of termination, as the case may be.

The Executive Director or his designee may attend any meeting of the IIC, and the Investment Division shall deliver to the Executive Director copies of all IIC materials, analyses, correspondence, and agendas as and when delivered to IIC members or other TRS employees. The Executive Director is not a member of the IIC, however, acting in his or her capacity as the chief executive officer and chief administrative employee of TRS as set forth in the Board's Bylaws, the Executive Director shall, after consultation with the CIO, have the power to veto any investment or delegation of investment discretion proposed for IIC consideration or authorized or recommended by the IIC pursuant to a vote of its members whenever he deems such veto to be in TRS' best interest. When this Policy requires that the Board authorize an investment or an engagement of an external manager, the IIC shall vote on whether to recommend such investment or engagement to the Board. The results of the vote shall be reported to the Board in the materials provided to the Board for consideration.

- d. All proposed changes to this Policy will be reviewed by the legal staff for compliance with state and federal laws regarding fiduciary responsibility, investment prudence, ethics compliance, and other applicable standards or requirements before submission to the Policy Committee. Except as authorized by the Executive Director, proposed changes to this Policy will first be presented to the Policy Committee, which will consider recommending the proposed changes to the Board. The Board may consider and adopt proposed changes that have not been considered by the Policy Committee. This Policy shall be reviewed at least once every three years.

1.4. Total Fund Objectives

In this Policy, the total or overall investment portfolio includes all assets invested by TRS to provide retirement, death, health, and disability benefits administered by the system, including cash and cash equivalents (the "Total Fund" or the "Fund") and will be structured and managed to achieve the following objectives:

- a. Control risk through proper diversification of asset classes and by establishing long-term risk and return expectations; and
- b. As applicable to the pension plan, achieve a long-term rate of return that:
 - i. Exceeds the assumed actuarial rate of return adopted by the Board;
 - ii. Exceeds the long-term rate of inflation by an annualized 5%; and
 - iii. Exceeds the return of a composite benchmark of the respective long-term normal asset mix weighting of the major asset classes.

1.5. Total Fund Investment Standard

Article XVI, Section 67(a)(3) of the Texas Constitution and Section 825.301, Government Code, states that the standard of care for TRS investments is a "prudent person" standard. Section 825.301, Government Code, provides that Section 117.004(b), Property Code, applies to TRS investment decisions. Section 117.004(b) generally states that the determination of the prudence of a single investment decision will be made taking into consideration the investment of all of the assets of the trust, or the assets of the collective investment vehicle, as the case may be, rather than a consideration as to the prudence of the single investment of the trust, or the single investment of the collective investment vehicle, as the case may be.

All investments made by the Total Fund must be in "securities" as defined in Government Code Section 825.301(a) provided, however, that until September 1, 2019, TRS may buy and sell those instruments set forth in Section 825.301(a-1), Government Code, to efficiently manage and reduce the risk of the overall investment portfolio.

The Board and the Investment Division may obtain the assistance and advice of external investment experts, including external managers operating under Agency Agreements, and other investment counselors or consultants as needed.

1.6. Total Fund Asset Mix and Benchmarks

The Investment Division will assist the Board in engaging in an asset-liability study for the pension plan at least once every five (5) years to review asset classes, return-risk assumptions, and correlation of returns with applicable benchmarks and across asset classes. A key objective of the asset-liability study shall be the development through statistical modeling techniques of a diversified portfolio that specifies ranges of prudent portfolio exposures and a “long-term normal” position for each asset class. The normal portfolio mix will represent the portfolio that is expected to meet the Board’s actuarial return objectives for the pension plan within the risk tolerances specified herein.

Each asset class allocation percentage has a “long-term normal” position within the overall portfolio and a maximum and minimum range around that normal allocation. All percentages refer to market value.

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Each asset class is described by an associated benchmark that describes, in general terms, the opportunity set and return characteristics associated with the asset class. For certain private or more complex asset classes the benchmark serves as a proxy for expected returns rather than an approximation of the actual investments that will characterize that component of the portfolio. Those benchmarks, along with the allocation ranges, are identified in the table on the following page, and are referred to as the “Policy Benchmarks.” ~~The portfolio transition which started on October 1, 2007 for Real Assets is ongoing with a long term target for Real Assets of 15%. Adjustments to the benchmark to accommodate the transition for Real Assets are described in footnote 3 in the table below.~~

[Table appears on following page]

Asset Class	Benchmark	Bloomberg Ticker	Minimum Range ¹	Maximum Range ¹	Target
Global Equity:					
US Large Cap	MSCI USA Standard	GDDUUS	13%	23%	18%
US Small Cap	MSCI USA Small Cap	GCUDUS	0%	7%	2%
Non-US Developed	MSCI EAFE and Canada	NDDUEC	10%	20%	15%
Emerging Markets	MSCI EM	NDUEEGF	5%	15%	10%
Directional Hedge Funds	HFRI Fund of Funds Composite	HFRIFOF	0%	10%	5%
<i>Total Public Equity</i>	<i>Target-weighted Blend</i>		45%	55%	50%
Private Equity	State Street Private Equity Index – lagged one quarter		76%	1716%	1211%
Total Global Equity	Target-weighted Blend		554%	6968%	6261%
Stable Value:					
US Treasuries	Barclays Capital (BarCap) Long Treasury Index	LUTLTRUU	0%	20%	13%
Absolute Return (Including Credit Sensitive Investments) ²	3 Month LIBOR + 2%	USCOTR03 (plus 2%)	0%	20%	0%
Stable Value Hedge Funds	HFRI Fund of Funds Conservative	HFRIFOFC	0%	10%	4%
Cash	Citigroup 90-day US Treasury	SBMMTB3	0%	5%	1%
Total Stable Value	Target-weighted Blend		13%	23%	18%
Real Return:					
Global Inflation Linked Bonds	BarCap US Treasury TIPS index	LBUTTRUU	0%	10%	5%
Real Assets	NCREIF ODCE – lagged one quarter		58%	2018%	1513%
Energy and Natural Resources ³	75% Cambridge Associates Natural Resources (reweighted⁴) / 25% quarterly Consumer Price Index – lagged one quarter	CPI (for CPI)	0%	8%	3%
<div style="border: 1px solid black; padding: 2px; display: inline-block;">#1</div>					
Commodities ³	Goldman Sachs Commodity Index	SPGCCITR	0%	5%	0%
Total Real Return	Target-weighted Blend		1516%	2526%	2021%
TOTAL PLAN	Target-weighted Blend				100%

¹ With respect to the maximum range and minimum range, the CIO may increase any maximum range by 5% or decrease any minimum range by 5% (but may not decrease a minimum range below zero) if the CIO concludes in a writing delivered to the Executive Director and to the Board of Trustees stating the action taken and the reasons why the CIO believes that such increase or decrease would be in the best interests of TRS; provided, the maximum range for Total Global Equity may not be increased above 6968%. Before taking action, the CIO must request comments from the Chairman of the appropriate Board Committee and TRS consultants and advisors. The Board, at the next succeeding Board meeting, must authorize the increase or decrease if the CIO proposes that the changes continue in effect after such Board meeting. The CIO will notify the Compliance Officer of any such change to a maximum or minimum range. If the Board does not authorize the continuation of the change to a maximum or minimum range after the next succeeding Board meeting, the Investment Division shall use best efforts to rebalance the portfolio to bring the asset classes within the ranges in the table above within 90 days.

² Absolute Return is a broad category that includes all assets that have a high probability of generating a positive absolute return regardless of market conditions over a one to three year period.

³ Except as specifically provided in [Article Section 5.2](#), investments in commodities are limited to instruments that constitute a security or an authorized derivative that is either underlain by a financial instrument or, if underlain by a physical commodity, is cash settled. Direct investments in physical commodities are prohibited.

⁴ [The Energy and Natural Resources benchmark will be calculated on a quarterly basis one quarter lagged. The Cambridge Associates Natural Resources Index is comprised of Timber, Energy and Upstream/Royalties sub-indices and will be reweighted quarterly using its actual weightings based upon beginning of quarter Timber weight and an equal weight for each of Energy and Upstream/Royalties.](#)

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1.7. Total Fund Measurement and Reporting Criteria

The Investment Division will deliver reports to the Board (and the appropriate Board committee, as applicable) adequate to indicate whether the Total Fund is meeting its objectives and that will permit the Board to monitor each portfolio for compliance with this Policy. The Board will establish performance and risk measurement and attribution standards for the Total Fund, each asset class, and component portfolios.

The following comparisons and reviews will be performed quarterly (unless otherwise noted) and presented to the Board:

- a. **Investment Performance** – Investment performance for the Total Fund and each component portfolio, net of external management fees (if applicable); will be compared with their respective benchmark indices. Fund performance will be judged primarily by comparisons to long-term (3, 5 and 10 year) Policy Benchmark returns.
- b. **Monitoring of compliance with Policy** – Portfolios will be reviewed for compliance with the requirements set forth in this Policy. The Investment Compliance Officer will have overall responsibility for compliance monitoring. However, if considered necessary, TRS will hire external parties to obtain assistance regarding compliance monitoring. To ensure independence in compliance monitoring the Investment Compliance Officer or external parties hired will not be given the authority to trade securities. To ensure ongoing compliance with this Policy and completeness of disclosures to the Board regarding compliance, the Investment Compliance Officer has authority to require certifications from applicable IIC members or Managing Directors disclosing known compliance violations. The Investment Compliance Officer reports all known compliance exceptions to the Board at the next meeting of the Board.
- c. **Asset class exposures and weightings** – The exposure of cash and derivative instruments to each asset class will be aggregated and compared with their respective long-term and transition benchmarks and with the authorized ranges around those benchmarks. Hedge Fund exposure will be reported relative to its statutory limit, if applicable.
- d. **External investments under consideration** – For any external investment under consideration by the Investment Division (including hedge funds, external managers, ~~real-asset~~ and private ~~equity~~ markets investments), the Investment Division will provide the Board the following information prior to the date of the applicable IIC meeting:
 - i. Name of the investment vehicle and investment manager;
 - ii. Total fund or strategy size;
 - iii. TRS investment amount under consideration;
 - iv. Investment strategy;
 - v. Names of the external manager or fund principals;
 - vi. Projected TRS commitment or funding date;
 - vii. Placement agent or firm sponsoring the offering or engagement, if any;
 - viii. Prospective fees;
 - ix. Other TRS investments with the firm; ~~and~~
 - x. Historical fund or manager performance; and
 - xi. Type of investment representation contemplated and proposed individual to serve, if any.
- e. **External investments activities** – The Investment Division will provide the Board with a list of all external investments, including any additions, withdrawals, transfers or terminations, on at least a semi-annual basis.
- f. **Derivatives** – The Investment Division shall provide a comprehensive report of all outstanding derivative applications (including derivative types, counterparties, notional amounts, and fair values) used by internal managers and external managers under Agency Agreements on at least a semi-annual basis.
- g. **Risk limit** – The Investment Division will report at least semi-annually the Total Fund and benchmark total estimated risk relative to the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- h. **Liquidity** – The Investment Division will report at least semi-annually to the Board the use of external liquidity funding mechanisms.

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- i. **Leverage** – The Investment Division will report the Gross and Net Leverage derived from internal derivative use, internal short sales, external managers, Hedge Funds, and leverage resulting from use of external liquidity funding mechanisms as outlined in the Liquidity Policy on at least a semi-annual basis.
- j. **Transparency report** – The Investment Division will provide a transparency report to the Board that may be used to disclose any of the required information mentioned above. This report may be delivered in electronic or physical formats.
- k. **Private Markets Long-Term Strategy** – The Investment Division will review with the Board its long-term strategy for ~~the each~~ Private ~~Equity and the Real Asset portfolios~~ Markets Portfolio at least every three years. This review will include information on target sub-strategy allocation, return, risk and liquidity expectations. Tactical deviations from this long-term strategy will be reviewed on an annual basis.
- l. **Staffing** – The Investment Division will provide an update no less than annually reporting on the staffing of key employees in the division, including turnover, transfers and the creation of new positions.
- m. **Placement Agent Disclosures** – The Investment Division shall compile all responses to the placement agent questionnaire (Appendix F) for the purposes of Article ~~4~~12, including for emerging manager investments, and report the results to the Board at least semi-annually. Each response shall include the questionnaire information as of the date the IIC approved the investment. Reports shall include the amounts and recipients of any political contribution or Placement Fee and the relationship of the recipients to the Placement Agent or Texas Elected Official, as applicable.
- #4 ~~n.~~ **Participation as Board Observers or on Governing Boards** – The Investment Division shall provide the Board with an annual report on all board observer positions and positions held by employees or third party representatives serving on the governing body of a business entity in which TRS holds a direct or indirect investment interest.
- o. **Other information** – Any other information or reports as the Board may request or require from time to time.

1.8. Total Fund Portfolio Implementation and Design; Restrictions

- a. The Total Fund investment portfolio is characterized by the following functional portfolios that are charged with the implementation of day-to-day portfolio management activity:
 - ~~a.i.~~ Internal Public Markets Portfolios;
 - ~~b.ii.~~ External Public Markets Portfolio;
 - ~~e.iii.~~ Private Markets Portfolios;
 - ~~d.iv.~~ Overlay Portfolios; and
 - ~~e.v.~~ Risk Management and Oversight.
- b. The Investment Division is authorized to represent TRS on external advisory committees or boards and as board observers in investments in which TRS has an interest.
- #4 c. Subject to Appendix G, after evaluation of the net benefit to TRS, employees in the Investment Division are authorized to represent TRS or to nominate or appoint third-party independent non-employees to represent TRS on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.
- ~~b.d.~~ The objectives, authority and limitations of each of these ~~functional~~ investment areas, and the authorized uses of derivatives, are described throughout the remainder of this Policy.
- #3 & Consolidation e. Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively. Additionally, TRS may avail itself of the

[protection afforded by applicable federal law, including the U.S. Sudan Accountability and Divestment Act and the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010.](#)

- e.f. [TRS will not invest directly in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. These include sexually explicit films, videos, publications, and software; topless bars and strip clubs; and explicit sexually-oriented telephone and Internet services. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.](#)

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ARTICLE 2 – PUBLIC MARKETS PORTFOLIOS

2.1. Public Markets Portfolios Objectives

The Public Markets Portfolios are comprised of the Internal Public Markets Portfolios and the External Public Markets Portfolios. The primary objectives of the Public Markets Portfolios are to manage publicly-traded, marketable securities and related instruments, in accordance with the risk parameters established by the permitted asset allocation ranges of this Policy, to meet or exceed the performance of the Policy Benchmark, as allocated to the Public Markets Portfolios. The Internal Public Markets Portfolios will serve as the primary vehicles through which transition management will be performed and proxy portfolios will be managed vis-à-vis the unfunded Private ~~Equity, Real Assets, and~~ [Markets Portfolios](#). External Manager Portfolios, and Hedge Fund portions of the Fund.

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2.2. Public Markets Portfolios Authorized Investments

The Public Markets Portfolios are authorized to invest in the securities described as follows:

- a. Equity securities of all companies traded or listed on a national exchange in the U.S. or in countries in the MSCI ACWI ex-US benchmark, and any component security of a Policy Benchmark.
- b. Common stocks, preferred stocks, convertible bonds, rights, warrants, units and depositary receipts (“DRs”) that trade publicly or pursuant to Rule 144A of the Securities and Exchange Commission (the “SEC”), without regard to the issuer’s principal place of business or jurisdiction of incorporation or organization (such securities are sometimes referred to in this Policy as “Authorized Equity Securities”), including common or preferred stock issued in initial public offerings (“IPOs”).
- c. Exchange-traded funds (“ETFs”) and closed-end funds tracking an applicable benchmark (or a significant subset or sector of a benchmark) if listed on a U.S. stock exchange or market or on a stock exchange or market in a country in which TRS is authorized to buy and sell securities.
- d. Exchange-listed or private placement equity-linked notes intended to track authorized international equity securities or indices, and registered index funds in any country index series intended to track its respective country index, provided that the country is in the Policy Benchmark.
- e. Exchange-traded futures contracts, options contracts, and options on futures contracts in order to efficiently manage or reduce the risk of the overall investment portfolio, or both, in accordance with this Policy and applicable law.
- f. Over-the-counter swap and option agreements, including but not limited to total return swaps, interest rate swaps, credit default swaps, and currency swaps, to efficiently manage or reduce the risk of the overall investment portfolio, or both. The Fund may also use forward agreements and any other instrument commonly used by institutional investors to manage institutional investment portfolios, in accordance with this Policy and applicable law.
- g. Evidence of indebtedness and securities that evidence an ownership interest in debt obligations that are issued, insured, guaranteed by, supported by, or based on the credit of the following:
 - i. The United States (“U.S.”) or any U.S. agency, department, or government sponsored enterprise (“GSE”);

- ii. The debt obligations of states, municipalities or any state agency of the United States of America;
 - iii. Corporations chartered by the United States or any state thereof; and
 - iv. Foreign governments, supranationals, subnationals, and corporations chartered by foreign governments.
- h. Agency and non-agency mortgage-backed securities.
 - i. Collateralized mortgage obligations (“CMO”).
 - j. Commercial mortgage-backed securities (“CMBS”).
 - k. Asset-backed securities (“ABS”).
 - l. All securities and all types of securities that are either included in the applicable benchmark or that will be added to the benchmark as of the announcement date of their future inclusion.
 - m. Mutual funds, closed-end funds, exchange traded funds, structured notes, limited partnerships, commingled funds, or any other security types that:
 - i. Are intended to track or replicate the returns of the Policy Benchmark or a portion thereof or that are intended to reduce the overall tracking error of the portfolio; or
 - ii. Invest in non-dollar fixed income instruments that are predominantly investment grade quality; or
 - iii. Invest in bank loans that are predominantly investment grade quality; or
 - iv. Actively invest in a dynamic portfolio of high yield securities.
 - n. Passive funds, structured credit basket transactions, or trusts containing high-yield fixed income securities selected according to defined parameters and, if the investment contract, offering documents, or prospectus requires distribution to TRS of securities held by fund or trust under specified circumstances, such securities.
 - o. Repurchase and triparty repurchase transactions.
 - p. Investments in State of Texas pooled investment funds.
 - q. Foreign currencies that may be required to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments.
 - r. Short sales as authorized and limited by [Article Section 2.7](#) for the Externally-Managed Public Assets Markets Portfolio.
 - s. Local Access Products, including equity-linked certificates, participation notes, and low-exercise price call warrants which replicate the performance of an underlying security, index, or market for which investment in the local market or in the ADRs or GDRs, or the total return swap market would be difficult or costly, or both.

In addition to the foregoing, the Public Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in [Article 7.8](#). Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

2.3. Internal Public Markets Portfolio Restrictions

- a. Not more than 20% of the outstanding equity securities of a single class of any company may be purchased. In calculating this 20% limit, any amounts that are held in the [External Public Markets PM](#) Portfolios and which are also deemed to be beneficially held by TRS for purposes of Section 13 of the Securities Exchange Act of 1934, including equity securities held in a separate account (or a commingled account in which TRS is deemed to be the beneficial owner for purposes of Section 13 of such act), shall be included.

~~d.g. b. TRS will not invest in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. These include, but are not limited to, sexually explicit films, videos, publications, and software; topless bars and strip clubs; and explicit sexually oriented telephone and Internet services. The restriction does not apply to~~

Consolidation

~~pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.~~

#3 &
Consolidation

~~e. Except as required by fiduciary duties created by the Texas Constitution or other applicable law, TRS will comply with Chapter 806, Government Code relating to prohibition on investments in Sudan, including reporting requirements on investments in listed companies and on decisions to cease divestment, remain invested, or reinvest in listed companies. Additionally, TRS will avail itself of the protection afforded by the U.S. Sudan Accountability and Divestment Act. To the fullest extent allowed by law and consistent with fiduciary duties, TRS will treat direct holdings in investments in companies with active business operations in Iran in a similar manner to investments in listed companies in Sudan. TRS will use the Iran scrutinized list of companies subject to the Iran Sanctions Act, or any successor legislation, as maintained by a governmental body or a reputable private organization and which is available in June of each year. If, in order to comply with the fiduciary duties created by the Texas Constitution, the IIC determines that divestment of or a ban on investments in companies on the Iran list would be imprudent under the circumstances because alternative investments to the listed companies do not offer commensurate return with no greater risk or commensurate risk with the same or greater return, the IIC may exempt companies from the Iran list and authorize investment in the securities of those companies.~~

~~d.~~
b. The IPM Portfolio shall conform to the tracking error target prescribed in Appendix A.

2.4. External Public Markets Portfolio

The component portfolios of the External Public Markets Portfolio (the “EPM Portfolio”) are:

- a. The External Manager Portfolio, which consists of:
 - i. Commingled or other private investment funds which are not determined to be Hedge Funds as defined by Section 2.6 of this Policy, and
 - ii. Separate accounts managed or advised by external managers operating under an Agency Agreement with TRS.
- b. The Hedge Fund Portfolio.
- c. The Other Absolute Return Portfolio including Credit Sensitive Investments.

The CIO will determine the proper mix of assets allocated for internal management under the parameters of the IPM Portfolio and those to be allocated to the External Manager Portfolio component of the EPM Portfolio. In no event shall the aggregate allocation to external managers pursuant to Agency Agreements exceed 30 percent (or a different percentage of not more than 50 percent if a different percentage is specified in the Government Code) of the Total Fund at the time of investment, as specified in Section 825.301 (a-2), Government Code.

~~This~~The preceding paragraph does not affect the target allocation and the range of allocation for the Hedge Fund Portfolio, which shall not exceed 10% of the Total Fund, or such lesser or greater percentage as allowed by applicable law and Section 2.7 of this Policy.

2.5. External Public Markets Portfolio Objectives

The primary objective of the EPM Portfolio is to invest in publicly-traded marketable securities, commingled funds, Hedge Funds, and related instruments, in accordance with the asset allocation parameters of this Policy, to meet or exceed the performance of the Policy Benchmark over a 5 to 10 year market cycle as allocated to the EPM Portfolio. The EPM Portfolio will employ a wide variety of investment and trading strategies with varying levels of liquidity and leverage. It is expected that some strategies will involve more concentrated, shorter term investments as well as those that are longer term in nature and thus will generally have more tracking error than expected within the IPM Portfolio, while other investments will have less correlation, beta and volatility and thus will offset the overall volatility of the EPM Portfolio and the Total Fund.

2.6. Hedge Fund Defined

In this Policy, “Hedge Fund” means a private, commingled investment vehicle with the following general characteristics, as set forth in Section 825.3012, Government Code:

- a. Is not registered as an investment company;
- b. Issues securities only to accredited investors or qualified purchasers under an exemption from registration; and
- c. Engages primarily in strategic trading of securities and other financial instruments.

“Hedge Fund” includes a private investment fund of funds or other commingled vehicle that itself invests in Hedge Funds. An investment in a Hedge Fund issuing securities to TRS does not involve a delegation of investment discretion to an external manager for the External Manager Portfolio, including for purposes of the statutory limit on delegation to external managers, and the assets of a Hedge Fund are not TRS assets.

For the purposes of complying with Section 825.3012, Government Code, the Investment Division shall use the following criteria to analyze and determine whether a private investment fund is “primarily engaged in strategic trading” and should be classified as a hedge fund:

Criteria “Strategic Trading of Securities”	Characteristics Non-Hedge Fund	Characteristics Potential Hedge Fund
1. Variability in Asset Class Concentration	Asset allocation typically stays the same throughout a market cycle, as shown by historical practice	Unconstrained; asset class mix can change dynamically in response to market conditions or as opportunities arise
2. Beta to underlying index specified for the particular mandate	Generally higher levels of beta (e.g., 0.75+)	Often less beta (e.g., <0.75)
3. Securities Traded	Primarily publicly-traded securities	Typically public or private instruments, and often with some illiquid (e.g., “side pockets”) investments segregated for accounting and incentive fee purposes
4. Leverage	Gross leverage less than 250% <i>and</i> net leverage 75% to 125%	Unconstrained by policy and practice – managers often unwilling to commit to constraints
5. Short sales of company-specific securities (i.e., non-derivatives)	Typically <50% gross short	Shorting of company-specific securities is integral to investment strategy or process, with gross short positions exceeding 50%
6. Use of Derivatives	Limited use of derivatives (notional is less than 100% of contributed capital)	Derivatives are integral to strategy or process (notional value greater than 100% of contributed capital)
7. Transparency	Generally position-level transparency for investor	Risk-level transparency, but little or no position-level transparency
8. Liquidity	Limited use of lock-ups, short or no notice period; frequent (e.g., monthly) or no redemption windows	Often lock-ups, withdrawal fees, notice periods exceeding 30 days and/or less frequent redemption windows than monthly; gates and ability to suspend redemptions can extend redemption for years or frustrate liquidity goals

Criteria “Strategic Trading of Securities”	Characteristics Non-Hedge Fund	Characteristics Potential Hedge Fund
9. Performance Fees	May charge performance fees, but often over asset class hurdle	Generally, manager charges management and performance or incentive fees, or both, but usually with no asset class hurdle

In this Section 2.6:

Beta is a measure of an asset’s volatility in relation to a specific market or risk factor, as observed over a market cycle; the measure of an asset's risk in relation to the market (for example, the S&P500) or to an alternative benchmark or factors. Generally, the return of a security with a beta of 1.5 will be, on average, 1.5 times the market return.

Leverage is a condition in which the net potential monetary exposure of an obligation exceeds the value of the underlying assets supporting the obligation. **Net Leverage** is calculated as the difference between (A) the sum of (i) the market value of all long cash market positions, (ii) the notional value of all long derivative positions, and (B) the sum of (i) the absolute market value of all short cash market positions, and (ii) the absolute notional value of all short derivative positions divided by (C) the net market value of the fund. **Gross Leverage** is the total of (A) the sum of (i) the market value of all long cash market positions, (ii) the notional value of all long derivative positions, (iii) the absolute market value of all short cash market positions, and (iv) the absolute notional value of all short derivative positions divided by (B) the net market value of the fund. For option based instruments, notional value may be calculated using hedge ratios to derive a delta-equivalent exposure.

Proposed investments in funds classified as Hedge Funds will be reported to the Board of Trustees (and appropriate Board committee, as applicable) quarterly. If the criteria examined do not clearly indicate, based on at least a preponderance of criteria, how a fund should be classified for statutory purposes, Investment Division may elect to present the pertinent information to the IIC for consideration of classification. Further, if the application of any one or more of the criteria for leverage, short sales, and derivatives, standing alone, would classify the fund as a Hedge Fund, but the preponderance of criteria would classify the fund as a non-Hedge Fund, the Investment Division may either decline to authorize the investment or may elect to present the pertinent information to the IIC for consideration of the classification of the fund and, if applicable, authorization for investment.

Prior to investment, the CIO will determine whether each Hedge Fund is a Stable Value Hedge Fund or a Directional Hedge Fund by reference to factors such as investment strategy, underlying investments, correlation, beta, leverage, expected return and expected risk.

2.7. External Public Markets Portfolio Authorization

- a. **Approval Authority – Hedge Fund Portfolio, External Manager and Other Absolute Return Portfolios** – The IIC is hereby authorized to approve investments in the External Public Markets Portfolio in accordance with the guidelines set forth in Section 2.5. The limits are defined and set forth in Appendix B of this Policy apply to allocations and commitments by the External Public Markets Portfolio.

The Investment Division may authorize an allocation to an external manager even if the external manager will invest the assets in a commingled fund or funds or a tax-qualified collective trust managed by an Affiliate of the external manager, provided, however, that the Investment Division shall determine whether any such commingled fund should be classified as a Hedge Fund for purposes of Section 825.3012, Government Code.

- b. **Board Consideration** – If a Board member desires that any Hedge Fund investment or external manager strategy mandate on the list delivered to the Board under Section 1.7 be submitted for consideration by the Board, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board before the anticipated closing date.
- c. **External Public Markets Advisors and Consultants** – The Investment Division is authorized to engage one or more qualified external advisors (each, an “Advisor”) to assist and advise the Investment Division with respect to investment opportunities within the EPM Portfolio. Each Advisor engaged by the Investment Division must be approved by the CIO and the Board. The applicable advisor or consultant will provide a prudence letter or letter of

recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO. Notwithstanding the foregoing, IIC consideration and approval of a sub-manager of an external manager who manages sub-managers does not in any event require a separate, additional prudence letter or letter of recommendation from an Advisor; provided, further, that such external manager of sub-managers (i) is fully liable for any action or omission of the sub-manager as if the action or omission had been taken by such external manager and (ii) recommends the engagement of the sub-manager in writing to the IIC. For avoidance of doubt, this paragraph does not prohibit the CIO from requesting a separate prudence letter from an Advisor with respect to the IIC's consideration of a sub-manager to be recommended by a manager.

- d. **Authority to Execute Documents and Agreements for the External Public Markets Portfolio** – The general authority resolution adopted by the Board on August 13, 2010 and designating those officers authorized to execute documents and attached as Appendix E is incorporated in this Investment Policy. Should the Board supersede such resolution, such superseding resolution shall be incorporated in this Investment Policy and replace the superseded resolution as Appendix E as of the effective date of the superseding resolution.
- e. **Allocation measurement** – Only the net long position of each external manager, fund vehicle, separate account, or Hedge Fund will be counted against the asset allocation policy; however, both long and short positions will be modeled (through proxies if necessary) to calculate Total Fund risk.
- f. **Short positions limit** – In addition to investments authorized under Section 2.2, the External Public Markets Portfolio may hold short positions in securities listed on a national exchange or U.S. treasuries. The aggregate short positions exposure of the External Public Markets Portfolio may not exceed 25% of the market value of the External Public Markets Portfolio without the prior written consent of the CIO. In no event may the aggregate short positions exposure of the External Public Markets Portfolio exceed 50% of the market value of the External Public Markets Portfolio, nor may any short sale or position violate the laws or rules of any jurisdiction or exchange in or on which the applicable Securities are traded or listed.
- g. **Overlay strategies** – The External Public Markets Portfolio is authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 78. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.
- h. **Rebalancing Authority** – Subject to the limits set forth in this Policy, the CIO, Deputy CIO or the head of External Public Markets may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not, on a monthly basis, exceed 2% of the Hedge Fund Portfolio, External Manager Portfolio, or Other Absolute Return Portfolio (as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments.
- i. **Termination Authority** – The CIO, Deputy CIO or the head of External Public Markets may transfer, withdraw or terminate interests in the EPM Portfolio, provided that the action does not result in a material, ~~unwaived~~un-waived breach of the terms and conditions of the applicable investment agreements.

2.8. External Public Markets Portfolio Restrictions

- a. Agency Agreements, considered in the aggregate, may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy, including the provisions of Section 2.2.
- b. The Investment Division may delegate management of not more than 30% (or a different percentage of not more than 50% if a different percentage is specified in the Government Code) of the market value of the assets of the Total Fund to external managers pursuant to Agency Agreements. For avoidance of doubt, this restriction does not apply to assets held by funds (including Hedge Funds) which limit the liability of TRS to the capital contributed and any distributions that TRS might be legally obligated to contribute or repay to the fund.
- c. The Investment Division is authorized to invest up to 10% (unless extended by law, this authority reverts to 5% on September 1, 2019) of the Total Fund in Hedge Funds as defined in Section 2.6. Compliance with the statutory limit is to be determined at the time TRS executes subscription documents for each Hedge Fund investment or additional investment.

- d. Each Agency Agreement with an external manager shall specify the applicable policies, risk controls, portfolio characteristics, reporting requirements, requirements or restrictions, including criteria for determining quality of investments or the use of standard debt rating services.
- e. Each Agency Agreement with an external manager shall terminate on or before September 1, 2019; provided, however, that an Agency Agreement may include provisions for optional renewal or extension of the agreement by the Investment Division beyond September 1, 2019 that are contingent on amendment of TRS statutes to authorize such agreements after that date.

~~f. Each Agency Agreement shall require the external manager to comply with TRS restrictions and investments relating to direct holdings in companies having active business operations in Sudan or Iran, including divestment. TRS will comply with any requirements imposed by Section 806.057 of the Government Code relating to notification, requests, or action involving indirect holdings in funds containing listed companies.~~

[Consolidation](#)

2.9. External Public Markets Portfolio Conflicts of Interest

Conflicts of interest, including the appearance of conflicts, in the selection and engagement of external investment managers will be avoided at all times. Potential or actual conflicts of interest must be evaluated during due diligence and after engagement under applicable ethics policies and statutory provisions, including without limitation Sections 825.211 and 825.212, Government Code, which do not apply to Hedge Fund managers in that capacity. The Investment Division will develop guidelines and procedures to identify actual or potential conflicts of interest affecting external managers to be engaged pursuant to Agency Agreements. The Investment Division shall employ reasonable diligence to identify conflicts of interest affecting TRS trustees, employees and advisors with respect to all private investments.

ARTICLE 3 – PRIVATE MARKETS PORTFOLIOS

3.1. Private Markets Portfolios

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The Private Markets Portfolios are (1) the Private Equity Portfolio (the “PE Portfolio”~~”) and”),~~ (2) the Real Assets Portfolio (the “RA Portfolio”) ~~and~~ (3) the [Energy and Natural Resources Portfolio \(the “ENR Portfolio”\)](#). The Board shall approve the respective long-term normal allocation and the range of allocation for each portfolio.

3.2. Private Markets Portfolios Authorization

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The Private Markets Portfolios are authorized to invest in the asset classes specified in this Policy and may hold and exercise rights, options and warrants attached to securities relating to an investment by the Private Markets Portfolios.

Funding of committed capital in ~~either the PE Portfolio or the RA Portfolio~~ [Private Markets Portfolios](#) will occur over an extended time period and may take several years before the total allocation to each asset class is fully invested. Because an individual investment may begin to return capital to the investor prior to the full funding of the investor’s commitment, the outstanding invested capital of the investment might at times be substantially less than the total commitment. In recognition of the above characteristics unique to the ~~PE and RA~~ [Private Markets](#) Portfolios, a “committed” allocation to ~~both private equity and real assets~~ [an investment](#) may exceed the respective allocation targets authorized. It will not be a violation of this Policy if changes in the market values of the public assets portfolios or the Private Markets Portfolios cause the market value of the Private Markets Portfolios to exceed the upper limit of the allocation ranges established in this Policy.

3.3. Private Markets Investment Process

Private Markets External Advisors and Consultants

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The Investment Division is authorized to engage one or more Advisors to assist and advise the Investment Division with respect to investment opportunities within the Private Markets Portfolios. Each Advisor engaged by the Investment Division to provide investment advice with respect to ~~private equity, real estate, and other real assets~~ [Private Markets Portfolio](#) investments must be approved by the CIO, ~~either~~ the head of Private Equity, ~~or~~ the head of Real Assets, ~~or the head of~~ [Energy and Natural Resources](#) (as appropriate), and the Board. Subject to the direction of the private equity ~~or~~ real assets, [energy and natural resources](#) investment staff, as appropriate (each, a “Private Markets Team”), Advisor duties may include, but are not limited to, the following:

- a. Performing due diligence on specific Private Markets investment opportunities assigned by a Private Markets Team;
- b. Providing research related to private ~~equity and real assets~~ markets and opportunities, economic conditions, and performance expectations;
- c. Assisting a Private Markets Team, upon request, in identifying potential Private Markets investment opportunities;
- d. Providing, upon request, written recommendations to a Private Markets Team ~~regarding investments for the Private Markets Portfolios; and~~
- e. Assisting a Private Markets Team in the negotiation of required investment contracts and legal documentation; ~~and~~ [and](#)

- f. Providing a prudence letter or letter of recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO.

To the extent an Advisor is directed by a Private Markets Team to perform due diligence on an investment opportunity, such due diligence will be performed in accordance with prudent underwriting objectives established by ~~as such~~ Private Markets Team for the ~~TRS applicable~~ Private ~~Equity and Real Assets programs~~ Markets Portfolio. Each investment opportunity must meet these prudent underwriting standards in order to merit inclusion within the respective portfolios.

3.4. Private Markets Authorization of Investments

Investment Authority. The limits defined and set forth in Appendix B of this Policy apply to allocations and commitments by the Private Markets Portfolios.

If, after due diligence by either of the Advisor and the Investment Division, the Advisor and the Investment Division do not concur on whether a private markets investment within the Investment Division's discretion should be made, the Investment Division may elect to present the opportunity to the appropriate Board committee for consideration of a recommendation to the Board to authorize the investment. Unless the Board authorizes an investment, a proposed investment may not be made without the concurrence of both the Investment Division and the Advisor.

Private markets opportunities that will be considered for investment include the following: primary investments in any legally permissible investment vehicle, including limited liability entities (usually limited partnerships), co-investments, secondary investments, commingled funds, separate accounts, hybrid structures investing in equity or debt, joint ventures, secondary market transactions, entity-level investing or other off-market investments, new and emerging managers, and opportunistic investments (e.g., investments in the management entity of a private markets investment firm or sponsor, public-to-private transactions, and the acquisition of business development company or investment trust assets).

To the extent a Board member desires that any private markets investment opportunity submitted for consideration by the IIC be also submitted for consideration by the trustees, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board and by the appropriate Board committee, as applicable, before the anticipated closing date.

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The CIO, Deputy CIO or ~~either, as applicable,~~ the head of Private Equity, ~~or~~ the head of Real Assets, ~~or the head of (as applicable)~~ Energy and Natural Resources (as applicable) may transfer, withdraw or terminate interests in the Private Markets Portfolios in accordance with the investment documents, provided that the action does not breach any agreement to which TRS is legally bound.

Commitment Authorization. Each investment must be authorized as required by the provisions, guidelines, and limitations established in this Policy. Any structure in which TRS invests shall meet established legal requirements.

#4

~~**Limited Partner or Investor Advisory Committees.** When approved by the CIO or either the head of Private Equity or the head of Real Assets (as appropriate), Private Markets Team members may serve as investor representatives on the advisory committee of any private equity or real assets investment vehicle to which TRS has committed capital.~~

Authority to Execute Documents and Agreements for the Private Markets Portfolios. The general authority resolution adopted by the Board on August 13, 2010 and designating those officers authorized to execute documents and attached as Appendix E is incorporated in this Investment Policy. Should the Board supersede such resolution, such superseding resolution shall be incorporated in this Investment Policy and replace the superseded resolution as Appendix E as of the effective date of the superseding resolution.

#1

Rebalancing Authority. Subject to the limits set forth in this Policy, the CIO, Deputy CIO or ~~either, as applicable,~~ the head of Private Equity, the head of Real Assets or the head of ~~Real Assets (as appropriate)~~ Energy and Natural Resources may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not exceed, on a monthly basis, 2% of each of the Private Equity Portfolio ~~or~~, the Real Assets Portfolio or the ENR Portfolio (respectively, as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments; provided, the withdrawal does not breach any agreement by which TRS is legally bound.

Overlay Authority. The Private Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in Article ~~7~~[8](#). Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

3.5. Private Markets Portfolio Restrictions

Consolidation

- a. ~~As part of the Investment Division's due diligence, the Investment Division will seek to obtain assurance from prospective private markets fund managers or sponsors that they will use commercially reasonable best efforts, consistent with their duties to all investors, to avoid investing in companies or enterprises that derive a significant portion of their revenues from products or services intended exclusively to appeal to a prurient interest in sex. These would include, but not be limited to, sexually explicit films, videos, publications, and software; topless bars and strip clubs; and sexually oriented telephone and Internet services. Notwithstanding any other provision of this Policy, it is not a violation of this Policy if the Investment Division proceeds with a private investment based on oral or non-contractual written assurance.~~
- b. ~~TRS will comply with notification requests or action required by Section 806.057, Government Code relating to indirect holdings in listed companies through equity funds. To the extent a Private Markets Portfolios contain direct holdings in publicly traded securities of listed scrutinized companies doing business in Sudan or Iran, the Investment Division will comply with TRS restrictions and reporting requirements for direct holdings. Co-investments shall comply with TRS restrictions relating to direct holdings in companies having active business operations in Sudan or Iran, including divestment.~~

ARTICLE 4 – PRIVATE EQUITY PORTFOLIO

4.1. Private Equity Portfolio Objectives

Diversification

The primary long-term objective of the PE Portfolio is to develop a prudently diversified portfolio of investments that is expected to enhance the overall risk-return profile of the Total Fund and to reduce risk within the PE Portfolio.

The following attributes will be considered in constructing a diversified PE Portfolio: strategy, geography, industry sectors, size of investment, and vintage year.

4.2. Private Equity Portfolio Authorized Investments

Private equity funds build portfolios of private investments in the equity or equity-rights securities of operating companies. Private equity funds may acquire investments in debt obligations, public or private common and preferred stocks, convertible securities, and any warrants, rights, or options attached to any of the foregoing that relate to equity ownership in an issuer. Privately-acquired securities usually have transfer restrictions and are not as liquid as publicly-traded securities. Private equity funds are often classified by strategy, including: venture capital; mezzanine; buyout - acquisition; international - emerging markets; and special situation (e.g., growth equity, turnarounds, distressed).

4.3. Private Equity Portfolio Restrictions

The Private Equity Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 5 – REAL ASSETS PORTFOLIO

5.1. Real Assets Portfolio Objectives

The ~~Real Assets~~ (“RA”) Portfolio will be structured to achieve the following investment objectives:

- a. As the primary focus, contribute favorably to diversification of the Total Fund through exposure to real assets’ low or negative correlation to the Public Markets portfolios.
- b. Provide competitive returns through capital appreciation.
- c. The following attributes will be considered in constructing a diversified RA Portfolio: strategy, geography, property types, size of investment, vintage year, and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required..

5.2. Real Assets Portfolio Authorized Investments

The RA Portfolio will focus on private or public real estate equity or equity linked investments, private or public real estate debt, infrastructure, timber, agricultural real estate, oil and gas, real asset mezzanine debt or equity, mortgage-related investments, entity-level investments, real estate investment trusts (“REITs”), master limited partnerships (“MLPs”), non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified by strategy, including: core; core-plus; value-added; and opportunistic.

5.3. Real Assets Portfolio Restrictions

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- ~~a. Not more than 5% of the Total Fund may be invested in certain real asset strategies. For the purposes of this calculation, these certain real assets include timber, agricultural real estate, oil and gas, master limited partnerships (“MLPs”), and non-fixed assets.~~
- ~~b. The ~~Real Assets~~RA Portfolio is authorized by and is subject to the terms and conditions described in Article 3.~~

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ARTICLE 6 – ENERGY AND NATURAL RESOURCES PORTFOLIO

6.1. Energy and Natural Resource Portfolio Objectives

The ENR Portfolio will be structured to achieve the following investment objectives:

- a. Contribute favorably to diversification of the Total Fund by increasing exposure to assets with a higher degree of inflation sensitivity.
- b. Provide competitive returns through capital appreciation.
- c. The following attributes will be considered in constructing a diversified ENR Portfolio: general inflation sensitivity, expected return, strategy, geography, resource exposure, size of investment, vintage year, where investment is in the resources value chain (upstream, midstream or downstream) and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required.

6.2. Energy and Natural Resource Portfolio Authorized Investments

The ENR Portfolio may invest in private and public energy or natural resource related securities either directly or through funds which may include investments in equity, equity-linked investments including options, warrants, preferred equity, and structured equity, private or public debt, entity-level investments, master limited partnerships, commodity futures, natural resources interests (mineral, royalty or working interests), timber and agricultural property, water, power generation, renewable energy, and associated infrastructure, services and technology. Energy and natural resource investments are often classified by

[resource type and where the investment is in the resource value chain \(upstream, midstream or downstream\). Direct investments in physical commodities are prohibited.](#)

6.3. Energy and Natural Resource Portfolio Restrictions

[The ENR Portfolio is authorized by and is subject to the terms and conditions described in Article 3.](#)

ARTICLE 7 – EMERGING MANAGERS PROGRAM

TRIS shall make a good-faith effort to invest with qualified emerging managers for the External ~~Managers Portfolio, Private Equity Portfolio, and the Real Assets Portfolio~~. [Public Markets Portfolios and the Private Markets Portfolios. For the avoidance of doubt, these portfolios may also include investments in energy and natural resources.](#) The Investment Division is authorized to invest with qualified funds-of-funds managers skilled at identifying small and emerging managers in the private equity, real asset and public equity markets. The target dollar allocation is outlined for this program in Appendix C.

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Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations. Conversely, not all minority, women, and disabled veteran-owned or -controlled organizations are necessarily considered emerging managers for the purposes of this program. Whether a management firm is an “emerging manager” depends on all of the facts and circumstances. In general, emerging managers are defined as newer, independent private investment management firms that manage less than \$2 billion, or have a performance track record as a firm shorter than five years, or both.

All investments with emerging managers will be subject to due diligence by an independent qualified external advisor. The advisor will present each investment recommendation to the IIC for its approval. In general, an emerging manager should be registered with the appropriate authorities if such registration would be consistent with industry practices. Each investment will have a minimum size of \$5 million. With respect to the External Public Markets Portfolio, the total investment by TRS with each emerging manager may not exceed 40% of such emerging manager’s assets under management. With respect to the Private Equity Portfolio and the Real Assets Portfolio, the total investment by TRS into each fund raised by an emerging manager may not exceed 40% of the size of such fund. This paragraph does not apply to investments executed as part of a fund-of-funds mandate.

The Investment Division shall document its efforts to identify and expand its investments with qualified emerging managers for the purpose of board and legislative reporting on the methods and results, including data disaggregated by race, ethnicity, gender, and fund size. All investments under the emerging manager program must be made prudently and in accordance with fiduciary and ethical standards.

ARTICLE 78 – OVERLAY PORTFOLIOS

78.1. Overlay Portfolios Objectives

Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund.

78.2. Overlay Portfolios Authorized Investments

Overlay Portfolios may contract for, buy, sell, and hold the following contracts and derivative instruments in accordance with this Policy:

- a. Exchange-traded futures contracts;
- b. Exchange-traded option contracts;
- c. Options on exchange-traded futures contracts;

- d. Over-the-counter or exchange-traded swap agreements;
- e. Over-the-counter option agreements;
- f. Forward agreements; and
- g. Forward-settling securities transactions.

78.3. Overlay Portfolios Restrictions

Overlay Portfolios may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls or restrictions otherwise established by this Policy or applicable law.

Direct purchase of derivatives underlain by physical commodities is prohibited for any TRS portfolio unless such derivatives are cash-settled. This prohibition does not apply to private investment funds, including Hedge Funds.

When engaging in currency overlay strategies, the Overlay Portfolio may not increase or decrease the net notional exposure of the Total Fund:

- a. To all non-dollar currencies in aggregate by more than 5% of the market value of the Total Fund;
- b. To any single developed market currency (except for the U.S. Dollar) by more than 2% of the market value of the Total Fund; and
- c. To any single emerging market currency by more than 1% of the market value of the Total Fund.

The foregoing percentage limit restrictions do not apply to currency derivatives used (i) as part of the non-discretionary foreign exchange risk management policy described in Section 910.2, (ii) to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing and selling investments and (iii) for hedging the characteristics of an individual investment to align it with the characteristics of such investment's benchmark.

ARTICLE 89 – AUTHORIZED USES OF DERIVATIVES

This Article enumerates the applications, documentation and limitations for the use of derivatives as permitted under Section 825.301, Government Code.

89.1. Derivatives Objective and Investment Standard

The Board's objectives for using derivatives are to efficiently manage and reduce the risk of the overall investment portfolio. Through the use of derivatives, the risks that are bound together in traditional cash market investments can be separated and managed independently.

Derivatives authorized by this Policy may only be used to efficiently manage and reduce the risk of the overall investment portfolio in accordance with applicable law. In addition, all uses of derivatives must comply with the fiduciary standard of prudence set forth in Article XVI, Section 67(a)(3), Texas Constitution, which requires that all TRS investments must be made using the judgment and care under the circumstances then prevailing that persons of ordinary prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income there from as well as the probable safety of their capital.

89.2. Derivatives Policy Scope

Except where specifically noted, this Policy applies to all derivatives transactions executed by the Investment Division and by external managers operating under an Agency Agreement. This Policy does not apply to registered or private investment funds, including limited liability entities, issuing securities to TRS.

This Policy applies to all exchange-traded derivatives and over the counter ("OTC") derivative instruments authorized by law. This Policy does not apply to the use of derivatives by private investment funds issuing securities to TRS unless TRS in fact controls and has a legal right to approve the investment policy or guidelines of such funds.

89.3. Derivatives Use by External Managers and Commingled Funds (Hedge Funds)

The Total Fund may have external exposure to derivatives in two ways.

- a. First, the Total Fund will invest as a passive investor in Hedge Funds organized as limited-liability entities, which limits potential losses to the capital contributed to the entity. TRS is not a party to the management agreement between the Hedge Fund and its investment manager. Hedge Fund and other commingled fund managers owe the same legal duties to all investors.
 - i. The Investment Division must exercise thorough due diligence in assessing the scope of the Hedge Fund manager's uses of derivatives, their purpose, experience of the fund manager's staff in managing these positions, inherent leverage, and the manager's systems, controls and operations in determining suitability of these entities for TRS investment.
- b. Second, TRS may delegate discretion, through Agency Agreements, to external managers who act as a TRS agent with respect to Total Fund assets and who are authorized to enter into specified contracts and commitments that will be legally binding on TRS. External managers are TRS fiduciaries.
 - i. ~~i.~~ For external managers engaged pursuant to Agency Agreements, Investment Division must view the external manager as an extension of the internal Investment Division's investment management processes and must require external managers to comply with this Policy and applicable guidelines and law on the use of derivatives to the same extent as Investment Division. Guidelines for the scope and use of derivatives will be established on a case-by-case basis with each external manager in the applicable Agency Agreement. An external investment manager of publicly-traded investments engaged by TRS under an Agency Agreement may engage in derivatives transactions only if expressly authorized by, and the transactions are consistent with, the overall investment objectives and restrictions established in the Agency Agreement, this Policy, and applicable law. Each Agency Agreement must be consistent with applicable law, this Policy, and other TRS policies. An Agency Agreement may only authorize such uses of derivative instruments when the

Investment Division reasonably concludes after due diligence that the external manager possesses the experience, expertise, and qualifications to prudently use derivatives, and has appropriate operational, compliance, and risk management personnel, policies, and procedures to effectively monitor and control their use, including the use of leverage.

- ii. Selection, engagement, and monitoring of external managers engaged through an Agency Agreement requires a clear understanding of the managers' uses of derivatives, particularly as it relates to various risk controls, compliance functions, and leverage. Investment Division will monitor risk exposures and leverage on both an individual entity and aggregate basis. The permitted uses of derivatives and leverage by each external manager must be fully documented in each Agency Agreement.

89.4. Derivatives Definition; Authorization

Derivatives are financial instruments the value of which are derived, in whole or part, from the value of any one or more underlying securities or assets, or index of securities or assets (such as a bonds, stocks, financial commodities, and currencies). For the purposes of this Policy, derivatives include, without limitation, futures contracts; options; options on futures contracts; forward contracts; swap agreements, including swap contracts with embedded options; any instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments; and any other instrument commonly used by institutional investors to manage institutional investment portfolios. Derivatives, for purposes of this policy, do not include currency forwards with a tenor of 30 days or less if such forwards do not require upfront amounts to be paid or received. Derivatives may be purchased through a national exchange or through a direct OTC arrangement with a counterparty.

Except as specifically provided in [Article Section 5.2](#), this Policy does not apply to, or authorize, any use of derivatives underlain by physical commodities (unless such derivatives are cash-settled), single-asset real estate mortgages, or title to real estate or property affixed to real estate.

89.5. Derivatives Applications Permitted

Consistent with the objectives set out in [Article 8 Section 9.1](#), derivative applications may be used by Investment Division and external managers engaged through Agency Agreements to:

- a. Implement investment strategies in a lower cost and efficient manner;
- b. Efficiently manage the Total Fund portfolio by altering the portfolio's market (systematic) exposure in lieu of trading the underlying cash market securities through purchases or short sales, or both, of appropriate derivatives;
- c. Construct portfolios with risk and return characteristics that could not be efficiently created with cash market securities consistently with the objectives in this Policy and in compliance with applicable law;
- d. Hedge and control risks so that the Total Fund's risk-return profile is more closely aligned with the Total Fund's targeted risk-return profile through purchases or short sales, or both, of appropriate derivatives; and
- e. Facilitate transition trading when holdings must be rebalanced or reallocated among permissible investments as a result of changes to applicable benchmark indexes or policy changes.

The only authorized uses of derivative transactions are efficient portfolio management and reduction of risk in portfolios and to implement investment strategies authorized by this Policy more effectively and at a lower cost than would be possible in the cash market. External managers may not engage in derivative applications that are inconsistent with the applicable Agency Agreement, this Policy and applicable law, unless specifically authorized by the TRS Board and the Agency Agreement has been amended accordingly.

89.6. Derivatives Applications Not Permitted

Derivatives may not be used for any activity a primary purpose of which is speculation or to profit while materially increasing risk to TRS. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by this Policy or any related policies or resolutions of the Board, and their use is not reasonably and substantially intended to produce efficiency in portfolio management and reduce market, credit, or liquidity risks applicable to the portfolio. Derivatives may not be used for circumventing limitations or restrictions imposed by this Policy or applicable regulatory requirements. Derivative applications may only be used to invest in asset classes that are consistent with TRS's legally permissible policy asset categories (including currencies), implementation strategies, and risk-return characteristics.

Except as specifically provided in [ArticleSection 5.2](#), investments in derivatives underlain by physical commodities are prohibited unless such derivatives are cash-settled.

89.7. Derivatives Documentation and Controls

Prior to the implementation of a new internal derivative instrument type or application, Investment Division shall document the purpose, justification, baseline portfolio, derivative application portfolio, risks (including, at a minimum, market, modeling, pricing, liquidity, and legal risks), the expected increase or reduction in systematic and idiosyncratic risk resulting from the application, the amount of leverage employed under the strategy, the prudent reasons for employing leverage, and the procedures in place to monitor and manage the derivative exposure. The documentation will be approved by the CIO and reported to the IIC and the Board (or appropriate Board committee, as applicable) at their next regularly-scheduled quarterly meetings. The Investment Division shall adopt fully documented control procedures to properly account and value the Total Fund's exposure to each derivatives application, whether internal or external under an Agency Agreement. The Investment Division shall establish an appropriate risk management procedure to monitor compliance both internally and by external managers and will take corrective action if necessary. The Investment Division shall have due regard for operational risks associated with various derivatives strategies, including risk management, accounting systems, liquidity needs, adequate staffing, and staff qualifications.

89.8. Derivatives Limitations

Counterparty Risks: In order to limit the financial risks associated with derivative applications, guidelines for rigorous counterparty selection criteria and ISDA agreements shall be created by the Investment Division to reduce counterparty risk for over-the-counter ("OTC") derivatives. Any counterparty in an OTC derivative transaction with TRS must have a credit rating of at least A- (Standard & Poor's or Fitch) or A3 (Moody's). All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established ISDA Master Agreements or, if centrally cleared, clearing agreements and have full documentation of all legal obligations of both parties to each transaction. All ISDA Master Agreements entered into by or on behalf of TRS by the Investment Division or an external manager engaged pursuant to an Agency Agreement (if applicable) shall provide for netting of obligations. The Investment Division and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. The net market value of all OTC derivative positions, including those managed through Agency Agreements, less collateral posted, for any individual counterparty may not exceed \$500 million. The net market value of all OTC derivative positions for any individual counterparty, without consideration of collateral, may not exceed 5% of the total market value of the Fund. If these market-value limits are exceeded, the Investment Division will inform the CIO, Executive Director, and Chairman of the appropriate Board committee as soon as practicable and take appropriate corrective action within a 90-day period or develop a corrective action plan that will be presented to the Board at its next regularly scheduled meeting at which investment matters will be discussed following the initial 90-day corrective action period.

Global Risk Limitations: Notwithstanding other limitations in this Policy, transactions that would cause the aggregate risk exposure of the Total Fund, including externally-managed portfolios, to exceed the aggregate risk limits established by the current asset allocation policies of the Board are not permitted. On a Total Fund basis, the combined economic exposure introduced through both cash and derivative market positions is subject to the asset allocation ranges, risk limits, and other portfolio parameters described in this Policy.

Position Limits: For futures and options positions TRS will comply with all position and aggregate limits established by the applicable regulatory and legal organizations and authorities within each jurisdiction.

89.9. Derivatives Risk Management and Compliance

To ensure compliance with this Article 89, all internally- and externally-managed derivatives (other than derivatives held in Hedge Funds) must be marked to market on a daily basis by the Fund's external custodian(s), and such daily reports will be reviewed for accuracy by the TRS Risk Management staff and Investment Administration Center personnel. Compliance with the requirements of this Policy will be monitored by the TRS Investments Compliance Officer using information systems and data from internal and external sources. Any violations of this Article 89 will be reported immediately to the Executive Director and to the Chief Investment Officer, who will determine, if considered material as determined by Investments Compliance Officer, Chief Investment Officer, and Executive Director, the appropriate remedy and report promptly to the Board (and the appropriate Board committee, as applicable).

ARTICLE 910 – RISK MANAGEMENT AND OVERSIGHT

910.1. Market Risk Management

The Investment Division will establish a framework for measuring enterprise-level risk for both the Total Fund Portfolio and the established benchmark, including any transition benchmarks employed during asset allocation shifts. At a minimum, this framework must include a quantified estimate of downside risk (e.g., value-at-risk (“VaR”), estimated shortfall, or various parametric and non-parametric statistics). The Investment Division will monitor the relative positioning of the Total Fund Portfolio vis-à-vis the benchmark no less frequently than monthly.

- a. **Asset allocation limits** – In addition to the Total Fund Portfolio level risk limits, the portfolio will be constrained to the asset allocation percentages and ranges prescribed by this Policy. Accordingly, the total exposure to each asset class must be based on the individual exposures of each cash security and each outstanding derivative contract.
- b. **Risk limit** – The Investment Division will model and monitor the Total Fund Portfolio and benchmark to ensure that the total estimated risk for the Public Markets portion of the Portfolio is within the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- c. **Proxy securities and indices** – If necessary and prudent, the Investment Division will employ proxies to approximate the economic characteristics of actual investments if the terms and conditions of the actual investments or the underlying holdings are not readily available or where the complexity of the underlying investment renders a deterministic model impractical.
- d. **Transition portfolio** – During portfolio transitions from or to private ~~market investments in real estate, other real assets, or private equity~~, a transition benchmark may be employed that either explicitly creates placeholders for unfunded private investments or that treats the allocations to private market assets separately from the allocations to public market assets based on the funded portion of the Private Markets Portfolios. In either case, the risk statistics and limits will be applied relative to this transition benchmark.
- e. **Private market assets holdings** – The Investment Division may include private investments in ~~real estate, other real assets, and private equity in~~ this analysis either by proxy or by actually modeling the terms and conditions of the underlying exposures; however, if the inclusion of these investments is deemed to distort the true risk characteristics of the portfolio, the Board may approve the use of an alternative methodology for analyzing the risk characteristics of those investments.
- f. **Active risk limits** – In addition to the portfolio-level risk statistics described above, a target tracking error will be imposed on each asset class mandate whether implemented through internal or external managers or commingled funds. Additionally, a target tracking error will be imposed on the entire portfolio that takes into account both internally and externally managed portfolios and commingled funds as well as both asset allocation and security selection decisions. These limits are specified in Appendix A, attached hereto.

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910.2. Foreign-Exchange Risk Management

The objective of the Foreign-Exchange (“F/X”) policy is to effectively manage portfolio return volatility associated with foreign currency risk. F/X risk is the possibility of a negative currency return as a result of adverse movements in foreign exchange rates. The F/X policy sets forth a structure and implementation plan to determine the level of strategic currency risk that the Fund is willing to tolerate.

F/X Policy Structure

The “PHRs” are policy hedge ratios that will be separately applied to the Fund’s public-markets and private-markets non-dollar exposures. PHR is the percentage of aggregate, non-dollar currency exposure to be passively hedged. The hedging horizon for the PHRs is intermediate (one to three years). The results of the PHR decisions will be presented to the Board (or the appropriate Board committee, as applicable) for approval by the Board and incorporated into the benchmark as prescribed in Appendix D.

From an implementation perspective, an F/X overlay manager would have responsibility for implementing the PHR decisions and would not exercise delegated investment discretion. The F/X overlay may be implemented internally or externally. If external, the non-discretionary F/X overlay manager would not fall under the definition of either an “external manager” or a Hedge Fund. A non-discretionary external F/X overlay manager would merely implement the investment decision that has already been made by the IIC.

910.3. Credit Risk Management

- a. **Counterparty exposures** – The maximum allowable unsecured counterparty exposure for OTC derivative transactions is \$500 million, based on the total net market value of all OTC positions held with each counterparty. The total counterparty exposure for each counterparty, including the collateralized portions of these agreements, may not exceed 5% of the market value of the Total Fund. The minimum credit rating, based on a nationally recognized statistical rating organization (“NRSRO”), must be at least A- or better at the inception of the contract. For any counterparty that experiences deterioration in credit quality that results in a NRSRO rating below the A- level, subsequent to the inception of transaction, additional eligible collateral may be posted, or the transaction may be terminated.
- b. All OTC derivatives must be governed by an ISDA Master Agreement and Credit Support Annex or, if centrally cleared, by clearing agreements, and must include both close-out netting provisions and collateralization provisions.
- c. **Repurchase agreements** – The counterparty limits for repurchase transactions and tri-party repurchase transactions may not exceed 5% of the market value of the Total Fund unless those transactions are covered by a third-party indemnification agreement by an organization that bears a long-term NRSRO credit rating of A- or better and is enhanced by acceptable collateral. Each repurchase agreement will be entered into under the PSA/ISMA Global Master Repurchase Agreement.

Each ISDA Master Agreement must also include a table that delineates the excess purchased securities margin (haircut) required, based on the collateral type, duration, and credit quality.

- d. **Securities lending** – When securities lending activity is performed by an external, third party lending agent, Investment Division will examine the credit underwriting practices of the lending agent, including enforcement of collateral requirements, counterparty analysis, and surveillance. Additionally, Investment Division will periodically review the securities lending lines by counterparty. A securities lending agent must be an organization rated A- or better by a NRSRO. More detailed information about TRS securities lending activities is specified in the separate Securities Lending Policy.

910.4. Liquidity Risk Management

The objective of the Liquidity Risk Management policy is to ensure that the Fund maintains ample liquidity to meet its funding commitments. The two kinds of commitments which necessitate a prudent liquidity policy are:

- a. Disbursements of benefits and related obligations to plan participants, including retirement, death, health, and disability benefits payments.
- b. TRS investment activities: These are mainly associated with risk management and funding of external managers. Some examples include:
 - i. TRS engages in derivatives to efficiently manage and reduce risk of the overall investment portfolio. Use of these instruments requires liquidity for collateral, margin and payment obligations at the time of a reset, call or maturity;
 - ii. TRS funds accounts managed by public markets external managers; and
 - iii. TRS manages unfunded capital commitments that the Fund is legally obligated to fund when called by private ~~equity or real asset~~ markets general partners.

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External Funding Authority

The Investment Division is authorized to establish external funding mechanisms (such as master repurchase agreements with one or more counterparties) and the flexibility to operate in all types of market liquidity environments to allow prudent management of these commitments while achieving a long-term rate of return and adhering to the asset allocation limits outlined in this Policy. In addition to these external funding mechanisms, TRS will maintain adequate funds in its custodial account to cover investment-related obligations. Finally, the Board authorizes the Investment Division to access the cash holdings backing the OTC swaps to manage its commitments.

Limitations Applicable to External Funding Authority

Liquidity provided from these external funding mechanisms may not exceed 2% of the market value of the Total Fund. The expectation is that the liquidity funded through external funding mechanisms will be short-term (less than 30 days). The Investment Division must seek approval from the CIO for extended use of external funding sources. The Investment Division shall report such approvals for extended use to the Board not later than the next regular quarterly meeting.

910.5. Operations Risk Management

- a. **Overdrafts** – The Investment Division will monitor the frequency and costs associated with all overdraft activity.
- b. **Custodial Bank(s)** – The Investment Division will conduct on-site due diligence to review the operational controls set in place by all custodial banks. The Investment Division will also consider the extent of remedies provided by the custodian and its overall ability to fulfill its commitments should operational failures occur.

910.6. Settlement Risk Management

The Investment Division will monitor unsettled trade activity by counterparty and instrument type.

910.7. Legal Risk Management

Legal documentation for all accounts, investment subscriptions, external managers, investments in private investment funds (~~private equity, real assets,~~ Private Markets Portfolios and Hedge Funds), and derivatives will be reviewed, negotiated and approved for TRS execution by internal or external legal counsel, or both. The Investment Division, in consultation with ~~Legal Services~~ the Office of the General Counsel, will exercise diligence to ensure that all contracts are legally binding and enforceable in a suitable venue. The Investment Division will seek the assistance, review, and advice of legal counsel whenever it is prudent to do so. The Office of the General Counsel ~~and the Legal Services Department~~ has ~~ve~~ primary responsibility for the engagement of outside legal counsel for investment matters, subject to applicable statutes and rules adopted by the Office of the Attorney General.

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910.8. Risk Management Compliance Cure Periods and Remedies

- a. **Passive violations** – A passive violation occurs when the portfolio breaches a prescribed policy limit as the result of changing market or credit conditions. The Investment Division will report the violation to the Board and will remedy the violation within 90 days of the violation or prepare a written action plan that must be approved by Board resolution to extend the cure period beyond 90 days.
- b. **Active violations** – An active violation is caused by entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor. In this case, a thorough analysis of controls will ensue and be reported to the Chief Investment Officer, the Executive Director and the Chairman of the appropriate Board committee, as soon as practical, and to the full Board at its next regularly scheduled meeting at which investment matters will be discussed. The Investment Division will seek to remedy the violation when possible. In instances where the costs of immediate remedies are prohibitive, the Investment Division will develop a corrective action plan that will be submitted to the CIO within a reasonable time after the violation occurs, not to exceed 15 days, depending on the nature and complexity of the investment holding and transactions needed to remedy the violation. The Board will be apprised of the violation at its next regularly scheduled meeting along with the corrective action plan.

910.9. Permitted Uses of Leverage

The Investment Division is authorized to use the following types of leverage:

- a. Derivative strategies in accordance with the risk parameters established by the asset allocation ranges of this Policy and applicable legal restrictions;
- b. Short sales in accordance with this Policy;
- c. F/X hedging in accordance with this Policy;
- d. Embedded leverage within the Total Fund's limited partnership investments; and
- e. Collateralized fundings including securities lending activities, pledges, repurchase and reverse repurchase agreements and other external funding mechanisms.

Leverage will not be used to exceed the risk parameters established by the asset allocation ranges of this Policy.

ARTICLE ~~10~~11 – HEALTH INSURANCE PROGRAM PORTFOLIO

~~10~~11.1 Health Insurance Program Portfolio Objective

The primary objective of the Health Insurance Program Portfolio is to preserve capital through investment in conservative, short-term securities.

~~10~~11.2 Authorized Investments for the Health Insurance Program Portfolio

Section 404.024, Government Code describes the Authorized Investments employed by the comptroller when he or she invests state funds. The Investment Division shall employ this list of Authorized Investments when the Investment Division invests the Health Insurance Program Portfolio.

ARTICLE ~~11~~12 – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS

~~11~~12.1 Scope

This policy applies to all TRS investment transactions in which a placement agent or finder is or may be involved, including new agreements (including follow-on and co-investments), extension of existing agreements, increase in funding or capital commitment to an existing relationship or fund, or an amendment that increases management fees or compensation under an agreement.

This policy also applies to attempts to influence TRS investment decisions through contacts with TRS trustees, or contacts with, or political contributions made for the benefit of, one or more Texas Elected Officials, and also applies to contacts with persons employed by any such official.

If any provision of this policy conflicts with a provision of another policy adopted by the TRS board, the stricter provision shall apply.

~~11~~12.2 Purpose

The purpose of this policy is to ensure the integrity of all TRS investment transactions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division and must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment recommendations made by consultants and advisers must be based solely on the merits after the necessary due diligence. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either.

~~11~~12.3 Philosophy

The Board desires that the Investment Division obtain full disclosure of all matters having the potential to harm TRS's reputation or the integrity of TRS's investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process.

~~11~~12.4 Required Disclosures

At a minimum, all external Fund or Manager Parties shall provide detailed written responses to the questionnaire attached hereto as Appendix F as early as reasonably possible in the due diligence process for a TRS investment transaction. The Executive Director is authorized to approve such revisions to Appendix F from time to time as he deems to be in the best interest of TRS and consistent with this policy.

In addition, all Fund or Manager Parties shall provide a detailed description of the services to be performed by the Placement Agent and how the Placement Agent is used (e.g., with all prospects, or only with a subset of prospects). The Investment Division shall obtain a copy or summary of the terms of an agreement to compensate a Placement Agent for the due diligence file. The Investment Division shall provide all prospective Fund or Manager Parties with a copy of this policy upon commencement of due diligence.

~~11~~12.5 Contractual Representations, Warranties and Covenants

Each Fund or Manager Party shall represent and warrant to TRS in the executed closing documents for the transaction that its responses to Appendix F to this policy and any supplemental inquiries are true, correct, and complete in all material respects, and shall also covenant to update any such information within 10 business days of any change in the information in the responses.

In addition, each Placement Agent shall fully disclose the terms of its arrangements with a Fund or Manager Party for payment of a Placement Fee and any political contributions by the Placement Agent to any Texas Elected Officials, and shall certify as to the matters addressed in Appendix F, as applicable, to TRS in a writing executed by an authorized officer that the disclosures required by this policy are true and complete in all material respects.

Each final investment agreement shall provide TRS with the option to receive a reimbursement of management or advisory fees equal to the amount of Placement Fees to be paid to any and all Placement Agents, and, in addition and not in the alternative, the right to terminate the management agreement or withdraw without penalty from the fund investment vehicle or vehicles if any certificates or contractual representations, warranties or covenants relating to this policy have been breached.

1112.6 Prohibitions

Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. No TRS investment may be made if the transaction involves either (a) a Placement Agent who is not registered with either of the Securities and Exchange Commission or the Financial Industry Regulatory Authority (“FINRA”), or (b) the sharing of a Placement Fee with a non-registered person or entity. No TRS investment may be made if an authorized officer or the board, in consultation with legal counsel, determines that a disclosed contact with a TRS board member or Texas Elected Official, or a contribution to a Texas Elected Official, has created an unacceptable risk to the integrity and reputation of the TRS investment program or has been made in violation of a TRS policy or applicable law. A contact-based referral, without more, by a trustee of either an investment opportunity or a Manager or Fund Party contact to the Executive Director, Chief Investment Officer, or Deputy Chief Investment Officer does not constitute such a risk or a violation of this policy.

1112.7 Definitions

Affiliate – means a person or entity controlled by or under common control with another person or entity.

Fund or Manager Party – includes, (a) as to a private investment fund, a fund sponsor, the general partner, managing member, or its equivalent with respect to a fund, fund sponsor, or fund management firm, (b) as to an external, separate account investment manager, the asset management entity and the parent of such asset management entity, and (c) as to (a) and (b), any Affiliate, principal, owner, officer, shareholder, director, managing member, or employee having authority to act on behalf of such fund or firm.

Placement Agent – includes any third party, whether or not affiliated with a Fund or Manager Party, that is a party to an agreement or arrangement (whether oral or written) with a Fund or Manager Party for the direct or indirect payment of a Placement Fee in connection with a TRS investment. Any other person or entity who claims a Placement Fee or who by agreement with a Placement Agent will share in a Placement Agent’s Placement Fee is deemed to be a Placement Agent whether or not the person or entity is an Affiliate, principal, owner, officer, shareholder, director, managing member, or employee of a Placement Agent. A “finder” is a Placement Agent.

Placement Fee – includes any compensation or payment, directly or indirectly, of a commission, finder’s fee, or any other consideration or benefit to be paid to a Placement Agent.

Relative – means a spouse (including an ex-spouse), parent, child (including adopted), sibling, niece, nephew, aunt, or uncle.

Texas Elected Official – includes any elected official of the State of Texas, including but not limited to the governor, lieutenant governor, comptroller of public accounts, attorney general, and any member of the Texas Legislature, and also includes a campaign fund or political action committee, or PAC for an elected official, and any Relative of a Texas elected official.

TRS Person – means any person listed on Exhibit A attached to Appendix F to this Policy or to any other due diligence document, and includes without limitation any current or former TRS board member, Executive Director, Deputy Director, Chief Financial Officer, Investment Division or ~~Legal Services~~[Office of the General Counsel](#) employee, any investment consultant or actuary, any outside counsel engaged by TRS, and any Relative of a TRS Person, whether or not listed on an Exhibit A, TRS Persons.

APPENDIX A – TRACKING ERROR NEUTRAL ~~NEUTRAL~~
(IN ANNUALIZED BASIS POINTS)¹

Internal	Neutral
Equity (Global Best)	100
External	
Equity (US; Large-Cap)	300
Equity (US; Small-Cap)	500
Equity (International; Developed, EAFE)	300
Equity (International; Emerging Markets)	300
Equity (World Equity)	300
Stable Value Hedge Funds	400
Directional Hedge Funds	600

	Neutral	Maximum
Total Global Inflation Linked		200
Total Public Fund Tracking Error	100	300

¹ Tracking error will be measured on a realized basis over a three year period.

APPENDIX B – IIC APPROVAL AUTHORITY AND MANAGER ORGANIZATION ALLOCATION LIMITS

Allocations to a single manager organization may only exceed the limits specified in this Appendix B with the prior authorization of the Board.

Article Affected	Portfolio	Initial Allocation or Commitment with Manager Organization, by Portfolio	Additional or Follow-On Allocation or Commitment with the same Manager Organization, by Portfolio	Total Manager Organization Limits, by Portfolio
2.7	External Public Markets Portfolio	0.5%	1%	3%
4.2	Private Equity Portfolio	0.5%	1%	3%
5.2	Real Assets Portfolio	0.5%	1%	3%
6.2	Energy and Natural Resources Portfolio	0.5%	1%	3%
Total IIC Approval Authority, each Manager Organization				6%

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All allocation or commitment limits are expressed as a percentage of the Total Fund value and are to be calculated as of the date the applicable investment agreements are executed.

“Affiliate” means any person directly or indirectly controlling, controlled by, or under common control with, another person. A “manager organization” includes its Affiliates without regard to the names of the entities.

The percentage limit for additional or follow-on allocations or commitments applies to each additional or follow-on allocation or commitment by a listed portfolio to a manager organization and is in addition to, and not cumulative of, the limit specified for initial allocations or commitments. By way of example, if a portfolio initially allocates 0.2% of the Total Fund to a manager organization, the portfolio may thereafter allocate or commit up to 1.0% in a single additional or follow-on allocation or commitment to the same manager organization for a total of 1.2% allocated or committed to the same manager organization (0.2%+1.0%). If a portfolio initially allocates 0.2%, then makes an additional allocation or commitment of 0.8%, and desires to make a further additional or follow-on allocation to the same manager organization, the applicable limit for the further additional or follow-on allocation is 1.0% of the Total Fund, for a total of 2.0% allocated or committed to the manager organization (0.2%+0.8%+1.0%). All investments occurring in the six months prior to the follow-on investment, co-investment or additional investment shall be included in the calculation of the percentage limits. If the initial investment occurred less than six months prior to the current investment, the initial allocation limit of 0.5% rather than the follow-on allocation limit of 1.0% will apply.

In calculating the available limits, returned capital is excluded from the sum of existing total allocations or commitments. Committed capital is included during the applicable investment period of a fund without regard to whether the commitment amount is funded or unfunded or the fund is open-ended. After the investment period, committed but unfunded capital is not included in the calculation of outstanding commitments for the purposes of this Appendix B. Capital that has been returned but that is subject to recall by a private investment fund is considered to be committed or allocated for the purposes of the limits in this Appendix B.

Authority for Special Investment Opportunities. Notwithstanding the limits set forth in this Appendix B, the CIO may designate an investment opportunity as a “Special Investment Opportunity” if the circumstances indicate a reasonable probability that a rapid investment response will be required in order for TRS to acquire the investment in excess of the limits on Investment Division authority set forth in this Appendix B. Circumstances requiring a rapid response may include, but are not limited to, distressed situations or market dislocations creating opportunities to acquire interests or assets at pricing that indicates a reasonable probability that the interests or assets are undervalued or will increase in value. The CIO shall notify the Executive Director as promptly as possible of the Special Investment Opportunity. The CIO and the Executive Director shall consult with the Chairman of the Board and the Chairman of the Investment Management Committee and determine if it is not practicable to present the opportunity for consideration by the Board. If the opportunity will not be added to an agenda, and the

CIO and the Executive Director conclude that the investment would be in the best interests of TRS, the CIO and the Executive Director may authorize and conclude an investment up to \$1 billion in that Special Investment Opportunity.

After one investment in a Special Investment Opportunity has been made, no further investment in a Special Investment Opportunity may be made until the Board has reauthorized the CIO's authority to designate a Special Investment Opportunity. Such reauthorization shall renew the CIO's and the Executive Director's authority to invest up to \$1 billion in a Special Investment Opportunity under this provision.

APPENDIX C – EMERGING MANAGERS

Articles Affected:	Portfolio	Target Allocation (in millions)
2.7	External Public Markets Portfolio ¹	250
4.2	Private Equity Portfolio ^{1,2}	950
5.2	Real Assets Portfolio ^{1,2}	450
	Total	1,650

[#1](#) For the avoidance of doubt, these portfolios may also include investments in energy and natural resources.

¹ The CIO may increase or decrease each portfolio Target Allocation by \$200 million; provided, the total Target Allocation must remain unchanged as a result of such increase or decrease.

[#2](#) ² Target Allocation based on ~~commitments~~net market value.

APPENDIX D – POLICY HEDGE RATIOS

Portfolio	PHRs
Public Markets Portfolios	0%
Private Markets Portfolios	0%

APPENDIX E – AUTHORITY RESOLUTION (TRS 477)

Board of Trustees
General Authority Resolutions Adopted September 13, 2012

Investment Group

Resolved, That Investment Division employees holding the following TRS working titles are members of the “**Investment Group**”:

Chief Investment Officer
Senior Managing Director
Senior Director
Senior Investment Manager

Deputy Chief Investment Officer
Managing Director
Director

Resolved further, That the Executive Director is authorized and directed to designate in writing those individual members of the **Investment Group** who are authorized within the investment areas designated by the Executive Director, in addition to the Chief Investment Officer and the Deputy Chief Investment Officer, to take any one or more of the following actions authorized below in accordance with these resolutions until the authority is revoked.

Resolved further, That the Executive Director is authorized and directed to designate in writing, by investment area and category or item designation, the specific authorities granted to each authorized member of the **Investment Group**, until the authority is revoked.

A. General Authority for Investment Matters other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

1. Buy, sell, or give orders or instructions for transactions in currencies and securities, and any amendments or modifications of such orders or instructions.
2. Direct Investment Operations personnel to deliver, pay, expend, or receive cash, currencies, monies, securities (including restricted or Rule 144A securities) in connection with a contract to buy or sell securities.
3. Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of securities transactions.
4. Direct Investment Operations personnel to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; and to instruct other cash movements, including movements of cash to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Notwithstanding any provision of this Section A, authority granted under this Section A does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

B. Investment Contracting Authority other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

- B.1 Make, execute, and deliver investment-related documents, including written contracts, investment management agreements, subscription agreements, account agreements, consents, certificates, powers of attorney, notes, deeds,

security agreements, pledges, and endorsements, and any and all documents necessary or proper to effectuate the authority granted in this Section B.1.

- B.2 Make, execute, and deliver investment-related documents waiving, modifying, or amending in writing specific provisions of a written investment-related agreement, including directions and instructions to amend, modify, fix, and execute written investment guidelines in investment management agreements with external managers and fund managers.
- B.3 Make, execute, and deliver written renewals, extensions, assignments, terminations, or transfers of investment-related contracts or agreements, including contracts for investment management, commitments of capital, investment vehicles, security interests, liens or mortgages relating to TRS investments.
- B.4 Jointly with a member of the **Financial Group** or the **Executive Group**, execute investment fund and external manager account redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash, or securities to a TRS account by a third-party fund, external manager, account, debtor, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements and side letter agreements and any amendments or modifications to subscription agreements and side letter agreements.

Notwithstanding any provision of this Section B, the authority granted under this Section B does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

C. Derivatives Authority

Resolved further, That the Chief Investment Officer or the Deputy Chief Investment Officer and any member of the **Investment Group** who is designated by the Executive Director as a member of the derivatives team, in addition to any authority expressly designated by the Executive Director under these resolutions is authorized to act on behalf of TRS to:

- C.1 Negotiate, make, fix, execute, amend, modify, renew, extend, transfer, assign, terminate, endorse, or terminate in writing any and all of the following: master agreements for derivatives transactions; schedules, credit support annexes, transaction confirmations, account agreements, and clearing agreements relating to such agreements; and deliverables relating to such agreements, schedules, annexes, confirmations, account agreements, or clearing agreements, including documents relating to derivatives cash settlements and movements of collateral or margin.
- C.2 Make, execute, and deliver documents and agreements waiving, modifying, or amending in writing specific provisions of a written agreement relating to derivatives account agreements, collateral management agreements, or clearing agreements.
- C.3 Waive, amend, modify, renew, extend, transfer, assign, endorse, or terminate in writing agreements relating to derivatives transactions, and any transaction confirmations under such agreements.
- C.4 Jointly with a member of the **Financial Group** or the **Executive Group**, execute documents, directions, and instructions, including standing instructions, relating to cash settlement of derivatives and movements of collateral or margin for derivatives transactions.
- C.5 Buy, sell, or give orders or instructions for transactions in derivatives, and any amendments or modifications of such orders or instructions.
- C.6 Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of derivatives transactions.

Financial Group

Resolved further, That the “**Financial Group**” comprises employees holding the following TRS working titles:

Chief Financial Officer
Manager of General Accounting
Team Leader of Financial Reporting

Manager of Investment Accounting
Team Leader of Investment Accounting
Team Leader of Budgeting

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, jointly with an authorized member of the **Investment Group** or the **Executive Group**, to execute redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash, collateral, margin, or securities to a TRS account by a third-party fund, account, debtor, or derivatives counterparty, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements and side letter agreements and any amendments to subscription agreements or side letter agreements.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, to execute authorizations to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; instruct other cash movements, including movements of assets to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS to authorize and direct members of the Investment Accounting team to verify or confirm to a custodian or prime broker any order for the transfer or delivery of currencies, monies, securities, or contracts to any other person.

Executive Group

Resolved further, That the **Executive Group** comprises employees holding the TRS working titles of Executive Director and Deputy Director, and each member of the **Executive Group** is authorized and empowered to perform, with respect to a particular matter or transaction, any and all of the acts that any and all employees in the **Investment Group** or the **Financial Group** are authorized to perform, except that when joint action by a member of the **Investment Group** and a member of the **Financial Group** is required, only one member of the **Executive Group** may act jointly with a member of either of the **Investment Group** or the **Financial Group**.

Trading Group

Resolved further, That the “**Trading Group**” comprises the employees holding the following TRS working titles: Director – Trading Center, and Trader. Each member of the **Trading Group** is authorized and empowered on behalf of TRS to take the following actions: to place orders or agree with brokers, dealers and market-makers to purchase or sell securities, derivatives, forward contracts, or currency; to monitor and supervise execution and settlement of such orders or agreements; and to negotiate, fix, and vary the commissions, spreads, or discounts for individual orders or agreements to purchase or sell securities, derivatives, forward contracts, or currency.

APPENDIX F – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS QUESTIONNAIRE

Fund or Manager Name: _____

Completed by: _____

Date submitted: _____

Note: TRS may require completion of a new questionnaire or updating of responses at any time, including as of the closing date for any transaction investment or additional funding.

- A) Contacts with State Officials; Political Contributions. Has any person lobbied, communicated with, or made political contributions during the past three years on behalf of the Fund or Manager Party to a Texas Elected Official in connection with a prospective investment transaction with a Texas state investment entity, including TRS?
- 1) If the answer is “yes,” please provide a complete list of the name(s) of the entities and individual(s) involved, the approximate dates of the contributions, the amounts of the contributions, a summary of the contacts or communications, and the nature of the discussion in regards to the investment with any Texas state investment entity, including TRS.
- B) Contacts with TRS Board Members. Has any person lobbied or otherwise communicated on behalf of the Fund or Manager Party with a current or former member of the TRS Board of Trustees during the past two years for the purpose of asking the current or former member to seek to influence a decision by the TRS investment staff or a TRS advisor or consultant to recommend that TRS invest?
- 1) If the answer is “yes,” please provide a complete listing of the name(s) of the entities and individual(s) involved, the approximate dates of the contacts or communications, and the nature of the discussion in regards to this investment.
- C) Placement Agents and Placement Fees. Is or was the Fund or Manager Party a party to any agreement or arrangement (whether oral or written) to pay a Placement Fee to or for the benefit of any Placement Agent in connection with TRS’s prospective investment in a fund or engagement of an external manager?
- 1) If the answer to C) is “yes,” please provide a copy of the written agreement or agreements creating the obligation to pay a Placement Fee. If the agreement is not written, please provide a written summary of the agreement. Additionally, please state the amount of the Placement Fee (or the formula for its determination if the amount is not yet determined) and the date of its payment or anticipated payment.
 - 2) If the answer is “yes,” please list the name(s) of the person or entity. If the party to the agreement is an entity, please also list the names of the principal owners, officers, directors, or managing members of the Placement Agent and provide a resume for each such person.
 - 3) If the answer is “yes,” state whether the Placement Agent, or any of its Affiliates, is registered as a lobbyist with any state government or the federal government and identify the registrants and the applicable jurisdictions where registered.
 - 4) Will or did any TRS Person or any Relative of a TRS Person receive, has any such person received, or might any such person receive, any compensation or payment, directly or indirectly, of a commission, finder’s fee, or any other consideration or benefit to be paid to a Placement Agent (a “Placement Fee”) in connection with TRS’s investment? If the answer is “yes,” please list the name or names of the TRS Person or Relative of a TRS Person and provide details about the terms of the Placement Fee.

- 5) Will or did any Texas Elected Official or a Relative of a Texas Elected Official receive a Placement Fee in connection with TRS's investment? If the answer is "yes," please list the name or names of the official and provide details about the terms of the Placement Fee, including the amounts and timing of payments.
- 6) Did (or will) any third party person or entity who is not employed or otherwise affiliated with a Placement Agent, including a current or former TRS Person, either (a) recommend the Placement Agent or (b) receive a share of a Placement fee or any other economic benefit in connection with TRS's investment, whether directly or indirectly through a Placement Agent engaged by you?
- 7) If the answer to 6) is "yes," please list the name of the person or entity, the relationship of the person or entity to the Placement Agent and your firm, and provide a description of the arrangement and the reason for the payment.
- 8) State whether the Placement Agent or any of its Affiliates is registered as an investment advisor with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or a similar agency outside the United States. Provide details about registration or explain why registration is not required.

The undersigned certifies, represents and warrants on behalf of the Fund or Manager Party that, to the best of its knowledge after due inquiry, (a) the foregoing responses to this questionnaire are complete, true, and correct and do not omit any statement or fact necessary to make any statement made not misleading in any material respect, and (b) no prior statements or representations, if any, whether oral or written, made on behalf of the Fund or Manager Party relating to the subject matter of this questionnaire in connection with TRS's due diligence inquiries, a prospective investment management agreement, or a subscription to the Fund, as the case may be, including any side letter agreements, were untrue or misleading in any material respect when they were made.

[signature block for Fund or Manager Party]

Date: _____

Attachment: Exhibit A, TRS Persons

**APPENDIX G - EXTERNAL ADVISORY COMMITTEES OR BOARDS, BOARD OBSERVERS,
AND BOARD REPRESENTATION**

(A) External Advisory Committees or Boards and Board Observers. A TRS investment-related agreement may provide that an Investment Division employee may represent TRS by serving:

1. On an advisory committee, advisory board, or similar advisory body to a TRS investment vehicle, whether the position is voting or non-voting; or
2. As a non-voting TRS observer at meetings of the governing body of an investment vehicle, including a business entity, in which TRS has an interest.

(B) Board Representation by a TRS Employee. A TRS investment-related agreement may provide for TRS representation on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.

1. Requirements:

- a. The TRS employee representative may not serve in a position that under applicable law has general liability to third parties, such as a general partnership position.
- b. An agreement for TRS representation on an external governing body must be in writing and, to the extent possible, address limitations on capacity and fiduciary duties, liability insurance, indemnification, travel payments or reimbursements, and perquisites provided to persons on the governing body in the entity's ordinary course of business.
- c. Duties that an employee owes to TRS must be primary.
- d. The external entity's insurance and indemnification will be primary relative to any available TRS liability and indemnification coverage.
- e. If compensation or reimbursement of expenses will be paid, the agreement must require payment of any compensation or reimbursement directly to TRS.

2. Qualification: A TRS employee representative must hold one of the following TRS titles to be eligible to serve: Senior Investment Manager, Director, Senior Director, Managing Director, Senior Managing Director, Deputy CIO, or CIO.

3. Authorization:

- a. For a non-public (private) entity, either of the CIO or the Deputy CIO, in consultation with the Office of the General Counsel, must authorize an employee to serve.
- b. For an entity that has issued publicly-traded securities, the CIO and the Executive Director, in consultation with the Office of the General Counsel, must authorize an employee to serve.
- c. The CIO and Deputy CIO may not serve on an external governing body without prior authorization from the Executive Director.

(C) Board Representation by a Non-Employee Independent Third Party. A TRS investment-related agreement may grant TRS a contractual right or option to appoint, nominate, remove, or replace a non-employee independent third party to serve on the governing body of a business entity in which TRS has or will have an investment interest.

1. Requirements:

- a. A third-party may not be TRS's agent and shall have full discretion when voting as a member of the governing body.
- b. TRS will not insure or indemnify any third party representative.

2. Qualification: The third party must clear a conflict check.

3. Authorization: The third party must be approved by the head of the applicable investment area and either of the Deputy CIO or the CIO, in consultation with the Executive Director.



INVESTMENT POLICY STATEMENT
(Adopted September [], 2013 to be effective October 1, 2013)

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EXECUTIVE SUMMARY

This Executive Summary is not intended to replace, and must be read in conjunction with, the Investment Policy Statement. In the event of a conflict between the Executive Summary and the Investment Policy Statement, the Investment Policy Statement shall govern.

Total Fund and Portfolio Design;
Restrictions

The Investment Policy Statement provides a formal plan for investing pension trust fund and health insurance program assets. The policy defines the roles and responsibilities of the Investment Division and other parties within that plan.

The Internal Investment Committee is established and assigned the authority to review and approve investments. The IIC's authority is limited by the size of the investments it can approve without also obtaining approval from the Board. The limitations are 0.5% for initial allocations, 1% for follow-on allocations, 3% total to any one organization in each of External Public Markets, Private Equity, Real Assets and Energy and Natural Resources and 6% total to any one organization in the total Trust with each of the foregoing percentage stated as a percentage of the Total Trust and calculated at time of investment. In addition, the CIO has Special Investment Opportunity authority of up to \$1 billion. See "Appendix B – IIC Approval Authority and Manager Organization Allocation Limits."

The Trust's objectives are to (a) control risk and (b) achieve a long-term rate of return that exceeds (i) the assumed actuarial rate of return adopted by the Board, (ii) inflation plus 5% and (iii) the Trust's Policy Benchmark. The Trust is subject to a "prudent person" standard of care under the Texas Constitution.

Within the constraints of the IPS, the Investment Division is authorized to engage advisors and consultants, authorize commitments to be funded over an extended period of years, serve or hire independent third-parties to serve on External Advisory Committees or Boards, as Board Observers or on the governing body of a non-public (private) or a publicly-traded business entity, allow short positions, engage in overlay strategies, rebalance the portfolio, and transfer, withdraw or terminate its investments. Private Market and External Public investments will be submitted to the Board for authorization if the appropriate consultant or advisor does not concur with the investment or at the request of any Board member.

Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively.

TRS will not invest in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.

See "Article 1 – Total Fund and Portfolio Design; Restrictions."

Asset Allocation	<u>Asset Class</u>	<u>Target</u>
	<u>Global Equity</u>	
	US Large Cap	18%
	US Small Cap	2
	Non-US Developed	15
	Emerging Markets	10
	Directional Hedge Funds	5
	Private Equity	11
	<u>Stable Value</u>	
	US Treasuries	13%
	Absolute Return	0
	Stable Value Hedge Funds	4
	Cash	1
	<u>Real Return</u>	
	Global Inflation Linked Bonds	5%
	Real Assets	13
	Energy and Natural Resources	3
	Commodities	0
	Total	100%
	In addition to the target, each asset class has minimum and maximum allocations which, with certain exceptions, are +/-5% around the target allocation.	
	See “Section 1.6 – Total Fund Asset Mix and Benchmarks.”	
Measurement and Reporting	Investment performance, policy compliance, asset allocation, external investments activities, derivatives usage, risk limits, liquidity, leverage, private markets strategy, staffing, board and board observer seats, use of placement agents and other information will be monitored and reported to the Board. See “Section 1.7 – Total Fund Measurement and Reporting Criteria.”	
Public Markets Portfolios	The portfolios are authorized to invest in publicly traded or Rule 144A (either through an exchange or over-the-counter) assets such as equities, exchange-traded funds, equity-linked notes, options, futures, swaps, forwards, corporate debt, sovereign or sovereign-sponsored entity debt (including US Treasuries), mortgage-backed securities, collateralized mortgage obligations, commercial mortgage-backed securities, asset-backed securities, any investment in one of the public markets benchmarks, mutual funds, closed end funds, structured notes, structured credit transactions, repurchase transactions, State of Texas pooled investment funds, foreign currencies, short sales, local access products and other investments. See “Section 2.2 –Public Markets Portfolios Authorized Investments.”	
	Certain restrictions apply to the internally managed portfolios including restrictions on the amount of equity of any company that can be held (not more than 20%) and those listed in Section 1.8., See “Section 2.3 – Public Markets Portfolios Restrictions.”	
External Public Markets Portfolio	The portfolio is comprised of (a) externally managed public investments that do not qualify as Hedge Funds (limited to less than 30% of the Trust), (b) Hedge Funds (limited to less than 10% of the Trust) and (c) other absolute return portfolios (includes credit-sensitive investments). Hedge Fund is defined in Section 2.6.	

	See “Section 2.7 – Authorized Investments for the External Public Markets Portfolio” and “Section 2.8 – External Public Markets Portfolio Restrictions.”
Private Markets Portfolio	General principles of investing in private markets apply to the Private Equity, Real Assets and Energy and Natural Resources portfolios. See “Article 3 – Private Markets Portfolios.”
Private Equity Portfolio	The portfolio makes investments either through funds or directly in equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments. Private equity strategies are often classified as venture capital, mezzanine, buyout, emerging markets and special situation. See “Article 4 – Private Equity Portfolio.”
Real Assets Portfolio	The portfolio makes investments either through funds or directly in equity, debt, rights, warrants or other investments in real estate, infrastructure, timber, agriculture, oil and gas, mortgage-related investments, real estate investment trusts, master limited partnerships, non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified as core, core-plus, value-added and opportunistic. See “Article 5 – Real Assets Portfolio.”
Energy and Natural Resources Portfolio	The portfolio makes investments in energy and natural resources related assets through public funds, private equity funds, or directly through equity, equity-rights securities, preferred stock, convertible securities, debt obligations, warrants, rights, options and other investments whether public or private. Energy and natural resource investments are often classified by resource type and where the investment is in the resource value chain (upstream, midstream or downstream). See “Article 6 – Energy and Natural Resources Portfolio.”
Emerging Managers Program	The Investment Division will make a good-faith effort to invest a target allocation of \$1.65 billion with qualified emerging managers in the External Public Markets Portfolio, Private Equity Portfolio and the Real Assets Portfolio. Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations generally with less than \$2 billion assets under management or a performance track record of less than five years. See “Article 7 – Emerging Managers Program” and “Appendix C – Emerging Managers.”
Overlay Portfolios	Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund. Overlay portfolios are restricted by the asset allocation limits of the Trust. In addition, certain uses of currency overlays are restricted to less than (a) 5% to all non-US dollar currencies, (b) 2% to any one developed market currency (except the US dollar) and (c) 1% to any emerging market currency, each calculated as a percentage of the Trust. See “Article 8 – Overlay Portfolios.”
Derivatives	<p>Derivatives are authorized only if they efficiently manage and reduce the risk of the overall investment portfolio. Derivatives can be used to (a) implement investment strategies in a lower cost or efficient manner, (b) efficiently manage the Total Fund portfolio, (c) construct portfolios that could not be efficiently constructed using cash market securities, (d) hedge and control risks and (e) facilitate transition trading.</p> <p>Over-the-counter derivatives may not have a tenor of greater than six years (or, thirty years in the case of interest rate swaps). Derivatives may only invest in legally permissible policy asset categories and may not be used to circumvent the asset allocation or other policy restrictions. All use of derivatives must be properly</p>

documented. All over-the-counter derivatives must be executed using ISDA documentation or, if centrally cleared, clearing agreements. All counterparties must have a credit rating of at least A- (Standard & Poor's or Fitch) or A3 (Moody's). In addition, the net market value of derivatives positions with any counterparty may not exceed \$500 million (calculated net of collateral) and may not exceed 5% of the total market value of the Fund (without consideration of collateral).

See "Article 9 – Authorized Uses of Derivatives."

Risk Management

The Investment Division will monitor and manage risk of the Total Fund Portfolio including:

Market Risk –will be managed and measured using at a minimum a quantified estimate of downside risk (e.g., value-at-risk), asset allocation limits, private markets holdings analysis, and a quantified estimate of risk relative to the benchmark (tracking error).

Foreign Exchange Risk – will be managed according to a Policy Hedge Ratio established by the Board. The current Policy Hedge Ratio is set at 0%.

Credit Risk – the primary sources of credit risk are derivative counterparty risk (mitigated by credit provisions in the derivatives documentation), the risk from repurchase agreements (limited to 5% of the Trust market value) and securities lending.

Liquidity Risk – a prudent liquidity management will be established to ensure that the Fund maintains ample liquidity to meet its funding commitments, especially disbursements of benefits and TRS investment activities.

Leverage Risk – the permitted uses of leverage are defined. Leverage will not be used to exceed the asset allocation ranges of the policy.

Other managed risks include operations risk, settlement risk and legal risk.

Compliance cure periods or corrective action plan periods established for violations of policy or other compliance limits are 90 days for passive violations (a violation due to changing market or credit conditions) and 15 days for active violations (a violation due to entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor).

See "Article 10 – Risk Management and Oversight."

Health Insurance Program

Authorized investments for the Health Insurance Program Portfolio are conservative, short-term securities consistent with the guidelines employed by the Comptroller when investing State funds. See "Article 11 – Health Insurance Program Portfolio."

Political Contributions; Improper Influence; Placement Agents and Finders

The purpose of this policy is to ensure the integrity of all TRS investment transactions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either. The Investment Division shall obtain full disclosure of all matters having the potential to harm TRS's reputation or the integrity of TRS's investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process. Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. Adequate disclosure must be made in connection with any investment in the form of

“Appendix F – Political Contributions; Improper Influence; Placement Agents and Finders Questionnaire.”

See “Article 12 – Political Contributions; Improper Influence; Placement Agents and Finders.”

Tracking Error

Neutral tracking error targets are established for certain portfolios of the Trust:

Internal

Equity (Global Best)	100 bp
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External

Equity (US; Large-Cap)	300 bp
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Equity (US; Small-Cap)	500
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Equity (International; Developed, EAFE)	300
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Equity (International; Emerging Markets)	300
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Equity (World Equity)	300
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Stable Value Hedge Funds	400
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Directional Hedge Funds	600
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Total Public Fund Tracking Error	100
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In addition, Total Global Inflation Linked and Total Public Fund have maximum tracking error limits of 200 bp and 300 bp, respectively. See “Appendix A – Tracking Error Neutral (in annualized basis points).”

Authority

The employee titles in the Investment Group are specified and three types of investment authority are described including (i) general authority for investment matters, (ii) over-the-counter derivatives contracts and (iii) transfers of funds or assets; fund or account redemptions and withdrawals. In addition, the employees of the Financial Group, Executive Group and Trading Group are also specified and their authority is described. See “Appendix E – Authority Resolution (TRS 477).”

ARTICLE 1 – TOTAL FUND AND PORTFOLIO DESIGN

1.1. Introduction

The Teacher Retirement System of Texas (“TRS”) administers a pension trust fund and other health insurance programs for retirees and certain active public education employees under State of Texas constitutional and statutory provisions. TRS is governed by a Board of Trustees (the “Board”). TRS provides service and disability retirement benefits and death and survivor benefits for Texas public education employees and their beneficiaries. Benefits are funded by state and member contributions and investment returns.

1.2. Purpose and Design

The purpose of this Investment Policy Statement (this “Policy”) is to provide a formal plan for investing pension trust fund and health insurance program assets to achieve defined investment objectives consistent with the TRS mission statement adopted by the Board and with applicable law.

This Policy also defines the roles and responsibilities of the various entities involved in the investment process and facilitates internal and external communication of investment policy.

The appendices to this Policy are incorporated into and form part of this Policy for all purposes. Capitalized terms not defined in this Policy have the meanings assigned to them in the “TRS Glossary of Investment Terms” (“Glossary”), which definitions are also incorporated into and form part of this Policy for all purposes. Modifications to the appendices or the Glossary that would have a substantive effect on this Policy require Board consideration and adoption.

1.3. Roles of Board, Staff, and Advisors

The Board has the primary fiduciary responsibility for investing TRS trust assets in accordance with Article XVI, Section 67 of the Texas Constitution and with applicable law. The Board establishes investment objectives and policy, obtains expert advice and assistance, and oversees the employment of a qualified and competent investment staff (“Investment Division”) and legal staff. The Board also monitors the actions of staff and advisors to ensure compliance with its policies. The Board has a Policy Committee of the Board (“Policy Committee”), an Investment Management Committee of the Board (“IMD Committee”) and a Risk Management Committee of the Board (“Risk Management Committee”), each of which is a standing committee of the Board charged with those responsibilities set forth in the Bylaws of the Board. The Board and the Investment Division are assisted by outside investment consultants and internal and external legal counsel.

- a. Investment Counsel (“Investment Counsel”) selected by the Board provides education, advice, commentary, and discussion as requested at Board meetings, assists with development and review of investment policies and procedures, performs due diligence and recommends managers or investments, reports on the progress of the Fund in meeting its investment objectives, and compares the performance of the portfolio to established benchmarks. The Investment Division and Investment Counsel provide information as needed to assist the consulting actuary in performance of actuarial services.
- b. The Investment Division has fiduciary responsibilities delegated by the Board under applicable law. The Investment Division manages the Fund according to the Board's policies, advises and informs the Executive Director and the Board about investments, and recommends modifications to this Policy. The Investment Division executes all transactions, performs risk-management functions, and prepares investment reports.
- c. The Internal Investment Committee (“IIC”) is hereby established to review, consider, and authorize proposed external manager engagements and investments as required by this Policy for the External Public Markets Portfolio and the Private Markets Portfolios. Additionally, the IIC will manage the foreign exchange policy hedge ratios (set forth in Appendix D) and review as needed.

The permanent IIC membership consists of the Chief Investment Officer (“CIO”), the Deputy CIO, the Chief Risk Officer (“CRO”), and the Investment Division Senior Managing Directors (“SMD’s”). The CIO will establish procedures and guidelines for the operations of the IIC. The IIC procedures and guidelines may provide that the CIO may appoint and remove select Directors as non-permanent voting members to the IIC. The IIC procedures and

guidelines will define a quorum and establish the vote required to authorize an investment or external manager engagement or, if required by this Policy, recommend an investment or external manager engagement to the Board, which vote may not be less than a majority of the then-incumbent IIC members present and voting at a meeting at which a quorum is present. The CIO shall have the power to veto any investment or delegation of investment discretion authorized or recommended by the IIC pursuant to a vote of its members. Termination of a member's TRS employment terminates IIC membership as of the date the employee or TRS gives notice of termination, as the case may be.

The Executive Director or his designee may attend any meeting of the IIC, and the Investment Division shall deliver to the Executive Director copies of all IIC materials, analyses, correspondence, and agendas as and when delivered to IIC members or other TRS employees. The Executive Director is not a member of the IIC, however, acting in his or her capacity as the chief executive officer and chief administrative employee of TRS as set forth in the Board's Bylaws, the Executive Director shall, after consultation with the CIO, have the power to veto any investment or delegation of investment discretion proposed for IIC consideration or authorized or recommended by the IIC pursuant to a vote of its members whenever he deems such veto to be in TRS' best interest. When this Policy requires that the Board authorize an investment or an engagement of an external manager, the IIC shall vote on whether to recommend such investment or engagement to the Board. The results of the vote shall be reported to the Board in the materials provided to the Board for consideration.

- d. All proposed changes to this Policy will be reviewed by the legal staff for compliance with state and federal laws regarding fiduciary responsibility, investment prudence, ethics compliance, and other applicable standards or requirements before submission to the Policy Committee. Except as authorized by the Executive Director, proposed changes to this Policy will first be presented to the Policy Committee, which will consider recommending the proposed changes to the Board. The Board may consider and adopt proposed changes that have not been considered by the Policy Committee. This Policy shall be reviewed at least once every three years.

1.4. Total Fund Objectives

In this Policy, the total or overall investment portfolio includes all assets invested by TRS to provide retirement, death, health, and disability benefits administered by the system, including cash and cash equivalents (the "Total Fund" or the "Fund") and will be structured and managed to achieve the following objectives:

- a. Control risk through proper diversification of asset classes and by establishing long-term risk and return expectations; and
- b. As applicable to the pension plan, achieve a long-term rate of return that:
 - i. Exceeds the assumed actuarial rate of return adopted by the Board;
 - ii. Exceeds the long-term rate of inflation by an annualized 5%; and
 - iii. Exceeds the return of a composite benchmark of the respective long-term normal asset mix weighting of the major asset classes.

1.5. Total Fund Investment Standard

Article XVI, Section 67(a)(3) of the Texas Constitution and Section 825.301, Government Code, states that the standard of care for TRS investments is a "prudent person" standard. Section 825.301, Government Code, provides that Section 117.004(b), Property Code, applies to TRS investment decisions. Section 117.004(b) generally states that the determination of the prudence of a single investment decision will be made taking into consideration the investment of all of the assets of the trust, or the assets of the collective investment vehicle, as the case may be, rather than a consideration as to the prudence of the single investment of the trust, or the single investment of the collective investment vehicle, as the case may be.

All investments made by the Total Fund must be in "securities" as defined in Government Code Section 825.301(a) provided, however, that until September 1, 2019, TRS may buy and sell those instruments set forth in Section 825.301(a-1), Government Code, to efficiently manage and reduce the risk of the overall investment portfolio.

The Board and the Investment Division may obtain the assistance and advice of external investment experts, including external managers operating under Agency Agreements, and other investment counselors or consultants as needed.

1.6. Total Fund Asset Mix and Benchmarks

The Investment Division will assist the Board in engaging in an asset-liability study for the pension plan at least once every five (5) years to review asset classes, return-risk assumptions, and correlation of returns with applicable benchmarks and across asset classes. A key objective of the asset-liability study shall be the development through statistical modeling techniques of a diversified portfolio that specifies ranges of prudent portfolio exposures and a “long-term normal” position for each asset class. The normal portfolio mix will represent the portfolio that is expected to meet the Board’s actuarial return objectives for the pension plan within the risk tolerances specified herein.

Each asset class allocation percentage has a “long-term normal” position within the overall portfolio and a maximum and minimum range around that normal allocation. All percentages refer to market value.

Each asset class is described by an associated benchmark that describes, in general terms, the opportunity set and return characteristics associated with the asset class. For certain private or more complex asset classes the benchmark serves as a proxy for expected returns rather than an approximation of the actual investments that will characterize that component of the portfolio. Those benchmarks, along with the allocation ranges, are identified in the table on the following page, and are referred to as the “Policy Benchmarks.”

[Table appears on following page]

Asset Class	Benchmark	Bloomberg Ticker	Minimum Range ¹	Maximum Range ¹	Target
Global Equity:					
US Large Cap	MSCI USA Standard	GDDUUS	13%	23%	18%
US Small Cap	MSCI USA Small Cap	GCUDUS	0%	7%	2%
Non-US Developed	MSCI EAFE and Canada	NDDUEC	10%	20%	15%
Emerging Markets	MSCI EM	NDUEEGF	5%	15%	10%
Directional Hedge Funds	HFRI Fund of Funds Composite	HFRIFOF	0%	10%	5%
<i>Total Public Equity</i>	<i>Target-weighted Blend</i>		<i>45%</i>	<i>55%</i>	<i>50%</i>
Private Equity	State Street Private Equity Index – lagged one quarter		6%	16%	11%
Total Global Equity	Target-weighted Blend		54%	68%	61%
Stable Value:					
US Treasuries	Barclays Capital (BarCap) Long Treasury Index	LUTLTRUU	0%	20%	13%
Absolute Return (Including Credit Sensitive Investments) ²	3 Month LIBOR + 2%	USCOTR03 (plus 2%)	0%	20%	0%
Stable Value Hedge Funds	HFRI Fund of Funds Conservative	HFRIFOFC	0%	10%	4%
Cash	Citigroup 90-day US Treasury	SBMMTB3	0%	5%	1%
Total Stable Value	Target-weighted Blend		13%	23%	18%
Real Return:					
Global Inflation Linked Bonds	BarCap US Treasury TIPS index	LBUTTRUU	0%	10%	5%
Real Assets	NCREIF ODCE – lagged one quarter		8%	18%	13%
Energy and Natural Resources ³	75% Cambridge Associates Natural Resources (reweighted ⁴) / 25% quarterly Consumer Price Index – lagged one quarter	CPI (for CPI)	0%	8%	3%
Commodities ³	Goldman Sachs Commodity Index	SPGCCITR	0%	5%	0%
Total Real Return	Target-weighted Blend		16%	26%	21%
TOTAL PLAN	Target-weighted Blend				100%

¹ With respect to the maximum range and minimum range, the CIO may increase any maximum range by 5% or decrease any minimum range by 5% (but may not decrease a minimum range below zero) if the CIO concludes in a writing delivered to the Executive Director and to the Board of Trustees stating the action taken and the reasons why the CIO believes that such increase or decrease would be in the best interests of TRS; provided, the maximum range for Total Global Equity may not be increased above 68%. Before taking action, the CIO must request comments from the Chairman of the appropriate Board Committee and TRS consultants and advisors. The Board, at the next succeeding Board meeting, must authorize the increase or decrease if the CIO proposes that the changes continue in effect after such Board meeting. The CIO will notify the Compliance Officer of any such change to a maximum or minimum range. If the Board does not authorize the continuation of the change to a maximum or minimum range after the next succeeding Board meeting, the Investment Division shall use best efforts to rebalance the portfolio to bring the asset classes within the ranges in the table above within 90 days.

² Absolute Return is a broad category that includes all assets that have a high probability of generating a positive absolute return regardless of market conditions over a one to three year period.

³ Except as specifically provided in Section 5.2, investments in commodities are limited to instruments that constitute a security or an authorized derivative that is either underlain by a financial instrument or, if underlain by a physical commodity, is cash settled. Direct investments in physical commodities are prohibited.

⁴ The Energy and Natural Resources benchmark will be calculated on a quarterly basis one quarter lagged. The Cambridge Associates Natural Resources Index is comprised of Timber, Energy and Upstream/Royalties sub-indices and will be reweighted quarterly using its actual weightings based upon beginning of quarter Timber weight and an equal weight for each of Energy and Upstream/Royalties.

1.7. Total Fund Measurement and Reporting Criteria

The Investment Division will deliver reports to the Board (and the appropriate Board committee, as applicable) adequate to indicate whether the Total Fund is meeting its objectives and that will permit the Board to monitor each portfolio for compliance with this Policy. The Board will establish performance and risk measurement and attribution standards for the Total Fund, each asset class, and component portfolios.

The following comparisons and reviews will be performed quarterly (unless otherwise noted) and presented to the Board:

- a. **Investment Performance** – Investment performance for the Total Fund and each component portfolio, net of external management fees (if applicable); will be compared with their respective benchmark indices. Fund performance will be judged primarily by comparisons to long-term (3, 5 and 10 year) Policy Benchmark returns.
- b. **Monitoring of compliance with Policy** – Portfolios will be reviewed for compliance with the requirements set forth in this Policy. The Investment Compliance Officer will have overall responsibility for compliance monitoring. However, if considered necessary, TRS will hire external parties to obtain assistance regarding compliance monitoring. To ensure independence in compliance monitoring the Investment Compliance Officer or external parties hired will not be given the authority to trade securities. To ensure ongoing compliance with this Policy and completeness of disclosures to the Board regarding compliance, the Investment Compliance Officer has authority to require certifications from applicable IIC members or Managing Directors disclosing known compliance violations. The Investment Compliance Officer reports all known compliance exceptions to the Board at the next meeting of the Board.
- c. **Asset class exposures and weightings** – The exposure of cash and derivative instruments to each asset class will be aggregated and compared with their respective long-term and transition benchmarks and with the authorized ranges around those benchmarks. Hedge Fund exposure will be reported relative to its statutory limit, if applicable.
- d. **External investments under consideration** – For any external investment under consideration by the Investment Division (including hedge funds, external managers, and private markets investments), the Investment Division will provide the Board the following information prior to the date of the applicable IIC meeting:
 - i. Name of the investment vehicle and investment manager;
 - ii. Total fund or strategy size;
 - iii. TRS investment amount under consideration;
 - iv. Investment strategy;
 - v. Names of the external manager or fund principals;
 - vi. Projected TRS commitment or funding date;
 - vii. Placement agent or firm sponsoring the offering or engagement, if any;
 - viii. Prospective fees;
 - ix. Other TRS investments with the firm;
 - x. Historical fund or manager performance; and
 - xi. Type of investment representation contemplated and proposed individual to serve, if any.
- e. **External investments activities** – The Investment Division will provide the Board with a list of all external investments, including any additions, withdrawals, transfers or terminations, on at least a semi-annual basis.
- f. **Derivatives** – The Investment Division shall provide a comprehensive report of all outstanding derivative applications (including derivative types, counterparties, notional amounts, and fair values) used by internal managers and external managers under Agency Agreements on at least a semi-annual basis.
- g. **Risk limit** – The Investment Division will report at least semi-annually the Total Fund and benchmark total estimated risk relative to the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- h. **Liquidity** – The Investment Division will report at least semi-annually to the Board the use of external liquidity funding mechanisms.

- i. **Leverage** – The Investment Division will report the Gross and Net Leverage derived from internal derivative use, internal short sales, external managers, Hedge Funds, and leverage resulting from use of external liquidity funding mechanisms as outlined in the Liquidity Policy on at least a semi-annual basis.
- j. **Transparency report** – The Investment Division will provide a transparency report to the Board that may be used to disclose any of the required information mentioned above. This report may be delivered in electronic or physical formats.
- k. **Private Markets Long-Term Strategy** – The Investment Division will review with the Board its long-term strategy for each Private Markets Portfolio at least every three years. This review will include information on target sub-strategy allocation, return, risk and liquidity expectations. Tactical deviations from this long-term strategy will be reviewed on an annual basis.
- l. **Staffing** – The Investment Division will provide an update no less than annually reporting on the staffing of key employees in the division, including turnover, transfers and the creation of new positions.
- m. **Placement Agent Disclosures** – The Investment Division shall compile all responses to the placement agent questionnaire (Appendix F) for the purposes of Article 12, including for emerging manager investments, and report the results to the Board at least semi-annually. Each response shall include the questionnaire information as of the date the IIC approved the investment. Reports shall include the amounts and recipients of any political contribution or Placement Fee and the relationship of the recipients to the Placement Agent or Texas Elected Official, as applicable.
- n. **Participation as Board Observers or on Governing Boards** – The Investment Division shall provide the Board with an annual report on all board observer positions and positions held by employees or third party representatives serving on the governing body of a business entity in which TRS holds a direct or indirect investment interest.
- o. **Other information** – Any other information or reports as the Board may request or require from time to time.

1.8. Total Fund Portfolio Implementation and Design; Restrictions

- a. The Total Fund investment portfolio is characterized by the following functional portfolios that are charged with the implementation of day-to-day portfolio management activity:
 - i. Internal Public Markets Portfolios;
 - ii. External Public Markets Portfolio;
 - iii. Private Markets Portfolios;
 - iv. Overlay Portfolios; and
 - v. Risk Management and Oversight.
- b. The Investment Division is authorized to represent TRS on external advisory committees or boards and as board observers in investments in which TRS has an interest.
- c. Subject to Appendix G, after evaluation of the net benefit to TRS, employees in the Investment Division are authorized to represent TRS or to nominate or appoint third-party independent non-employees to represent TRS on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.
- d. The objectives, authority and limitations of each of these investment areas, and the authorized uses of derivatives, are described throughout the remainder of this Policy.
- e. Except as required by fiduciary duties created by the Texas Constitution or applicable law, each TRS investment portfolio, including separate account investments, will comply with Chapters 806 and 807 of the Government Code relating to prohibitions on investments in Sudan and Iran, respectively. Additionally, TRS may avail itself of the

protection afforded by applicable federal law, including the U.S. Sudan Accountability and Divestment Act and the Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010.

- f. TRS will not invest directly in securities of any company that derives a significant portion of its revenues from products or services intended exclusively to appeal to a prurient interest in sex through explicit depictions of sexual activity. These include sexually explicit films, videos, publications, and software; topless bars and strip clubs; and explicit sexually-oriented telephone and Internet services. The restriction does not apply to pooled investment vehicles, provided that the Investment Division shall engage with the managers of such vehicles and use commercially reasonable efforts during due diligence to determine whether such vehicles invest in any company that would not be eligible for direct investment by TRS.

ARTICLE 2 – PUBLIC MARKETS PORTFOLIOS

2.1. Public Markets Portfolios Objectives

The Public Markets Portfolios are comprised of the Internal Public Markets Portfolios and the External Public Markets Portfolios. The primary objectives of the Public Markets Portfolios are to manage publicly-traded, marketable securities and related instruments, in accordance with the risk parameters established by the permitted asset allocation ranges of this Policy, to meet or exceed the performance of the Policy Benchmark, as allocated to the Public Markets Portfolios. The Internal Public Markets Portfolios will serve as the primary vehicles through which transition management will be performed and proxy portfolios will be managed vis-à-vis the unfunded Private Markets Portfolios, External Manager Portfolios, and Hedge Fund portions of the Fund.

2.2. Public Markets Portfolios Authorized Investments

The Public Markets Portfolios are authorized to invest in the securities described as follows:

- a. Equity securities of all companies traded or listed on a national exchange in the U.S. or in countries in the MSCI ACWI ex-US benchmark, and any component security of a Policy Benchmark.
- b. Common stocks, preferred stocks, convertible bonds, rights, warrants, units and depositary receipts (“DRs”) that trade publicly or pursuant to Rule 144A of the Securities and Exchange Commission (the “SEC”), without regard to the issuer’s principal place of business or jurisdiction of incorporation or organization (such securities are sometimes referred to in this Policy as “Authorized Equity Securities”), including common or preferred stock issued in initial public offerings (“IPOs”).
- c. Exchange-traded funds (“ETFs”) and closed-end funds tracking an applicable benchmark (or a significant subset or sector of a benchmark) if listed on a U.S. stock exchange or market or on a stock exchange or market in a country in which TRS is authorized to buy and sell securities.
- d. Exchange-listed or private placement equity-linked notes intended to track authorized international equity securities or indices, and registered index funds in any country index series intended to track its respective country index, provided that the country is in the Policy Benchmark.
- e. Exchange-traded futures contracts, options contracts, and options on futures contracts in order to efficiently manage or reduce the risk of the overall investment portfolio, or both, in accordance with this Policy and applicable law.
- f. Over-the-counter swap and option agreements, including but not limited to total return swaps, interest rate swaps, credit default swaps, and currency swaps, to efficiently manage or reduce the risk of the overall investment portfolio, or both. The Fund may also use forward agreements and any other instrument commonly used by institutional investors to manage institutional investment portfolios, in accordance with this Policy and applicable law.
- g. Evidence of indebtedness and securities that evidence an ownership interest in debt obligations that are issued, insured, guaranteed by, supported by, or based on the credit of the following:
 - i. The United States (“U.S.”) or any U.S. agency, department, or government sponsored enterprise (“GSE”);

- ii. The debt obligations of states, municipalities or any state agency of the United States of America;
 - iii. Corporations chartered by the United States or any state thereof; and
 - iv. Foreign governments, supranationals, subnationals, and corporations chartered by foreign governments.
- h. Agency and non-agency mortgage-backed securities.
 - i. Collateralized mortgage obligations (“CMO”).
 - j. Commercial mortgage-backed securities (“CMBS”).
 - k. Asset-backed securities (“ABS”).
 - l. All securities and all types of securities that are either included in the applicable benchmark or that will be added to the benchmark as of the announcement date of their future inclusion.
 - m. Mutual funds, closed-end funds, exchange traded funds, structured notes, limited partnerships, commingled funds, or any other security types that:
 - i. Are intended to track or replicate the returns of the Policy Benchmark or a portion thereof or that are intended to reduce the overall tracking error of the portfolio; or
 - ii. Invest in non-dollar fixed income instruments that are predominantly investment grade quality; or
 - iii. Invest in bank loans that are predominantly investment grade quality; or
 - iv. Actively invest in a dynamic portfolio of high yield securities.
 - n. Passive funds, structured credit basket transactions, or trusts containing high-yield fixed income securities selected according to defined parameters and, if the investment contract, offering documents, or prospectus requires distribution to TRS of securities held by fund or trust under specified circumstances, such securities.
 - o. Repurchase and triparty repurchase transactions.
 - p. Investments in State of Texas pooled investment funds.
 - q. Foreign currencies that may be required to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments.
 - r. Short sales as authorized and limited by Section 2.7 for the External Public Markets Portfolio.
 - s. Local Access Products, including equity-linked certificates, participation notes, and low-exercise price call warrants which replicate the performance of an underlying security, index, or market for which investment in the local market or in the ADRs or GDRs, or the total return swap market would be difficult or costly, or both.

In addition to the foregoing, the Public Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

2.3. Internal Public Markets Portfolio Restrictions

- a. Not more than 20% of the outstanding equity securities of a single class of any company may be purchased. In calculating this 20% limit, any amounts that are held in the External Public Markets Portfolios and which are also deemed to be beneficially held by TRS for purposes of Section 13 of the Securities Exchange Act of 1934, including equity securities held in a separate account (or a commingled account in which TRS is deemed to be the beneficial owner for purposes of Section 13 of such act), shall be included.
- b. The IPM Portfolio shall conform to the tracking error target prescribed in Appendix A.

2.4. External Public Markets Portfolio

The component portfolios of the External Public Markets Portfolio (the “EPM Portfolio”) are:

- a. The External Manager Portfolio, which consists of:
 - i. Commingled or other private investment funds which are not determined to be Hedge Funds as defined by Section 2.6 of this Policy, and
 - ii. Separate accounts managed or advised by external managers operating under an Agency Agreement with TRS.
- b. The Hedge Fund Portfolio.
- c. The Other Absolute Return Portfolio including Credit Sensitive Investments.

The CIO will determine the proper mix of assets allocated for internal management under the parameters of the IPM Portfolio and those to be allocated to the External Manager Portfolio component of the EPM Portfolio. In no event shall the aggregate allocation to external managers pursuant to Agency Agreements exceed 30 percent (or a different percentage of not more than 50 percent if a different percentage is specified in the Government Code) of the Total Fund at the time of investment, as specified in Section 825.301 (a-2), Government Code.

The preceding paragraph does not affect the target allocation and the range of allocation for the Hedge Fund Portfolio, which shall not exceed 10% of the Total Fund, or such lesser or greater percentage as allowed by applicable law and Section 2.7 of this Policy.

2.5. External Public Markets Portfolio Objectives

The primary objective of the EPM Portfolio is to invest in publicly-traded marketable securities, commingled funds, Hedge Funds, and related instruments, in accordance with the asset allocation parameters of this Policy, to meet or exceed the performance of the Policy Benchmark over a 5 to 10 year market cycle as allocated to the EPM Portfolio. The EPM Portfolio will employ a wide variety of investment and trading strategies with varying levels of liquidity and leverage. It is expected that some strategies will involve more concentrated, shorter term investments as well as those that are longer term in nature and thus will generally have more tracking error than expected within the IPM Portfolio, while other investments will have less correlation, beta and volatility and thus will offset the overall volatility of the EPM Portfolio and the Total Fund.

2.6. Hedge Fund Defined

In this Policy, “Hedge Fund” means a private, commingled investment vehicle with the following general characteristics, as set forth in Section 825.3012, Government Code:

- a. Is not registered as an investment company;
- b. Issues securities only to accredited investors or qualified purchasers under an exemption from registration; and
- c. Engages primarily in strategic trading of securities and other financial instruments.

“Hedge Fund” includes a private investment fund of funds or other commingled vehicle that itself invests in Hedge Funds. An investment in a Hedge Fund issuing securities to TRS does not involve a delegation of investment discretion to an external manager for the External Manager Portfolio, including for purposes of the statutory limit on delegation to external managers, and the assets of a Hedge Fund are not TRS assets.

For the purposes of complying with Section 825.3012, Government Code, the Investment Division shall use the following criteria to analyze and determine whether a private investment fund is “primarily engaged in strategic trading” and should be classified as a hedge fund:

Criteria “Strategic Trading of Securities”	Characteristics Non-Hedge Fund	Characteristics Potential Hedge Fund
1. Variability in Asset Class Concentration	Asset allocation typically stays the same throughout a market cycle, as shown by historical practice	Unconstrained; asset class mix can change dynamically in response to market conditions or as opportunities arise
2. Beta to underlying index specified for the particular mandate	Generally higher levels of beta (e.g., 0.75+)	Often less beta (e.g., <0.75)
3. Securities Traded	Primarily publicly-traded securities	Typically public or private instruments, and often with some illiquid (e.g., “side pockets”) investments segregated for accounting and incentive fee purposes
4. Leverage	Gross leverage less than 250% <i>and</i> net leverage 75% to 125%	Unconstrained by policy and practice – managers often unwilling to commit to constraints
5. Short sales of company-specific securities (i.e., non-derivatives)	Typically <50% gross short	Shorting of company-specific securities is integral to investment strategy or process, with gross short positions exceeding 50%
6. Use of Derivatives	Limited use of derivatives (notional is less than 100% of contributed capital)	Derivatives are integral to strategy or process (notional value greater than 100% of contributed capital)
7. Transparency	Generally position-level transparency for investor	Risk-level transparency, but little or no position-level transparency
8. Liquidity	Limited use of lock-ups, short or no notice period; frequent (e.g., monthly) or no redemption windows	Often lock-ups, withdrawal fees, notice periods exceeding 30 days and/or less frequent redemption windows than monthly; gates and ability to suspend redemptions can extend redemption for years or frustrate liquidity goals
9. Performance Fees	May charge performance fees, but often over asset class hurdle	Generally, manager charges management and performance or incentive fees, or both, but usually with no asset class hurdle

In this Section 2.6:

Beta is a measure of an asset’s volatility in relation to a specific market or risk factor, as observed over a market cycle; the measure of an asset's risk in relation to the market (for example, the S&P500) or to an alternative benchmark or factors. Generally, the return of a security with a beta of 1.5 will be, on average, 1.5 times the market return.

Leverage is a condition in which the net potential monetary exposure of an obligation exceeds the value of the underlying assets supporting the obligation. **Net Leverage** is calculated as the difference between (A) the sum of (i) the market value of all long cash market positions, (ii) the notional value of all long derivative positions, and (B) the sum of (i) the absolute market value of all short cash market positions, and (ii) the absolute notional value of all short derivative positions divided by (C) the net market value of the fund. **Gross Leverage** is the total of (A) the sum of (i) the market value of all long cash market positions, (ii) the notional value of all long derivative positions, (iii) the absolute market value of all short cash market positions, and (iv) the absolute notional value of all short derivative positions divided by (B) the net market value of the fund. For option based instruments, notional value may be calculated using hedge ratios to derive a delta-equivalent exposure.

Proposed investments in funds classified as Hedge Funds will be reported to the Board of Trustees (and appropriate Board committee, as applicable) quarterly. If the criteria examined do not clearly indicate, based on at least a preponderance of criteria, how a fund should be classified for statutory purposes, Investment Division may elect to present the pertinent information to the IIC for consideration of classification. Further, if the application of any one or more of the criteria for leverage, short sales, and derivatives, standing alone, would classify the fund as a Hedge Fund, but the preponderance of criteria would classify the fund as a non-Hedge Fund, the Investment Division may either decline to authorize the investment or may elect to present the pertinent information to the IIC for consideration of the classification of the fund and, if applicable, authorization for investment.

Prior to investment, the CIO will determine whether each Hedge Fund is a Stable Value Hedge Fund or a Directional Hedge Fund by reference to factors such as investment strategy, underlying investments, correlation, beta, leverage, expected return and expected risk.

2.7. External Public Markets Portfolio Authorization

- a. **Approval Authority – Hedge Fund Portfolio, External Manager and Other Absolute Return Portfolios** – The IIC is hereby authorized to approve investments in the External Public Markets Portfolio in accordance with the guidelines set forth in Section 2.5. The limits are defined and set forth in Appendix B of this Policy apply to allocations and commitments by the External Public Markets Portfolio.

The Investment Division may authorize an allocation to an external manager even if the external manager will invest the assets in a commingled fund or funds or a tax-qualified collective trust managed by an Affiliate of the external manager, provided, however, that the Investment Division shall determine whether any such commingled fund should be classified as a Hedge Fund for purposes of Section 825.3012, Government Code.

- b. **Board Consideration** – If a Board member desires that any Hedge Fund investment or external manager strategy mandate on the list delivered to the Board under Section 1.7 be submitted for consideration by the Board, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board before the anticipated closing date.
- c. **External Public Markets Advisors and Consultants** – The Investment Division is authorized to engage one or more qualified external advisors (each, an “Advisor”) to assist and advise the Investment Division with respect to investment opportunities within the EPM Portfolio. Each Advisor engaged by the Investment Division must be approved by the CIO and the Board. The applicable advisor or consultant will provide a prudence letter or letter of recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO. Notwithstanding the foregoing, IIC consideration and approval of a sub-manager of an external manager who manages sub-managers does not in any event require a separate, additional prudence letter or letter of recommendation from an Advisor; provided, further, that such external manager of sub-managers (i) is fully liable for any action or omission of the sub-manager as if the action or omission had been taken by such external manager and (ii) recommends the engagement of the sub-manager in writing to the IIC. For avoidance of doubt, this paragraph does not prohibit the CIO from requesting a separate prudence letter from an Advisor with respect to the IIC’s consideration of a sub-manager to be recommended by a manager.
- d. **Authority to Execute Documents and Agreements for the External Public Markets Portfolio** – The general authority resolution adopted by the Board on August 13, 2010 and designating those officers authorized to execute documents and attached as Appendix E is incorporated in this Investment Policy. Should the Board supersede such resolution, such superseding resolution shall be incorporated in this Investment Policy and replace the superseded resolution as Appendix E as of the effective date of the superseding resolution.
- e. **Allocation measurement** – Only the net long position of each external manager, fund vehicle, separate account, or Hedge Fund will be counted against the asset allocation policy; however, both long and short positions will be modeled (through proxies if necessary) to calculate Total Fund risk.
- f. **Short positions limit** – In addition to investments authorized under Section 2.2, the External Public Markets Portfolio may hold short positions in securities listed on a national exchange or U.S. treasuries. The aggregate short positions exposure of the External Public Markets Portfolio may not exceed 25% of the market value of the External Public Markets Portfolio without the prior written consent of the CIO. In no event may the aggregate short positions

exposure of the External Public Markets Portfolio exceed 50% of the market value of the External Public Markets Portfolio, nor may any short sale or position violate the laws or rules of any jurisdiction or exchange in or on which the applicable Securities are traded or listed.

- g. **Overlay strategies** – The External Public Markets Portfolio is authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.
- h. **Rebalancing Authority** – Subject to the limits set forth in this Policy, the CIO, Deputy CIO or the head of External Public Markets may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not, on a monthly basis, exceed 2% of the Hedge Fund Portfolio, External Manager Portfolio, or Other Absolute Return Portfolio (as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments.
- i. **Termination Authority** – The CIO, Deputy CIO or the head of External Public Markets may transfer, withdraw or terminate interests in the EPM Portfolio, provided that the action does not result in a material, un-waived breach of the terms and conditions of the applicable investment agreements.

2.8. External Public Markets Portfolio Restrictions

- a. Agency Agreements, considered in the aggregate, may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy, including the provisions of Section 2.2.
- b. The Investment Division may delegate management of not more than 30% (or a different percentage of not more than 50% if a different percentage is specified in the Government Code) of the market value of the assets of the Total Fund to external managers pursuant to Agency Agreements. For avoidance of doubt, this restriction does not apply to assets held by funds (including Hedge Funds) which limit the liability of TRS to the capital contributed and any distributions that TRS might be legally obligated to contribute or repay to the fund.
- c. The Investment Division is authorized to invest up to 10% (unless extended by law, this authority reverts to 5% on September 1, 2019) of the Total Fund in Hedge Funds as defined in Section 2.6. Compliance with the statutory limit is to be determined at the time TRS executes subscription documents for each Hedge Fund investment or additional investment.
- d. Each Agency Agreement with an external manager shall specify the applicable policies, risk controls, portfolio characteristics, reporting requirements, requirements or restrictions, including criteria for determining quality of investments or the use of standard debt rating services.
- e. Each Agency Agreement with an external manager shall terminate on or before September 1, 2019; provided, however, that an Agency Agreement may include provisions for optional renewal or extension of the agreement by the Investment Division beyond September 1, 2019 that are contingent on amendment of TRS statutes to authorize such agreements after that date.

2.9. External Public Markets Portfolio Conflicts of Interest

Conflicts of interest, including the appearance of conflicts, in the selection and engagement of external investment managers will be avoided at all times. Potential or actual conflicts of interest must be evaluated during due diligence and after engagement under applicable ethics policies and statutory provisions, including without limitation Sections 825.211 and 825.212, Government Code, which do not apply to Hedge Fund managers in that capacity. The Investment Division will develop guidelines and procedures to identify actual or potential conflicts of interest affecting external managers to be engaged pursuant to Agency Agreements. The Investment Division shall employ reasonable diligence to identify conflicts of interest affecting TRS trustees, employees and advisors with respect to all private investments.

ARTICLE 3 – PRIVATE MARKETS PORTFOLIOS

3.1. Private Markets Portfolios

The Private Markets Portfolios are (1) the Private Equity Portfolio (the “PE Portfolio”), (2) the Real Assets Portfolio (the “RA Portfolio”) and (3) the Energy and Natural Resources Portfolio (the “ENR Portfolio”). The Board shall approve the respective long-term normal allocation and the range of allocation for each portfolio.

3.2. Private Markets Portfolios Authorization

The Private Markets Portfolios are authorized to invest in the asset classes specified in this Policy and may hold and exercise rights, options and warrants attached to securities relating to an investment by the Private Markets Portfolios.

Funding of committed capital in Private Markets Portfolios will occur over an extended time period and may take several years before the total allocation to each asset class is fully invested. Because an individual investment may begin to return capital to the investor prior to the full funding of the investor’s commitment, the outstanding invested capital of the investment might at times be substantially less than the total commitment. In recognition of the above characteristics unique to the Private Markets Portfolios, a “committed” allocation to an investment may exceed the respective allocation targets authorized. It will not be a violation of this Policy if changes in the market values of the public assets portfolios or the Private Markets Portfolios cause the market value of the Private Markets Portfolios to exceed the upper limit of the allocation ranges established in this Policy.

3.3. Private Markets Investment Process

Private Markets External Advisors and Consultants

The Investment Division is authorized to engage one or more Advisors to assist and advise the Investment Division with respect to investment opportunities within the Private Markets Portfolios. Each Advisor engaged by the Investment Division to provide investment advice with respect to Private Markets Portfolio investments must be approved by the CIO, the head of Private Equity, the head of Real Assets, or the head of Energy and Natural Resources (as appropriate), and the Board. Subject to the direction of the private equity, real assets, energy and natural resources investment staff, as appropriate (each, a “Private Markets Team”), Advisor duties may include, but are not limited to, the following:

- a. Performing due diligence on specific Private Markets investment opportunities assigned by a Private Markets Team;
- b. Providing research related to private markets and opportunities, economic conditions, and performance expectations;
- c. Assisting a Private Markets Team, upon request, in identifying potential Private Market investment opportunities;
- d. Providing, upon request, written recommendations to a Private Markets Team regarding investments for the Private Markets Portfolios;
- e. Assisting a Private Markets Team in the negotiation of required investment contracts and legal documentation; and
- f. Providing a prudence letter or letter of recommendation for all opportunities presented to the IIC unless an exception has been made by the CIO.

To the extent an Advisor is directed by a Private Markets Team to perform due diligence on an investment opportunity, such due diligence will be performed in accordance with prudent underwriting objectives established by such Private Markets Team for the applicable Private Markets Portfolio. Each investment opportunity must meet these prudent underwriting standards in order to merit inclusion within the respective portfolios.

3.4. Private Markets Authorization of Investments

Investment Authority. The limits defined and set forth in Appendix B of this Policy apply to allocations and commitments by the Private Markets Portfolios.

If, after due diligence by either of the Advisor and the Investment Division, the Advisor and the Investment Division do not concur on whether a private markets investment within the Investment Division's discretion should be made, the Investment Division may elect to present the opportunity to the appropriate Board committee for consideration of a recommendation to the Board to authorize the investment. Unless the Board authorizes an investment, a proposed investment may not be made without the concurrence of both the Investment Division and the Advisor.

Private markets opportunities that will be considered for investment include the following: primary investments in any legally permissible investment vehicle, including limited liability entities (usually limited partnerships), co-investments, secondary investments, commingled funds, separate accounts, hybrid structures investing in equity or debt, joint ventures, secondary market transactions, entity-level investing or other off-market investments, new and emerging managers, and opportunistic investments (e.g., investments in the management entity of a private markets investment firm or sponsor, public-to-private transactions, and the acquisition of business development company or investment trust assets).

To the extent a Board member desires that any private markets investment opportunity submitted for consideration by the IIC be also submitted for consideration by the trustees, the Board member should notify the Executive Director and the CIO sufficiently in advance to permit completion of due diligence and consideration by the Board and by the appropriate Board committee, as applicable, before the anticipated closing date.

The CIO, Deputy CIO or, as applicable, the head of Private Equity, the head of Real Assets, or the head of Energy and Natural Resources (as applicable) may transfer, withdraw or terminate interests in the Private Markets Portfolios in accordance with the investment documents, provided that the action does not breach any agreement to which TRS is legally bound.

Commitment Authorization. Each investment must be authorized as required by the provisions, guidelines, and limitations established in this Policy. Any structure in which TRS invests shall meet established legal requirements.

Authority to Execute Documents and Agreements for the Private Markets Portfolios. The general authority resolution adopted by the Board on August 13, 2010 and designating those officers authorized to execute documents and attached as Appendix E is incorporated in this Investment Policy. Should the Board supersede such resolution, such superseding resolution shall be incorporated in this Investment Policy and replace the superseded resolution as Appendix E as of the effective date of the superseding resolution.

Rebalancing Authority. Subject to the limits set forth in this Policy, the CIO, Deputy CIO or, as applicable, the head of Private Equity, the head of Real Assets or the head of Energy and Natural Resources may add funds to previously approved investments for the purposes of rebalancing or adjusting risks. Such additional investments or allocations shall not exceed, on a monthly basis, 2% of each of the Private Equity Portfolio, the Real Assets Portfolio or the ENR Portfolio (respectively, as appropriate) per investment. This subsection does not affect or limit the authority of the Investment Division to withdraw funds from approved investments; provided, the withdrawal does not breach any agreement by which TRS is legally bound.

Overlay Authority. The Private Markets Portfolios are authorized to engage in overlay strategies in accordance with the guidelines set forth in Article 8. Overlay strategies may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls otherwise established by this Policy.

ARTICLE 4 – PRIVATE EQUITY PORTFOLIO

4.1. Private Equity Portfolio Objectives

Diversification

The primary long-term objective of the PE Portfolio is to develop a prudently diversified portfolio of investments that is expected to enhance the overall risk-return profile of the Total Fund and to reduce risk within the PE Portfolio.

The following attributes will be considered in constructing a diversified PE Portfolio: strategy, geography, industry sectors, size of investment, and vintage year.

4.2. Private Equity Portfolio Authorized Investments

Private equity funds build portfolios of private investments in the equity or equity-rights securities of operating companies. Private equity funds may acquire investments in debt obligations, public or private common and preferred stocks, convertible securities, and any warrants, rights, or options attached to any of the foregoing that relate to equity ownership in an issuer. Privately-acquired securities usually have transfer restrictions and are not as liquid as publicly-traded securities. Private equity funds are often classified by strategy, including: venture capital; mezzanine; buyout - acquisition; international - emerging markets; and special situation (e.g., growth equity, turnarounds, distressed).

4.3 Private Equity Portfolio Restrictions

The Private Equity Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 5 – REAL ASSETS PORTFOLIO

5.1. Real Assets Portfolio Objectives

The RA Portfolio will be structured to achieve the following investment objectives:

- a. As the primary focus, contribute favorably to diversification of the Total Fund through exposure to real assets' low or negative correlation to the Public Markets portfolios.
- b. Provide competitive returns through capital appreciation.
- c. The following attributes will be considered in constructing a diversified RA Portfolio: strategy, geography, property types, size of investment, vintage year, and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required.

5.2. Real Assets Portfolio Authorized Investments

The RA Portfolio will focus on private or public real estate equity or equity linked investments, private or public real estate debt, infrastructure, timber, agricultural real estate, oil and gas, real asset mezzanine debt or equity, mortgage-related investments, entity-level investments, real estate investment trusts ("REITs"), master limited partnerships ("MLPs"), non-fixed assets and other opportunistic investments in real assets. Real estate investments are often classified by strategy, including: core; core-plus; value-added; and opportunistic.

5.3. Real Assets Portfolio Restrictions

The RA Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 6 – ENERGY AND NATURAL RESOURCES PORTFOLIO

6.1. Energy and Natural Resource Portfolio Objectives

The ENR Portfolio will be structured to achieve the following investment objectives:

- a. Contribute favorably to diversification of the Total Fund by increasing exposure to assets with a higher degree of inflation sensitivity.
- b. Provide competitive returns through capital appreciation.
- c. The following attributes will be considered in constructing a diversified ENR Portfolio: general inflation sensitivity, expected return, strategy, geography, resource exposure, size of investment, vintage year, where investment is in the resources value chain (upstream, midstream or downstream) and the number of funds or investment managers represented in the portfolio. No specific geographic diversification or leverage targets are required.

6.2. Energy and Natural Resource Portfolio Authorized Investments

The ENR Portfolio may invest in private and public energy or natural resource related securities either directly or through funds which may include investments in equity, equity-linked investments including options, warrants, preferred equity, and structured equity, private or public debt, entity-level investments, master limited partnerships, commodity futures, natural resources interests (mineral, royalty or working interests), timber and agricultural property, water, power generation, renewable energy, and associated infrastructure, services and technology. Energy and natural resource investments are often classified by resource type and where the investment is in the resource value chain (upstream, midstream or downstream). Direct investments in physical commodities are prohibited.

6.3. Energy and Natural Resource Portfolio Restrictions

The ENR Portfolio is authorized by and is subject to the terms and conditions described in Article 3.

ARTICLE 7 – EMERGING MANAGERS PROGRAM

TRS shall make a good-faith effort to invest with qualified emerging managers for the External Public Markets Portfolios and the Private Markets Portfolios. For the avoidance of doubt, these portfolios may also include investments in energy and natural resources. The Investment Division is authorized to invest with qualified funds-of-funds managers skilled at identifying small and emerging managers in the private equity, real asset and public equity markets. The target dollar allocation is outlined for this program in Appendix C.

Emerging managers can include, but are not limited to, minority, women, and disabled veteran-owned or -controlled organizations. Conversely, not all minority, women, and disabled veteran-owned or -controlled organizations are necessarily considered emerging managers for the purposes of this program. Whether a management firm is an “emerging manager” depends on all of the facts and circumstances. In general, emerging managers are defined as newer, independent private investment management firms that manage less than \$2 billion, or have a performance track record as a firm shorter than five years, or both.

All investments with emerging managers will be subject to due diligence by an independent qualified external advisor. The advisor will present each investment recommendation to the IIC for its approval. In general, an emerging manager should be registered with the appropriate authorities if such registration would be consistent with industry practices. Each investment will have a minimum size of \$5 million. With respect to the External Public Markets Portfolio, the total investment by TRS with each emerging manager may not exceed 40% of such emerging manager’s assets under management. With respect to the Private Equity Portfolio and the Real Assets Portfolio, the total investment by TRS into each fund raised by an emerging manager may not exceed 40% of the size of such fund. This paragraph does not apply to investments executed as part of a fund-of-funds mandate.

The Investment Division shall document its efforts to identify and expand its investments with qualified emerging managers for the purpose of board and legislative reporting on the methods and results, including data disaggregated by race, ethnicity, gender, and fund size. All investments under the emerging manager program must be made prudently and in accordance with fiduciary and ethical standards.

ARTICLE 8 – OVERLAY PORTFOLIOS

8.1. Overlay Portfolios Objectives

Overlay Portfolios are designed to manage risk, asset allocation, and market exposures through futures, options, swap agreements, or forward agreements. Overlay Portfolios may be implemented in connection with the Total Fund or with any investment or portfolio within the Total Fund.

8.2. Overlay Portfolios Authorized Investments

Overlay Portfolios may contract for, buy, sell, and hold the following contracts and derivative instruments in accordance with this Policy:

- a. Exchange-traded futures contracts;
- b. Exchange-traded option contracts;
- c. Options on exchange-traded futures contracts;
- d. Over-the-counter or exchange-traded swap agreements;

- e. Over-the-counter option agreements;
- f. Forward agreements; and
- g. Forward-settling securities transactions.

8.3. Overlay Portfolios Restrictions

Overlay Portfolios may not be used to circumvent the asset allocation parameters, risk guidelines, or any other controls or restrictions otherwise established by this Policy or applicable law.

Direct purchase of derivatives underlain by physical commodities is prohibited for any TRS portfolio unless such derivatives are cash-settled. This prohibition does not apply to private investment funds, including Hedge Funds.

When engaging in currency overlay strategies, the Overlay Portfolio may not increase or decrease the net notional exposure of the Total Fund:

- a. To all non-dollar currencies in aggregate by more than 5% of the market value of the Total Fund;
- b. To any single developed market currency (except for the U.S. Dollar) by more than 2% of the market value of the Total Fund; and
- c. To any single emerging market currency by more than 1% of the market value of the Total Fund.

The foregoing percentage limit restrictions do not apply to currency derivatives used (i) as part of the non-discretionary foreign exchange risk management policy described in Section 10.2, (ii) to settle security transactions denominated in those foreign currencies and any authorized instrument or contract intended to manage transaction or currency exchange risk in purchasing and selling investments and (iii) for hedging the characteristics of an individual investment to align it with the characteristics of such investment's benchmark.

ARTICLE 9 – AUTHORIZED USES OF DERIVATIVES

This Article enumerates the applications, documentation and limitations for the use of derivatives as permitted under Section 825.301, Government Code.

9.1. Derivatives Objective and Investment Standard

The Board's objectives for using derivatives are to efficiently manage and reduce the risk of the overall investment portfolio. Through the use of derivatives, the risks that are bound together in traditional cash market investments can be separated and managed independently.

Derivatives authorized by this Policy may only be used to efficiently manage and reduce the risk of the overall investment portfolio in accordance with applicable law. In addition, all uses of derivatives must comply with the fiduciary standard of prudence set forth in Article XVI, Section 67(a)(3), Texas Constitution, which requires that all TRS investments must be made using the judgment and care under the circumstances then prevailing that persons of ordinary prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income there from as well as the probable safety of their capital.

9.2. Derivatives Policy Scope

Except where specifically noted, this Policy applies to all derivatives transactions executed by the Investment Division and by external managers operating under an Agency Agreement. This Policy does not apply to registered or private investment funds, including limited liability entities, issuing securities to TRS.

This Policy applies to all exchange-traded derivatives and over the counter ("OTC") derivative instruments authorized by law. This Policy does not apply to the use of derivatives by private investment funds issuing securities to TRS unless TRS in fact controls and has a legal right to approve the investment policy or guidelines of such funds.

9.3. Derivatives Use by External Managers and Commingled Funds (Hedge Funds)

The Total Fund may have external exposure to derivatives in two ways.

- a. First, the Total Fund will invest as a passive investor in Hedge Funds organized as limited-liability entities, which limits potential losses to the capital contributed to the entity. TRS is not a party to the management agreement between the Hedge Fund and its investment manager. Hedge Fund and other commingled fund managers owe the same legal duties to all investors.
 - i. The Investment Division must exercise thorough due diligence in assessing the scope of the Hedge Fund manager's uses of derivatives, their purpose, experience of the fund manager's staff in managing these positions, inherent leverage, and the manager's systems, controls and operations in determining suitability of these entities for TRS investment.
- b. Second, TRS may delegate discretion, through Agency Agreements, to external managers who act as a TRS agent with respect to Total Fund assets and who are authorized to enter into specified contracts and commitments that will be legally binding on TRS. External managers are TRS fiduciaries.
 - i. For external managers engaged pursuant to Agency Agreements, Investment Division must view the external manager as an extension of the internal Investment Division's investment management processes and must require external managers to comply with this Policy and applicable guidelines and law on the use of derivatives to the same extent as Investment Division. Guidelines for the scope and use of derivatives will be established on a case-by-case basis with each external manager in the applicable Agency Agreement. An external investment manager of publicly-traded investments engaged by TRS under an Agency Agreement may engage in derivatives transactions only if expressly authorized by, and the transactions are consistent with, the overall investment objectives and restrictions established in the Agency Agreement, this Policy, and applicable law. Each Agency Agreement must be consistent with applicable law, this Policy, and other TRS policies. An Agency Agreement may only authorize such uses of derivative instruments when the

Investment Division reasonably concludes after due diligence that the external manager possesses the experience, expertise, and qualifications to prudently use derivatives, and has appropriate operational, compliance, and risk management personnel, policies, and procedures to effectively monitor and control their use, including the use of leverage.

- ii. Selection, engagement, and monitoring of external managers engaged through an Agency Agreement requires a clear understanding of the managers' uses of derivatives, particularly as it relates to various risk controls, compliance functions, and leverage. Investment Division will monitor risk exposures and leverage on both an individual entity and aggregate basis. The permitted uses of derivatives and leverage by each external manager must be fully documented in each Agency Agreement.

9.4. Derivatives Definition; Authorization

Derivatives are financial instruments the value of which are derived, in whole or part, from the value of any one or more underlying securities or assets, or index of securities or assets (such as a bonds, stocks, financial commodities, and currencies). For the purposes of this Policy, derivatives include, without limitation, futures contracts; options; options on futures contracts; forward contracts; swap agreements, including swap contracts with embedded options; any instrument or contract intended to manage transaction or currency exchange risk in purchasing, selling or holding investments; and any other instrument commonly used by institutional investors to manage institutional investment portfolios. Derivatives, for purposes of this policy, do not include currency forwards with a tenor of 30 days or less if such forwards do not require upfront amounts to be paid or received. Derivatives may be purchased through a national exchange or through a direct OTC arrangement with a counterparty.

Except as specifically provided in Section 5.2, this Policy does not apply to, or authorize, any use of derivatives underlain by physical commodities (unless such derivatives are cash-settled), single-asset real estate mortgages, or title to real estate or property affixed to real estate.

9.5. Derivatives Applications Permitted

Consistent with the objectives set out in Section 9.1, derivative applications may be used by Investment Division and external managers engaged through Agency Agreements to:

- a. Implement investment strategies in a lower cost and efficient manner;
- b. Efficiently manage the Total Fund portfolio by altering the portfolio's market (systematic) exposure in lieu of trading the underlying cash market securities through purchases or short sales, or both, of appropriate derivatives;
- c. Construct portfolios with risk and return characteristics that could not be efficiently created with cash market securities consistently with the objectives in this Policy and in compliance with applicable law;
- d. Hedge and control risks so that the Total Fund's risk-return profile is more closely aligned with the Total Fund's targeted risk-return profile through purchases or short sales, or both, of appropriate derivatives; and
- e. Facilitate transition trading when holdings must be rebalanced or reallocated among permissible investments as a result of changes to applicable benchmark indexes or policy changes.

The only authorized uses of derivative transactions are efficient portfolio management and reduction of risk in portfolios and to implement investment strategies authorized by this Policy more effectively and at a lower cost than would be possible in the cash market. External managers may not engage in derivative applications that are inconsistent with the applicable Agency Agreement, this Policy and applicable law, unless specifically authorized by the TRS Board and the Agency Agreement has been amended accordingly.

9.6. Derivatives Applications Not Permitted

Derivatives may not be used for any activity a primary purpose of which is speculation or to profit while materially increasing risk to TRS. Derivatives are considered speculative if their uses have no material relation to objectives and strategies specified by this Policy or any related policies or resolutions of the Board, and their use is not reasonably and substantially intended to produce efficiency in portfolio management and reduce market, credit, or liquidity risks applicable to the portfolio. Derivatives may not be used for circumventing limitations or restrictions imposed by this Policy or applicable regulatory requirements. Derivative applications may only be used to invest in asset classes that are consistent with TRS's legally permissible policy asset categories (including currencies), implementation strategies, and risk-return characteristics.

Except as specifically provided in Section 5.2, investments in derivatives underlain by physical commodities are prohibited unless such derivatives are cash-settled.

9.7. Derivatives Documentation and Controls

Prior to the implementation of a new internal derivative instrument type or application, Investment Division shall document the purpose, justification, baseline portfolio, derivative application portfolio, risks (including, at a minimum, market, modeling, pricing, liquidity, and legal risks), the expected increase or reduction in systematic and idiosyncratic risk resulting from the application, the amount of leverage employed under the strategy, the prudent reasons for employing leverage, and the procedures in place to monitor and manage the derivative exposure. The documentation will be approved by the CIO and reported to the IIC and the Board (or appropriate Board committee, as applicable) at their next regularly-scheduled quarterly meetings. The Investment Division shall adopt fully documented control procedures to properly account and value the Total Fund's exposure to each derivatives application, whether internal or external under an Agency Agreement. The Investment Division shall establish an appropriate risk management procedure to monitor compliance both internally and by external managers and will take corrective action if necessary. The Investment Division shall have due regard for operational risks associated with various derivatives strategies, including risk management, accounting systems, liquidity needs, adequate staffing, and staff qualifications.

9.8. Derivatives Limitations

Counterparty Risks: In order to limit the financial risks associated with derivative applications, guidelines for rigorous counterparty selection criteria and ISDA agreements shall be created by the Investment Division to reduce counterparty risk for over-the-counter ("OTC") derivatives. Any counterparty in an OTC derivative transaction with TRS must have a credit rating of at least A- (Standard & Poor's or Fitch) or A3 (Moody's). All OTC derivative transactions, including those managed through Agency Agreements, must be subject to established ISDA Master Agreements or, if centrally cleared, clearing agreements and have full documentation of all legal obligations of both parties to each transaction. All ISDA Master Agreements entered into by or on behalf of TRS by the Investment Division or an external manager engaged pursuant to an Agency Agreement (if applicable) shall provide for netting of obligations. The Investment Division and external managers may also use collateral arrangements to mitigate counterparty credit or performance risk. The net market value of all OTC derivative positions, including those managed through Agency Agreements, less collateral posted, for any individual counterparty may not exceed \$500 million. The net market value of all OTC derivative positions for any individual counterparty, without consideration of collateral, may not exceed 5% of the total market value of the Fund. If these market-value limits are exceeded, the Investment Division will inform the CIO, Executive Director, and Chairman of the appropriate Board committee as soon as practicable and take appropriate corrective action within a 90-day period or develop a corrective action plan that will be presented to the Board at its next regularly scheduled meeting at which investment matters will be discussed following the initial 90-day corrective action period.

Global Risk Limitations: Notwithstanding other limitations in this Policy, transactions that would cause the aggregate risk exposure of the Total Fund, including externally-managed portfolios, to exceed the aggregate risk limits established by the current asset allocation policies of the Board are not permitted. On a Total Fund basis, the combined economic exposure introduced through both cash and derivative market positions is subject to the asset allocation ranges, risk limits, and other portfolio parameters described in this Policy.

Position Limits: For futures and options positions TRS will comply with all position and aggregate limits established by the applicable regulatory and legal organizations and authorities within each jurisdiction.

9.9. Derivatives Risk Management and Compliance

To ensure compliance with this Article 9, all internally- and externally-managed derivatives (other than derivatives held in Hedge Funds) must be marked to market on a daily basis by the Fund's external custodian(s), and such daily reports will be reviewed for accuracy by the TRS Risk Management staff and Investment Administration Center personnel. Compliance with the requirements of this Policy will be monitored by the TRS Investments Compliance Officer using information systems and data from internal and external sources. Any violations of this Article 9 will be reported immediately to the Executive Director and to the Chief Investment Officer, who will determine, if considered material as determined by Investments Compliance Officer, Chief Investment Officer, and Executive Director, the appropriate remedy and report promptly to the Board (and the appropriate Board committee, as applicable).

ARTICLE 10 – RISK MANAGEMENT AND OVERSIGHT

10.1. Market Risk Management

The Investment Division will establish a framework for measuring enterprise-level risk for both the Total Fund Portfolio and the established benchmark, including any transition benchmarks employed during asset allocation shifts. At a minimum, this framework must include a quantified estimate of downside risk (e.g., value-at-risk (“VaR”), estimated shortfall, or various parametric and non-parametric statistics). The Investment Division will monitor the relative positioning of the Total Fund Portfolio vis-à-vis the benchmark no less frequently than monthly.

- a. **Asset allocation limits** – In addition to the Total Fund Portfolio level risk limits, the portfolio will be constrained to the asset allocation percentages and ranges prescribed by this Policy. Accordingly, the total exposure to each asset class must be based on the individual exposures of each cash security and each outstanding derivative contract.
- b. **Risk limit** – The Investment Division will model and monitor the Total Fund Portfolio and benchmark to ensure that the total estimated risk for the Public Markets portion of the Portfolio is within the upper and lower bounds corresponding to the maximum and minimum downside risk measures that could be achieved through the asset allocation limits in this Policy.
- c. **Proxy securities and indices** – If necessary and prudent, the Investment Division will employ proxies to approximate the economic characteristics of actual investments if the terms and conditions of the actual investments or the underlying holdings are not readily available or where the complexity of the underlying investment renders a deterministic model impractical.
- d. **Transition portfolio** – During portfolio transitions from or to private investments, a transition benchmark may be employed that either explicitly creates placeholders for unfunded private investments or that treats the allocations to private market assets separately from the allocations to public market assets based on the funded portion of the Private Markets Portfolios. In either case, the risk statistics and limits will be applied relative to this transition benchmark.
- e. **Private market assets holdings** – The Investment Division may include private investments in this analysis either by proxy or by actually modeling the terms and conditions of the underlying exposures; however, if the inclusion of these investments is deemed to distort the true risk characteristics of the portfolio, the Board may approve the use of an alternative methodology for analyzing the risk characteristics of those investments.
- f. **Active risk limits** – In addition to the portfolio-level risk statistics described above, a target tracking error will be imposed on each asset class mandate whether implemented through internal or external managers or commingled funds. Additionally, a target tracking error will be imposed on the entire portfolio that takes into account both internally and externally managed portfolios and commingled funds as well as both asset allocation and security selection decisions. These limits are specified in Appendix A, attached hereto.

10.2. Foreign-Exchange Risk Management

The objective of the Foreign-Exchange (“F/X”) policy is to effectively manage portfolio return volatility associated with foreign currency risk. F/X risk is the possibility of a negative currency return as a result of adverse movements in foreign exchange rates. The F/X policy sets forth a structure and implementation plan to determine the level of strategic currency risk that the Fund is willing to tolerate.

F/X Policy Structure

The “PHRs” are policy hedge ratios that will be separately applied to the Fund’s public-markets and private-markets non-dollar exposures. PHR is the percentage of aggregate, non-dollar currency exposure to be passively hedged. The hedging horizon for the PHRs is intermediate (one to three years). The results of the PHR decisions will be presented to the Board (or the appropriate Board committee, as applicable) for approval by the Board and incorporated into the benchmark as prescribed in Appendix D.

From an implementation perspective, an F/X overlay manager would have responsibility for implementing the PHR decisions and would not exercise delegated investment discretion. The F/X overlay may be implemented internally or externally. If external, the non-discretionary F/X overlay manager would not fall under the definition of either an “external manager” or a Hedge Fund. A non-discretionary external F/X overlay manager would merely implement the investment decision that has already been made by the IIC.

10.3. Credit Risk Management

- a. **Counterparty exposures** – The maximum allowable unsecured counterparty exposure for OTC derivative transactions is \$500 million, based on the total net market value of all OTC positions held with each counterparty. The total counterparty exposure for each counterparty, including the collateralized portions of these agreements, may not exceed 5% of the market value of the Total Fund. The minimum credit rating, based on a nationally recognized statistical rating organization (“NRSRO”), must be at least A- or better at the inception of the contract. For any counterparty that experiences deterioration in credit quality that results in a NRSRO rating below the A- level, subsequent to the inception of transaction, additional eligible collateral may be posted, or the transaction may be terminated.
- b. All OTC derivatives must be governed by an ISDA Master Agreement and Credit Support Annex or, if centrally cleared, by clearing agreements, and must include both close-out netting provisions and collateralization provisions.
- c. **Repurchase agreements** – The counterparty limits for repurchase transactions and tri-party repurchase transactions may not exceed 5% of the market value of the Total Fund unless those transactions are covered by a third-party indemnification agreement by an organization that bears a long-term NRSRO credit rating of A- or better and is enhanced by acceptable collateral. Each repurchase agreement will be entered into under the PSA/ISMA Global Master Repurchase Agreement.

Each ISDA Master Agreement must also include a table that delineates the excess purchased securities margin (haircut) required, based on the collateral type, duration, and credit quality.

- d. **Securities lending** – When securities lending activity is performed by an external, third party lending agent, Investment Division will examine the credit underwriting practices of the lending agent, including enforcement of collateral requirements, counterparty analysis, and surveillance. Additionally, Investment Division will periodically review the securities lending lines by counterparty. A securities lending agent must be an organization rated A- or better by a NRSRO. More detailed information about TRS securities lending activities is specified in the separate Securities Lending Policy.

10.4. Liquidity Risk Management

The objective of the Liquidity Risk Management policy is to ensure that the Fund maintains ample liquidity to meet its funding commitments. The two kinds of commitments which necessitate a prudent liquidity policy are:

- a. Disbursements of benefits and related obligations to plan participants, including retirement, death, health, and disability benefits payments.
- b. TRS investment activities: These are mainly associated with risk management and funding of external managers. Some examples include:
 - i. TRS engages in derivatives to efficiently manage and reduce risk of the overall investment portfolio. Use of these instruments requires liquidity for collateral, margin and payment obligations at the time of a reset, call or maturity;
 - ii. TRS funds accounts managed by public markets external managers; and
 - iii. TRS manages unfunded capital commitments that the Fund is legally obligated to fund when called by private markets general partners.

External Funding Authority

The Investment Division is authorized to establish external funding mechanisms (such as master repurchase agreements with one or more counterparties) and the flexibility to operate in all types of market liquidity environments to allow prudent management of these commitments while achieving a long-term rate of return and adhering to the asset allocation limits outlined in this Policy. In addition to these external funding mechanisms, TRS will maintain adequate funds in its custodial account to cover investment-related obligations. Finally, the Board authorizes the Investment Division to access the cash holdings backing the OTC swaps to manage its commitments.

Limitations Applicable to External Funding Authority

Liquidity provided from these external funding mechanisms may not exceed 2% of the market value of the Total Fund. The expectation is that the liquidity funded through external funding mechanisms will be short-term (less than 30 days). The Investment Division must seek approval from the CIO for extended use of external funding sources. The Investment Division shall report such approvals for extended use to the Board not later than the next regular quarterly meeting.

10.5. Operations Risk Management

- a. **Overdrafts** – The Investment Division will monitor the frequency and costs associated with all overdraft activity.
- b. **Custodial Bank(s)** – The Investment Division will conduct on-site due diligence to review the operational controls set in place by all custodial banks. The Investment Division will also consider the extent of remedies provided by the custodian and its overall ability to fulfill its commitments should operational failures occur.

10.6. Settlement Risk Management

The Investment Division will monitor unsettled trade activity by counterparty and instrument type.

10.7. Legal Risk Management

Legal documentation for all accounts, investment subscriptions, external managers, investments in private investment funds (Private Markets Portfolios and Hedge Funds), and derivatives will be reviewed, negotiated and approved for TRS execution by internal or external legal counsel, or both. The Investment Division, in consultation with the Office of the General Counsel, will exercise diligence to ensure that all contracts are legally binding and enforceable in a suitable venue. The Investment Division will seek the assistance, review, and advice of legal counsel whenever it is prudent to do so. The Office of the General Counsel has primary responsibility for the engagement of outside legal counsel for investment matters, subject to applicable statutes and rules adopted by the Office of the Attorney General.

10.8. Risk Management Compliance Cure Periods and Remedies

- a. **Passive violations** – A passive violation occurs when the portfolio breaches a prescribed policy limit as the result of changing market or credit conditions. The Investment Division will report the violation to the Board and will remedy the violation within 90 days of the violation or prepare a written action plan that must be approved by Board resolution to extend the cure period beyond 90 days.
- b. **Active violations** – An active violation is caused by entering into an agreement or investment that breaches a policy limit at inception or thereafter through failure to monitor. In this case, a thorough analysis of controls will ensue and be reported to the Chief Investment Officer, the Executive Director and the Chairman of the appropriate Board committee, as soon as practical, and to the full Board at its next regularly scheduled meeting at which investment matters will be discussed. The Investment Division will seek to remedy the violation when possible. In instances where the costs of immediate remedies are prohibitive, the Investment Division will develop a corrective action plan that will be submitted to the CIO within a reasonable time after the violation occurs, not to exceed 15 days, depending on the nature and complexity of the investment holding and transactions needed to remedy the violation. The Board will be apprised of the violation at its next regularly scheduled meeting along with the corrective action plan.

10.9. Permitted Uses of Leverage

The Investment Division is authorized to use the following types of leverage:

- a. Derivative strategies in accordance with the risk parameters established by the asset allocation ranges of this Policy and applicable legal restrictions;
- b. Short sales in accordance with this Policy;
- c. F/X hedging in accordance with this Policy;
- d. Embedded leverage within the Total Fund's limited partnership investments; and
- e. Collateralized fundings including securities lending activities, pledges, repurchase and reverse repurchase agreements and other external funding mechanisms.

Leverage will not be used to exceed the risk parameters established by the asset allocation ranges of this Policy.

ARTICLE 11 – HEALTH INSURANCE PROGRAM PORTFOLIO

11.1 Health Insurance Program Portfolio Objective

The primary objective of the Health Insurance Program Portfolio is to preserve capital through investment in conservative, short-term securities.

11.2 Authorized Investments for the Health Insurance Program Portfolio

Section 404.024, Government Code describes the Authorized Investments employed by the comptroller when he or she invests state funds. The Investment Division shall employ this list of Authorized Investments when the Investment Division invests the Health Insurance Program Portfolio.

ARTICLE 12 – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS

12.1 Scope

This policy applies to all TRS investment transactions in which a placement agent or finder is or may be involved, including new agreements (including follow-on and co-investments), extension of existing agreements, increase in funding or capital commitment to an existing relationship or fund, or an amendment that increases management fees or compensation under an agreement.

This policy also applies to attempts to influence TRS investment decisions through contacts with TRS trustees, or contacts with, or political contributions made for the benefit of, one or more Texas Elected Officials, and also applies to contacts with persons employed by any such official.

If any provision of this policy conflicts with a provision of another policy adopted by the TRS board, the stricter provision shall apply.

12.2 Purpose

The purpose of this policy is to ensure the integrity of all TRS investment transactions and conformity with the highest fiduciary, ethical, and legal standards by all parties involved. All investment decisions made by the Board and the Investment Division and must be based solely on the merits in conformity with fiduciary standards and applicable law. All investment recommendations made by consultants and advisers must be based solely on the merits after the necessary due diligence. All investment decisions and recommendations must be free of impropriety or improper influence and the appearance of either.

12.3 Philosophy

The Board desires that the Investment Division obtain full disclosure of all matters having the potential to harm TRS's reputation or the integrity of TRS's investment processes, or that could constitute unethical or unlawful conduct during the investment due diligence process.

12.4 Required Disclosures

At a minimum, all external Fund or Manager Parties shall provide detailed written responses to the questionnaire attached hereto as Appendix F as early as reasonably possible in the due diligence process for a TRS investment transaction. The Executive Director is authorized to approve such revisions to Appendix F from time to time as he deems to be in the best interest of TRS and consistent with this policy.

In addition, all Fund or Manager Parties shall provide a detailed description of the services to be performed by the Placement Agent and how the Placement Agent is used (e.g., with all prospects, or only with a subset of prospects). The Investment Division shall obtain a copy or summary of the terms of an agreement to compensate a Placement Agent for the due diligence file. The Investment Division shall provide all prospective Fund or Manager Parties with a copy of this policy upon commencement of due diligence.

12.5 Contractual Representations, Warranties and Covenants

Each Fund or Manager Party shall represent and warrant to TRS in the executed closing documents for the transaction that its responses to Appendix F to this policy and any supplemental inquiries are true, correct, and complete in all material respects, and shall also covenant to update any such information within 10 business days of any change in the information in the responses.

In addition, each Placement Agent shall fully disclose the terms of its arrangements with a Fund or Manager Party for payment of a Placement Fee and any political contributions by the Placement Agent to any Texas Elected Officials, and shall certify as to the matters addressed in Appendix F, as applicable, to TRS in a writing executed by an authorized officer that the disclosures required by this policy are true and complete in all material respects.

Each final investment agreement shall provide TRS with the option to receive a reimbursement of management or advisory fees equal to the amount of Placement Fees to be paid to any and all Placement Agents, and, in addition and not in the alternative, the right to terminate the management agreement or withdraw without penalty from the fund investment vehicle or vehicles if any certificates or contractual representations, warranties or covenants relating to this policy have been breached.

12.6 Prohibitions

Neither TRS nor any TRS investment shall be burdened with or liable for any Placement Fee. No TRS investment may be made if the transaction involves either (a) a Placement Agent who is not registered with either of the Securities and Exchange Commission or the Financial Industry Regulatory Authority (“FINRA”), or (b) the sharing of a Placement Fee with a non-registered person or entity. No TRS investment may be made if an authorized officer or the board, in consultation with legal counsel, determines that a disclosed contact with a TRS board member or Texas Elected Official, or a contribution to a Texas Elected Official, has created an unacceptable risk to the integrity and reputation of the TRS investment program or has been made in violation of a TRS policy or applicable law. A contact-based referral, without more, by a trustee of either an investment opportunity or a Manager or Fund Party contact to the Executive Director, Chief Investment Officer, or Deputy Chief Investment Officer does not constitute such a risk or a violation of this policy.

12.7 Definitions

Affiliate – means a person or entity controlled by or under common control with another person or entity.

Fund or Manager Party – includes, (a) as to a private investment fund, a fund sponsor, the general partner, managing member, or its equivalent with respect to a fund, fund sponsor, or fund management firm, (b) as to an external, separate account investment manager, the asset management entity and the parent of such asset management entity, and (c) as to (a) and (b), any Affiliate, principal, owner, officer, shareholder, director, managing member, or employee having authority to act on behalf of such fund or firm.

Placement Agent – includes any third party, whether or not affiliated with a Fund or Manager Party, that is a party to an agreement or arrangement (whether oral or written) with a Fund or Manager Party for the direct or indirect payment of a Placement Fee in connection with a TRS investment. Any other person or entity who claims a Placement Fee or who by agreement with a Placement Agent will share in a Placement Agent’s Placement Fee is deemed to be a Placement Agent whether or not the person or entity is an Affiliate, principal, owner, officer, shareholder, director, managing member, or employee of a Placement Agent. A “finder” is a Placement Agent.

Placement Fee – includes any compensation or payment, directly or indirectly, of a commission, finder’s fee, or any other consideration or benefit to be paid to a Placement Agent.

Relative – means a spouse (including an ex-spouse), parent, child (including adopted), sibling, niece, nephew, aunt, or uncle.

Texas Elected Official – includes any elected official of the State of Texas, including but not limited to the governor, lieutenant governor, comptroller of public accounts, attorney general, and any member of the Texas Legislature, and also includes a campaign fund or political action committee, or PAC for an elected official, and any Relative of a Texas elected official.

TRS Person – means any person listed on Exhibit A attached to Appendix F to this Policy or to any other due diligence document, and includes without limitation any current or former TRS board member, Executive Director, Deputy Director, Chief Financial Officer, Investment Division or Office of the General Counsel employee, any investment consultant or actuary, any outside counsel engaged by TRS, and any Relative of a TRS Person, whether or not listed on an Exhibit A, TRS Persons.

**APPENDIX A – TRACKING ERROR NEUTRAL
(IN ANNUALIZED BASIS POINTS)¹**

Internal	Neutral
Equity (Global Best)	100
External	
Equity (US; Large-Cap)	300
Equity (US; Small-Cap)	500
Equity (International; Developed, EAFE)	300
Equity (International; Emerging Markets)	300
Equity (World Equity)	300
Stable Value Hedge Funds	400
Directional Hedge Funds	600

	Neutral	Maximum
Total Global Inflation Linked		200
Total Public Fund Tracking Error	100	300

¹ Tracking error will be measured on a realized basis over a three year period.

APPENDIX B – IIC APPROVAL AUTHORITY AND MANAGER ORGANIZATION ALLOCATION LIMITS

Allocations to a single manager organization may only exceed the limits specified in this Appendix B with the prior authorization of the Board.

Article Affected	Portfolio	Initial Allocation or Commitment with Manager Organization, by Portfolio	Additional or Follow-On Allocation or Commitment with the same Manager Organization, by Portfolio	Total Manager Organization Limits, by Portfolio
2.7	External Public Markets Portfolio	0.5%	1%	3%
4.2	Private Equity Portfolio	0.5%	1%	3%
5.2	Real Assets Portfolio	0.5%	1%	3%
6.2	Energy and Natural Resources Portfolio	0.5%	1%	3%
	Total IIC Approval Authority, each Manager Organization			6%

All allocation or commitment limits are expressed as a percentage of the Total Fund value and are to be calculated as of the date the applicable investment agreements are executed.

“Affiliate” means any person directly or indirectly controlling, controlled by, or under common control with, another person. A “manager organization” includes its Affiliates without regard to the names of the entities.

The percentage limit for additional or follow-on allocations or commitments applies to each additional or follow-on allocation or commitment by a listed portfolio to a manager organization and is in addition to, and not cumulative of, the limit specified for initial allocations or commitments. By way of example, if a portfolio initially allocates 0.2% of the Total Fund to a manager organization, the portfolio may thereafter allocate or commit up to 1.0% in a single additional or follow-on allocation or commitment to the same manager organization for a total of 1.2% allocated or committed to the same manager organization (0.2%+1.0%). If a portfolio initially allocates 0.2%, then makes an additional allocation or commitment of 0.8%, and desires to make a further additional or follow-on allocation to the same manager organization, the applicable limit for the further additional or follow-on allocation is 1.0% of the Total Fund, for a total of 2.0% allocated or committed to the manager organization (0.2%+0.8%+1.0%). All investments occurring in the six months prior to the follow-on investment, co-investment or additional investment shall be included in the calculation of the percentage limits. If the initial investment occurred less than six months prior to the current investment, the initial allocation limit of 0.5% rather than the follow-on allocation limit of 1.0% will apply.

In calculating the available limits, returned capital is excluded from the sum of existing total allocations or commitments. Committed capital is included during the applicable investment period of a fund without regard to whether the commitment amount is funded or unfunded or the fund is open-ended. After the investment period, committed but unfunded capital is not included in the calculation of outstanding commitments for the purposes of this Appendix B. Capital that has been returned but that is subject to recall by a private investment fund is considered to be committed or allocated for the purposes of the limits in this Appendix B.

Authority for Special Investment Opportunities. Notwithstanding the limits set forth in this Appendix B, the CIO may designate an investment opportunity as a “Special Investment Opportunity” if the circumstances indicate a reasonable probability that a rapid investment response will be required in order for TRS to acquire the investment in excess of the limits on Investment Division authority set forth in this Appendix B. Circumstances requiring a rapid response may include, but are not limited to, distressed situations or market dislocations creating opportunities to acquire interests or assets at pricing that indicates a reasonable probability that the interests or assets are undervalued or will increase in value. The CIO shall notify the Executive Director as promptly as possible of the Special Investment Opportunity. The CIO and the Executive Director shall consult with the Chairman of the Board and the Chairman of the Investment Management Committee and determine if it is not practicable to present the opportunity for consideration by the Board. If the opportunity will not be added to an agenda, and the

CIO and the Executive Director conclude that the investment would be in the best interests of TRS, the CIO and the Executive Director may authorize and conclude an investment up to \$1 billion in that Special Investment Opportunity.

After one investment in a Special Investment Opportunity has been made, no further investment in a Special Investment Opportunity may be made until the Board has reauthorized the CIO's authority to designate a Special Investment Opportunity. Such reauthorization shall renew the CIO's and the Executive Director's authority to invest up to \$1 billion in a Special Investment Opportunity under this provision.

APPENDIX C – EMERGING MANAGERS

Articles Affected:	Portfolio	Target Allocation (in millions)
2.7	External Public Markets Portfolio ¹	250
4.2	Private Equity Portfolio ^{1,2}	950
5.2	Real Assets Portfolio ^{1,2}	450
	Total	1,650

For the avoidance of doubt, these portfolios may also include investments in energy and natural resources.

¹ The CIO may increase or decrease each portfolio Target Allocation by \$200 million; provided, the total Target Allocation must remain unchanged as a result of such increase or decrease.

² Target Allocation based on net market value.

APPENDIX D – POLICY HEDGE RATIOS

Portfolio	PHRs
Public Markets Portfolios	0%
Private Markets Portfolios	0%

APPENDIX E – AUTHORITY RESOLUTION (TRS 477)

Board of Trustees
General Authority Resolutions Adopted September 13, 2012

Investment Group

Resolved, That Investment Division employees holding the following TRS working titles are members of the “**Investment Group**”:

Chief Investment Officer
Senior Managing Director
Senior Director
Senior Investment Manager

Deputy Chief Investment Officer
Managing Director
Director

Resolved further, That the Executive Director is authorized and directed to designate in writing those individual members of the **Investment Group** who are authorized within the investment areas designated by the Executive Director, in addition to the Chief Investment Officer and the Deputy Chief Investment Officer, to take any one or more of the following actions authorized below in accordance with these resolutions until the authority is revoked.

Resolved further, That the Executive Director is authorized and directed to designate in writing, by investment area and category or item designation, the specific authorities granted to each authorized member of the **Investment Group**, until the authority is revoked.

A. General Authority for Investment Matters other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

1. Buy, sell, or give orders or instructions for transactions in currencies and securities, and any amendments or modifications of such orders or instructions.
2. Direct Investment Operations personnel to deliver, pay, expend, or receive cash, currencies, monies, securities (including restricted or Rule 144A securities) in connection with a contract to buy or sell securities.
3. Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of securities transactions.
4. Direct Investment Operations personnel to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; and to instruct other cash movements, including movements of cash to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Notwithstanding any provision of this Section A, authority granted under this Section A does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

B. Investment Contracting Authority other than Derivatives

Resolved further, That the Chief Investment Officer, Deputy Chief Investment Officer, and any other member of the **Investment Group** designated by the Executive Director as having such authority, in addition to any other authority expressly designated by the Executive Director under these resolutions, may act on behalf of TRS to:

- B.1 Make, execute, and deliver investment-related documents, including written contracts, investment management agreements, subscription agreements, account agreements, consents, certificates, powers of attorney, notes, deeds,

security agreements, pledges, and endorsements, and any and all documents necessary or proper to effectuate the authority granted in this Section B.1.

- B.2 Make, execute, and deliver investment-related documents waiving, modifying, or amending in writing specific provisions of a written investment-related agreement, including directions and instructions to amend, modify, fix, and execute written investment guidelines in investment management agreements with external managers and fund managers.
- B.3 Make, execute, and deliver written renewals, extensions, assignments, terminations, or transfers of investment-related contracts or agreements, including contracts for investment management, commitments of capital, investment vehicles, security interests, liens or mortgages relating to TRS investments.
- B.4 Jointly with a member of the **Financial Group** or the **Executive Group**, execute investment fund and external manager account redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash, or securities to a TRS account by a third-party fund, external manager, account, debtor, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements and side letter agreements and any amendments or modifications to subscription agreements and side letter agreements.

Notwithstanding any provision of this Section B, the authority granted under this Section B does not extend to transactions in derivatives, which are governed exclusively by Section C of these resolutions.

C. Derivatives Authority

Resolved further, That the Chief Investment Officer or the Deputy Chief Investment Officer and any member of the **Investment Group** who is designated by the Executive Director as a member of the derivatives team, in addition to any authority expressly designated by the Executive Director under these resolutions is authorized to act on behalf of TRS to:

- C.1 Negotiate, make, fix, execute, amend, modify, renew, extend, transfer, assign, terminate, endorse, or terminate in writing any and all of the following: master agreements for derivatives transactions; schedules, credit support annexes, transaction confirmations, account agreements, and clearing agreements relating to such agreements; and deliverables relating to such agreements, schedules, annexes, confirmations, account agreements, or clearing agreements, including documents relating to derivatives cash settlements and movements of collateral or margin.
- C.2 Make, execute, and deliver documents and agreements waiving, modifying, or amending in writing specific provisions of a written agreement relating to derivatives account agreements, collateral management agreements, or clearing agreements.
- C.3 Waive, amend, modify, renew, extend, transfer, assign, endorse, or terminate in writing agreements relating to derivatives transactions, and any transaction confirmations under such agreements.
- C.4 Jointly with a member of the **Financial Group** or the **Executive Group**, execute documents, directions, and instructions, including standing instructions, relating to cash settlement of derivatives and movements of collateral or margin for derivatives transactions.
- C.5 Buy, sell, or give orders or instructions for transactions in derivatives, and any amendments or modifications of such orders or instructions.
- C.6 Give directions and instructions to members of the **Trading Group** or external managers relating to execution, brokerage, clearing or settlement of derivatives transactions.

Financial Group

Resolved further, That the “**Financial Group**” comprises employees holding the following TRS working titles:

Chief Financial Officer
Manager of General Accounting
Team Leader of Financial Reporting

Manager of Investment Accounting
Team Leader of Investment Accounting
Team Leader of Budgeting

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, jointly with an authorized member of the **Investment Group** or the **Executive Group**, to execute redemption and withdrawal notices and instructions for the transfer or delivery by wire or physical transfer of cash, collateral, margin, or securities to a TRS account by a third-party fund, account, debtor, or derivatives counterparty, except that an authorized member of the **Investment Group** may be the sole TRS signatory on subscription agreements and side letter agreements and any amendments to subscription agreements or side letter agreements.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS, to execute authorizations to fund subscribed investment funds or capital called by investment funds; transfer funds or assets between custodial accounts, including external manager separate accounts; transfer funds to pay fees under an investment contract; instruct other cash movements, including movements of assets to and from custodial accounts held by the Comptroller of Public Accounts and transfers of assets in kind for investment under an investment contract.

Resolved further, That each member of the **Financial Group** is authorized and empowered on behalf of TRS to authorize and direct members of the Investment Accounting team to verify or confirm to a custodian or prime broker any order for the transfer or delivery of currencies, monies, securities, or contracts to any other person.

Executive Group

Resolved further, That the **Executive Group** comprises employees holding the TRS working titles of Executive Director and Deputy Director, and each member of the **Executive Group** is authorized and empowered to perform, with respect to a particular matter or transaction, any and all of the acts that any and all employees in the **Investment Group** or the **Financial Group** are authorized to perform, except that when joint action by a member of the **Investment Group** and a member of the **Financial Group** is required, only one member of the **Executive Group** may act jointly with a member of either of the **Investment Group** or the **Financial Group**.

Trading Group

Resolved further, That the “**Trading Group**” comprises the employees holding the following TRS working titles: Director – Trading Center, and Trader. Each member of the **Trading Group** is authorized and empowered on behalf of TRS to take the following actions: to place orders or agree with brokers, dealers and market-makers to purchase or sell securities, derivatives, forward contracts, or currency; to monitor and supervise execution and settlement of such orders or agreements; and to negotiate, fix, and vary the commissions, spreads, or discounts for individual orders or agreements to purchase or sell securities, derivatives, forward contracts, or currency.

APPENDIX F – POLITICAL CONTRIBUTIONS; IMPROPER INFLUENCE; PLACEMENT AGENTS AND FINDERS QUESTIONNAIRE

Fund or Manager Name: _____

Completed by: _____

Date submitted: _____

Note: TRS may require completion of a new questionnaire or updating of responses at any time, including as of the closing date for any transaction investment or additional funding.

- A) Contacts with State Officials; Political Contributions. Has any person lobbied, communicated with, or made political contributions during the past three years on behalf of the Fund or Manager Party to a Texas Elected Official in connection with a prospective investment transaction with a Texas state investment entity, including TRS?
- 1) If the answer is “yes,” please provide a complete list of the name(s) of the entities and individual(s) involved, the approximate dates of the contributions, the amounts of the contributions, a summary of the contacts or communications, and the nature of the discussion in regards to the investment with any Texas state investment entity, including TRS.
- B) Contacts with TRS Board Members. Has any person lobbied or otherwise communicated on behalf of the Fund or Manager Party with a current or former member of the TRS Board of Trustees during the past two years for the purpose of asking the current or former member to seek to influence a decision by the TRS investment staff or a TRS advisor or consultant to recommend that TRS invest?
- 1) If the answer is “yes,” please provide a complete listing of the name(s) of the entities and individual(s) involved, the approximate dates of the contacts or communications, and the nature of the discussion in regards to this investment.
- C) Placement Agents and Placement Fees. Is or was the Fund or Manager Party a party to any agreement or arrangement (whether oral or written) to pay a Placement Fee to or for the benefit of any Placement Agent in connection with TRS’s prospective investment in a fund or engagement of an external manager?
- 1) If the answer to C) is “yes,” please provide a copy of the written agreement or agreements creating the obligation to pay a Placement Fee. If the agreement is not written, please provide a written summary of the agreement. Additionally, please state the amount of the Placement Fee (or the formula for its determination if the amount is not yet determined) and the date of its payment or anticipated payment.
 - 2) If the answer is “yes,” please list the name(s) of the person or entity. If the party to the agreement is an entity, please also list the names of the principal owners, officers, directors, or managing members of the Placement Agent and provide a resume for each such person.
 - 3) If the answer is “yes,” state whether the Placement Agent, or any of its Affiliates, is registered as a lobbyist with any state government or the federal government and identify the registrants and the applicable jurisdictions where registered.
 - 4) Will or did any TRS Person or any Relative of a TRS Person receive, has any such person received, or might any such person receive, any compensation or payment, directly or indirectly, of a commission, finder’s fee, or any other consideration or benefit to be paid to a Placement Agent (a “Placement Fee”) in connection with TRS’s investment? If the answer is “yes,” please list the name or names of the TRS Person or Relative of a TRS Person and provide details about the terms of the Placement Fee.

- 5) Will or did any Texas Elected Official or a Relative of a Texas Elected Official receive a Placement Fee in connection with TRS's investment? If the answer is "yes," please list the name or names of the official and provide details about the terms of the Placement Fee, including the amounts and timing of payments.
- 6) Did (or will) any third party person or entity who is not employed or otherwise affiliated with a Placement Agent, including a current or former TRS Person, either (a) recommend the Placement Agent or (b) receive a share of a Placement fee or any other economic benefit in connection with TRS's investment, whether directly or indirectly through a Placement Agent engaged by you?
- 7) If the answer to 6) is "yes," please list the name of the person or entity, the relationship of the person or entity to the Placement Agent and your firm, and provide a description of the arrangement and the reason for the payment.
- 8) State whether the Placement Agent or any of its Affiliates is registered as an investment advisor with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or a similar agency outside the United States. Provide details about registration or explain why registration is not required.

The undersigned certifies, represents and warrants on behalf of the Fund or Manager Party that, to the best of its knowledge after due inquiry, (a) the foregoing responses to this questionnaire are complete, true, and correct and do not omit any statement or fact necessary to make any statement made not misleading in any material respect, and (b) no prior statements or representations, if any, whether oral or written, made on behalf of the Fund or Manager Party relating to the subject matter of this questionnaire in connection with TRS's due diligence inquiries, a prospective investment management agreement, or a subscription to the Fund, as the case may be, including any side letter agreements, were untrue or misleading in any material respect when they were made.

[signature block for Fund or Manager Party]

Date: _____

Attachment: Exhibit A, TRS Persons

APPENDIX G - EXTERNAL ADVISORY COMMITTEES OR BOARDS, BOARD OBSERVERS, AND BOARD REPRESENTATION

- (A) **External Advisory Committees or Boards and Board Observers.** A TRS investment-related agreement may provide that an Investment Division employee may represent TRS by serving:
1. On an advisory committee, advisory board, or similar advisory body to a TRS investment vehicle, whether the position is voting or non-voting; or
 2. As a non-voting TRS observer at meetings of the governing body of an investment vehicle, including a business entity, in which TRS has an interest.
- (B) **Board Representation by a TRS Employee.** A TRS investment-related agreement may provide for TRS representation on the governing body of a non-public (private) or a publicly-traded business entity in which TRS holds a direct or indirect investment interest.
1. **Requirements:**
 - a. The TRS employee representative may not serve in a position that under applicable law has general liability to third parties, such as a general partnership position.
 - b. An agreement for TRS representation on an external governing body must be in writing and, to the extent possible, address limitations on capacity and fiduciary duties, liability insurance, indemnification, travel payments or reimbursements, and perquisites provided to persons on the governing body in the entity's ordinary course of business.
 - c. Duties that an employee owes to TRS must be primary.
 - d. The external entity's insurance and indemnification will be primary relative to any available TRS liability and indemnification coverage.
 - e. If compensation or reimbursement of expenses will be paid, the agreement must require payment of any compensation or reimbursement directly to TRS.
 2. **Qualification:** A TRS employee representative must hold one of the following TRS titles to be eligible to serve: Senior Investment Manager, Director, Senior Director, Managing Director, Senior Managing Director, Deputy CIO, or CIO.
 3. **Authorization:**
 - a. For a non-public (private) entity, either of the CIO or the Deputy CIO, in consultation with the Office of the General Counsel, must authorize an employee to serve.
 - b. For an entity that has issued publicly-traded securities, the CIO and the Executive Director, in consultation with the Office of the General Counsel, must authorize an employee to serve.
 - c. The CIO and Deputy CIO may not serve on an external governing body without prior authorization from the Executive Director.
- (C) **Board Representation by a Non-Employee Independent Third Party.** A TRS investment-related agreement may grant TRS a contractual right or option to appoint, nominate, remove, or replace a non-employee independent third party to serve on the governing body of a business entity in which TRS has or will have an investment interest.
1. **Requirements:**
 - a. A third-party may not be TRS's agent and shall have full discretion when voting as a member of the governing body.
 - b. TRS will not insure or indemnify any third party representative.
 2. **Qualification:** The third party must clear a conflict check.
 3. **Authorization:** The third party must be approved by the head of the applicable investment area and either of the Deputy CIO or the CIO, in consultation with the Executive Director.



September 12 – 13, 2013

Board of Trustees

Agenda Item 7.A. Consider Proposed Changes to the Investment Policy Statement

Resolved, That the Board of Trustees (Board) hereby adopts the proposed revised version of the Investment Policy Statement (“IPS”) as recommended for adoption by the Policy Committee, to be effective as of October 1, 2013 [with the following changes:

- _____
- _____
- _____.]

Resolved, That the IPS adopted to be effective as of October 1, 2013 supersedes all prior versions of the IPS.

Tab 7 B



Legal Services

Memorandum

DATE: August 27, 2013

TO: Policy Committee of the Board of Trustees and Board of Trustees

FROM: Tina M. Carnes, Assistant General Counsel

COPY: Brian K. Guthrie, TRS Executive Director; Ken Welch, TRS Deputy Director; Janet Bray, Director of Human Resources; Carolina de Onís, TRS General Counsel

RE: Memo and Resolution for the Adoption of an Amended At-Will Policy

Introduction

At the September 2013 meeting of the Policy Committee, the Committee will consider recommending to the Board of Trustees the adoption of an amended policy regarding at-will employment. The policy was initially adopted in 1995 and most recently re-adopted by the Board in September of 2010. The Policy stated it would be reviewed again in September of 2013.

Background

Under the employment at-will doctrine that has been the law in Texas since 1888, absent a specific agreement to the contrary, employment may be terminated by the employer or the employee at will, for good cause, bad cause, or no cause at all.

As a general rule, state employees serve under the employment at-will doctrine. Various statutes and decisions place limitations on the at-will doctrine by prohibiting termination for specified reasons. For example, the state may not discharge employees for engaging in protected, free speech; discriminate in employment based on race, color, religion, sex, or national origin; deny public employment based on membership or non-membership in a labor organization; or retaliate against an employee for filing a workers' compensation claim or alleging a violation of law.

Considerations for TRS

In response to a recommendation by the Texas Attorney General's Office, TRS initially adopted an At-Will policy in 1995. By adopting an At-Will policy, TRS strengthens its position that, absent a specific written agreement to the contrary, TRS and its employees maintain an at-will relationship.

The Policy Committee has reviewed the resolution five times since its adoption in July 1995. These reviews occurred in March 1998, June 2001, July 2004, September 2007, and September 2010. The language in the resolution has remained substantively unchanged since its original adoption in July 1995.

Requested Action

Staff requests that the Policy Committee recommend that the Board of Trustees adopt the attached amended policy. It supports the assertion that TRS is an at-will employer and helps to minimize liability. Staff also proposes extending review cycle of the policy to ten years.

Staff also requests the Board of Trustees adopt the attached policy.

Teacher Retirement System of Texas

Employment At-Will Policy

~~Interpretation Contact: Human Resources Director~~

Purpose To inform employees of the at-will nature of their employment at TRS.

Definition **At-Will Employment**
In an at-will employment relationship:

- An employee does not have a contract guaranteeing employment for any period of time.
- An employer can terminate an employee at any time for any reason or no reason at all so long as that reason is not unlawful.
- An employee can resign at any time for any reason or no reason at all ~~and without prior notice to TRS.~~

Applies to All TRS employees.

Policy Employees of TRS are employed at-will. This at-will employment relationship can only be modified by a written contract signed by the Chair of the TRS Board of Trustees or his or her designee.

Related Policies

- *Grievance and Appeals Policy*
- *Involuntary Termination of Employment Policy*
- *Progressive Corrective Action Policy*

Administrative Policy Manual	First Issued: July 28, 1995
Reviewer: Human Resources & Legal Services 2010 2013	Last Board Review: September 17 13,
Review Cycle: Every Three Years 2013 2023	Next Review Due: September
Adopted By: The Board of Trustees	Date:
Issued By: Ronnie Jung Brian K. Guthrie	
September 2013 , 2010 2013	

This policy does not constitute a contract nor a guarantee of employment and may be modified, superseded, or eliminated by TRS without notice to the employee. This policy statement supersedes all previous policy statements on this subject.

**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD RESOLUTION**

RESOLUTION REGARDING AT-WILL EMPLOYMENT POLICY

September 12-13, 2013

Whereas, It is the policy of the Board of Trustees of the Teacher Retirement System of Texas (TRS) that employees of TRS are employed at will; now, therefore, be it

Resolved, That the Board readopts the attached At-Will Employment Policy of TRS.

Tab 7 C



Legal Services

Memorandum

DATE: August 26, 2013

TO: Policy Committee of the Board of Trustees

FROM: Rebecca M. Smith, Assistant General Counsel

COPY: Brian Guthrie, Executive Director
Ken Welch, Deputy Director
Carolina de Onís, General Counsel
Rebecca Merrill, Special Advisor to the Executive Director and
Manager of Special Projects

RE: Adoption of Proposed Amendments to 34 Texas Administrative Code rule § 47.17 of
Chapter 47, Qualified Domestic Relations Orders

REQUESTED ACTION

At its June 2013 meeting, the Policy Committee authorized publication for public comment a proposed amendment to one rule in Chapter 47 regarding qualified domestic relations orders. Specifically, the Policy Committee authorized publication of the amendment proposed by staff to §47.17(y), relating to Calculation for Alternate Payee Benefits Before a Member's Benefit Begins. The proposed amendment was published and no comments were received at the time of submission of this memorandum. If comments are received prior to the meeting of the Policy Committee, staff will address the comments at the meeting. The proposed amendment is before the Committee now for a recommendation to the Board of Trustees regarding adoption.

WHY THE ACTION IS REQUESTED

The need for the proposed rule change to §47.17(y) was identified in the course of establishing business rules for the TEAM project. The original rule was adopted with an error in its text resulting in a greatly reduced benefit to the alternate payee. The proposed amendment corrects the error so that an alternate payee who is authorized under a qualified domestic relations order (QDRO) to receive a stated monthly amount of the annuity payment made on behalf of the participant will receive the correct amount of annuity when requesting to receive a lifetime annuity under §804.005, Texas Government Code.

BACKGROUND OF THE REQUESTED ACTION

Section 47.17(y) In 1993, the Legislature provided a mechanism for an alternate payee to begin receiving payment of the award given under the terms of a QDRO when the member is at least 62 years old and eligible for normal age retirement but not yet retired. Upon the alternate payee's request, TRS is directed to pay the alternate payee the alternate payee's portion of the actuarial equivalent of the member's accrued benefit at the time of the request, determined as if the member retired on the date of the alternate payee's election. Section 47.17 establishes the method of calculating the alternate payee's benefit under §804.005 as well as the method of calculating the benefit payable on behalf of the member at the time a distribution becomes payable.

Because of the many types of awards made to alternate payees in QDROs over the years, it became necessary to provide instructions in the rule for calculating the alternate payee's portion under each type of award. Subsection (y) addresses how to calculate the alternate payee's portion when the QDRO directs TRS to pay a stated monthly amount, e.g. \$500 per month. The subsection currently directs staff to simply divide the stated monthly amount by the member's life annuity factor which results in a few dollars per month to the alternate payee. The subsection should direct staff to multiply the stated monthly amount by the member's life annuity factor in order to arrive at the amount of money TRS would have expected to pay to the alternate payee over the member's lifetime and then to divide the lump sum amount by the alternate payee's life annuity factor effectively annuitizing the lump sum over the alternate payee's lifetime. The proposed amendment to the rule corrects this error.

RECOMMENDATION

Staff recommends the Policy Committee of the Board of Trustees consider recommending to the Board of Trustees the adoption of the amendment to §47.17(y) as outlined herein and without changes to the text as published in the *Texas Register* (38 TexReg 4305) for public comment.

RULE §47.17 Calculation for Alternate Payee Benefits Before a Member's Benefit Begins

(a) A "qualified domestic relations order" (QDRO) means a domestic relations order which creates or recognizes the existence of an alternate payee's right or assigns to an alternate payee the right to receive all or a portion of the benefits payable with respect to a member or retiree under a public retirement system, which directs the public retirement system to disburse benefits to an alternate payee, and which meets the requirements of Government Code, §804.003 and Internal Revenue Code §414(p)(1)(A)(i) and §414(p)(1)(B).

(b) The retirement system shall pay any eligible alternate payee who has a QDRO approved by the retirement system and who elects such payments, an amount that is the alternate payee's portion of the actuarial equivalent of the accrued benefit of the member of the retirement system, determined as if the member retired on the date of the alternate payee's election. The amount will become payable, upon receipt of a written request and a certified copy of a domestic relations order determined to be qualified, in accordance with the order, and in the form of an annuity payable in equal monthly installments for the life of the alternate payee.

(c) This method of distribution may be elected only when there is a member whose benefits are subject to partial payment under the law, who has not retired; who has attained the greater of either the age of 62 and is eligible to retire without reduction for early age retirement, or normal retirement age and service requirements for service retirement; and who retains credit and contributions in the retirement system attributable to that service.

(d) If an alternate payee elects to be paid under this section, the retirement system shall reduce the benefit payable by the system to the member or the member's beneficiary by the alternate payee's portion of the actuarial equivalent determined under this section.

(e) In figuring these benefits for the alternate payee and the adjusted standard annuity of the member's benefit as set forth in this section, the system shall consider the member's benefit as a normal age standard service retirement annuity, without regard to any optional annuity chosen or beneficiary designated by the member.

(f) The beginning of monthly payments under this section terminates any interest that the alternate payee who receives the payment might otherwise have in benefits that accrue to the account of the member after the date the initial payment to the alternate payee is made.

(g) An alternate payee who elects this method of payment has only a right to receive an annuity for life as calculated in this section and does not have the right to pass on any portion of his/her benefit upon his/her death. There is no reversion of the alternate payee's benefit to the member upon the alternate payee's death, irrespective of whether the death occurs before or after the member's benefit commencement.

(h) TRS will use Tables for Life Annuity Factors, Interest Annuity Factors, and Interest Accumulation Factors furnished by the TRS actuary of record.

[Attached Graphic](#)

[Attached Graphic](#)

[Attached Graphic](#)

(i) To calculate the alternate payee's actuarial equivalent benefit, the following procedure will be followed:

(1) Determine the member's accrued monthly benefit as of the alternate payee's benefit commencement date.

(2) Determine the member's age and the alternate payee's age as of the alternate payee's benefit commencement date.

(3) Determine the appropriate percent of the member's accrued benefit payable to the alternate payee under the terms of the QDRO.

(4) Calculate the alternate payee's actuarial equivalent monthly benefit by multiplying the member's accrued benefit times the life annuity factor at member's age times the alternate payee's percent. Then, divide that figure by the life annuity factor at alternate payee's age.

(j) To calculate the member's adjusted standard annuity, there are two scenarios:

(1) the alternate payee elects a monthly income and survives until the member annuity commencement date (MACD); or

(2) the alternate payee elects monthly income and dies before the MACD.

(k) When the alternate payee elects under subsection (j)(1) of this section, the formula used to reduce the member's standard annuity is the member's standard annuity monthly benefit amount minus the figure derived by dividing the total reserve for benefits to the alternate payee by the life annuity factor of the member at the member's age at MACD. The total reserve for the benefits to the alternate payee is the reserve for payments made to the alternate payee prior to MACD plus the reserve for payments made to the alternate payee after MACD. The reserve for payments made to the alternate payee after MACD is the alternate payee monthly benefit amount times the life annuity factor of the alternate payee at the alternate payee age at MACD. The reserve for payments made to the alternate payee prior to MACD is the alternate payee monthly benefit amount times the interest annuity factor to reflect payments of the number of payments before MACD.

(l) When the alternate payee elects under subsection (j)(2) of this section, the formula used to reduce the member's standard annuity monthly benefit amount is the member's standard annuity monthly benefit amount before the reflection of payments to the alternate payee under this section minus the figure derived by dividing the total reserve for payments made to the alternate payee by the life annuity factors of the member at the member's age at MACD. The total reserve for payments made to the alternate payee is the alternate payee monthly benefit amount times the interest annuity factor to reflect payment of the number of payments before death times the interest accumulation factor to reflect interest of the number of full months from the date of death of the alternate payee to the MACD.

(m) If the member dies before MACD and a standard annuity is used to calculate any benefit due after death, benefits payable on behalf of the member must be based on the member's adjusted standard annuity. The balance of the accumulated contributions in the member savings account payable to a beneficiary must also be adjusted to reflect the payment to the alternate payee by reducing the accumulated contributions in the member savings account by the QDRO percentage described in subsection (i)(3) of this section. A benefit of an amount equal to twice the member's annual compensation for the school year immediately preceding the school year in which the member dies, or twice the member's rate of annual compensation for the school year in which the member dies, payable under Government Code, §824.402(a)(1) and (2), or a lump sum payment of \$2,500.00 plus an applicable monthly benefit as described in Government Code, §824.404, is not reduced by payments made to the alternate payee under Government Code, §804.005.

(n) If the member dies after MACD, the \$10,000.00 lump sum survivor benefits or the \$2,500.00 lump sum payment plus an applicable monthly benefit payable to a beneficiary under Government Code, §824.501 and §824.404, are not reduced as a result of payments to an alternate payee under this rule. Any payments paid pursuant to Government Code, §824.407 must be reduced by first reducing the account balance at the time of retirement by the QDRO percentage described in subsection (i)(3) of this section.

(o) If the member elects to terminate membership in TRS before MACD, the member contributions in the member account before a refund is processed, must be reduced by the QDRO percentage described in subsection (i)(3) of this section.

(p) When new law provides for an increase in the benefit payable to the member after the commencement of the payment of an annuity to the member, the increase will be distributed by increasing the member's and the alternate payee's benefit as provided by the law for an increase to the

member's benefit so long as there is no additional actuarial cost to the system unless provided otherwise by the legislature.

(q) A person, who has previously withdrawn service that was reduced by a QDRO percentage as described in subsection (o) of this section and who wishes to reinstate the service, must deposit the amount withdrawn or refunded and the fees required by law. Benefits payable based even in part on the terminated service will be reduced as described in this section as if the service had not been terminated.

(r) When a member who has an alternate payee drawing benefits enters a Deferred Retirement Option Plan (DROP), TRS will use the adjusted standard annuity in the calculation for the member's DROP.

(s) When a member who is participating in DROP has an alternate payee to begin a distribution under the Government Code, §804.005, the retirement system will use the adjusted standard annuity to calculate all future DROP transfers beginning with the initial month that a distribution is payable to the alternate payee. When calculating the member's adjusted standard annuity, the amount of the annuity paid to the alternate payee that represents the annuitized portion of the DROP balance shall not be included in the calculation. TRS shall use only the portion of the payment to the alternate payee that represents the alternate payee's share of the monthly annuity.

(t) When a member who has an alternate payee drawing benefits elects a partial lump-sum option, TRS will use the adjusted standard annuity in the calculation for the member's partial lump-sum payment.

(u) In the event the total distribution amount awarded to the alternate payee in a QDRO is limited to a specific dollar amount, the following procedure will be followed to calculate the alternate payee's actuarial equivalent benefit:

(1) Determine the alternate payee's age as of the alternate payee's benefit commencement date.

(2) Calculate the alternate payee's actuarial equivalent monthly benefit by multiplying the member's accrued benefit times the life annuity factor at member's age times the alternate payee's percent. Compare the product to the specific dollar limit amount. If the specific dollar limit amount is the smaller amount, divide the specific dollar limit amount awarded to the alternate payee by the life annuity factor at alternate payee's age to determine the alternate payee's monthly benefit. If the specific dollar limit amount is larger than the product of the member's accrued benefit times the life annuity factor at member's age times the alternate payee's percent, divide the product by life annuity factor at alternate payee's age to determine the alternate payee's monthly benefit.

(v) In the event the alternate payee dies prior to receiving the total limited distribution awarded to the alternate payee in a QDRO and before the MACD, calculate the member's adjusted standard annuity as described in subsection (j)(2) of this section.

(w) When a member who is participating in DROP has an alternate payee to begin a distribution under the Government Code, §804.005, TRS will calculate the alternate payee's actuarial equivalent benefit by multiplying the member's accrued benefit times the life annuity factor at member's age plus the balance of the DROP times the alternate payee's percent. That figure shall then be divided by the life annuity factor at alternate payee's age.

(x) When a member who is participating in DROP has an alternate payee to begin a distribution under the Government Code, §804.005, TRS will reduce the DROP account by applying the percentage of the member's accrued benefit payable to the alternate payee under the terms of the qualified domestic relations order beginning with the initial month that a distribution is payable to the alternate payee.

(y) In the event the amount of monthly retirement benefit awarded to the alternate payee in the QDRO is a stated monthly amount rather than a percentage, determine the alternate payee's actuarial equivalent benefit ~~by multiplying the stated monthly amount times the life annuity factor at the member's age and then by dividing the product stated monthly amount~~ by the life annuity factor at the alternate payee's age.

(z) In the event the amount of monthly retirement benefit awarded to the alternate payee in the QDRO is a percentage of the benefit but limited to no more than a stated monthly amount, determine the alternate payee's actuarial equivalent benefit by multiplying the member's accrued benefit times the life annuity factor at member's age times the alternate payee's percent, then dividing that product by the life annuity factor at alternate payee's age. If the amount derived from this calculation is smaller than the stated monthly amount, the amount calculated is the alternate payee's actuarial equivalent benefit. If the amount derived from this calculation is larger than the stated monthly amount, the alternate payee's actuarial equivalent benefit is calculated by dividing the stated monthly amount by the life annuity factor at the alternate payee's age.

**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD RESOLUTION**

Adopting Amended TRS Rule 34 TAC §47.17

September 12-13, 2013

Whereas, Chapter 804, Texas Government Code gives the Teacher Retirement System of Texas (TRS), as trustee, the exclusive authority to determine whether a domestic relations order is a qualified domestic relations order (QDRO) that requires TRS to pay a portion of the benefits payable on behalf of a participant to an alternate payee;

Whereas, Section 804.005, Texas Government Code authorizes an alternate payee to elect and receive an amount in lieu of the amount awarded under the terms of a QDRO, that is the alternate payee's portion of the actuarial equivalent of the accrued retirement benefit of the TRS participant, determined as if the participant retired on the date of the alternate payee's election, provided the participant is at least age 62 and eligible for normal age retirement and the amount is payable in the form of annuity for the life of the alternate payee;

Whereas, Section 804.005(g), Texas Government Code, authorizes the TRS Board of Trustees ("board") to adopt rules it considers necessary to implement and administer the section;

Whereas, A recent review of TRS rule §47.17(y), relating to Calculation for Alternate Payee Benefits Before a Member's Benefit Begins, revealed an error in the text that results in the alternate payee receiving less than the amount required under the statute;

Whereas, The proposed amendment to TRS rule §47.17(y), relating to Calculation for Alternate Payee Benefits Before a Member's Benefit Begins, provides the correct instructions for calculating the alternate payee's portion of the actuarial equivalent of the member's accrued benefit when the QDRO directs TRS to pay the alternate payee a stated monthly amount;

Whereas, pursuant to the authority granted by the Policy Committee of the board at its June 2013 meeting, TRS published proposed changes to §47.17 for public comment in the July 5, 2013 issue of the *Texas Register*, and the public had at least 30 days' notice of TRS' intention to adopt the proposed amendment before the board considered its adoption and TRS received no comments; and

Whereas, The board's policy committee has recommended that the board adopt the proposed amendment, and the board desires to adopt the proposed amendment without changes to the published text of the proposed rule; now, therefore, be it

Resolved, That the board hereby:

- 1) Adopts amended TRS rule 34 TEX. ADMIN. CODE §47.17 as published in the July 5, 2013 issue of the *Texas Register* (38 TexReg 4305);
- 2) Incorporates by reference into this Resolution, as though fully set out in it, the applicable policy committee and board meeting materials, discussions and actions, including the approved rule text and reasoned justification for its adoption as presented in those meeting materials, discussions and actions;
- 3) Grants the TRS staff authority to prepare and to file all documents required by this Resolution, to work with the Office of the Secretary of State in preparing and filing such documents, and to make any technical changes required for publication of the adopted rule; and
- 4) Grants the board chairman the authority to sign an order showing the action of the board.

Tab 7 D



Legal Services

Memorandum

DATE: September 2, 2013

TO: Policy Committee of the Board of Trustees and TRS Board of Trustees

FROM: Wm. Clarke Howard, TRS Assistant General Counsel

COPY: Brian Guthrie, Executive Director
Ken Welch, Deputy Director
Carolina de Onís, General Counsel

RE: Adoption of Proposed Amendments to 34 Texas Administrative Code (TAC), TRS-ActiveCare Rule § 41.41 on a Permanent, Non-Emergency Basis

Background

Prior to September 1, 2013, on or about the fifteenth (15th) of each month, the Teacher Retirement System of Texas (TRS) or the administering firm (*i.e.*, Blue Cross and Blue Shield of Texas or BCBSTX) sent bills for premiums to participating entities in TRS-ActiveCare. Under TRS-ActiveCare rule § 41.41, each participating entity was required to remit payment on or before the sixth day after the last day of each month in which TRS or BCBSTX issues the bill to the participating entity. The bill issued was for that month of coverage, which means that payment was then rendered a month in arrears.

During the plan year that just ended on August 31, 2013, TRS-ActiveCare experienced an unexpectedly high level of claims. This high level of claims has placed the solvency of the TRS-ActiveCare fund at risk. This risk constituted and continues to constitute an imminent peril to the public health, safety, or welfare of individuals enrolled in TRS-ActiveCare.

In June 2013, TRS staff and the TRS health benefits consultant, Gabriel, Roeder, Smith & Company (GRS), recommended that each participating entity be required to remit payment on or before the fifteenth day of each month in which TRS or BCBSTX issue the bill to the participating entity, beginning with bills generated on or after September 1, 2013. By moving the due date of each bill forward in time by approximately three (3) weeks, the proposed amendments move the payment from a month in arrears to the month of coverage. With this change, the risk to the solvency of the TRS-ActiveCare fund can be alleviated and the imminent peril to the public health, safety, or welfare of individuals enrolled in TRS-ActiveCare can be eliminated.

In response, the following actions were taken by the TRS Policy Committee (committee) and the TRS Board of Trustees (board) in June 2013:

- 1) The committee approved a resolution that recommended that the board adopt the proposed amendments to TRS-ActiveCare rule §41.41 on an emergency basis.
- 2) In order for the proposed amendments to TRS-ActiveCare rule §41.41 to have a lasting effect, they must be adopted on a permanent, non-emergency basis. Accordingly, the committee also authorized public-comment publication of the proposed amendments to TRS-ActiveCare rule §41.41 in the *Texas Register*, a step toward the adoption of the proposed amendments on a permanent, non-emergency basis.
- 3) The board adopted the proposed amendments to TRS-ActiveCare rule §41.41 on an emergency basis.

Pursuant to the authority granted by the committee, TRS submitted the proposed amendments to the Texas Secretary of State for publication in the *Texas Register*. The proposed amendments were published for at least 30 days before this meeting, and they now may be adopted by the board on a permanent, non-emergency basis. No public comments were submitted concerning the proposed amendments to TRS-ActiveCare rule §41.41.

TRS staff and GRS are now recommending that the board adopt the proposed amendments to TRS-ActiveCare rule §41.41 on a permanent, non-emergency basis.

Summary of Proposed Amendments to TRS-ActiveCare Rule § 41.41

As noted above, prior to September 1, 2013, each participating entity was required to remit payment on or before the sixth day after the last day of each month in which TRS or BCBSTX issued the bill to the participating entity. The proposed amendments will require each participating entity to remit payment approximately three (3) weeks earlier, on or before the fifteenth day of each month in which TRS or BCBSTX issue the bill to the participating entity, beginning with bills generated on or after September 1, 2013. Attached to this memorandum are the marked rule texts for your review.

Requested *Committee* Action

Staff requests that the committee recommend that the board adopt the proposed amendments to TRS-ActiveCare rule §41.41 on a permanent, non-emergency basis, as described in this memorandum and the attached marked rule texts, and as published in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163).

Requested *Board Action*

In turn, staff requests that the board adopt the proposed amendments to TRS-ActiveCare rule § 41.41 on a permanent, non-emergency basis, as described herein and the attachments hereto and as published in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163).

Rule §41.41 Premium Payments

- (a) ~~For each bill generated by TRS or its designee on or before August 31, 2013,~~ Each participating entity shall remit to TRS the amount on each bill directed to the participating entity by TRS or the administering firm. The participating entity shall remit payment on or before the sixth day after the last day of each month in which TRS or the administering firm issued a bill. Payment shall be delivered in the same manner (*e.g.*, currently, TEXNET) in which the participating entity delivers retirement contributions. Any waiver granted to a participating entity under §825.408(a), Government Code, does not apply to amounts billed under this section or to amounts otherwise owed to TRS for TRS-ActiveCare.
- (b) For each bill generated by TRS or its designee on or after September 1, 2013, each participating entity shall remit to TRS the amount on each bill directed to the participating entity by TRS or the administering firm. The participating entity shall remit payment on or before the fifteenth day of each month in which TRS or the administering firm issued a bill. Payment shall be delivered in the same manner (*e.g.*, currently, TEXNET) in which the participating entity delivers retirement contributions. Any waiver granted to a participating entity under §825.408(a), Government Code, does not apply to amounts billed under this section or to amounts otherwise owed to TRS for TRS-ActiveCare.
- ~~(c)(b)~~ A participating entity will be billed for all full-time and part-time employees enrolled in TRS-ActiveCare who were employed by the participating entity on the date that TRS or its designee generates the bill for that billing month as reported by the participating entity. In addition, a participating entity will be billed retroactively for all full-time and part-time employees who enroll after the date on which the bill is generated for that month and choose coverage for that month. A participating entity will also be billed for any individual covered in accordance with §41.40 of this title (relating to Coverage Continuation While on Leave Without Pay-). Participating entities are responsible for collecting all applicable premiums and other costs that are required to be paid by its full-time employees, part-time employees, and any individuals covered in accordance with §41.40 of this title. A participating entity shall remit the full amount billed each month.
- ~~(d)(e)~~ Participating entities shall not modify the amount of any bill or remit any amount different from the amount billed. A participating entity shall report adopted adjustments, including those seeking credit for terminated employees, to the administering firm no later than the 45th day after the billing date. TRS may reject any adopted adjustments that are inappropriate or untimely, including those adjustments seeking credit for terminated employees reported later than 45 days after the billing date on which the employee was first incorrectly reported as eligible for coverage. Approved adjustments will be reflected on a subsequent bill.
- ~~(e)(d)~~ TRS may take corrective action against a participating entity that fails to remit payment in accordance with the timelines and other requirements of this section, including but not limited to placement of a warrant hold with the Comptroller of Public Accounts.

**Teacher Retirement System of Texas
Policy Committee Resolution
Recommending Final Adoption of Amendments to
TRS-ActiveCare Rule 34 Tex. Admin. Code § 41.41**

September 12-13, 2013

Whereas, Chapter 1579, Insurance Code, authorizes the Teacher Retirement System of Texas (TRS), as trustee, to implement and administer the uniform group health benefits program under the Texas School Employees Uniform Group Health Coverage Act (TRS-ActiveCare), as described in the statute;

Whereas, 34 Tex. Admin. Code § 41.41 provides that each participating entity in TRS-ActiveCare shall remit to TRS the amount on each bill for premiums directed to the participating entity by TRS or the administering firm and provides the deadline for making such payments to TRS;

Whereas, In June 2013, in response to an unexpectedly high level of claims during the current plan year, which has placed the solvency of the TRS-ActiveCare fund at risk, the TRS Board of Trustees (board) adopted proposed amendments to TRS-ActiveCare rule §41.41 on an emergency basis;

Whereas, Pursuant to the authority granted by the Policy Committee (committee) of the board at its June 2013 meeting, TRS published the very same proposed amendments to TRS-ActiveCare rule §41.41 for public comment in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163);

Whereas, The public has had at least 30 days' notice of TRS' intention to adopt the proposed amendments on a permanent, non-emergency basis and TRS received no comments; now, therefore, be it

Resolved, That the committee hereby recommends that the board adopt on a permanent, non-emergency basis, amended TRS rule 34 Tex. Admin. Code §41.41 as published in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163).

**Teacher Retirement System of Texas
Board Resolution**

**Adopting Amendments to
TRS-ACTIVECARE RULE 34 TEX. ADMIN. CODE § 41.41
ON A PERMANENT, NON-EMERGENCY BASIS**

September 12-13, 2013

Whereas, Chapter 1579, Insurance Code, authorizes the Teacher Retirement System of Texas (TRS), as trustee, to implement and administer the uniform group health benefits program under the Texas School Employees Uniform Group Health Coverage Act (TRS-ActiveCare), as described in the statute;

Whereas, 34 TEX. ADMIN. CODE § 41.41 provides that each participating entity in TRS-ActiveCare shall remit to TRS the amount on each bill for premiums directed to the participating entity by TRS or the administering firm and provides the deadline for making such payments to TRS;

Whereas, In June 2013, in response to an unexpectedly high level of claims during the current plan year, which has placed the solvency of the TRS-ActiveCare fund at risk, the TRS Board of Trustees (board) adopted proposed amendments to TRS-ActiveCare rule §41.41 on an emergency basis;

Whereas, Pursuant to the authority granted by the Policy Committee (committee) of the board at its June 2013 meeting, TRS published the very same proposed amendments to TRS-ActiveCare rule §41.41 for public comment in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163);

Whereas, The public has had at least 30 days' notice of TRS' intention to adopt the proposed amendments on a permanent, non-emergency basis and TRS received no comments; and

Whereas, The committee has recommended that the board adopt the proposed amendments to TRS-ActiveCare rule §41.41 on a permanent, non-emergency basis, and the board desires to adopt the proposed amendments on a permanent, non-emergency basis, without changes to the published texts of the proposed rule; now, therefore, be it

Resolved, That the board hereby:

- 1) Adopts on a permanent, non-emergency basis, amended TRS rule 34 Tex. Admin. Code §41.41 as published in the June 28, 2013 issue of the *Texas Register* (38 TexReg 4162-4163);

- 2) Incorporates by reference into this Resolution, as though fully set out in it, the applicable committee and board meeting materials, discussions and actions, including the approved rule text and reasoned justification for its adoption as presented in those meeting materials, discussions and actions;
- 3) Grants the TRS staff authority to prepare and to file all documents required by this Resolution, to work with the Office of the Secretary of State in preparing and filing such documents, and to make any technical changes required for publication of the adopted rule; and
- 4) Grants the board chairman the authority to sign an order showing the action of the board.

Tab 9

Teacher Retirement System of Texas

TEAM Program: Independent Program Assessment

Board Presentation

September 13, 2013



- Independent Program Assessment (IPA):
 - Provide independent reporting and oversight to the TRS Board and Executive Director or designee regarding critical risks related to the TRS Enterprise Application Modernization (TEAM) Program to enable informed decision-making.

 - Critical Risks Focus:
 - Failure to meet TEAM objectives
 - Lack of user acceptance
 - Program substantially delayed
 - Program substantially over budget

Observations – Strengths

1. Enhanced TEAM Program Management Organization:
 - *Aligned PMO Program Management by reporting directly to Program Sponsor*
 - *Promoted David Cook to manage the PMO and oversee TRS - TEAM Program Management*

2. Improved Accuracy of Project Status Reporting within the Quality Assurance Team (QAT) Monitoring report:
 - *Added baseline planned dates to identify original project milestone due dates and any revised planned due dates*
 - *Improved detail explanation of reasons for project timeline changes*

IPA Scorecard

TEAM Program Governance	Prior Score	Current Score	Observation
1.Program/Project Management	2	2	4,5
2.Risk Management	1	1	
3.Issues Management and Tracking	1	1	
4. Program Communication	1	1	
5. Change Management/ Quality Control	1	1	
6. Staffing and Organization	2	2	4
7. Budget Tracking	1	2	12
TEAM Projects			
1.LOB Implementation	1	1	9,11 10
2.FSR Implementation	2	2	
3.Data Management	2	2	
4.Reporting Entity Outreach	1	1	
5.Organizational Change Management	1	1	
6.Business Rules Development	1	1	
7.Business Procedures and Training	NA	NA	
8. Legacy System Decommissioning	NA	NA	
9.External Website Enhancement	NA	NA	
10.Legacy System Decommissioning	N/A	N/A	

Legend

- 1 = LOW
- 2= GUARDED
- 3= CAUTION
- 4= ELEVATED
- 5= SEVERE



N/A= Project not started, rating is not applicable at this time

SUMMARY List of Observations

ID #	Date	Observation	Status
1	Jan '13	Re-engineering of internal controls has not yet been addressed within the TEAM Program	Addressed & Monitor
2	Jan '13	Approach not formalized and timely for hiring and retention of high tech IT staff	Addressed & Monitor
3	Feb '13	Project plan inconsistent with project reporting	Addressed & Monitor
4	Feb '13	Team and project staffing plan is not detailed enough	In Progress
5	Feb '13	Project interdependencies have not been documented	Addressed & Monitor
6	Feb '13	Financial System Replacement (FSR) contingency plan has not been developed	Addressed & Monitor
7	Feb '13	Organizational Change Management project scope and plan have not been clearly identified	Addressed & Monitor
8	Feb '13	Change Management and Quality Assurance Procedures have not been finalized and published	Addressed & Monitor

SUMMARY List of Observations

ID #	Date	Observation	Status
9	Apr '13	Line of Business (LOB) and Financial System Replacement (FSR) system implementations projects are executed concurrently, increasing demand on TRS staff	In Progress
10	Apr '13	Data Management Project delayed deliverables, and lack of quality control in deliverable acceptance	In Progress
11	Apr '13	FSR project Statement of Work (SOW) requirements are overly complex and could result in increased cost and timeline	Closed & Monitor
12	Jun '13	TEAM Program Budget Tracking and Reporting not detailed enough	New

Legend – Risk Score

- 1 = LOW
- 2 = GUARDED
- 3 = CAUTION
- 4 = ELEVATED
- 5 = SEVERE



12. TEAM Program Budget Tracking and Reporting not detailed enough:

- TEAM Project Status Reporting does not include total program and specific project level Budget to Actual variance
- Cost categories have not been finalized for reporting financial results. Several versions and various levels of "TEAM Program" cost and budget tracking work sheets stored in SharePoint.

Risks:

- *Unclear program and project level financial results – specifically life-to-date and annual Actual to Budget variance*
- *Inaccurate TEAM financial estimates*

Recommendations:

- *Include TEAM program and project level life-to-date financial information within status reports to ESC (and Board).*
- *Determine cost categories to include in financial reporting and allocate project specific direct costs, such as consulting, professional fees, application software, and staff etc. to specific projects within TEAM*

Management Responses:

- *Exploring various reporting options for TEAM Program. Will begin presenting more detail in FY 2014 financial reports.*

Status Update – on Previously Reported Observations

#	Date	Observations	August '13 Status
1	Jan '13	<p>Re-engineering of internal controls has not yet been addressed within the TEAM Program.</p> <p><u>Recommendations:</u> <i>Incorporate internal controls assessment and design into applicable project plans (e.g., LOB, FSR)</i></p>	<p><i>Addressed & Monitor</i> <i>TEAM Interdependency Plan includes a placeholder for Controls. Detail project tasks will be included in the LOB and FSR MS Project Plans when developed.</i></p>
2	Jan '13	<p>Approach not formalized and timely for hiring and retention of high tech IT staff.</p> <p><u>Recommendations:</u> <i>Consider several approaches and include cost/benefit analysis.</i></p>	<p><i>Addressed & Monitor</i> <i>Approach identified, all 15 IT authorized positions under the FY12-13 biennium plan have been filled.</i></p>
3	Feb '13	<p>Project plan inconsistent with project reporting</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> ➤ <i>Update project schedules for all projects in-progress (DM, OCM, FSR) tasks and milestones.</i> ➤ <i>Consider adding Business Process Mapping activities under the LOB project implementation plan in order to track BPM/BPA project activities.</i> 	<p><i>Addressed & Monitor</i> <i>DM – updated, baseline revised</i> <i>OCM – additional updates in progress, dependent on LOB and FSR project plans</i> <i>FSR – updated through vendor contract only</i> <i>LOB – plan will be developed when contract signed, BPM process mapping completed.</i></p>

Status Update – on Previously Reported Observations

#	Date	Observations	August '13 Status
4	Feb '13	<p>TEAM Program and project staffing plan is not detailed enough</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> ➤ Document detail roles and responsibilities by each team member, including Vendor roles. ➤ Develop detailed staffing matrix for all projects using resource management plan in MS Project. 	<p><i>In progress</i></p> <ul style="list-style-type: none"> ➤ Specific project team roles and responsibilities will be completed when LOB and FSR vendor contract signed. ➤ Most resources are loaded into MS Project. Resource leveling (resolving over-allocations) will be developed when LOB and FSR vendor contract signed.
5	Feb '13	<p>Project interdependencies have not been documented</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> ➤ Develop a consolidated MS Project Plan with interdependencies identified at a high level. ➤ Establish Monthly Interdependency meetings. 	<p><i>Addressed & Monitor</i></p> <ul style="list-style-type: none"> ➤ High level Interdependency MS Project Plan developed. Critical path tasks will be identified when LOB and FSR vendor contract signed. ➤ Monthly Interdependency meetings scheduled.
6	Feb '13	<p>Financial System Replacement (FSR) contingency plan has not been developed</p> <p><u>Recommendations:</u></p> <p><i>Develop a contingency plan prior to Envisioning, with cost/benefit analysis to facilitate Go/No-Go decision.</i></p>	<p><i>Addressed & Monitor</i></p> <ul style="list-style-type: none"> ➤ Go/No Go decision will be part of the requirements phase, start date rescheduled to November 2013 with estimated duration of 5 months.

Status Update – on Previously Reported Observations

#	Date	Observations	August '13 Status
7	Feb '13	<p>Organizational Change Management project scope and plan have not been clearly identified</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> ➤ Clarify roles and responsibilities between HR, OCM, TEAM Communications Sub-Teams ➤ Consider adding HR representation to the CMT and aligning Communication and Training under Organizational Change Management Project 	<p><i>Addressed & Monitor</i></p> <ul style="list-style-type: none"> ➤ Updated OCM scope and roles approved by ESC; Project Charter and MS Project Plan will be updated. ➤ HR representation added to CMT – this part of the observation is closed.
8	Feb '13	<p>Change Management and Quality Assurance Procedures have not been finalized and published</p> <p><u>Recommendations:</u></p> <p><i>Develop and publish Program Change Management and Quality Control or QA Procedures.</i></p>	<p><i>Addressed & Monitor</i></p> <p><i>CM Procedures finalized and published, QA Plan scheduled to be completed in August.</i></p>
9	Apr '13	<p>TEAM Program Implementation timeline, LOB and FSR system implementations projects are executed concurrently</p> <p><u>Recommendations:</u></p> <p><i>Develop a MS Project Plan fully resources loaded; include major milestones and interdependencies from each key project in order to determine proper resource allocation.</i></p>	<p><i>In Progress</i></p> <p><i>Interdependency schedule with major milestones identified at a high level. Critical path tasks will be identified when LOB and FSR implementation plans are developed.</i></p>

Status Update – on Previously Reported Observations

#	Date	Observations	August '13 Status
10	Apr '13	<p>Data Management (DM) project delayed deliverables comparing timeline to baseline project plan – and inadequate deliverable acceptance documentation</p> <p><u>Recommendations:</u> <i>Compare milestone deliverables current plan/actual dates to baseline project plan – milestone delays should be highlighted in Dashboard and Status reports</i></p>	<p><i>In Progress</i></p> <ul style="list-style-type: none"> ➤ <i>Actual dates will be compared to recently updated new baseline dates. Project scope and baseline plan may be revised again when LOB and FSR vendors are on board.</i> ➤ <i>Continued organizational improvement of DM SharePoint repository. Starting with the May Invoice approval, PMO has dedicated staff to verify artifacts and approvals.</i>
11	Apr '13	<p>Financial System Replacement (FSR) SOW Overly complex and detailed requirements – SOW appears to be more aligned with requirements for custom development</p> <p><u>Recommendations:</u> <i>Reevaluate FSR implementation timeline and consider reducing scope.</i></p>	<p><i>Closed & Monitor (Note: TRS did not perceive this observation as a risk to the FSR project. Per TRS, the vendor reviewed all of the requirements as part of the negotiations and did not consider them to be either complex or custom requirements.)</i></p> <p><i>The FSR vendor contract was estimated to be signed in July 2013, however currently scheduled to be completed in September 2013.</i></p>

Activities Completed – current period

1. Attended weekly ESC and CMT meetings and Project Team Meetings including Communications sub-team meeting, Project Interdependency and FSR project meetings.
2. Continued with a detailed project management documentation review, including: overall TEAM Program Management status report, and also individual project schedules and status reports, project Action and Decision Logs and other program/project related reports.
3. Reviewed prior observations' status and related management action plans with PMO and Program Manager. Provided status update on each observation and action items to CMT, ESC and Executive Director.
4. Completed the review and analysis of TEAM Program budget tracking documentation and presented observations with specific recommendations to Finance and PMO Program Manager.
5. Attended FSR Risk Assessment review meeting and verified that all risks were logged and documented within the FSR project status report.
6. Monitored staffing and resource allocation plans, reviewed strategic planning for high tech IT staffing needs.
7. Completed the review of Data Management deliverables included in the April and May 2013 Invoices paid to Alliance. Verified evidence that each deliverable was completed and approved by management per deliverable acceptance criteria defined in the contract.

Activities for Next Period

1. Continue to attend and observe weekly Executive Steering Committee (ESC) and Core Management Team (CMT) meetings.
2. Prepare analysis of project level risk report evaluation and provide feedback to CMT and Risk Management.
3. Review and evaluate Program Quality Assurance (QA) plan and guidelines (when completed) and verify that QA standards are published and implemented.
4. Continue to review current Data Management and Program Management vendor invoice payments and deliverable acceptance approvals; document observations and review with Project Managers and PMO.
5. Review and evaluate LOB vendor selection and scoring information, including contract and other procurement documentation (when available).
6. Review and evaluate final SOW FSR vendor contract and other related procurement documentation (when available).

IPA Budget Status

IPA Financial summary status through July 31, 2013

➤ Total hours incurred	1,036
➤ Total calculated cost incurred	\$186,200
➤ Total billings for deliverables	\$160,000
➤ Variance	\$ 26,200

Tab 10

Teacher Retirement System of Texas



TEAM Program Management Update

Barbie Pearson

September 2013



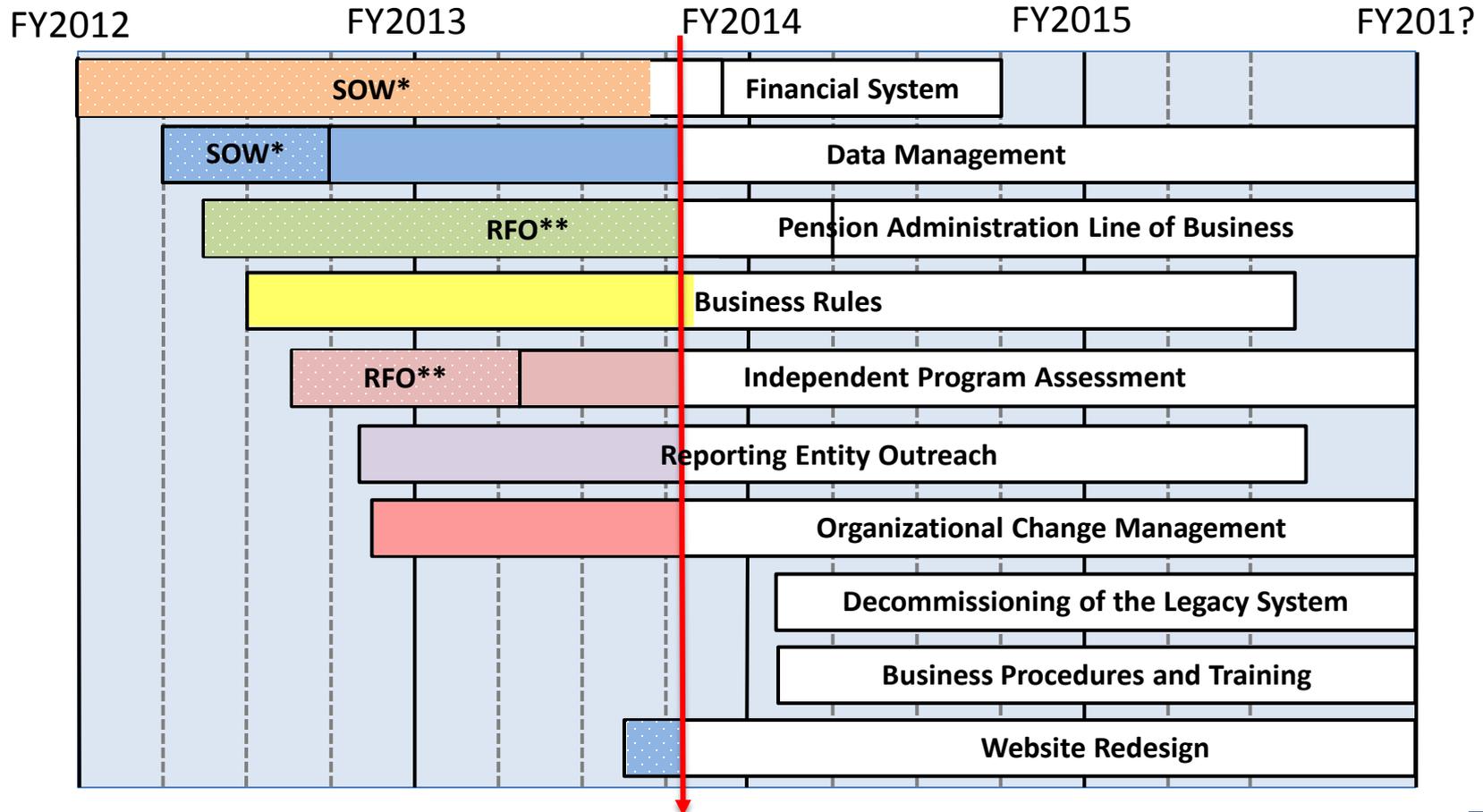
Agenda

- TEAM Program Progress
- Detailed Update on Financial System Project
- Detailed Update on the Line of Business Project
- TEAM Project Milestones
- TEAM Project Accomplishments



TEAM PROGRAM

TEAM Program Progress as presented in June



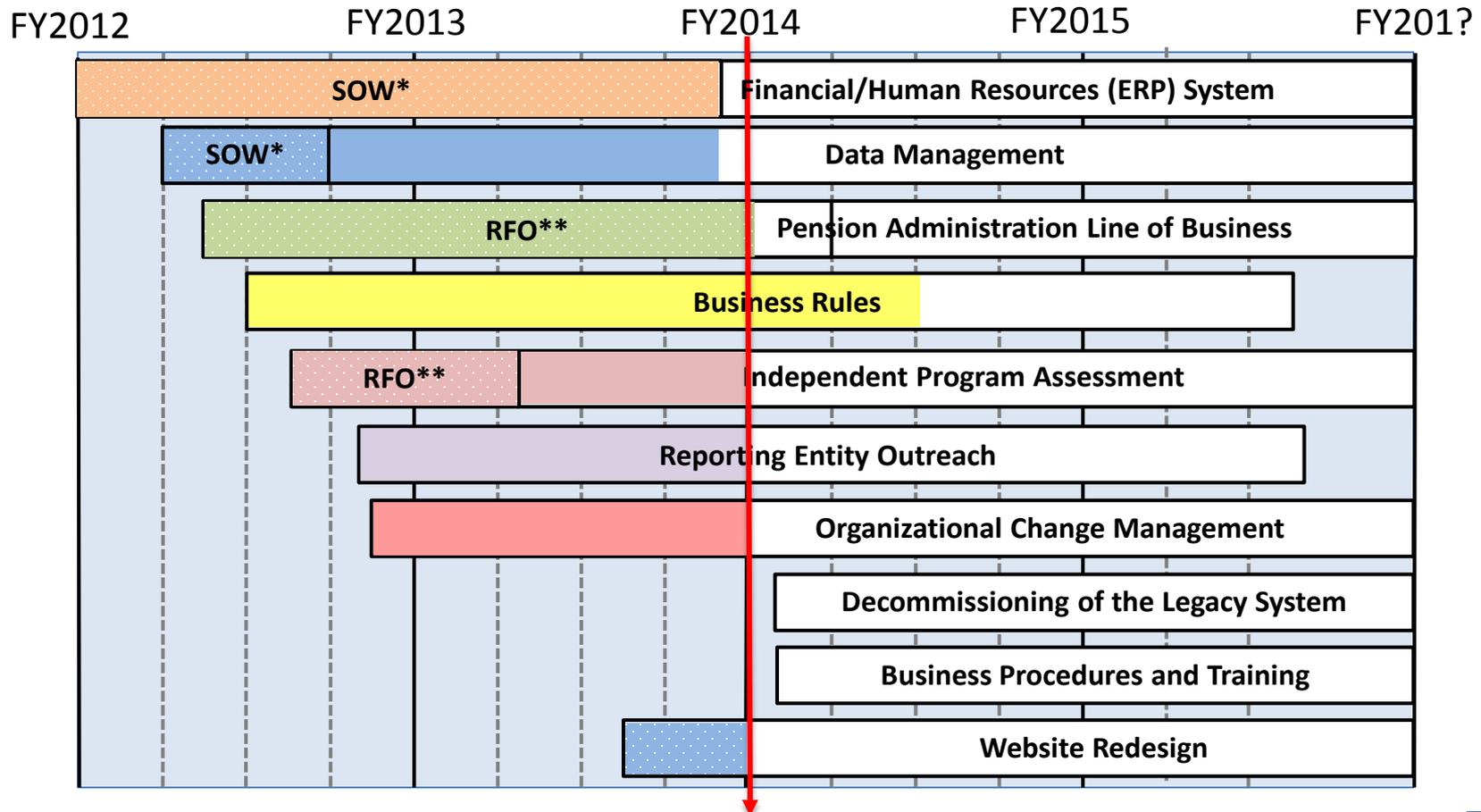
* SOW = Statement of Work
** RFO = Request for Offer

June Board Mtg



TEAM PROGRAM

TEAM Program Progress as of August 30th



* SOW = Statement of Work
 ** RFO = Request for Offer

As of August 30th

Teacher Retirement System of Texas



TEAM Program Management Update Financial System Replacement Project

Jamie Michels

September 2013



More than just a Financial System

- Budget Planning & Position Control
- Procurement & Contract Monitoring
- Cost Allocation
- Budget and CAFR Publishing
- Payroll
- Human Resources
- Employee Self Service

FSR Risk Mitigations

Consolidated Fit/Gap Analysis

- Risk: Initial proposed schedule was based on overlapping modules being implemented (a piecemeal approach). With this approach the vendor would have no incentive to control pricing for the later modules.
- Mitigation: A Consolidated Fit/Gap Analysis Phase mitigates this risk by providing TRS the opportunity to fully and concurrently evaluate all anticipated modules, develop a fit/gap analysis, determine if any customizations are necessary, and make an informed assessment prior to issuing a “go” or “no go” decision for each module. This allows TRS to negotiate final pricing from a position of knowledge, and minimizes cost increases before proceeding to the implementation phases.

FSR Risk Mitigations

Overall Project Schedule increased (29 vs. 15 months)

- Risk: Initial proposed schedule was limited in scope and did not considered adequate timing for production releases.
- Mitigation: Extended schedule better aligns with the increased scope which accurately encompasses the entire enterprise solution and reflects the true complexity of the effort. In addition it is a recommended implementation best practice to stay within a fiscal year for financials and a calendar year for human resources management.

FSR Risk Mitigations

Hardware/Software/Resources limitations:

- Risk: Longer overlap with the LOB project may have an effect with implementation of the new solution
- Mitigation: The Consolidated Fit/Gap Analysis phase will be hosted by the vendor avoiding any maintenance fees during this phase. Current negotiations take into account for additional vendor resources for the increased assessment of the technical foundation (conversion, interfaces, reports, dashboards, and forms) and we have negotiated long-term all-inclusive maintenance services to avoid any future IT resource overhead.

FSR Risk Mitigations

Overly Complex and Detailed Requirements

- Risk: SOW appears to be more aligned with requirements for custom development (as identified by BridgePoint).
- Mitigation: Out of 1,750 requirements in the SOW, 19 were identified by the FSR vendor to be custom, 220 were considered partially custom and the remaining were out-of-the-box. In addition TRS now has the opportunity, due to the Consolidated Fit/Gap Analysis phase, to perform a cost benefit analysis on any requirement that is not out-of-the-box and make a determination whether they want to proceed with the requirement. This will allow TRS to minimize customizing a solution and incurring additional costs.

FSR Risk Mitigations

Utilization of New Software Version

- Risk: TRS' technical staff had a concern with the selection of vendor solution due to the use of older versions of third party technologies.
- Mitigation: Implementing the vendor's latest version includes integration with TRS' existing NeoGov and FileNet technology avoiding re-training and redundant costs.

Next Steps for FSR Project

- Organizational Change Management (OCM) – In progress
- Business process review – In progress
- Implementation kickoff – 1st Quarter of FY 2014

Teacher Retirement System of Texas



TEAM Program Management Update Line of Business Proof of Concept

David Cook

September 2013



LOB Proof of Concept Purpose

- Assess vendor's solution and their delivery team
- Make a Go/No-Go decision
- Prepare TRS staff to work with the vendor when they begin the project

LOB Proof of Concept Objectives

- Interact with the vendor's key personnel
- Gain hands-on experience with the vendor's requirements gathering methodology
- Explore vendor's development methodology, tools, and architecture of the solution
- Clarify outstanding items from vendor's RFO response
- Develop a better understanding of the vendor's solution to help prepare TRS for working with them

LOB Proof of Concept Structure

- Business Track
 - Retirement
 - Health Care
 - Employer Setup
 - 1099 Production
- Technical Track
- Project Management Track

LOB Proof of Concept Results and Lessons Learned

- POC was successful – over 50 TRS Business and Technical staff participated
- Business staff saw how they could accomplish their job with vendor’s solution
- Business and technical staff buy-in to vendor’s solution and key personnel– we learned about their methodology and technology
- Important to review both TRS vision and requirements with staff
- Staff demo of vendor’s solution

Proof of Concept Decision

- Unanimous GO decision on vendor's solution
- Unanimous GO decision on all of vendor's key staff

Teacher Retirement System of Texas



TEAM Program Management Update Milestones and Accomplishments

Barbie Pearson

September 2013



TEAM PROGRAM

TEAM Project: Milestones

Planned Milestones (from June Board Meeting)	Planned Date	Actual Date	Status
Complete Line of Business (LOB) RFO Finalists Presentation and Demos	6/28/2013	6/26/2013	Ahead of Schedule
Complete Priority 1 Business Rules	7/15/2013	7/12/2013	Ahead of Schedule
Begin LOB Proof of Concept	7/31/2013	7/29/2013	Ahead of Schedule
Award Enterprise Financial System Replacement Contract	7/1/2013		Behind Schedule

Upcoming Milestones	Previous Planned Date	Current Planned Date	Status
Complete LOB Vendor Negotiations	10/21/2013	10/21/2013	On Schedule
Start Pension LOB Project	11/4/2013	11/4/2013	On Schedule
Start Enterprise Financial System Replacement Project	9/1/2013	11/4/2013	Behind Schedule

Additional TEAM Project Accomplishments Since Last Board Meeting

- Research of other Public Pension and Private websites complete
- Data Management Project Schedule revisions complete to include the Data Conditioning schedule
- Process Mapping for current processes complete
- Key Internal Controls identified, documented and mapped to TEAM commitments/requirements
- Data Conditioning team completed data conditioning on all data reports received from ACI

TEAM Project Accomplishments (continued)

- Business Rules Project completed Phase 1. Team has begun writing Phase 2 rules.
- Completed Pension Line of Business (LOB) Proof of Concept
- Sent LOB Vendor an Intent to Award Letter

Tab 11

**TEACHER RETIREMENT SYSTEM OF TEXAS
BOARD OF TRUSTEES
AUDIT COMMITTEE**

MEETING AGENDA

**September 13, 2013 – 8:00 a.m.
TRS East Building – 5th Floor, Boardroom**

The Audit Committee will meet at 8:00 a.m. on Friday, September 13, 2013, in the 5th Floor Boardroom and conclude at approximately 9:30 a.m.

The State Auditor's Office will present their plan to conduct the Audit of TRS Comprehensive Annual Financial Report for Fiscal Year 2013.

Internal Audit will present the Fraud Risk Identification and Prevention Controls Audit, the Semi-Annual Testing of Benefit Payments, the Investment Compliance Program Self-Assessment, the Quarterly Investment Testing, the Information Security Follow-Up Audit, the Status of Prior Audit and Consulting Recommendations, and the Quarterly Internal Audit Administrative Reports.

The Committee will be briefed on Section 825.115 of the Texas Government Code regarding closed meetings with the retirement system's internal or external auditors which became effective September 1, 2013.

The Committee will consider a recommendation to the Board of Trustees regarding the proposed Audit Plan for Fiscal Year 2014.

Tab 12

Teacher Retirement System of Texas



Cash Disbursements ***June and July, 2013***

Don Green, Chief Financial Officer

Board of Trustees Meeting
September 13, 2013



Financial Statements

June and July 2013 Cash Disbursements Pension Trust Fund

To: TRS Board of Trustees
Brian Guthrie, Executive Director
Ken Welch, Deputy Director

From: Don Green, Chief Financial Officer

Date: September 13, 2013

Section 825.314(b) of the Texas Government Code requires the staff of the retirement system to report to the board at each board meeting the amounts and uses since the preceding board meeting of any money expended by the system from the Pension Trust Fund along with an explanation of why the amounts were needed to perform the fiduciary duties of the board. The 82nd Texas State Legislature adopted provisions allowing operating expenses of the system to be paid out of the Pension Trust Fund. On June 8, 2012, the board approved the Administrative Operations budget for fiscal year 2013.

Total Administrative Expenses (excluding TEAM Program) of \$6.1 million were disbursed in July, 2013. *Salaries and Other Personnel Costs* were \$4.2 million, *Professional Fees* were \$900 thousand, and *Other Operating Expenses* were \$1.0 million. Item of interest include \$719 thousand in professional fees and services, \$158 thousand for building rent, and \$306 thousand for July's member newsletter.

Total Administrative Expenses (excluding TEAM Program) of \$4.5 million were disbursed in June, 2013. *Salaries and Other Personnel Costs* were \$3.9 million, *Professional Fees* were \$7 thousand, *Capital Projects* were \$55 thousand, and *Other Operating Expenses* were \$0.5 million. Item of interest includes \$158 thousand for building rent.

TEAM Program Expenses of \$578 thousand were disbursed in July, 2013. *Salaries and Other Personnel Costs* were \$168 thousand, *Professional Fees* were \$222 thousand, and *Other Operating Expenses* were \$188 thousand. Items of interest include \$124 thousand for program management services and \$165 thousand for wireless equipment upgrades.

TEAM Program Expenses of \$581 thousand were disbursed in June, 2013. *Salaries and Other Personnel Costs* were \$143 thousand, *Professional Fees* were \$182 thousand, and *Other Operating Expenses* were \$256 thousand. Items of interest include \$116 thousand for program management services and \$95 thousand for communications equipment upgrade.

Financial Statements



Pension Trust Fund Cash Disbursements - FY 2013 YTD for the Month Ended July 31

	<u>2013</u>		<u>2012</u>
September	\$ 6,956,188		\$ 6,793,546
October	7,527,488		6,450,857
November	7,342,717		4,929,626
December	5,384,514		5,984,486
January	13,588,764 (a)		12,409,354
February	5,410,553		5,413,959
March	7,046,291		5,359,992
April	5,272,203		5,071,073
May	6,204,350		5,398,688
June	5,034,559		5,264,585
July	6,663,591		6,285,330
Totals	<u>\$ 76,431,218 (b)</u>		<u>\$ 69,361,496 (c)</u>

(a) Includes \$7 million in incentive compensation pay.

(b) Includes reimbursements of \$438,903.40

(c) Cash Disbursements totaled \$74,094,530 at August 31, 2012.

TEAM Administrative Expenses - FY 2013 YTD for the Month ended July 31

