ND STATE INVESTMENT BOARD MEETING

Friday, October 23, 2015, 8:30 a.m.
State Capitol, Peace Garden Room
Bismarck, ND

I. APPROVAL OF AGENDA

II. APPROVAL OF MINUTES (September 25, 2015)

III. INVESTMENTS

A. PIMCO Capital Markets Update - Mr. Crescenzi, Ms. King, Ms. Wu (enclosed) (45 min)
B. Board Education: Monthly Performance Reports - Mr. Hunter (enclosed) (20 min)
C. Board Education: Industry Conferences and Fiduciary Duty (enclosed) - Mr. Hunter (15 min)
D. Litigation Update: WGI Trading - Ms. Flanagan (enclosed) (10 min)

========================== Break from 10:00 to 10:15 a.m. ==========================

E. Litigation Update: GM Bankruptcy - Ms. Murtha (informational) (15 min) **(Board Action)**
F. Litigation Monitoring: Policy Proposal - Mr. Hunter (enclosed) (15 min) **(Board Action)**

IV. GOVERNANCE

A. SIB Client Survey - Mr. Hunter (enclosed) (10 min) **(Board Acceptance)**
B. SIB Audit Committee Report - Ms. Miller Bowley (enclosed) (10 min) **(Board Acceptance)**
C. Annual Evaluation of RIO vs. Policy Ends - Mr. Hunter (enclosed) (10 min) **(Board Acceptance)**

V. QUARTERLY MONITORING - 9/30/15 (enclosed). (Board Acceptance) (15 min)

A. Executive Limitations/Staff Relations - Mr. Hunter
B. Budget/Financial Conditions - Ms. Flanagan
C. Investment Program - Mr. Schulz
D. Retirement Program - Ms. Kopp
E. Watch List - Mr. Schulz

VI. OTHER

SIB Audit Committee meeting - November 19, 2015, 3:00 p.m. - Peace Garden, State Capitol
SIB meeting - November 20, 2015, 8:30 a.m. - Peace Garden, State Capitol

VII. ADJOURNMENT.

Any individual requiring an auxiliary aid or service, please contact the Retirement and Investment Office
(701) 328-9885 at least three (3) days prior to the scheduled meeting.

NORTH DAKOTA STATE INVESTMENT BOARD
MINUTES OF THE
SEPTEMBER 25, 2015, BOARD MEETING

MEMBERS PRESENT:
Drew Wrigley, Lt. Governor, Chair
Mike Sandal, Vice Chair
Jeff Engleson, Deputy Land Commissioner
Mike Gessner, TFFR Board
Adam Hamm, Insurance Commissioner (TLCF)
Rob Lech, TFFR Board
Mel Olson, TFFR Board
Kelly Schmidt, State Treasurer
Yvonne Smith, PERS Board
Cindy Ternes, WSI designee
Tom Trenbeath, PERS Board

STAFF PRESENT:
Eric Chin, Investment Analyst
Connie Flanagan, Fiscal & Invt Op Mgr
Bonnie Heit, Assist to the SIB
David Hunter, ED/CIO
Fay Kopp, Dep ED/CRA
Terra Miller Bowley, Supvr Audit Services
Cody Schmidt, Compliance Officer
Darren Schulz, Dep CIO
Susan Walcker, Invt Acct

GUESTS PRESENT:
Jeff Diehl, Adams Street Partners
Levi Erdmann, Land Dept.
Miguel Gonzalo, Adams Street Partners
Jan Murtha, Attorney General's Office

CALL TO ORDER:

Lt. Governor Wrigley called the State Investment Board (SIB) meeting to order at 8:30 a.m. on Friday, September 25, 2015, at the State Capitol, Ft. Union Room, Bismarck, ND.

AGENDA:

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. TERNES AND CARRIED ON A VOICE VOTE TO ACCEPT THE AGENDA FOR THE SEPTEMBER 25, 2015, MEETING AS DISTRIBUTED.

AYES: TREASURER SCHMIDT, MR. GESSNER, COMMISSIONER HAMM, MS. TERNES, MR. ENGLESON, MS. SMITH, MR. LECH, MR. SANDAL, MR. TRENBEATH, MR. OLSON, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

MINUTES:

IT WAS MOVED BY MR. LECH AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO APPROVE THE AUGUST 28, 2015, MINUTES AS DISTRIBUTED.

AYES: MS. SMITH, MR. SANDAL, MR. OLSON, MR. GESSNER, MR. LECH, MR. TRENBEATH, MS. TERNES, COMMISSIONER HAMM, MR. ENGLESON, TREASURER SCHMIDT, AND LT. GOVERNOR WRIGLEY
NAYS: NONE

MOTION CARRIED

INVESTMENTS:

Investment Fees/Expenses – Mr. Hunter reviewed investment management fees and expenses for fiscal years 2013, 2014, and 2015. Investment management fees and expenses as a percent of average assets under management declined from 0.65% in fiscal year 2013 to 0.51% in fiscal 2014 to 0.47% in fiscal 2015.

The decline of 14 basis points in fiscal 2014 and 3 basis points in fiscal 2015 realized annual incremental savings of approximately $17 million based on $10 billion of average assets under management.

Staff also expects additional savings will be realized in timber management incentive fees, Novarca investment management fee reviews, and securities lending.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. LECH AND CARRIED ON A VOICE VOTE TO ACCEPT THE INVESTMENT FEES/EXPENSES REPORT FOR FISCAL YEARS ENDING JUNE 30, 2013, 2014, and 2015.

AYES: MR. TRENBEATH, TREASURER SCHMIDT, MR. OLSON, MR. ENGLESON, MR. LECH, MR. SANDAL, COMMISSIONER HAMM, MR. GESSNER, MS. SMITH, MS. TERNES, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

Novarca Fee Review – Since February 17, 2015, Novarca's initial overview of the SIB portfolio showed fees already at or among the lowest offered by its managers. Novarca's initial review included the following managers: LSV Asset Management, Epoch Investment Partners, Capital Guardian Trust Company, Wellington Trust Company, and the private equity portfolios. LSV Asset Management's review has been completed and annual savings of $228,000 or 7 basis points was realized to better align with best in market for the international equity strategy. Epoch Investment Partners review has also been completed and findings show the SIB had best terms for the size of the international equity mandate. An analysis of transaction costs revealed less than efficient trading on a low turnover portfolio realizing market size of the strategy prohibits additional agile executions. Staff will continue to monitor transaction costs.

Lt. Governor Wrigley thanked staff for all of their efforts in managing the process to realize savings for the Pension Trust and Insurance Trust.

Private Equity Update – The Pension Trust's private equity portfolio currently has $540 million in commitments and returns need to be enhanced by promoting the development of strategic partnerships to leverage a "best ideas" approach while increasing pricing leverage. The Adams Street Partnerships have generally performed in line with expectations while the non-Adams Street Partnerships have not.

Asset and Performance Overview – Mr. Hunter updated the SIB on the status of the portfolios they manage on behalf of their clients as of June 30, 2015. Assets under management grew by approximately 14 percent or $1.3 billion. The SIB's client assets, based on unaudited valuations, currently exceed $10.7 billion. The Pension Trust posted a net return of 3.5 percent with gains of $164 million. The Insurance Trust generated a net return of 2.3 percent with gains of $58 million.

The Legacy Fund’s net return was 3.3 percent and assets increased by $1.1 billion.
Adams Street Partners – Adams Street representatives provided an overview of the firm, history and overview of private markets, and status of the portfolios they currently manage on behalf of the SIB.

Adams Street Partners also reviewed a new fund in which they are currently accepting commitments.

The Board recessed at 10:07 a.m. and reconvened at 10:22 a.m.

Private Equity Recommendation – Staff recommends up to a $30 million commitment to the new Adams Street 2015 Global Fund and secondly to engage Callan to perform a private equity manager search subject to successful contract negotiations. Staff noted that the SIB clients within the $4.8 billion Pension Trust currently have a 5 percent (or $240 million) target allocation to private equity versus an actual allocation of approximately $180 million. Staff has reviewed the recommendation with Callan who confirms staff’s recommendation to rebuild the client’s private equity allocation using Adams Street Partners and one or two other strategic partners.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. SANDAL AND CARRIED ON A ROLL CALL VOTE TO ACCEPT STAFF RECOMMENDATION TO ENHANCE PRIVATE EQUITY.

AYES: MR. ENGLESON, TREASURER SCHMIDT, MR. SANDAL, COMMISSIONER HAMM, MR. OLSON, MS. TERNES, MR. GESSNER, MR. TRENBEATH, MR. LECH, MS. SMITH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

BOARD EDUCATION: – Mr. Hunter reviewed educational opportunities, which board members have attended.

The board requested educational opportunities that staff have attended.

MONITORING REPORTS:

Ms. Flanagan reviewed the following compliance reports for Fiscal Year 2015 from the SIB investment managers; Exceptions to Investment Guidelines, Certification of Compliance with Investment Guidelines, Audit and Internal Control (SSAE 16) reports, and Form ADV Part 1, 2A, and 2B.

The Board requested a generic version of an ADV form.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. LECH AND CARRIED ON A VOICE VOTE TO ACCEPT THE MONITORING REPORTS.

AYES: MR. GESSNER, MR. ENGLESON, MS. SMITH, MS. TERNES, TREASURER SCHMIDT, MR. LECH, COMMISSIONER HAMM, MR. OLSON, MR. TRENBEATH, MR. SANDAL, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

The board also received the final 2013-15 biennium budget report for their reference.

Mr. Hunter also provided a staff update. Efforts are still ongoing to fill the Data Processing Coordinator position, which has been vacant since May 29, 2015. In the interim, suggestions made by the board were to possibly outsource some of the duties or look into the State Government Student Internship Program.

IT WAS MOVED BY TREASURER SCHMIDT AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO ACCEPT THE 2013-15 BUDGET REPORT AND STAFF REPORT.

AYES: MR. OLSON, MR.TRENBEATH, MR. ENGLESON, MR. GESSNER, COMMISSIONER HAMM, MS. SMITH, MR. SANDAL, TREASURER SCHMIDT, MS. TERNES, MR. LECH, AND LT. GOVERNOR WRIGLEY
NAYS: NONE
MOTION CARRIED

OTHER:

The next scheduled SIB Audit Committee meeting is September 25, 2015, at 1:00 p.m. in the Ft. Union Room.

The next scheduled SIB meeting is October 23, 2015, at 8:30 a.m. in the Peace Garden Room.

ADJOURNMENT:

With no further business to come before the SIB, Lt. Governor Wrigley adjourned the meeting at 11:01 a.m.

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Lt. Governor Wrigley, Chair
State Investment Board

____
Bonnie Heit
Assistant to the Board

PIMCO

Your Global Investment Authority

Strategy Review

North Dakota State Investment Board

23 October 2015

Morningstar Awards 2013

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The Morningstar Fixed-Income Fund Manager of the Year award (PIMCO Income, 2013) is based on the strength of the manager, performance, strategy and firm's stewardship. Morningstar Awards 2013©. Morningstar, Inc. All Rights Reserved. Awarded to Dan Ivascyn and Alfred Murata for U.S. Fixed Income Fund Manager of the Year.

Biographical information

Tony Crescenzi

Mr. Crescenzi is an executive vice president, market strategist and generalist portfolio manager in the Newport Beach office. He is also a member of the Investment Committee. Prior to joining PIMCO in 2009, he was chief bond market strategist at Miller Tabak, and worked for both Lehman Brothers and Prudential Bache. Mr. Crescenzi has written five books, including "The Strategic Bond Investor" and "Beyond the Keynesian Endpoint." He regularly appears on CNBC and Bloomberg television and in financial news media. Mr. Crescenzi taught in the executive MBA program at Baruch College from 1999-2009. He has 32 years of investment experience and holds an MBA from St. John's University and an undergraduate degree from the City University of New York.

Stephanie L. King, CFA

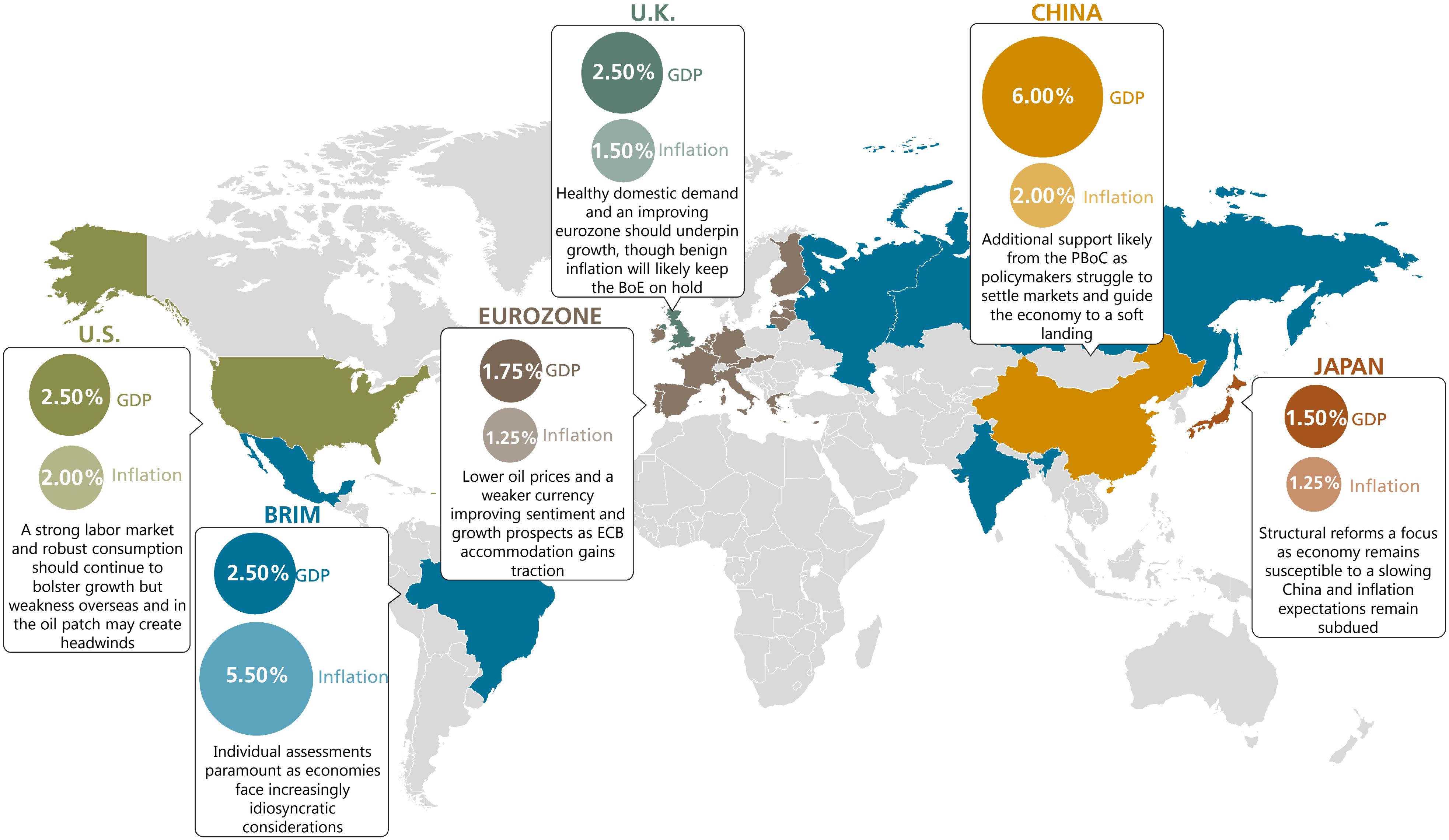
Ms. King is an executive vice president, head of the U.S. public client practice and an account manager in the Newport Beach office, focusing on institutional investors within the public sector. Previously at PIMCO, she worked with a variety of institutional client types and headed the U.S. corporate client practice. Additionally, she led the firm’s global recruiting function as part of PIMCO’s business management group and worked on a variety of talent management initiatives. She currently serves on the steering committee for PIMCO’s global inclusion, diversity and culture initiative. Prior to joining PIMCO in 2001, she was with Morgan Stanley, Blue Capital Management and Bain & Company. She has 17 years of investment experience and holds an MBA from Stanford University Graduate School of Business and an undergraduate degree from the Wharton School of the University of Pennsylvania.

Yinyin Wu

Ms. Wu is an account manager in the New York office, focusing on institutional client servicing. Prior to joining PIMCO in 2014, she worked in the capital markets group at Credit Suisse, helping corporations execute liability management transactions. She also covered technology companies in Credit Suisse’s investment banking group, advising them on capital raising and mergers and acquisitions. She has six years of investment experience and holds an MBA from the Wharton School and a master's degree in international studies from the Lauder Institute of the University of Pennsylvania. She also received an undergraduate degree from the University of Pennsylvania.

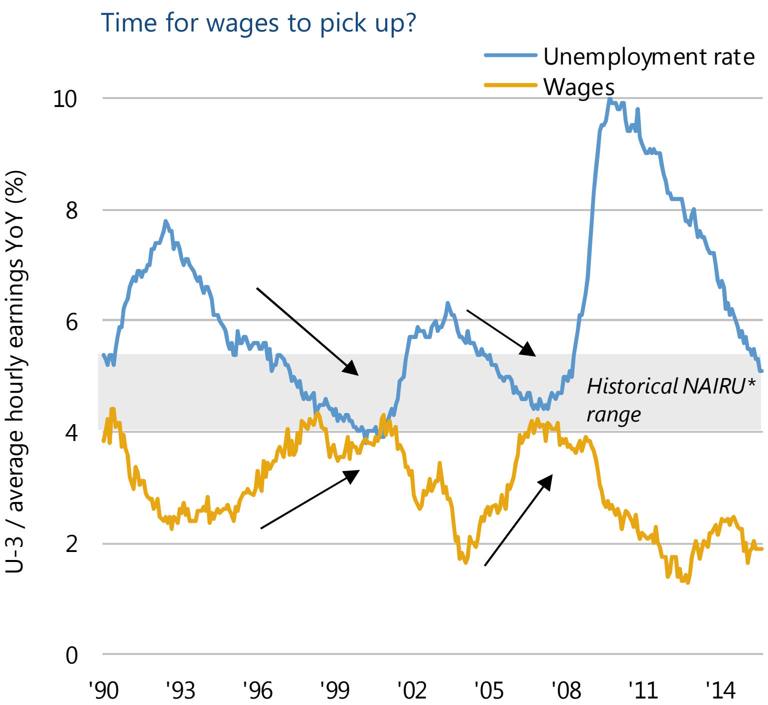
Cyclical outlook

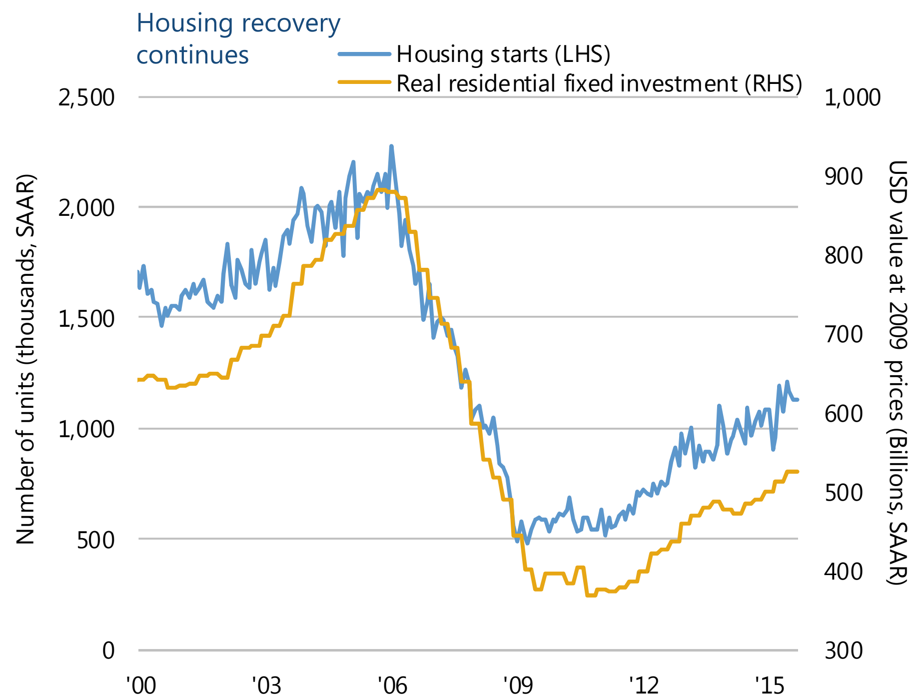
PIMCO's cyclical outlook



PIMCO forecast as of 22 September 2015
BRIM is Brazil, Russia, India and Mexico
Real GDP and inflation projections reflect the midpoints of PIMCO's forecasts for the four quarters ending Q3 2016

U.S.: Domestic engines of growth continue to show progress





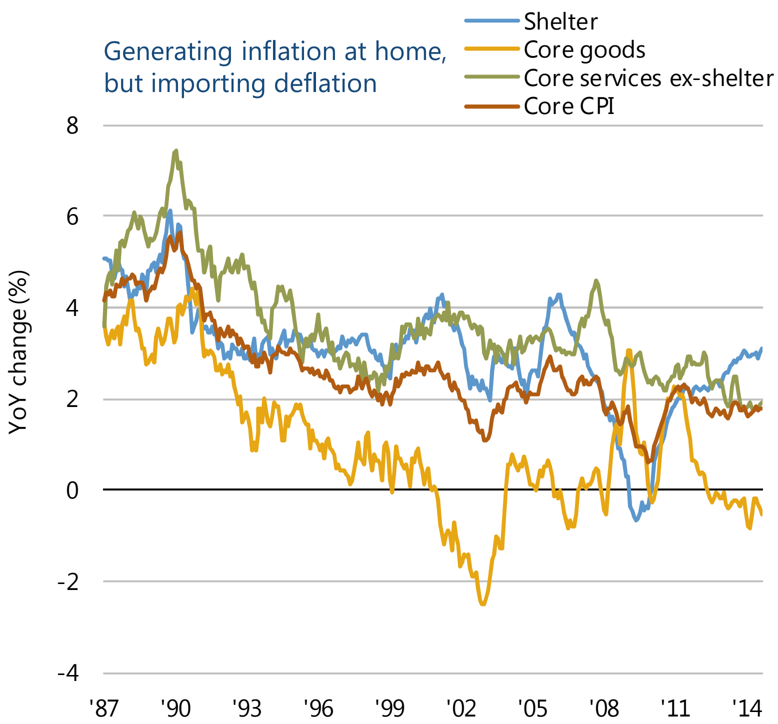
- The unemployment rate is reaching the range where wage pressures have built historically

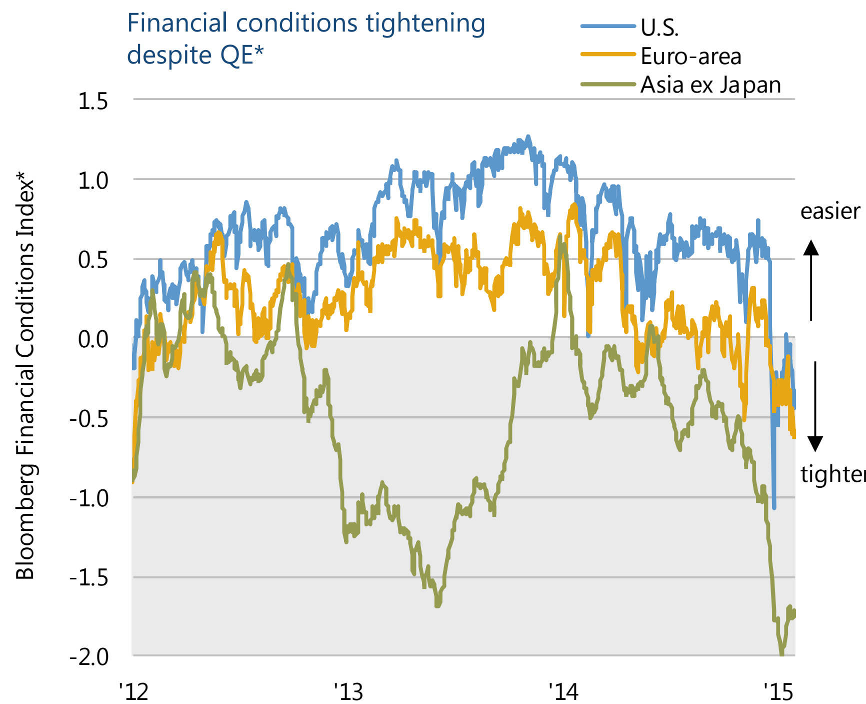
- Momentum in the housing market should continue amid pent-up demand and historically low mortgage rates

A healthy labor market and healing housing sector should support growth

As of 30 September 2015
SOURCE: Bloomberg, PIMCO
* NAIRU represents the Non-Accelerating Inflation Rate of Unemployment.

U.S.: International factors have held the Fed back





- Core goods prices have been weighed down by the strong dollar, but domestic components (e.g., rent) likely to increase
- The tightening in domestic and global financial conditions has contributed to Fed caution

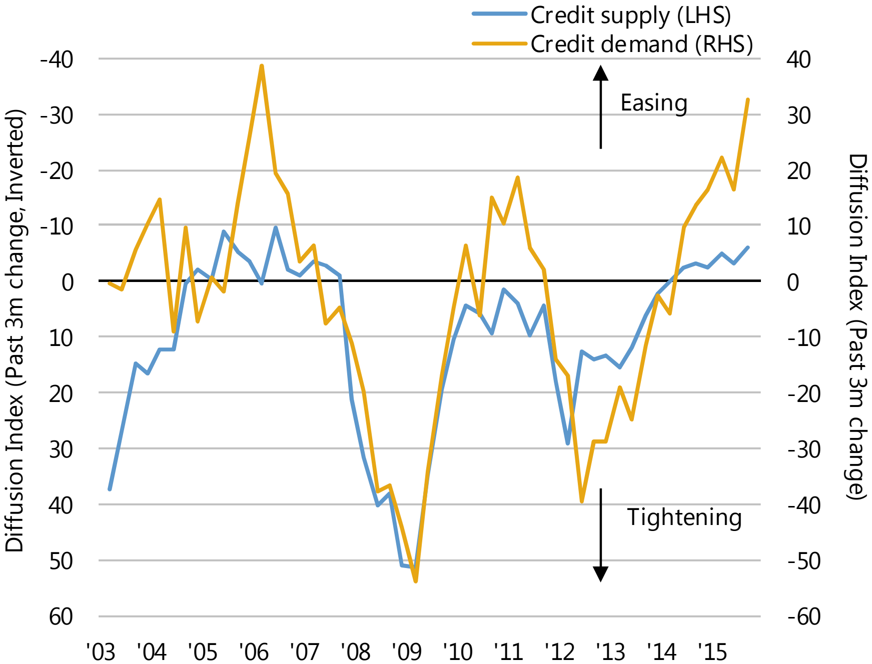
The Fed wants to move off zero soon but is wary of spillover risks emanating from abroad

As of 30 September 2015. SOURCE: Bloomberg, PIMCO

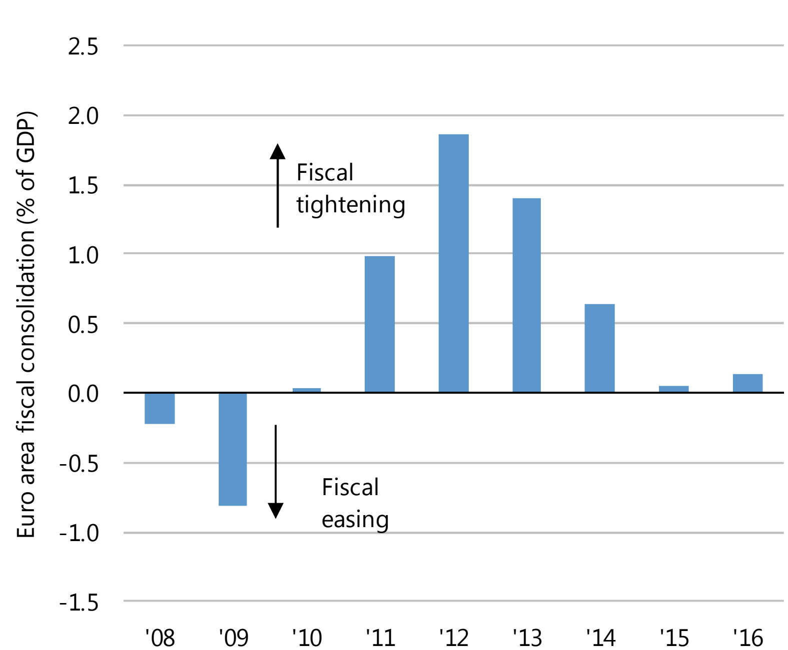
* The Bloomberg Financial Conditions indices track the overall level of financial stress in money, bond, and equity markets to help assess the availability and cost of credit. A positive value indicates accommodative financial conditions, while a negative value indicates tighter financial conditions relative to pre-crisis norms.

Eurozone: Growth prospects brightening amid ECB QE

European credit easier to come by*



Addition by the elimination of subtraction



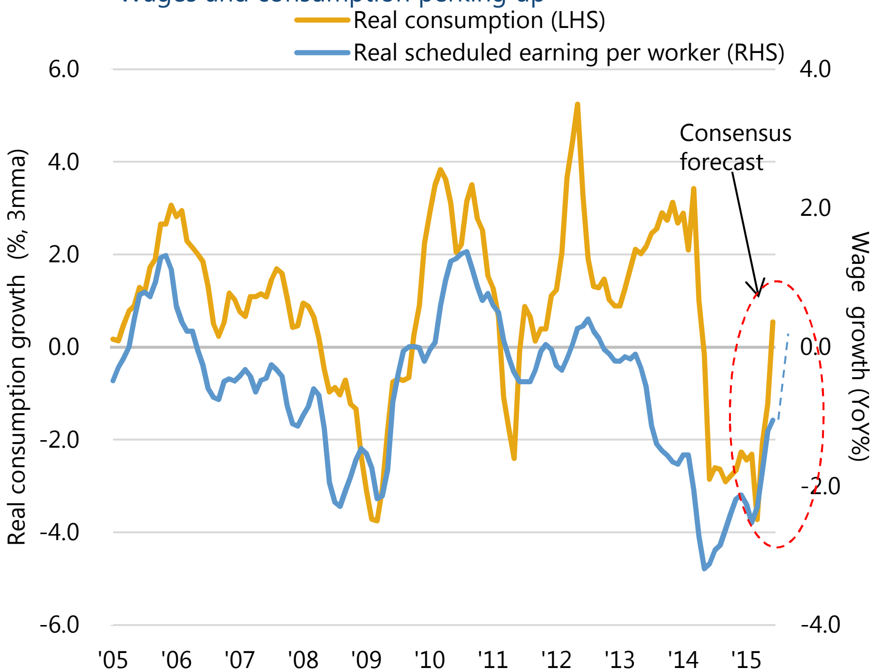
- The impact of ECB accommodation is visible in a marked improvement in credit conditions
- Over the cyclical horizon euro area austerity will finally be less of a drag than in recent years

Tailwinds from low oil prices and a weaker currency should support demand, while fiscal policy moves back to neutral

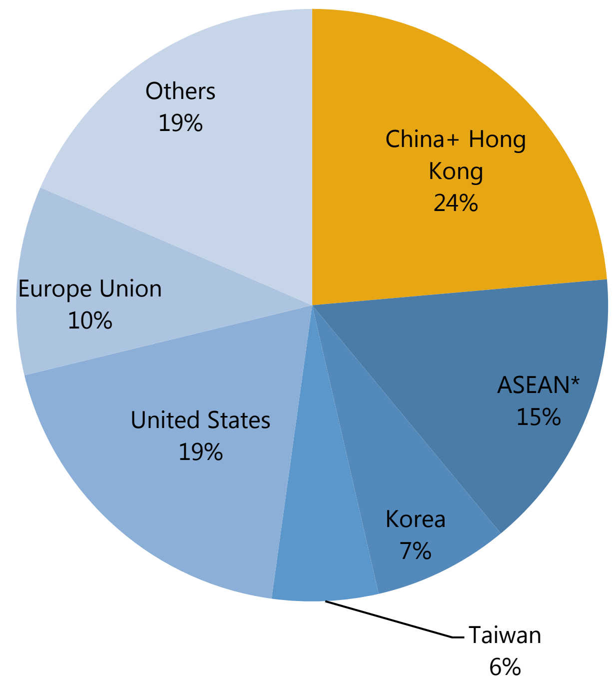
As of 30 September 2015
SOURCE: PIMCO, Eurostat, European Commission, IMF, National Governments, Bloomberg.
* From ECB Euro Area Bank Lending Survey of credit standards and conditions at 120 euro area banks.

Japan: Fragile recovery still faces hurdles

Wages and consumption perking up



Lots of exposure to Chinese demand

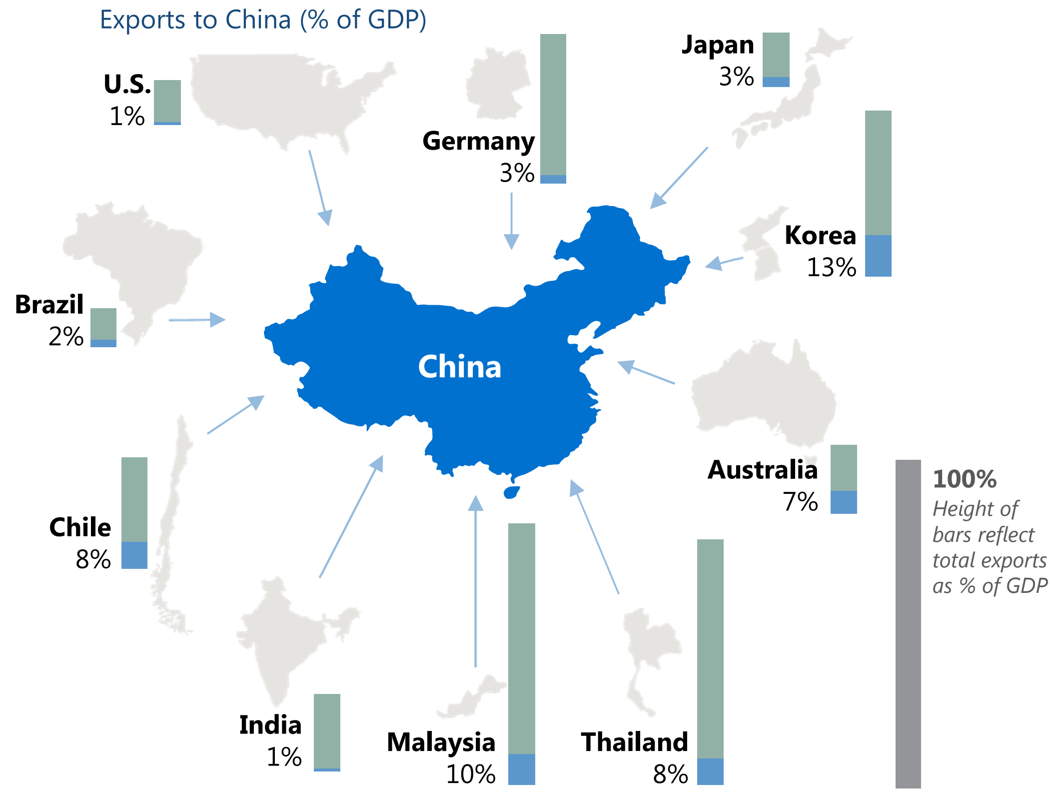


- Japan's wages and consumption are showing signs of recovery following a VAT hike-driven swoon
- Japan's export profile leaves it susceptible to the slowdown in China

Signs of improvement in cyclical growth, but policymakers likely to remain accommodative given risks from abroad

As of 30 September 2015
SOURCE: Bloomberg, PIMCO
* Association of Southeast Asian Nations

China: Concerns over slowdown and policymakers' effectiveness build

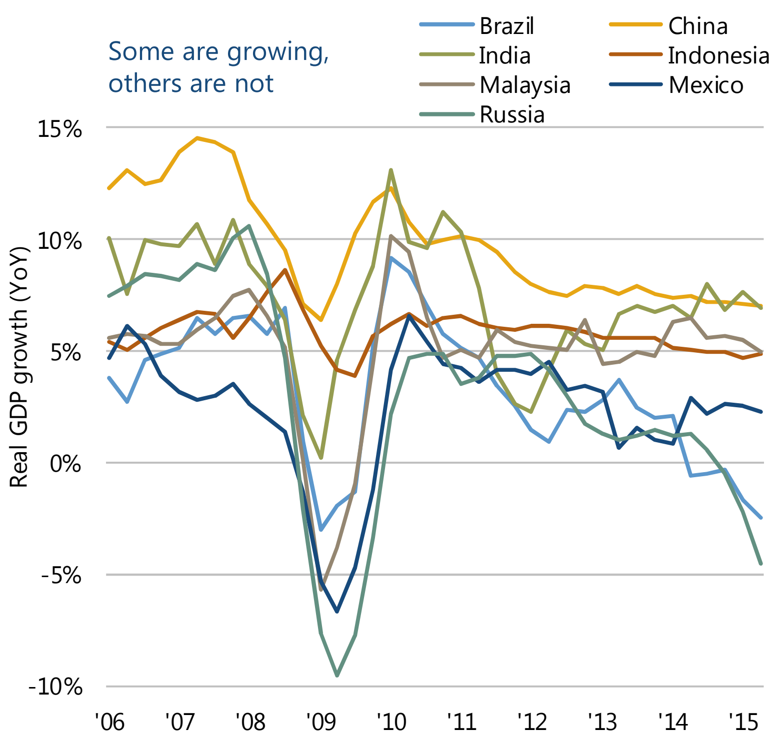


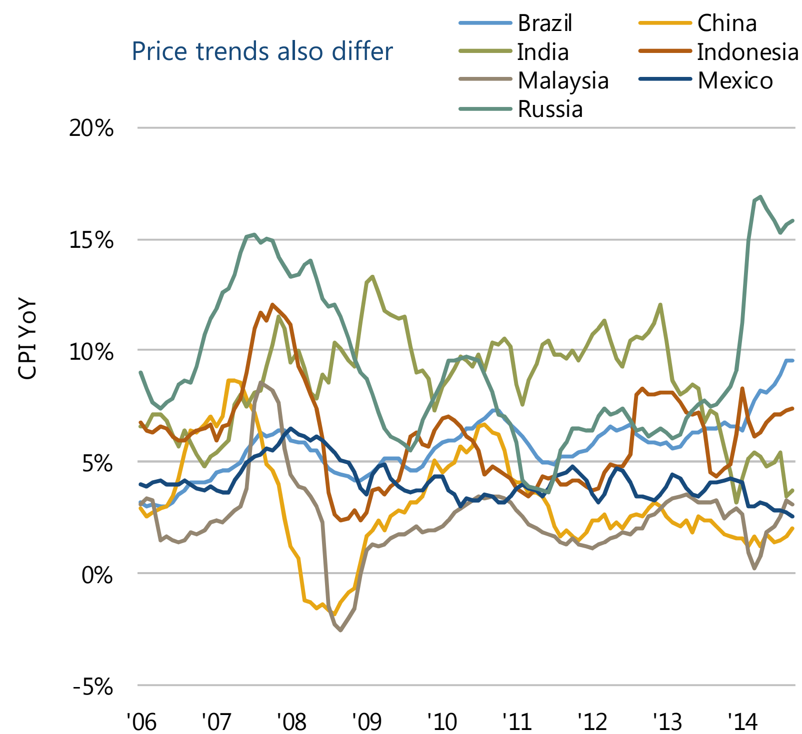
- Regardless of what the "real" growth rate is, China has been slowing for some time
- Exposures to China vary depending on geography and the extent of commodity production

Chinese policymakers recognize the need to do more to support growth, but skepticism has risen over implementation

As of 30 September 2015. Countries not drawn to scale.
SOURCE: Bloomberg, HAVER, PIMCO
* The PIMCO monthly GDP Estimate uses a weighted average of underlying economic indicators such as bank loans, railway, electricity production, and others.

Emerging markets: Growth and inflation dynamics are increasingly diverse





- The economic growth landscape is mixed, with idiosyncratic factors driving divergences
- Inflation is falling in many EMs, but outliers such as Brazil and Russia highlight dispersion

Rising concerns over EM growth have created pockets of opportunity across the diverse universe

As of 30 September 2015
SOURCE: HAVER, PIMCO

PIMCO Cyclical Forum economic forecasts

	REAL GDP		HEADLINE INFLATION[4]	
	LAST 12 MONTHS[1]	**PIMCO FORECAST Q3 ′15 – Q3 ′16**	**LAST 12 MONTHS[1]**	**PIMCO FORECAST Q3 ′15 – Q3 ′16**
U.S.	2.7%	2.25% to 2.75%	1.8%	1.75% to 2.25%
Eurozone	1.5%	1.5% to 2.0%	0.2%	1.0% to 1.5%
U.K.	2.6%	2.25% to 2.75%	0.0%	1.25% to 1.75%
Japan	0.8%	1.25% to 1.75%	0.6%	1.0% to 1.5%
China	7.0%	5.5% to 6.5%	1.5%	1.5% to 2.5%
BRIM[2]	0.3%	2.0% to 3.0%	8.4%	5.0% to 6.0%
World[3]	**2.7%**	**2.5% to 3.0%**	**2.1%**	**2.0% to 2.5%**

As of 22 September 2015
SOURCE: Bloomberg, PIMCO calculations
Real GDP and inflation projections represent PIMCO's forecasts for the four quarters ending Q3 2016

1 Last 12 months as of 30 June 2015
2 Brazil/Russia/India/Mexico
3 World is weighted average sum of countries listed in table above
4 The U.S. forecast is for core CPI and Japan's forecast reflects CPI ex-fresh food and adjusted for the VAT change

Secular outlook

PIMCO's Secular Outlook
The New Neutral Revisited

Growth
Cautiously optimistic as the world has learned to live with leverage

Inflation
Deflation has been averted, but limited room to maneuver in the event of a downturn

Financial system
Banks are more stable, but the broader system may be more susceptible to temporary dislocations

Energy revolution
Positive in aggregate, but the transition from scarcity to abundance will create winners and losers

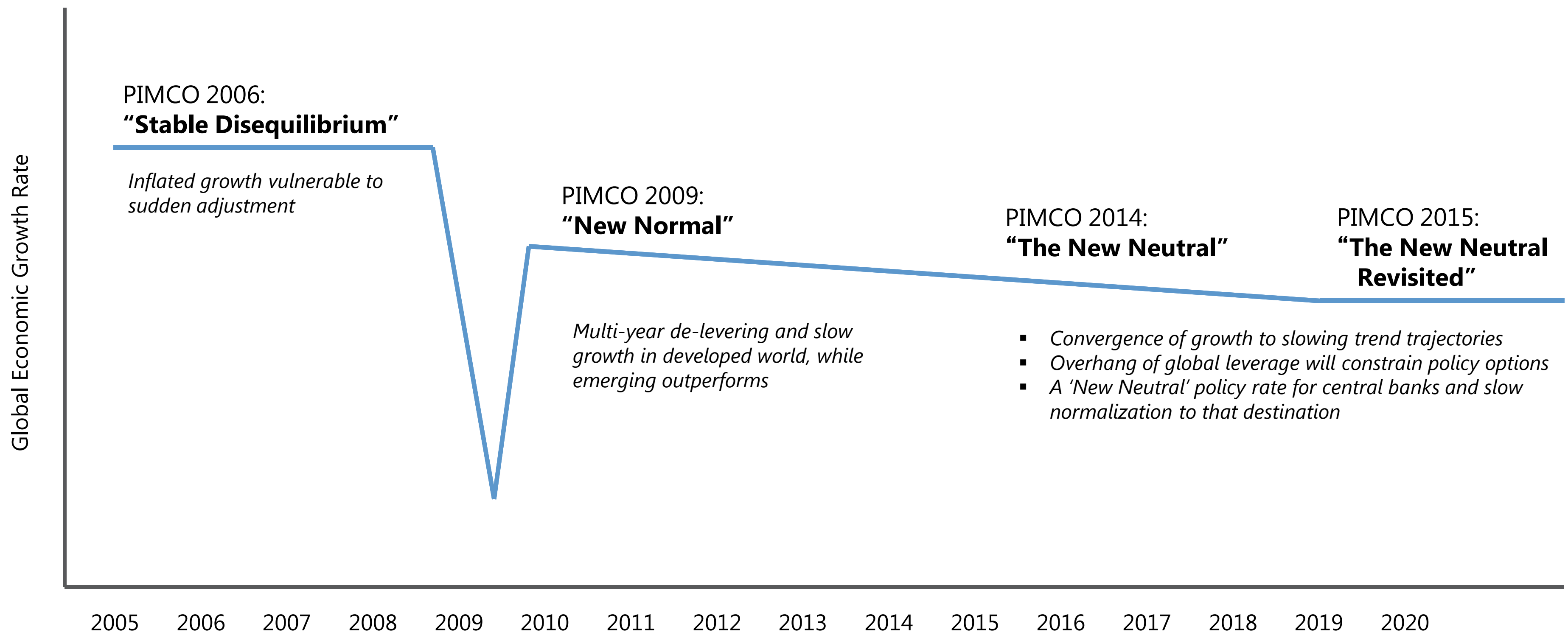
Geopolitics
Risks remain and shocks can emanate from multiple regions

As of 30 June 2015
SOURCE: PIMCO

Questions for the secular horizon

Growth	Inflation	Credit	Geopolitics
How sustainable is the status quo of steady but ultimately sluggish global growth supported by extraordinary monetary accommodation?	Have policymakers clipped the left tail risk of global deflation but replaced it with the risk of inflation down the road?	Can the safer yet potentially less liquid financial system of the post-crisis world provide the credit required to fund the global economy?	Are markets too complacent about the potential risks posed by geopolitical events in places like Ukraine, the Middle East or the South China Sea?

The global landscape over the secular horizon



As of 31 May 2015
SOURCE: PIMCO

Key themes and tail risks in The New Neutral® Revisited

Six themes driving global markets	
1.	**Converging to New Neutral** potential growth rates in developed and emerging economies
2.	Evolving to a re-regulated, **better capitalized global banking system**
3.	Moving from energy scarcity to **energy abundance** unlocked by the shale revolution
4.	Accelerating from deflation **toward targeted 2% inflation** in the major economies
5.	**A narrowing in global imbalances** as the global savings glut abates
6.	Implementing **better economic policy** in key emerging as well as developed economies

Tail risks	
1.	**A global recession** as few countries can maneuver to deploy countercyclical policy
2.	**Flash crashes**, air pockets and trading volatility, which have a greater likelihood amid diminished liquidity
3.	**Weaker aggregate demand** as "winners" from declining commodity prices save their windfall gains
4.	**A breakout of inflation** to the upside of central bank inflation targets
5.	"Disaster risk" relating to **geopolitical conflicts**
6.	**Policy failures** due to fractured politics or implementation challenges

Investment implications of The New Neutral® Revisited

DEVELOPED COUNTRY DURATION
A cautious stance

- U.S. – not enough Fed tightening risk priced in
- Europe – secularly rich, but subject to downward pressure

EMERGING MARKETS
Forget the acronyms, do the homework

- In a multi-speed world, country-by-country analysis (vs. broad exposure to BRICs) is key
- Compared with developed markets, EM offers attractive secular valuations

GLOBAL EQUITIES
The New Neutral will support valuations

- A New Neutral for risk-free rates will impact all asset classes
- In particular, it will support higher equity multiples

CURRENCIES
U.S. dollar-strength to continue

- Expectations for further appreciation, while more modest, remain
- Central bank policy is key

CORPORATE CREDIT
Seek out secular winners, one company at a time

- Credit market valuations are fair, but certainly not cheap
- Bottom-up security selection, framed by our secular views, is key

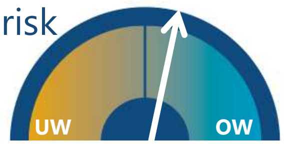
LIQUIDITY AND ACTIVE MANAGEMENT
Seek out opportunities amid on-going volatility

- Growing role for private credit vehicles that aim to capture credit and liquidity premia
- Modest expected returns increase the importance of alpha and active management

PIMCO Asset Allocation views

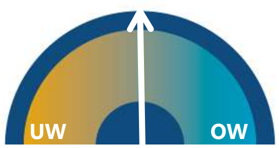
PIMCO asset class views

Overall risk



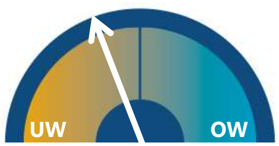
- We remain slightly overweight risk assets, but have pared our overall risk posture to mute the impact of a brief drawdown given heightened uncertainty
- Our goal is to tactically step back into our high-conviction positions as higher volatility presents attractive entry points

Equity



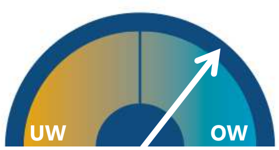
- We are neutral equities, focusing on country and sector selection, which remain critical.
- We are underweight U.S. equities , we are neutral Europe and slightly overweight Japan.
- Within EM, we prefer Asia with a focus in offshore “H-shares” in China and Taiwan.

Rates



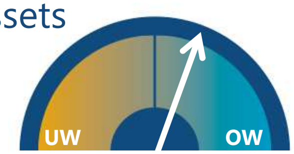
- We are modestly underweight interest rate duration in multi-asset portfolios, retaining moderate exposure given the diversification and tail risk hedging benefits of high quality bonds.
- We have small allocations to periphery debt, like that of Spain and Italy.

Credit



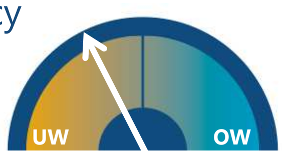
- Despite low all-in yields, spreads above government rates remain within fair to attractive levels
- We find specific opportunities such as European financial and U.S. housing-related credits more attractive

Real assets



- Global inflationary trends may be poised to reverse and gain positive momentum, bolstering the case for real assets
- Inflation-linked bonds are particularly attractive as their prices continue to imply very low inflation premia when compared with nominal bonds

Currency



- We remain bullish on the U.S. dollar, and prefer to express against a short basket of EM Asia currencies

As of 30 September 2015. SOURCE: PIMCO

Appendix

PIMCO: Focused on managing risks and delivering returns

Firm snapshot

Assets under management
- $1.52 trillion[1]

Global resources
- 13 offices across five continents
- Nearly 2,400 total employees:
  - 250+ portfolio managers
  - 125+ credit and quantitative analysts

Comprehensive investment solutions
- Alternatives
- Asset allocation
- Equities
- Fixed income

Diversified global business
- Over 80% of AUM in non-core strategies
- One of largest alternatives platforms
- Over 45 funds with positive inflows YTD

PIMCO's value proposition

Time-tested investment philosophy
- Diversified set of alpha engines
  - Top down
  - Bottom up
  - Structural tilts

Long-term investment results
- Nearly 90% of AUM outperformed benchmark over five-year period[2]

Client-focused culture
- Client education
- Solutions capabilities

Thought leadership
- Global market dynamics
- Economic analysis
- Central bank policy
- Industry trends

Access to our latest views: BLOG.PIMCO.COM

"What's new?"

Recent hires
- Joachim Fels: MD, Global Economics
- Geraldine Sundstrom: MD, Asset Allocation
- Senior Advisors:
  Ben Bernanke, Michael Spence, Gene Sperling

Cyclical forum conclusions
- Muted global growth driven by EM weakness
- Headwinds: Global savings glut, China slowdown
- Tailwinds: Oil's effect on consumption, continued monetary stimulus

New product launches
- Capital Securities Strategy
- Opportunistic credit "follow-on" PE-style vehicle
- Expanded Research Affiliates relationship – RAE Fundamental strategies

As of 30 September 2015

1 Effective 31, March 2012, PIMCO began reporting the assets managed on behalf of its parent's affiliated companies as part of its assets under management. Reported figures are as of 30 June, 2015, the last date of publically disclosed AUM data

2 Based on 30 September 2015 data of PIMCO managed portfolios with at least a 5-years history. The gross-of-fees performance of each portfolio was compared to the portfolio's primary benchmark. If the gross-of-fees portfolio performance was greater than the benchmark performance for a given period, the assets in that portfolio were included in the outperforming data. Benchmark outperformance indicates the performance of a portfolio as compared to its benchmark. As such, it does not indicate that a portfolio's performance was positive during any given period. For example, if a portfolio declined 3% during a given period, and its benchmark declined 4%, the portfolio would have outperformed its benchmark, even though it lost value during the period. Certain absolute return oriented portfolios contained within the data may inflate the data either positively or negatively due to the low return/volatility characteristics of the primary benchmark. For example a portfolio measured against 3-month USD Libor would be more likely to out- or underperform its benchmark. No measure of past performance should be understood to ensure that future performance will be positive, whether on a relative or absolute basis.

Assets under management by strategy

PIMCO manages $1.52 trillion in assets, including $1.15 trillion in third-party client assets

Alternatives		Billions ($)
Liquid Absolute Return	Unconstrained bond strategies, credit absolute return, other absolute return strategies	20.82
Hedge Funds	Global macro, long/short credit, multi-asset volatility arbitrage strategies, relative value commodities	15.67
Opportunistic/Distressed	Opportunistic strategies focusing on real estate related assets (residential, commercial), corporate credit	5.72
Asset Allocation		
Asset Allocation Strategies	Global Multi Asset, All Asset, EM Multi Asset, Real Retirement, Inflation-Response Multi Asset, DRA	59.07
Equities		
Equity Strategies	Combines enhanced equities and active equities	25.82
Real Return		
Real Return Strategies	Combines inflation linked strategies, actively managed commodities, and real-estate linked exposure	71.59
Fixed Income		
Total Return[1]	Total Return	125.48
Intermediate[2]	Core Strategies, Moderate Duration	136.68
Credit	Investment Grade Corporates, Bank Loans, High Yield Corporates, Convertibles	167.71
Long Duration	Focus on long-term bonds; asset liability management	118.79
Global	Non-U.S. and global multiple currency formats	98.75
Cash Management[2]	Money Market, Short-Term, Low Duration	92.09
Income	Income-oriented, insurance income	85.75
Emerging Markets	Local debt, external debt, currency	47.66
Mortgages	Agency MBS, structured credit (non-Agency MBS, CMBS, and ABS)	33.39
Diversified Income	Global credit combining corporate and emerging markets debt	22.63
Municipals	Tax-efficient total return management	12.58
Other	Custom mandates	9.19
Total assets under management		**$ 1,149.39 B**
Stable Value[2]	Stable income with emphasis on principal stability	22.36
Tail-Risk Hedging[3]	Pooled and customized portfolios of actively managed tail-risk hedges	45.29

As of 30 June 2015
SOURCE: PIMCO
Assets reflect those managed on behalf of third-party clients and exclude affiliated assets. Fund of funds assets have been netted from each strategy.
Potential differences in asset totals are due to rounding. Represents assets of strategy group in dedicated and non-dedicated portfolios.

1 Total Return has been segregated to isolate the assets of PIMCO sponsored U.S. Total Return 1940-act fund and foreign pool fund accounts. All other U.S. Total Return portfolios are included in the Intermediate category

2 Stable value assets have not been netted from U.S. Total Return, U.S. Moderate Duration and U.S. Low Duration assets

3 Tail-risk hedging assets reflect total notional value of dedicated mandates and are not counted towards PIMCO total assets under management

AGENDA ITEM III.A.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 16, 2015

SUBJECT: PIMCO Capital Markets Update

Given heightened volatility in recent months including a 10% decline in the global equity markets on August 24, 2015, we have invited Mr. Anthony Crescenzi of PIMCO to provide a capital markets update. We will also be joined by Stephanie King and Yinyin Wu who serve as our relationship managers for approximate $500 million of SIB client investments with PIMCO.

Tony Crescenzi

Mr. Crescenzi is an executive vice president, market strategist and generalist portfolio manager in the Newport Beach office. He is also a member of the Investment Committee. Prior to joining PIMCO in 2009, he was chief bond market strategist at Miller Tabak, and worked for both Lehman Brothers and Prudential Bache. Mr. Crescenzi has written five books, including "The Strategic Bond Investor" and "Beyond the Keynesian Endpoint." He regularly appears on CNBC and Bloomberg television and in financial news media. Mr. Crescenzi taught in the executive MBA program at Baruch College from 1999-2009. He has 32 years of investment experience and holds an MBA from St. John's University and an undergraduate degree from the City University of New York.

Stephanie L. King, CFA

Ms. King is an executive vice president, head of the U.S. public client practice and an account manager in the Newport Beach office, focusing on institutional investors within the public sector. Previously at PIMCO, she worked with a variety of institutional client types and headed the U.S. corporate client practice. Additionally, she led the firm's global recruiting function as part of PIMCO's business management group and worked on a variety of talent management initiatives. She currently serves on the steering committee for PIMCO's global inclusion, diversity and culture initiative. Prior to joining PIMCO in 2001, she was with Morgan Stanley, Blue Capital Management and Bain & Company. She has 17 years of investment experience and holds an MBA from Stanford University Graduate School of Business and an undergraduate degree from the Wharton School of the University of Pennsylvania.

Yinyin Wu

Ms. Wu is an account manager in the New York office, focusing on institutional client servicing. Prior to joining PIMCO in 2014, she worked in the capital markets group at Credit Suisse, helping corporations execute liability management transactions. She also covered technology companies in Credit Suisse's investment banking group, advising them on capital raising and mergers and acquisitions. She has five years of investment experience and holds an MBA from the Wharton School and a master's degree in international studies from the Lauder Institute of the University of Pennsylvania. She also received an undergraduate degree from the University of Pennsylvania.

PIMCO Performance & Fee Summary – YTD, FY2015, Since Inception

NDSIB Investments	Target return	Inception	Market Value	SI Perf. / SI net IRR[3] (%)	SI Alpha (%) / SI Multiple[4]	FY2015 Perf. (%)	FY2015 alpha (%)	YTD Perf. (%)	YTD alpha (%)	Fee Description [5]	YTD Fees	FY2015 Fees
Separate accounts [1]												
Agency MBS (gross)	Benchmark + 0.25%	Mar-12	$181,492,429	2.28	0.08	2.33	0.04	1.76	0.15	18/16.5/15 bps on 300m / 300m / thereafter	$229,753	$308,009
Unconstrained Bond (gross)	LIBOR + 3% to 4%	Mar-14	$92,199,556	-0.25	-0.50	1.44	1.16	-1.99	-2.19	45/40/35 bps on 600m / 700m / thereafter [6]	$0 [7]	$136,962 [7]
DiSCO II [2]												
Pension (net)	7 to 9% (net) [8]	Oct-11	$87,857,199	16.93	-	4.35	-	3.21	-	0.75% management, Admin fee is equal to the aggregate of 20 bps of the Fund's NAV for the first $500mm fund and 15 bps of the Fund's NAV thereafter; 15% incentive fee over 1M LIBOR hurdle rate	$860,672	$1,404,637
Insurance (net)	7 to 9% (net) [8]	Oct-11	$78,983,934	16.97	-	4.35	-	3.21	-		$773,747	$1,262,774
BRAVO II [2]												
Pension (net)	15% to 20% (net IRR)	Mar-13	$35,384,594	15.80	1.13x	12.10	-	5.50	-	1.36% management, 0.20% admin fee, on invested capital; 20% carried interest over 8% per annum uncompounded preferred return	$632,469	$1,033,083
Insurance (net)	15% to 20% (net IRR)	Mar-13	$35,384,594	15.80	1.13x	12.10	-	5.50	-		$632,469	$1,033,083
		Total	$511,302,305									

[1] YTD and SI performance / fees / market value as of 9/30

[2] YTD and SI performance / fees / market value as of 6/30

[3] Assumes full liquidation at the end of the performance period and deducts for all fees, expenses and unrealized carried interest that would be payable to the GP upon liquidation

[4] Since inception multiple represents (Total Net Assets + Distributions) / Capital Called

[5] SMAs are subject to fee aggregation. Private fund fees include mgmt fee + admin fee + accrued incentive fee / unrealized carried interest. Management and admin fees only applied to invested capital.

[6] Represents standard fee schedule, in effect so long as aggregate of NDSIB and ND Lands PIMCO assets are greater than $600m. For the 12 months ending 9/30/15, a performance fee schedule was in place that resulted in $0 fees paid.

[7] Based on the standard fee schedule, YTD fees would be approx. $347K and FY 2015 would be approximately $517K.

[8] Represents revised target return as of 1/15/15. Original target return was 10-12% net. SI performance of 18.7% through 12/31/14, during time period of 10-12% net target return.

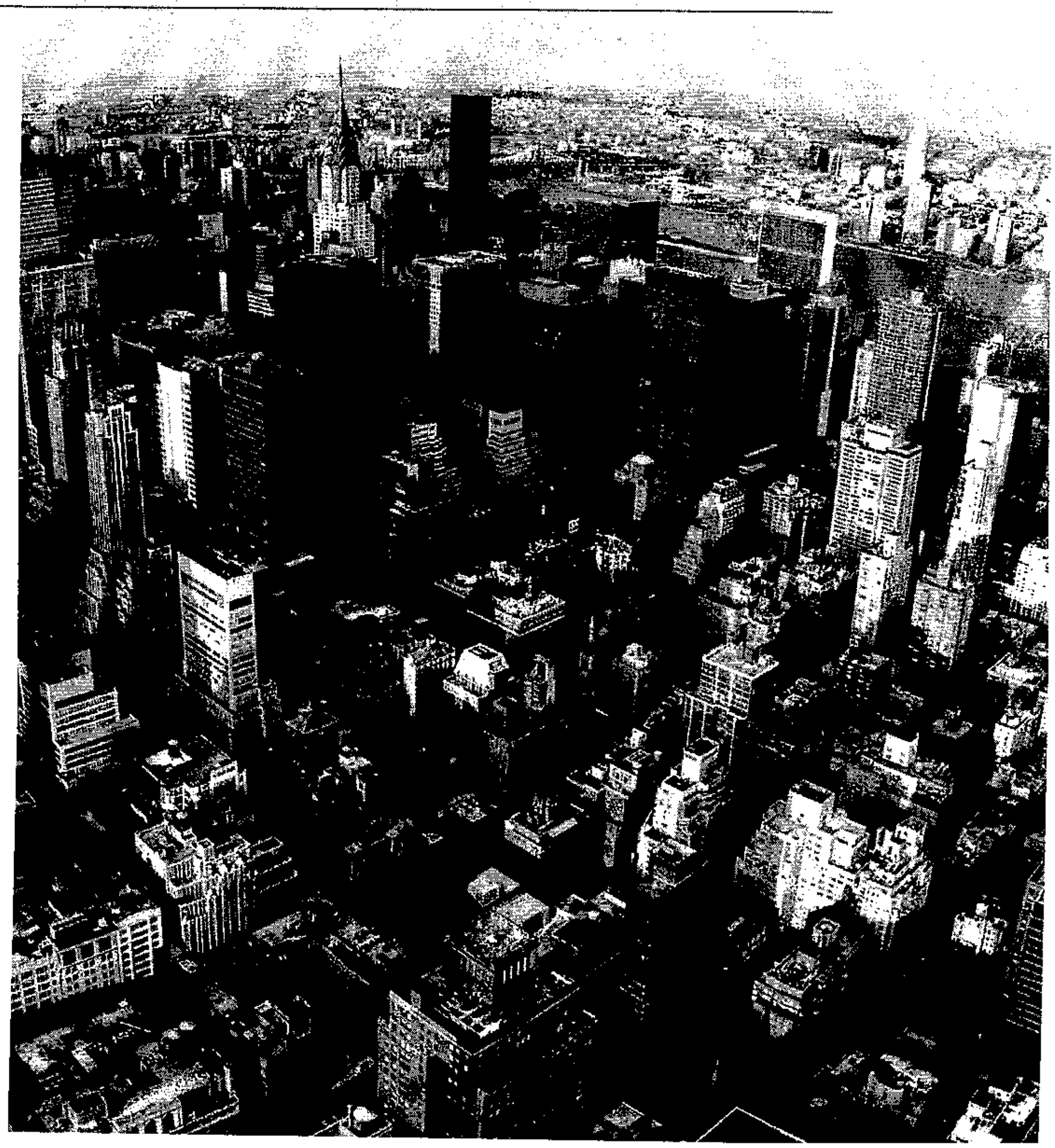
RIO Commentary:

Overall, PIMCO has performed well for our SIB clients although there is a significant disparity in the results. PIMCO's opportunistic credit strategies including DiSCO II ($167 million) and BRAVO II ($71 million) have performed well with net internal rate of returns ranging from 16.9% to 15.8%, respectively, since inception. Agency MBS ($181 million) has generally performed in line with the Mortgage Backed Security benchmark, while the Unconstrained Bond strategy ($92 million) has generated disappointing results and is under close scrutiny by RIO investment personnel.

PIMCO

Secular Outlook
May 2015

The New Neutral Revisited



ACTIVE INVESTING FOR THE SECULAR HORIZON

There are reasons to be cautiously optimistic about the outlook of the global economy. This is one of the distillations from our Secular Forum in May in which PIMCO's investment professionals gathered to review and assess the landscape of the global economy, financial markets, economic policy, and geopolitical flashpoints. Our goal was to develop a construct that the firm can use over the next three to five years to navigate global markets and invest wisely on behalf of our clients. Among other things, we revisited our theses of The New Neutral and The New Normal.

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Group Chief Investment Officer

2015 SECULAR FORUM: GUEST SPEAKERS

Our distinguished speakers bring fresh perspectives to challenge our internal expertise. Nobel laureate economists, policymakers, and historians have all injected valuable insights into our discussions over the years, providing a multi-dimensional perspective. This forum's speakers were:

Dr. Anat Admati
Professor of Finance and Economics at Stanford

Robert Arnott
Founder and Chairman of Research Affiliates, a subadvisor to PIMCO

Dr. Ben Bernanke
Former Chairman of the Federal Reserve, PIMCO Senior Advisor

Dr. Gary Gorton
Professor of Management and Finance at Yale

Leon Panetta
Former U.S. Secretary of Defense and Central Intelligence Agency Director

Jean-Claude Trichet
Former President of the European Central Bank

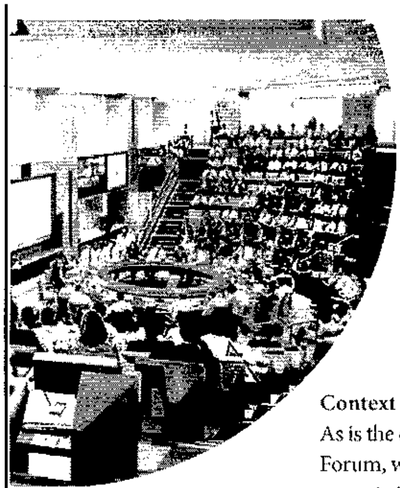
Dr. Daniel Yergin
Pulitzer Prize-Winning Author and Leading Expert on Energy and Geopolitics

Revisiting our views is one of the factors that makes our Secular Forum such an integral part of our investment process, as it has been for more than 30 years.

Another reason is that we challenge and refresh our thinking by inviting and engaging with distinguished guest speakers. This year's list (shown in the sidebar) included Jean-Claude Trichet, Leon Panetta and others, and we also benefited from the active participation of PIMCO advisors Ben Bernanke, Mike Spence and Gene Sperling, and from three superb presentations from our class of new MBAs and PhDs.

We began the forum on May 18 knowing we would need to answer several big questions to get our secular call right:

- *The global economy is living with leverage and has required "six-sigma" doses of unconventional monetary policy to generate sluggish, "one-sigma" growth. Will this continue and, if it does, is it sufficient to keep the system going? If so, what is the destination? If not, what are the consequences?*
- *Can the post-crisis global financial system support the credit intermediation required to fund the New Normal global economy? What are the trade-offs between a safer system and less liquid markets?*
- *Has the left-tail risk of global deflation been clipped? What is the right-tail risk of the policies deployed to avoid it?*
- *Chaos in the Middle East and confrontation in Ukraine have been taken in stride by markets and the global economy, but can this continue? Or are markets too complacent?*



Context and initial conditions

As is the case at any PIMCO Secular Forum, we have three choices: reaffirm our existing secular thesis, refine that thesis or – if circumstances warrant – replace that thesis. The New Neutral thesis that emerged from the 2014 PIMCO Secular Forum foresaw a multi-speed world of economies converging to modest trend growth trajectories. We also described an ongoing overhang of public and private global leverage, the potential for the U.S. economy to surprise on the upside, monetary divergence between countries escaping the zero bound and those remaining stuck there, and a re-regulated global financial system that is potentially safer but offers less dynamic growth and provides less liquidity to markets.

We concluded then that for the next three to five years we will be living in a New Neutral world in which monetary policymakers will set short-term interest rates at levels below, in many cases well below, the rates that prevailed before the global financial crisis. We saw The New Neutral thesis as the natural evolution of The New Normal construct that PIMCO introduced in 2009. But whereas The New Normal described a two-speed world of a global economy recovering from crisis and facing a headwind of de-leveraging, The New Neutral refined that thesis to apply to a multi-speed world of countries *converging* to slower trend growth trajectories while living with leverage, but doing so only with the support of monetary policy rates set at historically low, New Neutral levels.

Since our last forum, The New Normal/New Neutral construct has been adopted by policymakers and, in some cases, priced into financial markets. For example, here is Chinese Premier Li Keqiang speaking at the National People's Congress in Beijing on March 5, 2015 (emphasis added):

"In order to defuse problems and risks, avoid falling into the 'middle income trap,' and achieve modernization, China must rely on development, and development requires an appropriate growth rate. At the same time, China's economic development has entered a **New Normal** … "

Or consider this observation by Federal Reserve Chair Janet Yellen speaking at *The New Normal for Monetary Policy* research conference hosted by the Federal Reserve Bank of San Francisco on March 27, 2015:

"The equilibrium real federal funds rate is at present well below its historical average and is anticipated to rise only gradually over time as the various headwinds that have restrained the economic recovery continue to abate. If incoming data support such a forecast, the federal funds rate should be normalized, but at a gradual pace."

In her comments, Chair Yellen refers to the "equilibrium" federal funds rate, which is her term to describe what we and others have called the "neutral" monetary policy rate. What do markets price in for this equilibrium rate, and how has this pricing evolved over time?

The chart shows the implied yield on the December 2018 eurodollar futures contract, one proxy for where the market expects the Fed's policy rate to end up when the next rate hike cycle has concluded. In January 2014 this proxy for the terminal policy rate was about 4%, almost spot on with the "old neutral" idea that the Fed should anchor policy at a rate equal to the sum of the 2% inflation target and the estimated old neutral real rate of interest, which was thought to be 2%. Since then, the implied yield on this December 2018 futures contract has declined steadily and, at close to 2.5%, is right in the middle of the range we estimate for The New Neutral.

What's ahead: A New Neutral baseline scenario

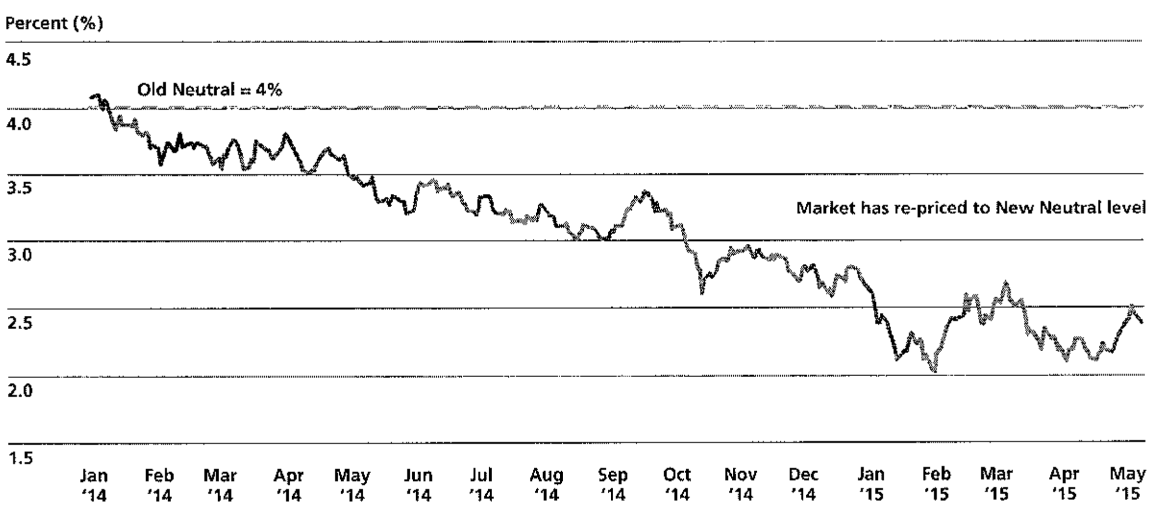
In some important respects, our baseline views on the secular outlook have not materially changed since the previous PIMCO Secular Forum in May 2014. We continue to see a multi-speed world of economies converging to modest trend growth rates, a view now shared by the International Monetary Fund, which, in its most recent world economic outlook, materially marked down its estimates of potential growth in both developed and emerging economies. We also see a global economy that is no longer restrained by private sector de-levering but, instead, is learning to live with record levels of public and private debt without a cushion that would be provided by more rapid growth or higher inflation than we foresee.

While the left-tail threat of *deflation* in Japan and the eurozone has diminished due to six-sigma QE programs put in place by the European Central Bank and the Bank of Japan (and in the case of the ECB an additional negative interest program in which banks are charged for the excess reserve balances on deposit at the central bank), we do not in our baseline foresee an imminent rise in prices toward the 2% inflation targets these central banks aim to achieve. Regarding financial markets, we participate in a global financial system that is better capitalized than before the crisis, and perhaps less vulnerable to a systemic run, but understand that it offers less liquidity to investors and appears more susceptible to "flash crashes" and "vapor locks" as the global balance sheet available for market-making shrinks.

For all these reasons, we continue to **believe that we are now, and will be for some time, operating in a *New Neutral* world in which central banks will be constrained to set policy rates at levels well below those that prevailed before the crisis.** In the eurozone and Japan, where we expect neutral real policy rates to be negative over most if not all of our secular horizon, we judge both the ECB and the BOJ leadership to be "all in" in their attempts to reflate their economies and to be willing to continue unconventional monetary policies for as long as it takes to move as close as possible to their 2% inflation targets. What about the Fed? As

The Implied Future Fed Policy Rate Has Declined to a New Neutral Level

December 2018 eurodollar interest rate futures contract implied policy rate



Source: Bloomberg as of 29 May 2015

discussed earlier, the markets have fully priced in a New Neutral path of Fed policy rate normalization, and on May 22, in the same week as our forum, Chair Yellen said it could take several years for the Fed to complete the forthcoming rate hike cycle once it finally commences, most likely later this year. The Fed would also like to shrink its balance sheet by allowing mortgage-backed securities to prepay and Treasuries to mature without replacing them with new purchases in the secondary market. That is the plan. But as we discussed at length during our forum, we do not think the Fed's balance sheet is on autopilot. The Fed's objective is to sustain economic expansion and bring inflation up to the 2% target. It would like to do this in tandem with shrinking its balance sheet as it gradually normalizes short-term interest rates, but if the former were to cause long-term yields to spike, we judge that the Fed would, if necessary, recalibrate the pace of balance sheet normalization so as not to compromise its dual mandate objectives.

Trends to follow, tails to hedge

After hearing from our invited speakers and following a robust internal discussion among PIMCO investment professionals, our Investment Committee met the morning after the forum to compare notes and to assess agreement on key themes. As we did so, a conceptual framework began to emerge, one that recognizes six key trends that are likely to define the global opportunity set available to investors and the returns they can expect over a secular horizon.

However, while we believe identifying and investing in these secular trends will be *necessary* to succeed, it will likely not be sufficient to deliver robust returns in the global economy and markets as they evolve. Investors will need to identify and hedge against six important secular tails as well.

Six trends driving global markets

1. *Converging to New Normal potential growth rates in developed and emerging economies.*
2. *Evolving to a re-regulated, better capitalized global banking system.*
3. *Moving from energy scarcity to energy abundance unlocked by the shale revolution.*
4. *Accelerating from deflation and toward targeted 2% inflation in the major economies.*
5. *Shifting (a nascent trend) from a global savings glut supported by lower commodity prices and toward narrowing global imbalances amid stronger global demand, which will depend to some extent on whether China can succeed in making the middle income transition.*
6. *Implementing (another nascent trend) better economic policy in key emerging economies (China, India) as well as key developed economies (eurozone, Japan) with at least the possibility of future breakthroughs in U.S. economic policy (immigration, oil exports, trade promotion authority).*

Six key tail risks to the secular trends

1. *With trend growth rates and inflation modest, policy rates low, public balance sheets bloated and public debt high, few countries would have room to maneuver to deploy countercyclical policy were the global economy to go into recession within the next five years.*
2. *The re-regulated, better capitalized global banking system allocates little of its balance sheet to making markets, resulting in greater likelihood of flash crashes, air pockets and trading volatility.*
3. *The trend away from energy scarcity and toward energy abundance creates big losers as well as winners and is only a net positive for global demand if the winners' boost in consumption offsets the losers' cut in consumption and capital spending.*
4. *Geopolitical conflicts have thus far been taken in stride by markets, but "disaster risk" is to some extent priced into financial assets today and is a source of volatility and downside risk to equity prices and credit spreads and upside potential to Treasury and Bund prices.*
5. *The distribution of global inflation outcomes has a right tail as well as a left tail; over our five-year horizon, a breakout of inflation to the upside of central bank inflation targets is not as unlikely as many seem to assume.*
6. *A trend is called nascent for a reason – there is a risk it does not develop – and there is risk to our optimistic baseline that foresees better economic policy in key emerging and developed economies and the possibility of future breakthroughs in U.S. economic policy over our secular horizon. There remains a tail risk of political polarization in the eurozone and/or a British exit from the European Union. In China, the planned reforms are ambitious, but success is not assured, and capital account liberalization in particular will be challenging to accomplish in the time frame announced.*

INVESTMENT IMPLICATIONS

Our 2015 Secular Outlook is a continuation of The New Normal/New Neutral, but valuations have changed. A year ago, markets were pricing in central bank policy rates above the levels implied by our New Neutral framework for the next three to five years. Today, markets have fully priced in The New Neutral and in some cases there may be insufficient risk premium. The New Neutral remains an anchor for fixed income valuations, but we expect to maintain a cautious stance on developed country duration in our portfolios. The six global trends we identify suggest the baseline of a gradual rise in yields/re-establishment of term premia in global fixed income markets. The six risks suggest that this will be a slow and, most likely, bumpy secular journey.

Inflation-protected securities

In the U.S., the major developed country that is the furthest advanced in its post-crisis normalization, we remain concerned that the market is pricing in insufficient risk premium for the impending Federal Reserve tightening cycle. The New Neutral framework provides an anchor but not a ceiling in terms of our expectations for Fed policy rates. While we expect an elongated economic cycle and growth close to potential, the two-sided risks we identify on inflation reinforce caution on nominal interest rate duration and also mean that we continue to favor U.S. TIPS (Treasury Inflation-Protected Securities) as a source of valuable inflation hedging at reasonable prices.

European bonds

European bond yields have been driven to very low levels by a combination of cyclical concerns of deflation risk, anticipation of scarcity in the face of ECB QE and concerns over the stability of Europe's monetary union. Based on our expectations of mild and gradual reflation in the eurozone, core European country yields are secularly rich but cyclically may be subject to periods of downward pressure including ECB QE, sluggish growth and the risk of political fragmentation.

Corporate credit

Corporate credit market valuations remain well-supported by solid fundamentals, and we are generally positive on the secular credit outlook given the favorable longer-term trends we identify. Still, credit market valuations, while broadly fair, are certainly not cheap. We will continue to look to our credit portfolio management and research specialists for bottom-up alpha-generating security selection, while guided by our overall secular framework.

Managing liquidity

Making sure that we are paid appropriately for liquidity and managing liquidity in our portfolios will remain important secular considerations across the board and notably in credit markets. We are operating in a less risky world in terms of leverage in the banking system and, at the global level, with a far smaller shadow banking system. However, a by-product of increased regulation and lower leverage is that banks/brokerages are less able to function as market makers. We anticipate ongoing periods of market volatility that investors must be prepared for and that, in turn, will offer opportunities for active managers when volatility pushes securities prices away from the underlying fundamentals.

Equities

Our New Neutral rate expectations support a relatively constructive view on equities. Low discount rates, recovering but muted inflation and a drawn-out business cycle argue for positive equity performance – even at what are currently full valuations from a historical perspective. The global trends we identify should support corporate earnings and, as with corporate credit, the secular trends provide a framework for picking winners by region and sector. In emerging markets, we will look for opportunities to invest in countries with improving growth profiles and economic governance reforms and see the potential for EM equity outperformance.

Commodities

The commodity supercycle is over, as is the correction due to the supply response over the last couple of years, in our view. Although commodity prices are unlikely to see big swings over the secular horizon, they will continue to play their role as a portfolio diversifier and inflation hedge. Another implication is that headline inflation should more closely track core inflation, affording greater clarity to central banks in their inflation targeting.

Emerging markets

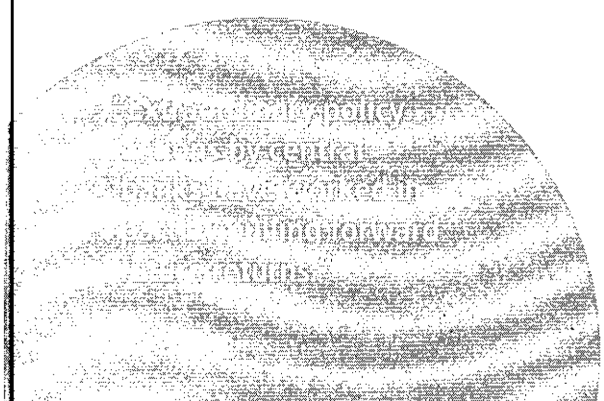
In emerging markets, we will continue to stress country-by-country analysis and active management over acronyms. Compared with developed country fixed income markets, emerging markets offer attractive secular valuations in a number of cases, in spite of cyclical headwinds.

Currencies

On currencies, in our secular outlook a year ago we identified the potential for U.S. dollar appreciation given the U.S.'s leading position among the major developed country economies in The New Neutral multi-speed world. Given the substantial moves since then, with the U.S. dollar some 15% stronger on a broad trade-weighted index, expectations for further dollar appreciation must be far more modest. But we continue to expect some further gradual appreciation of the U.S. dollar, particularly with the Federal Reserve set to be the first major central bank to embark on a New Neutral tightening cycle.

Valuations across markets that look fair and, in some cases, stretched underline the need for realistic asset market return expectations. Extraordinary policy actions by central banks have worked in part by pulling forward future returns and are now embedded in today's prices. In this environment, alpha generated by active managers will be an even more important part of total return as prospective returns across all asset classes are likely to be much lower than long-term averages. Investors who pursue a full opportunity set and emphasize flexibility to access the best global alpha opportunities should be well-rewarded in The New Neutral environment.

In addition to alpha generation in active benchmark strategies, absolute return strategies, including a suite of alternative products, may provide a way to exceed these New Normal return expectations. In addition, we anticipate a growing role for private credit vehicles for long-term investors looking to harvest identifiable credit and liquidity premia.



Our secular outlook rests on the expectation that central banks will remain accommodative and supportive of growth. Policy rates will remain low, and we expect the ECB and the BOJ to remain active in promoting reflation. In the U.S., while the Fed will gradually tighten policy, desire to shrink the balance sheet will be weighed against desire to avoid tightening financial conditions too much. While we expect convergence toward potential growth rates, and longer business cycles than the historical norm, caution is warranted to the degree that low policy rates, expanded central bank balance sheets and high government debt levels mean there is limited scope for policymakers to respond aggressively in the face of business cycle downturns or shocks to investor confidence.

We see market valuations across fixed income and equity markets as broadly reasonable and, in our baseline, expect improving economic fundamentals to support valuations for riskier assets. But there is a danger that an ongoing low-yield and low-return environment will encourage excessive risk taking as investors reach for yield to try and maintain old normal return targets. This was a risk we sought to protect our clients against in the run-up to the 2008 global financial crisis, and we will be on guard again over the next few years.

We expect there will be ample opportunities over the secular horizon for PIMCO, as an active manager, to deliver returns and manage risk on behalf of our clients. In a New Neutral world of ongoing and considerable central bank influence on asset prices and the potential for periods of heightened volatility, it will be critical to get right not only the macro calls, but also the implementation of investment strategy in all PIMCO portfolios.

P I M C O

All investments contain risk and may lose value. Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and the current low interest rate environment increases this risk. Current reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed. **Inflation-linked bonds (ILBs)** issued by a government are fixed income securities whose principal value is periodically adjusted according to the rate of inflation; ILBs decline in value when real interest rates rise. **Treasury Inflation-Protected Securities (TIPS)** are ILBs issued by the U.S. government. **Equities** may decline in value due to both real and perceived general market, economic and industry conditions. **Commodities** contain heightened risk, including market, political, regulatory and natural conditions, and may not be suitable for all investors. Investing in **foreign-denominated and/or -domiciled securities** may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. **Currency rates** may fluctuate significantly over short periods of time and may reduce the returns of a portfolio. **Absolute return portfolios** may not fully participate in strong positive market rallies. **Management risk** is the risk that the investment techniques and risk analyses applied by PIMCO will not produce the desired results, and that certain policies or developments may affect the investment techniques available to PIMCO in connection with managing the strategy. There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market. Investors should consult their investment professional prior to making an investment decision.

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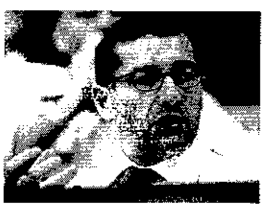
CYCLICAL OUTLOOK
September 2015

Has Europe Turned a Corner?

AUTHORS

Mike Amey
Managing Director
Portfolio Manager



Andrew Bosomworth
Managing Director
Portfolio Manager

Lorenzo Pagani
Managing Director
Portfolio Manager

In the following interview, Managing Directors Mike Amey, Andrew Bosomworth and Lorenzo Pagani discuss the conclusions from PIMCO's quarterly Cyclical Forum, in which the company's investment professionals gathered in September 2015 to discuss global economies and markets. They share our views on the medium-term outlook for Europe and the critical implications for investment strategy.

Q: Recent market volatility suggests investors are focused on developments in Asia, and perhaps are more comfortable with conditions in Europe. What is PIMCO's outlook for eurozone growth and inflation over the coming six to 12 months? Are things looking up?

Amey: Despite the market volatility in Asia and some turbulence in Europe around the difficult situation in Greece, our expectations are for the eurozone to experience above-trend real growth of 1.75%, a slight improvement over our Cyclical Outlook in March. We believe domestic demand will be the primary source of this growth due to improving private sector loan growth, which is responding to falling private sector interest rates, in turn driven down by low official interest rates and the European Central Bank's (ECB) quantitative easing (QE) programme. Meanwhile, fiscal policy is moving more into balance, and as a result will no longer be a drag on growth. Undoubtedly, there will be some challenges for the export sector, in particular for the German economy, as exports to Asia come under pressure; however, our assessment is that this recovery is becoming an increasingly domestic affair.

Looking at inflation in the eurozone, we expect it to edge higher to 1.25% in 12 months' time as the weakness in energy prices falls out of the headline Consumer Price Index (CPI) measure, and core CPI ticks up from 1% as the effect of the weaker euro feeds through into prices. Relative to the worries of persistent deflation that were prevalent earlier in the year, this is clearly good news; however, we are still some way from the ECB target of close-to-but-below 2%.

In short, things are looking up, but there remains a long way to go before the ECB can be confident of achieving its inflation target.

Q: How would you assess the ECB's efforts to stabilise inflation, promote lending to the real economy and stimulate growth? Are we still seeing a two-speed recovery in Europe?

Bosomworth: The ECB's policies are gaining traction. In March this year, the ECB began a QE programme that will see it purchase €60 billion worth of bonds per month until at least September 2016. The cumulative amount of money that will be injected into the economy via QE is equivalent to about 10% of eurozone gross domestic product (GDP). Although the ECB's QE is modest relative to those conducted by the U.S. Federal Reserve, the Bank of England (BOE) or the Bank of Japan, whose asset purchases amounted to about 25%, 21% and 65% of their countries' respective GDP, it is nevertheless a considerable amount of stimulus. QE and negative interest rates are a powerful combination, and six months into the programme there are already some tentative signs of success.

In financial markets, for example, borrowing costs have declined in all eurozone countries, and banks have eased their lending standards. Companies and households are taking out more loans and mortgages, so we are seeing credit beginning to grow again. Among investors, eurozone inflation expectations, as measured by the five-year breakeven inflation rate (starting five years forward), have risen. And the euro is weaker and equity valuations are higher. All of these factors make for easier financial conditions, which are feeding through to the real economy, where we are also seeing improvement. Business and consumer confidence has risen and economic growth has stabilised.

If there is any lesson to learn from comparing these four major QE programmes, it is that QE works better when fiscal policy is also stimulative, and when labour and product markets are both more flexible and friction is low. In our view, fiscal policy is no longer acting as a drag on growth in the eurozone: Ireland, Greece, Portugal, Spain and to a lesser extent Italy have made considerable progress on structural reforms. While such reforms are politically difficult to implement, they do pay off. Spain, for example, is now one of the eurozone's fastest-growing economies. Importantly, the bifurcation in economic growth among eurozone countries that we saw in the aftermath of Europe's sovereign debt crisis is dissipating.

Q: What are the potential policy risks over the cyclical horizon, and how might policymakers react?

Bosomworth: Counterintuitively, structural reforms might be making the ECB's aim of moving inflation towards its 2% target harder. The Phillips curve, which shows a historical inverse relationship between unemployment and inflation, is becoming steeper as a result of the past recession. When this happens, wages and CPI react much more to changes in unemployment: Eurozone unemployment rose from just above 7% in 2008 to as high as 12% in 2014, and remains stubbornly high at 10.9%. CPI will rarely rise when unemployment is high and when wages are more sensitive to the level of unemployment. Even in Germany, where unemployment is quite low, wages are not rising much partly because of increased immigration from other eurozone countries with high unemployment rates. To move inflation up towards the ECB's target, the eurozone needs to get unemployment down, and for that it needs more economic growth.

Together, inflation's greater sensitivity to unemployment, high unemployment and potential external risks, such as slower growth in emerging markets, are likely colluding to keep inflation low, and we think this constellation will persist over the cyclical horizon. The ECB currently forecasts overall CPI to rise to 1.7% by 2017. We share the ECB Governing Council's view that the risks to this forecast are to the downside. As a consequence, we think monetary policy may have to become more stimulative. In our view, this will likely take the form of the ECB increasing the quantity of its current €60 billion monthly bond purchases by €10 billion to €70 billion per month. Alternatively, come September 2016, if inflation is still low and the ECB's inflation forecast remains as is, which is what we think will happen, QE might likely extend into 2017.

Q: Is the increase in migration to Europe likely to affect its economies or markets in the year ahead?

Pagani: The impact of the unfolding refugee crisis on the European economy over the cyclical horizon is positive at the margin due to the increase in fiscal spending in support of the migrants. The effect on GDP and CPI over the next 12 months,

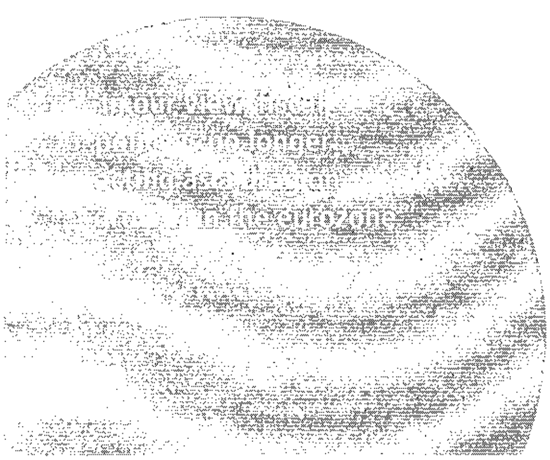
FORECAST	REAL GDP		HEADLINE INFLATION*	
	Current**	Q3'15—Q3'16	Current**	Q3'15—Q3'16
United States	2.7%	2.25% to 2.75%	1.8%	1.75% to 2.25%
Eurozone	1.5%	1.5% to 2.0%	0.2%	1.0% to 1.5%
United Kingdom	2.6%	2.25% to 2.75%	0.0%	1.25% to 1.75%
Japan	0.8%	1.25% to 1.75%	0.6%	1.0% to 1.5%
China	7.0%	5.5% to 6.5%	1.5%	1.5% to 2.5%
BRIM***	0.3%	2.0% to 3.0%	8.4%	5.0% to 6.0%
World******	**2.7%**	**2.5% to 3.0%**	**2.1%**	**2.0% to 2.5%**

*U.S. inflation forecast is for core CPI, and Japan's forecast reflects CPI ex fresh food and adjusted for the VAT change
**Current data for real GDP and inflation represent four quarters ending Q2 2015
***BRIM is Brazil, Russia, India, Mexico
****World is the GDP-weighted average of countries listed in table above
Source: Bloomberg, PIMCO calculations

however, is likely to be small. The longer-term impact could be more significant to the extent that migrants are allowed to work and integrate into the labour force. Offsetting this positive impact is potential political turmoil stemming from the crisis. Overall, we think that the market impact over the cyclical horizon is likely to be minimal.

Q: Turning to the UK, how do you expect the economy to perform over the cyclical horizon? And what is your expectation for the BOE's monetary policy?

Amey: The UK recovery is now starting to look like a classic UK recovery, where mortgage rates fall, consumer confidence improves, housing activity and broader consumer spending come through and businesses invest in both physical capacity and new employees. The worry for some time has been the resilience of the recovery in the face of poor productivity growth, lower public spending and a stronger sterling; however, with mounting evidence of rising productivity and real wage growth, the UK recovery now looks well supported. Our expectation is for real growth to continue at an above-trend pace of 2.5% over the next 12 months.



Inflation remains well below the BOE's 2% target, with headline CPI hovering around zero, while the core rate has stabilised around 1%. Our expectation is that a tight labour market and strong domestic demand will drive the core rate higher, with headline inflation converging to core at around 1.5% in 12 months' time. That in turn should be sufficient for the BOE to finally start the monetary tightening cycle, which we believe to most likely be in May 2016. By that time, headline CPI will have spent several months above the 1% threshold, and we expect the BOE should be sufficiently confident of inflation returning to its 2% target within their two-year horizon. We expect two hikes of 25 basis points over the cyclical horizon.

Q: How will PIMCO's outlook for growth, inflation and monetary policy in Europe guide the company's investment strategies over the medium term?

Pagani: Looking at interest rates, we think that there is value left in intermediate maturities, which do not fully discount the possibility of a QE extension beyond the ECB's September 2016 deadline and provide good carry opportunities. At the same time, we remain underweight the front end of the yield curve, which is trading at negative yields, and underweight the long end, which does not seem to compensate sufficiently for the increased volatility and the possibility of ECB reflationary success beyond the cyclical horizon.

The scenario of positive growth and relatively low inflation, coupled with continued QE, remains supportive for spreads in Europe's periphery, where we retain an overweight bias in Italy and Spain. Our overweight position in these peripheral economies is held as a stable positive contributor to carry in the portfolios, rather than on the expectation of continuous spread tightening over the cyclical horizon.

In the corporate sector, we also look outside of Europe, for example to the U.S., where we believe the recent spread widening relative to Europe provides investors with better risk rewards.

Finally, in currencies, we continue to maintain an underweight bias to the euro versus the U.S. dollar. However, in the context of portfolio construction, we focus our attention on position sizing that has to acknowledge the fact that the euro has been developing a price behavior that is positively correlated to other risk assets.

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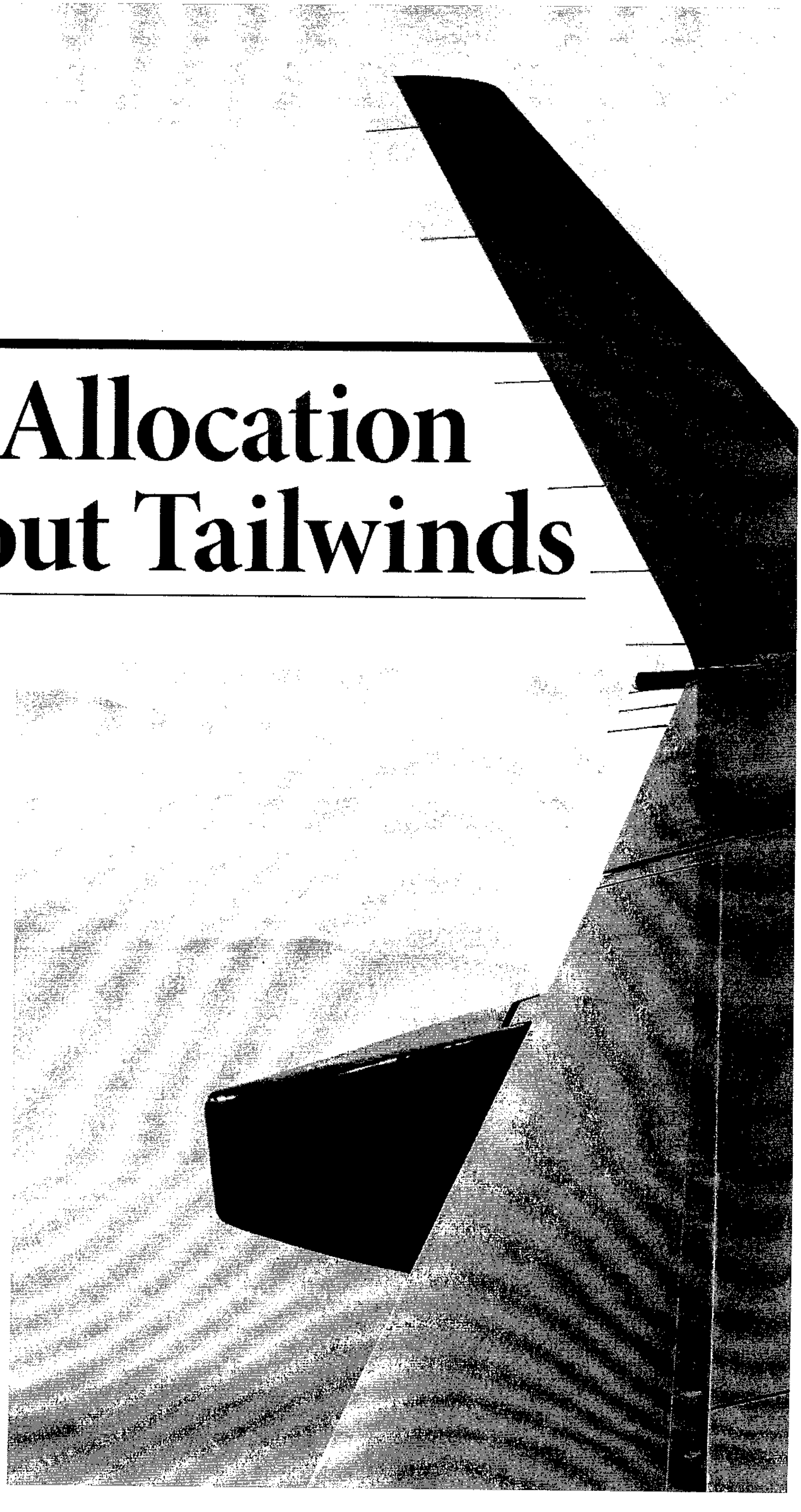
Asset Allocation
Secular Outlook 2015

Asset Allocation Without Tailwinds

The global economy and markets have come a long way since the financial crisis. Output in most major economies (in nominal terms) is higher than it was pre-crisis, as are asset prices. The specter of deflation is starting to fade as economic slack decreases and commodity prices stabilize. Extraordinary central bank policies, while controversial, have played a significant role in getting us here.



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Asset Allocation and
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Looking forward, it is our view that the world remains in The New Neutral, and importantly that asset markets now broadly reflect this development in their prices.

All this has significant ramifications for the evolution of asset prices and for how investors should approach multi-asset portfolios over the next three to five years, which we refer to as the secular horizon.

We reaffirmed the New Neutral thesis in May, when our investment professionals from across the globe gathered in Newport Beach for our Secular Forum to debate the long-term outlook for the global economy and to identify and assess key variables, trends and catalysts that may affect valuations and returns across global asset classes. We came away from the forum with some important insights, which Daniel Ivascyn, Richard Clarida and Andrew Balls describe in PIMCO's *Secular Outlook*, "The New Neutral Revisited."

At the center of our New Neutral thesis is the belief that even as central banks raise rates, they will do so slowly and prudently, and that the neutral rate over the coming cycle – meaning a rate that is neither stimulative nor contractionary – will be lower than in cycles past (a rough benchmark for the U.S. is closer to a 2% average policy rate than the traditional 4% assumed by many). We also don't foresee an inflation problem, even as we move away from an era of extremely limited price increases. Low interest rates and moderate inflation together support a muted but prolonged business cycle, and we believe this combination helps to sustain current asset valuations.

So why does our New Neutral thesis have significant ramifications for multi-asset investors over the secular horizon? We would argue that the tailwind from ever-lower policy rates and contracting term premia witnessed over the past 30 years is largely past us. Moreover, current valuations – as most assets already price in the reality of lower rates – are likely to constrain potential returns going forward.

Therefore investors must adjust to a world where returns on asset classes and the paradigm for constructing optimal portfolios over the next five years are unlikely to resemble those of the last five or even 30 years. Investors will need to be more dynamic and tactical in their overall asset allocations, and they should approach portfolio construction with even more differentiation as they allocate risk to individual positions. It is still possible to achieve compelling returns, but we believe the role of active portfolio management has become more important, and more necessary, than ever.

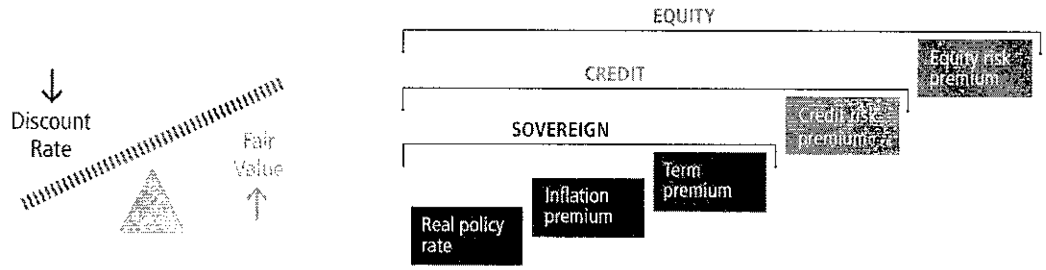
The New Neutral

For the next three to five years, even as monetary policymakers seek to normalize interest rates they will generally set short-term rates at levels below the rates that prevailed before the global financial crisis. Also in this New Neutral world, countries will converge to slower trend growth trajectories. Since PIMCO introduced The New Neutral secular view in May 2014, the construct has been priced in to financial markets.

LOWER DISCOUNT RATES SUPPORT VALUATIONS

Lower discount rates increase valuations

Building blocks of the discount rate



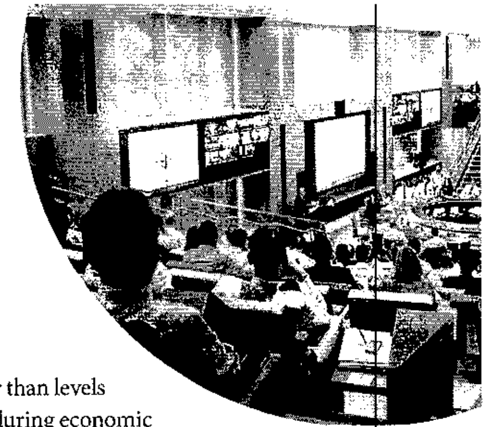
The fading discount rate boost

Let's start with restating the essential point: **The tailwind to asset classes from ever-lower interest rates is largely behind us.** Over the past several years, lower risk-free rates from aggressive central bank policies accompanied by dropping inflation created a "denominator effect" by pushing discount rates lower, which in turn led to higher valuations of assets. The discount rate applicable to future cash flows, regardless of the asset class, starts with the real "risk-free rate." The appropriate discount rate for each asset class can be modeled as the risk-free rate with an additional risk premium associated with its position in the capital structure and exposures to risk factors: for example, inflation and term premia for sovereign bonds, default and liquidity premia for credit, and equity risk premium for equities – each building off the risk-free discount rate. As risk-free rates drifted lower over a period of many decades, not only did the present value of future cash flows increase in the sovereign bond market, valuations increased broadly across **all** asset classes as growth expectations declined by less than the drop in risk-free rates.

So where are we headed? In fixed income, we do not see significantly higher bond yields over the next three to five years. Rather, policy rates are expected to rise gradually over the secular horizon. This change, from steadily falling discount rates to stable or, in many cases, modestly rising discount rates, will likely have substantial consequences: first, via lower expected returns, and second, on portfolio construction.

In this new regime, rigid "buy-and-hold" strategies may not work as well as they did in the past. A prime example is the recently popularized *"risk parity"* approach to asset allocation, a strategy by which portfolio allocations are sized in order to ensure the risk contribution from stocks, bonds and inflation-related assets is equal, or at parity. Given bonds generally have lower volatility than stocks and other assets, risk parity strategies systematically use leverage to increase risk exposure to the bond component. Over the past several years, markets have been generally friendly to these strategies as bond term premia compressed and volatility became subdued. However, they may now face headwinds as volatility resets and interest rate trends reverse, necessitating an active approach when managing these strategies. Moreover, studies have shown that the negative correlation between stocks and bonds (one of the key tenets behind this approach) tends to be greater when yields are falling than when yields are rising, which has significant implications for portfolio construction and diversification.

It seems clear that in the market environment we are facing, **tactical asset allocation and robust portfolio construction will become even more important as correlations become increasingly unstable and dispersion increases across asset class returns.** In this new regime, region, country and sector selection and bottom-up relative value strategies will have to do more of the heavy lifting to help offset either the end or reversal of the tailwind of declining discount rates.



Forecasting long-term returns

If asset valuations are full and price returns are likely to be lower overall, where do we find attractive opportunities? The New Neutral hypothesis offers a guide. Weaker growth potential and waning tailwinds from demographic trends will likely incentivize central bankers of highly levered, developed economies to raise rates in a slow and prudent manner, not veering far from the zero bound and keeping policy rates below previous long-term averages. We believe this will contribute to a longer economic cycle.

In this scenario, investors should expect low but positive returns from most developed market asset classes, with equities and credit outperforming government bonds and cash. Therefore, despite corporate bond yields seeming low and equity multiples seeming high, we do not see either market as overvalued or primed for a lasting correction. Investors may wish to add emphasis to the riskier asset classes in their overall allocation given our belief that lower yields and higher valuation multiples should be viewed through the lens that rates will be lower than in previous decades even as they creep upward.

For example, as we consider equities in our asset allocation portfolios, we estimate the current equity risk premium in the U.S. to be 3.9% in real terms, which is very close to its long-term average of 4.0% and higher than the 3.5% average observed during economic expansions. This suggests a fair premium relative to U.S. bonds and one with room to compress as economic strength continues to improve. Moreover, in seeking to outperform, one can always look for companies, sectors or even countries where earnings growth can positively impact prices and valuations.

Next, consider U.S. investment grade credit: Spreads relative to U.S. Treasuries, a measure that shows the additional premium bond investors demand as compensation for default risk, are not especially narrow relative to history, particularly for this stage of the business cycle. The current spread over the risk-free rate (option-adjusted spread, or OAS) is 137 basis points (bps), slightly narrower than the 40-year average of 138 bps but wider than levels typically observed during economic expansions (132 bps on average in first half expansions, and 110 bps on average in second half expansions).

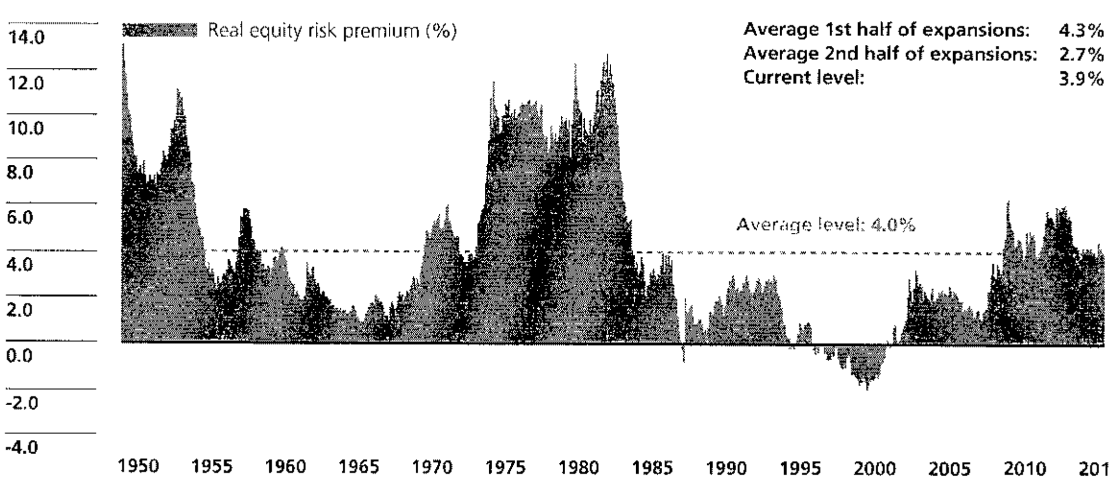
For global markets, our general estimates for long-term returns based upon our New Neutral thesis are shown on page 6. These estimates take into account current valuations, carry and where we believe valuations may be headed based upon our macroeconomic outlook.

Turning to emerging markets (EM), we believe that on average these sectors should outperform comparable developed market sectors over the secular horizon, but are likely to do so with higher volatility and other risks that must be considered.

As in the developed markets, lower yields have been a tremendous supporter of performance for EM assets following the financial crisis. However, in the past few years, emerging markets have gone through numerous challenges that have led to generally disappointing performance. Lower growth, lower commodity prices, weak exports and a strong U.S. dollar recently have been serious headwinds. The silver lining of the recent challenges, however, is that EM assets generally offer more favorable starting valuations.

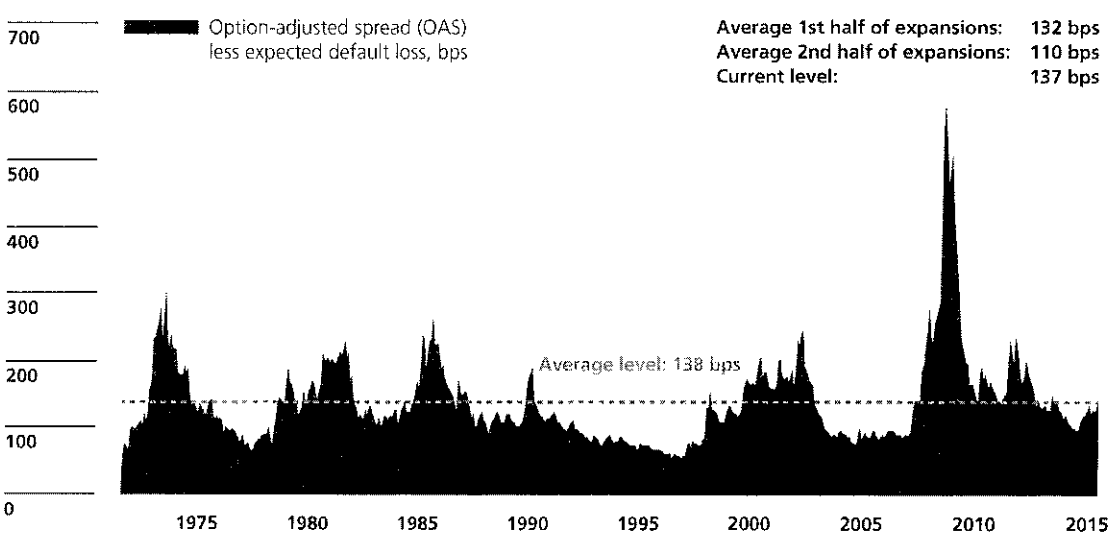
EM growth, which is expected to be higher than in developed markets, also helps valuations appear attractive. Add in the higher level of investments and productivity enhancements, and we have a favorable backdrop for attractive secular returns from emerging markets.

U.S. REAL EQUITY RISK PREMIUM SUGGESTS ATTRACTIVE LONG-TERM RETURN POTENTIAL IN EQUITIES



Source: Robert Shiller, Yale database, Bloomberg, PIMCO as of 30 June 2015
Hypothetical example for illustrative purposes only. Equity Risk Premium (ERP) = S&P500 cyclically adjusted earnings yield (inverse of the cyclically adjusted P/E) – 10-year real rate. 10-year real rate uses 10-year TIPS yield since 1998 and 10-year nominal rates less 36-month trailing inflation for periods before 1998. Expansions are defined based upon NBER business cycle data. First and second halves are equal halves of the full expansion period per this data; e.g., a hypothetical 20-month expansion would be sub-sampled by using the first 10 months as the first half and the second 10 months as the second half.

U.S. CREDIT VALUATIONS APPEAR FAIR RELATIVE TO LONG-TERM LEVELS

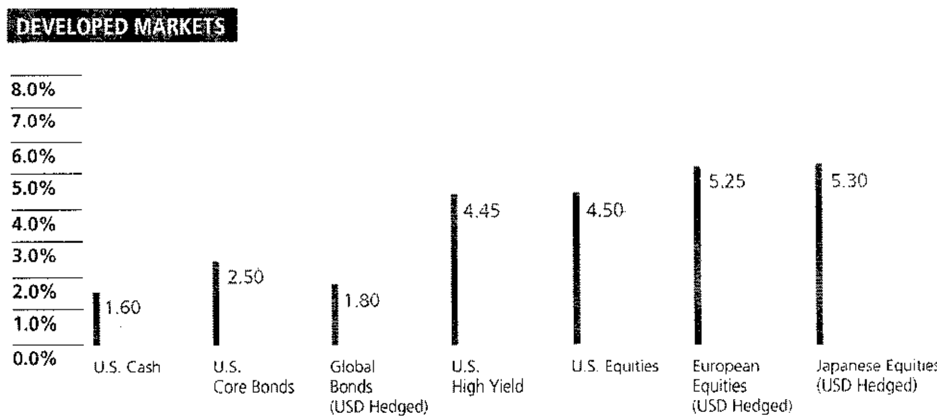


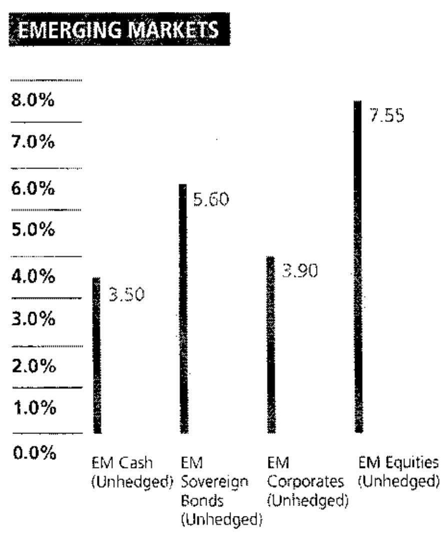
Source: Barclays U.S. Investment Grade Credit Index as of 30 June 2015. The option-adjusted spread (OAS) measures the spread over a variety of possible interest rate paths. The OAS measures the average return an investor will earn over Treasury returns, taking all possible future interest rate scenarios into account. From 1973 to 1990 OAS is computed from the duration-matched yield-to-worst of the Barclays IG Credit Index and Barclays Treasury Index. Starting in 1990 the OAS data is provided by Barclays. OAS was adjusted to maintain a constant ratings distribution.

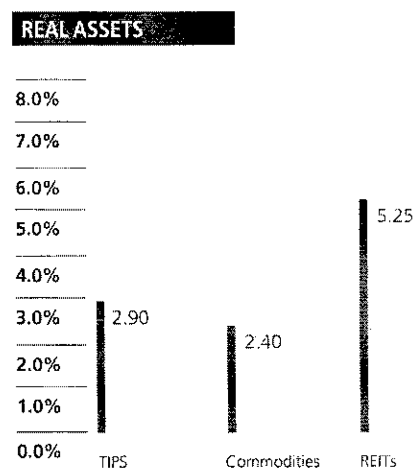
Thus far we have described the likely impact of The New Neutral on asset prices and their forward return potential, but as we mentioned at the outset, it is imperative to survey the markets and identify pockets of potentially more attractively priced securities that may deliver more attractive risk/return tradeoffs. In developed markets, to name a few examples, we believe global equities outside of the U.S. offer better forward return potential than those within. Across credit sectors we see superior opportunities in European financial and U.S. housing sectors. With respect to government debt, we generally find inflation-linked securities more attractive than their nominal counterparts.

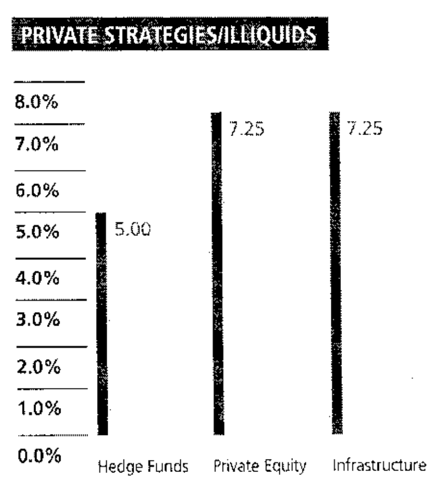
In EM, our theme of differentiation and dynamic management of portfolio positioning is even more important. No single EM country or asset class is likely to deliver these "average" long-term returns. Secular winners and losers will be decided as a function of initial conditions as well as country-specific monetary and fiscal policies. For countries or companies in emerging markets to attract scarcer global capital, they will need to demonstrate superior return potential that helps to compensate for their lack of liquidity and greater volatility. Policymakers and corporate managers will need to take the steps necessary to lead their countries and companies toward sustainable economic expansion. Successful investors will have to work to identify these potential winners: In the New Neutral world of muted growth, the twin engines of export-driven growth or terms-of-trade shock may not work going forward.

10-YEAR RETURN ESTIMATES









Source: PIMCO as of 31 March 2015. Estimates are based on the following indexes: U.S. cash – Citi 3-Month Treasury Bill Index; U.S. core bonds – Barclays U.S. Aggregate Index; global bonds (USD-hedged) – Barclays Global Aggregate ex USD Index; U.S. high yield – Barclays U.S. High Yield Index; U.S. equities – S&P 500 Index; European equities (USD-hedged) – MSCI Europe Index; Japanese equities (USD-hedged) – MSCI Japan Index; EM cash (unhedged) – J.P. Morgan ELMI + Unhedged Index; EM sovereign bonds (unhedged) – J.P. Morgan GBI-EM Global Index; EM corporates (unhedged) – J.P. Morgan CEMBI Diversified Index; EM equities (unhedged) – MSCI Emerging Markets Index; TIPS (U.S. Treasury Inflation-Protected Securities) – Barclays U.S. TIPS Index; commodities – Bloomberg Commodity TR Index; REITs (real estate investment trusts) – Dow Jones U.S. REIT Index; hedge funds – Dow Jones Credit Suisse Hedge Fund Index; Private equity – Cambridge Associates U.S. Private Equity Index; infrastructure – Macquarie Global Infrastructure Index.

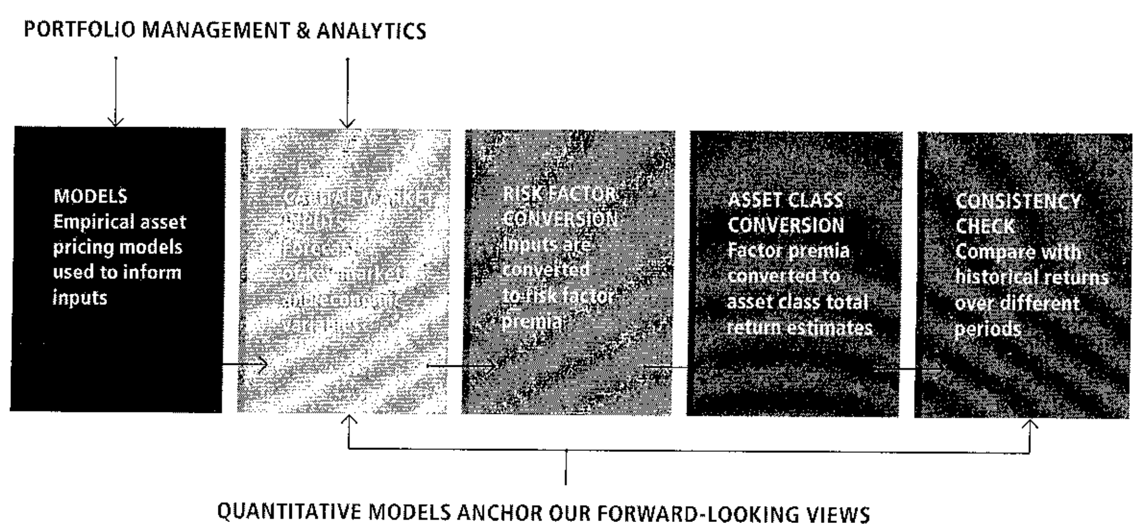
Capital Market Return Assumptions for Strategic Asset Allocation

Our long-term estimated returns are based on a structured internal survey, which queries senior portfolio managers (both generalists and specialists) for their forecasts for key markets. The survey is overseen by the asset allocation and the analytics teams.

The key inputs that are obtained through the survey process are forecasts for these data:

- Real GDP growth and inflation globally
- Equity valuations, dividend yields and earnings growth
- Nominal and real yield curves globally
- Foreign exchange rates against the U.S. dollar
- Investment grade and high yield credit spread levels, expected defaults and downgrades
- Sovereign credit spreads

A set of robust, well-established valuation models that map current market variables to expected returns serves as an anchor for the inputs in the survey process. For equities, country-specific cyclically adjusted earnings yields and estimates of equity risk premia over the local real interest rate relative to historical levels provide the most important analytical valuation anchor. Expected earnings growth is based on per capita real GDP growth estimates. For interest rates, the current yield level, the spread between current yields and forward rates alongside model-based estimates of long-term fair value for nominal and real yields are the most important analytical inputs which guide the expected long-term yields and model-based returns. For credit, the level of the current credit spread relative to history (adjusted for leverage ratios and composition across sectors and ratings quality) and historical defaults and downgrade losses are combined into a model-based forecast of future spreads and returns for both investment grade and high yield. For FX/currencies, real interest differentials are combined with a mean reversion toward purchasing power parity (PPP)-based fair value across countries to determine a model-based FX spot appreciation/depreciation and overall FX return.



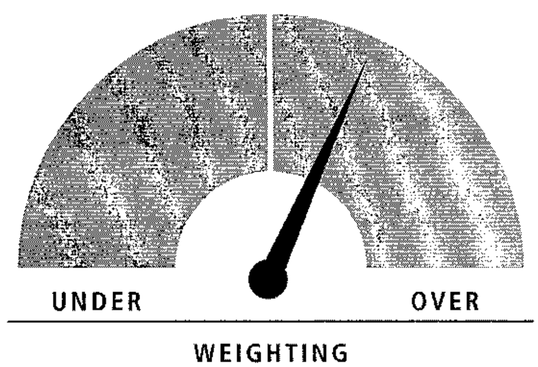
BUILDING ASSET ALLOCATION PORTFOLIOS

In our asset allocation portfolios, our investment decisions are made using a four-pronged framework.

- **We begin by gauging where in the globe macroeconomic conditions or policy actions are likely to produce the biggest surprises. These factors interact with macroeconomic fundamentals in ways that can have meaningful effects on asset returns.**
- **Then we conduct a rigorous analysis of cross-asset valuations and risk premia to inform our decisions on what to own long-term. This helps us determine our strategic allocations to various regions and asset classes.**
- **Next, we meet and debate often to assess short-term factors such as momentum, liquidity and investor flows, which help to indicate when trading may be warranted or even optimal.**
- **Finally, correlation and risk management considerations are incorporated to scale exposures.**

Asset Allocation Themes for Multi-Asset Portfolios

With the tailwind from ever-lower policy rates and term premia compression behind us, rather than see cause for alarm, investors should consider this a time to (1) refocus portfolio construction, (2) revisit sources of value through active management and (3) be judicious in asset allocation decisions. We believe investors will be best served if they consider opportunities across asset classes and throughout the globe.

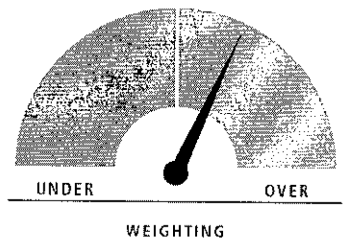


OVERALL RISK

Despite the waning tailwind of declining discount rates on asset class returns, we believe investors should not only stay invested, but look for opportunities to strategically overweight risk positions over the long term. Moderate global growth and a gradual upward path to interest rate levels lower than in previous cycles should be supportive of asset classes, though support is more tilted to providing a floor than providing a boost.

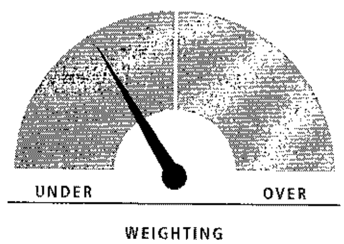
POSITIONING | **SECULAR OPPORTUNITIES**

EQUITIES



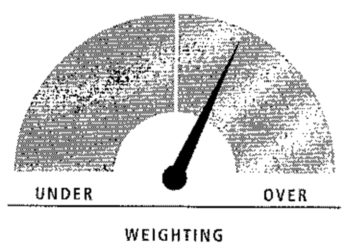
- A global survey of equity risk premia suggests fair to attractive valuations relative to bonds and recent history
- Exposure in Europe and Japan appear attractive given policy efforts that are stimulating growth, the levels of dividend yields and current valuations
- Emerging markets, particularly those in Asia, offer attractive opportunities for strategic overweights given macro trends, supportive policy and reforms, and levels of equity risk premia particularly when compared to recent history

RATES



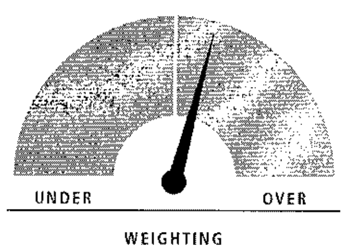
- Core fixed income retains its important role in a multi-asset portfolio to provide diversification and income
- We are wary of exposure to interest rates in developed markets as rates are low and poised to rise
- There are interesting opportunities in select EM countries, including Mexico and Brazil

CREDIT



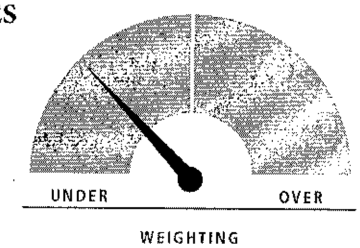
- Despite low all-in yields across credit sectors, spreads above government rates remain within fair to attractive levels
- We find specific opportunities such as European financials and U.S. housing-related credits most attractive
- A deeper appreciation for potential liquidity is needed given less inventory capacity at banks due to global banking regulations

REAL ASSETS



- Global inflationary trends may be poised to reverse and gain positive momentum, bolstering the case for real assets
- Inflation-linked bonds are particularly attractive as their prices continue to imply very low inflation premia when compared with nominal bonds
- Differentiation and tactical agility will be necessary to extract attractive returns from commodities as we believe supply and demand are generally matched

CURRENCIES



- We remain bullish on the U.S. dollar, and thus underweight international and emerging market currencies, given the divergence of Fed policy with most global central banks
- There are select opportunities in higher-yielding EM currencies like the Indian rupee; investors should nevertheless be wary of the potential for heightened volatility

Global Equities

Positive long-term outlook

We are generally constructive on the potential for equities to deliver long-term returns, though (as noted above) our 10-year forecast for developed market equities is in the modest 4%–5% range, and slightly higher for emerging markets (which include additional idiosyncrasies and risks).

The factors favoring equities include muted inflation, an extended business cycle and low discount rates which, if they move up, will likely do so slowly and to levels still low by historical standards.

Looking around the globe, European equities appear attractive over the secular horizon. In addition to the broader developments discussed, the trend toward increased dividend payout and a higher equity risk premium provide a good backdrop for superior returns. European equities offer high levels of earnings yields and valuations are lower relative to history. We think a resolution of the Greece crisis would remove a source of uncertainty and allow the market to outperform.

European financials may be a good secular choice in equity space, as well as hybrid securities or subordinated debt. We believe European banks are now far advanced in raising capital and in reaching some degree of normalization in yields, and the shape of the yield curve should lead to higher profitability, which is already buoyed by the cheap funding the European Central Bank (ECB) continues to provide through sustained quantitative easing.

In Asia, Japanese equities also offer strong secular return prospects. They have some of the best earnings growth momentum in the developed markets and stand to further benefit from the quantitative easing and structural reforms that are improving corporate governance and profitability.

We also favor equities in China and India: Both countries have embarked on secularly far-reaching reform agendas that should diminish vulnerabilities and unleash value. In particular, we should point out that the "bubble" and extreme valuations are confined to a small part of the Chinese market and recent volatility affords attractive entry for long-term investors into the more reasonably valued HSCEI (H shares).

China: A tale of different markets – picking the right one is important

[illegible]	Market capitalization ($ billions)	Price-to-earnings ratio, 12-month trailing	Price-to-book ratio	YTD return (local currency, %)	12-month return (local currency, %)	Dividend yield (%)
Shanghai Stock Exchange Composite Index	5,229	20.3x	2.4x	24.3	98.1	1.6
Shenzhen Stock Exchange Composite Index	3,303	52.3x	4.6x	50.4	92.4	0.5
ChiNext Price Index	336	86.1x	10.1x	82.7	97.9	0.3
Hong Kong Stock Exchange Hang Seng China [illegible]	388	8.7x	1.2x	2.7	18.9	3.4

Source: Bloomberg as of 13 July 2015

Equity market scorecard: key valuation indicators

Country/Region	Index	Cyclically adjusted P/E	Cyclically adjusted earnings yield	Real yield on 10-year government bond	Equity risk premium estimate
[illegible]	S&P 500	23.2	4.3%	0.5%	3.9%
Eurozone	EURO STOXX 50	15.2	6.6%	-0.1%	6.7%
Germany	DAX	18.7	5.4%	-0.5%	5.9%
France	CAC 40	16.6	6.0%	-0.4%	6.4%
[illegible]	FTSE 100	16.7	6.0%	0.0%	6.0%
Canada	TSX 60	19.3	5.2%	0.0%	5.2%
Australia	ASX 200	18.8	5.3%	0.7%	4.6%
Japan	TOPIX	25.3	4.0%	-0.6%	4.5%

All fundamental data are taken from Bloomberg. All figures are on a consolidated basis. Trailing returns are local currency total returns. Data as of 3 July 2015.
Cyclically adjusted price-to-earnings ratio is calculated as the ratio of the average of the inflation-adjusted price to the median of 10-year trailing real earnings. This is a variant of Shiller's P/E ratio. Cyclically adjusted earnings yield is the inverse of the cyclically adjusted price-to-earnings ratio. Real yields reflect the market real yield for each country or economy's 10-year maturity inflation-linked bond. For the FTSE 100, the real yield has been adjusted upward by 80 basis points to account for the basis between the UK's Retail Prices Index (RPI) and Consumer Price Index (CPI) inflation indexes. The real yield for the EURO STOXX 50 index reflects a weighted average of the 10-year real yields of the component countries.

Global Fixed Income

Differentiation Is Critical in Anchor Asset Class

Fixed income should remain a cornerstone of multi-asset portfolios for the foreseeable future as The New Neutral remains an anchor for fixed income valuations. However, ahead of the first Fed hike in almost 10 years, we are cautious on developed market duration in our portfolios and encourage investors to consider the full spectrum of global opportunities in fixed income.

In the developed markets we are likely to see term premium return to yield curves. There are two potential scenarios that could lead to higher long-term rates. The first would be the decline of fears of deflation and the end of the strong bid for high quality bonds that markets experienced when developed economies recently teetered on the edge of recession. A second scenario, more likely to manifest toward the latter part of our secular horizon, may be the unwinding of the global savings glut. Brought on by cheaper oil and commodity prices resulting in less petrodollars and/or a Chinese economy balancing away from export-oriented to consumption-oriented growth, both possibilities lead to fewer dollars recycling into U.S. Treasuries and other safe-haven government bonds.

Further, we could see the re-injection of "credit risk" into the government bonds of Italy and other peripheral European countries. Current yields and spreads compared to German government bonds may be attractive given the backdrop of ECB support. However, when asked to stand on their own, these bonds should not be trading at yields close to U.S. Treasury yields unless debt burdens are reduced and the economy is made more competitive.

We are secularly positive on Mexican interest rates as inflation has been reined in and Mexico has built significant fiscal and monetary policy credibility over the past several years. While Mexico's central bank is expected to raise rates in tandem with the Fed, we believe the market has priced in too many hikes. Credibility and institutional stability should see the spread of Mexican Bonos (Mexican government bonds with a fixed interest rate) to U.S. Treasuries compress in our secular horizon; we favor the intermediate part of the curve.

We are also hopeful that Brazil will move past its recent challenges to see better prospects ahead with a better mix of monetary and fiscal policies and more investor-friendly policies. The extremely high real interest rates would be very attractive if inflation were tamed and political and economic volatility reduced.

Credit spreads

As mentioned earlier, we believe credit spreads are broadly fair and provide adequate compensation for default risk. In such a scenario, and with no expectations of an elevated default cycle any time soon, one should earn the credit risk premium by investing in privately issued debt. However, credit differentiation and the identification of broad themes become more important in a world of diminished liquidity for specific industries and sectors that we find attractive on a secular basis (see the *Secular Series* publication, "Picking U.S. Energy, Housing and Other Credit Sectors for the Long Haul"). Some of these include the consumer and housing-related sectors in the U.S. and financials, including bank capital, in Europe and Japan.

In a world of diminished liquidity and mostly fair valuation for corporate bonds, it is perhaps appropriate to talk about a broad sector that still offers attractive return potential at the cost of sacrificing liquidity: private opportunities that require capital to be locked up for a period of time. There is a role for investors to take advantage of these as sources of financing from banks and other traditional lenders fade. These deals are often complex, and illiquid as advertised, but can be rewarding to institutions and investors who have the expertise to decipher the intricacies and unlock value. At PIMCO, we believe that this sector offers a win-win as investors seek higher returns than those offered by publicly traded stocks and bonds, and borrowers need capital that banks can no longer provide. (Please see our forward-looking return estimates for illiquid asset classes on page 6.) Our expectations are for the average private-equity-type investment to return approximately 2% more than equities, with lots of room for differentiation and opportunistic investment leading to potential outperformance.

Real Assets

Key Opportunities as Inflation Gradually Rises

As we see inflation accelerating, albeit gradually, over the secular horizon, we suggest investors consider an allocation to real assets, meaning assets that directly or indirectly hedge inflation risk (see the *Secular Series* piece, "Inflation Outlook: Approaching Target").

For the core government bond anchor in a multi-asset portfolio, we like U.S. TIPS (Treasury Inflation-Protected Securities). Not only are they an asset carrying only one risk, real rate risk (unlike nominal government bonds that carry both real rate and inflation risks), but we also view them as attractively valued relative to nominal bonds. The large amount of slack in the global economy over the past few years as well as the recent commodity price correction have resulted not only in a drop in inflation expectations (and fears of possible deflation until recently), but also in a near complete removal of inflation risk premium from the markets. Under these conditions, we think TIPS are an attractive choice for the core fixed income component of a multi-asset portfolio.

Commodities are another asset class that embodies the greater differentiation within asset classes that we expect going forward. During the supercycle of the early 2000s, when demand growth outpaced supply growth, most commodity sectors rose together. Then, as supply caught up over the last few years, we saw declines across most commodities. Going forward, supply and demand should be better matched and investors will have to be more selective in order to generate returns.

For example, we think U.S. natural gas stands out as attractive, with long-dated natural gas prices around $3.00/MMBtu (millions of British thermal units) trading close to prices where it is economical to substitute gas for coal in U.S. power production and significantly below the prices where natural gas trades in the rest of the world. Supply is likely to drop with a slowdown in fracking. Meanwhile, demand is likely to increase as the world looks for cleaner energy sources and the political process in the U.S. possibly allows for greater energy exports.

We also believe gold is losing its shine. The two biggest drivers of gold prices, U.S. real interest rates and the U.S. dollar, should both move modestly higher over the secular horizon, affecting financial market demand. Physical demand from India could also cool as the financial markets mature and the government promotes viable alternatives to gold for savings and wealth preservation.

Finally, an important element of commodity prices is the announcement of the anticipated agreement with Iran. While geopolitical risk in the Middle East has been a source of supply disruptions leading to higher prices, peace with Iran should bring additional oil into the global market, leading to a cap on long-term prices.

Currencies

Continuing Strength in U.S. Dollar

Over the secular horizon, the major factors driving currency returns are interest rate differentials and inflation surprises. We continue to expect broad strength in the U.S. dollar over the early part of the secular horizon. We expect the Fed to be the first major central bank to hike rates as the U.S. economy is a few years ahead of other major economies in its recovery.

This divergence will lead to U.S. dollar strength versus most developed economies where current policy is likely to further weaken local currencies.

In the latter part of the secular horizon we could see strong returns from the higher-yielding EM currencies like the Brazilian real (BRL) or the Indian rupee (INR) if inflation rates are stable enough to attract outside capital. The offshore exchange market in the Chinese yuan (CNH) also bears watching for possible appreciation as China further loosens capital controls; the CNH is more widely accepted in global trade (including becoming part of the International Monetary Fund's Special Drawing Rights (SDR) basket).

Risks to our outlook

PIMCO's latest Secular Outlook details the key investment risks over the secular horizon. One primary secular risk that investors should keep in mind is that while we do not expect a major recession and continue to expect central banks to go "all in" to support growth, should a recession occur when major global central banks are all operating at or near the zero bound and with already bloated balance sheets, they may have little room to maneuver to engage countercyclical policies.

Another secular risk is a bout of higher inflation. We see a move away from deflation or "lowflation" territory and toward central bank targets. Inflation is a notorious lagging, late-cycle indicator. It is possible that central banks misjudge the degree of slack in the economy and easy and unconventional policies result in a period of higher-than-expected inflation. This would be negative for returns in both bonds and stocks, positive for commodities.

Geopolitical risks also cast a shadow on our outlook. There are several known potential flash points around the world, and many that cannot yet be anticipated. A key development to watch is the evolution of the relationship between China and the U.S. as the former asserts itself more on the global stage.

While risks to the base case are ever present, they are by definition uncertain in likelihood and timing. As such, robust portfolio construction, diversification and identifying investments with "positive convexity" become particularly important in a world of lower expected returns.

Finally, though one often thinks about "left tails" when talking about risks, there is also the possibility of "right tails" over the secular horizon. For example, strong upside catalysts might include the end of political gridlock or improved fiscal policy, both of which may lead to stronger growth rates than the muted ones we expect in the U.S. and Europe. This development would obviously be positive for risk assets like equities and credit.

Asset Allocation Best Ideas: A Secular Perspective

As our survey of the outlook for major asset classes demonstrates, investors likely should reconsider their long-term paradigm to multi-asset portfolio construction. This is not because we forecast a bear market in equities or other dramatic turns. It is because The New Neutral has mostly been priced in to asset valuations, and investors should be well-served by differentiating among broad allocations and being diligent in examining specific opportunities to seek those with compelling risk-return potential.

Broadly, our secular bias is to overweight equities and credit fixed income and underweight government bonds. Patient investors may also benefit from overweighting exposure to emerging markets, though they need to be careful about how they execute and stay aware of the risks. Finally, while not suitable for all investors, illiquid, private investments, if prudently chosen, can offer superior return potential and diversification in an era of shrinking government and bank budgets.

The next step is to be tactical, which includes the perennial admonition to "do your homework." Yet from a tactical standpoint, there is one aspect of our New Neutral thesis to consider both for risk and return: We are likely to see substantial bouts of volatility ahead. In the near term, we expect the Federal Reserve will conduct its first policy rate hike later this year. While we expect the Fed to move gradually over time to a lower "neutral" policy rate than in previous cycles, we believe investors may be underestimating the volatility that could ensue from moving off the zero bound. Longer term, we see greater likelihood of flash crashes and general volatility resulting from the global banking system, which as a result of post-crisis regulation allocates less of its balance sheet to making markets. The banks may be "safer," but markets are less liquid at times when liquidity is needed. Another area of focus should be on predicting forward-looking correlations. Portfolios that appear well-diversified based on historical data may turn out to be less so in practice.

Issues of liquidity and volatility should be of concern to investors, but they can also be sources of opportunity when securities pricing becomes divorced from fundamentals. There is reason for cautious optimism among investors revisiting their approach to multi-asset portfolio construction for the long term.

The Asset Allocation team leverages firmwide resources

Mihir P. Worah
CIO Asset Allocation and Real Return

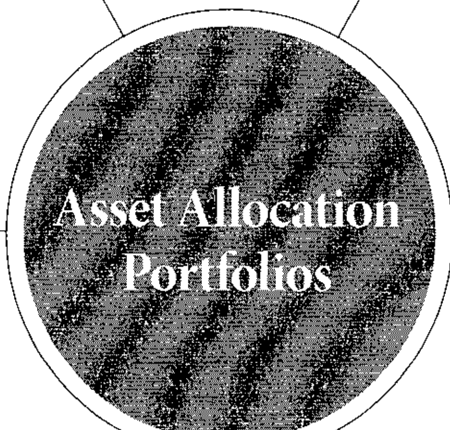
- PIMCO Investment Committee member
- Generalist portfolio manager
- 14 years of investment experience

Role: Asset allocation and portfolio construction

Geraldine Sundstrom
Managing Director, Asset Allocation

- Global macro and absolute return investment experience
- 17 years of investment experience

Role: Asset allocation and portfolio construction



Rahul Devgon
Senior Vice President

- Macro and technical trading
- Global macro and absolute return investment experience
- 16 years of investment experience

Role: Global macro and relative value trading

Mohsen Fahmi
Managing Director

- PIMCO Investment Committee member
- Global macro and absolute return investment experience
- 30 years of investment experience

Role: Global macro and relative value trading

Nic Johnson
Executive Vice President

- Real assets and relative value investment experience
- 11 years of investment experience

Role: Real assets and relative value

Lorenzo Pagani, Ph.D.
Managing Director

- Head of European government bond and rates desks
- European portfolio committee member
- Counterparty risk committee member
- 12 years of investment experience

Role: Fixed income relative value

FULL PIMCO RESOURCES

250+ Portfolio Managers
60+ Research Analysts
60+ Portfolio Analytics Analysts

PORTFOLIO ANALYTICS

Ravi Mattu
Managing Director

- Global head of analytics
- 33 years of investment experience
- 60+ portfolio analytics analysts

RISK MANAGEMENT

Bill De Leon
Managing Director

- Global head of portfolio risk management
- 24 years of investment experience
- 10 portfolio managers and 25+ legal advisors

The **"risk-free" rate** can be considered the return on an investment that, in theory, carries no risk. Therefore, it is implied that any additional risk should be rewarded with additional return. **All investments** contain risk and may lose value.

Past performance is not a guarantee or a reliable indicator of future results. Performance results for certain charts and graphs may be limited by date ranges specified on those charts and graphs; different time periods may produce different results. Charts are provided for illustrative purposes and are not indicative of the past or future performance of any PIMCO product.

Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and the current low interest rate environment increases this risk. Current reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed. **Equities** may decline in value due to both real and perceived general market, economic and industry conditions. Investing in **foreign-denominated and/or -domiciled securities** may involve heightened risk due to currency fluctuations, and economic and political risks, which may be enhanced in emerging markets. **Currency rates** may fluctuate significantly over short periods of time and may reduce the returns of a portfolio. **Sovereign securities** are generally backed by the issuing government. Obligations of U.S. government agencies and authorities are supported by varying degrees, but are generally not backed by the full faith of the U.S. government. Portfolios that invest in such securities are not guaranteed and will fluctuate in value. **Inflation-linked bonds (ILBs)** issued by a government are fixed income securities whose principal value is periodically adjusted according to the rate of inflation; ILBs decline in value when real interest rates rise. **Treasury Inflation-Protected Securities (TIPS)** are ILBs issued by the U.S. government. **Commodities** contain heightened risk, including market, political, regulatory and natural conditions, and may not be suitable for all investors.

There is no guarantee that these investment strategies will work under all market conditions or are suitable for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market. Investors should consult their investment professional prior to making an investment decision.

Return estimates are for illustrative purposes only and are not a prediction or a projection of return. Actual returns may be higher or lower than those shown and may vary substantially over shorter time periods.

The **Australian Stock Exchange ("ASX")** was formed in 1987 through the amalgamation of six independent stock exchanges. ASX operates Australia's primary national stock exchange for equities, derivatives and fixed interest securities and facilitates capital raisings for unlisted companies. The resources sector – mining and energy businesses – accounts for one-third the market capitalization; industrials – including banks, retail, media, and transportation - comprise the balance.

Barclays Global Aggregate (USD Hedged) Index provides a broad-based measure of the global investment-grade fixed income markets. The three major components of this index are the U.S. Aggregate, the Pan-European Aggregate, and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds, Canadian Government securities, and USD investment grade 144A securities.

The **Barclays High Yield Index** is an unmanaged market-weighted index including only SEC registered and 144(a) securities with fixed (non-variable) coupons. All bonds must have an outstanding principal of $100 million or greater, a remaining maturity of at least one year, a rating of below investment grade and a U.S. Dollar denomination.

Barclays U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

Barclays Credit Investment Grade Index is an unmanaged index comprised of publicly issued U.S. corporate and specified non-U.S. debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.

Barclays U.S. TIPS Index is an unmanaged market index comprised of all U.S. Treasury Inflation Protected Securities rated investment grade (Baa3 or better), have at least one year to final maturity, and at least $250 million par amount outstanding. Performance data for this index prior to 10/97 represents returns of the Barclays Inflation Notes Index.

The **Bloomberg Commodity Total Return Index** is an unmanaged index composed of futures contracts on 22 physical commodities. The index is designed to be a highly liquid and diversified benchmark for commodities as an asset class. Prior to 30 June 2014, this index was known as the Dow Jones UBS Commodity Total Return Index.

The **CAC 40** is a French stock market index, a benchmark index for the Paris Bourse (stock exchange). The index represents a capitalization-weighted measure of the 40 most significant values among the 100 highest market caps on the Paris Bourse. Its base value of 1,000 was set on December 31, 1987. As of December 1, 2003, the index has become a free float weighted index.

The **Cambridge Associates U.S. Private Equity Index** is based on returns data representing nearly two-thirds of leveraged buyout, subordinated debt, and special-situations partnerships since 1986.

ChiNext is an independent market, offering a platform for the needs of enterprises engaged in independent innovation and other growing venture enterprises. The ChiNext board indices comprehensively and objectively reflect the overall price move of ChiNext board stocks. It is launched and released on 06/01/2010.

The **Citigroup 3-Month Treasury Bill Index** is an unmanaged index representing monthly return equivalents of yield averages of the last 3 month Treasury Bill issues.

The **DAX 100 Index** is a total rate of return index of the 100 most highly capitalized stocks traded on the Frankfurt Stock Exchange.

The **Dow Jones Credit Suisse Hedge Fund Index** is an unmanaged index compiled by Credit Suisse Hedge Index LLC and CME Group Index Services LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The index uses the Credit Suisse Hedge Fund Database, which tracks approximately 8,000 funds and consists only of funds with a minimum of US$50 million under management, a 12-month track record, and audited financial statements. The index is formerly known as the Credit Suisse/Tremont Hedge Fund Index.

The **Dow Jones U.S. Select Real Estate Investment Trust (REIT) Index** is an unmanaged index subset of the Dow Jones Americas U.S. Select Real Estate Securities (RESI) Index. This index is a market capitalization weighted index of publicly traded Real Estate Investment Trusts (REITs) and only includes only REITs and REIT-like securities.

The **EURO STOXX 50 Index**, Europe's leading blue-chip index for the Eurozone, provides a blue-chip representation of supersector leaders in the Eurozone. The index covers 50 stocks from 12 Eurozone countries.

The **FTSE 100 Index** is a capitalization-weighted index of the 100 most highly capitalized companies traded on the London Stock Exchange. The equities use an investibility weighting in the index calculation. The index was developed with a base level of 1000 as of January 3, 1984.

The **Hang Seng China Enterprises Index** is a free-float capitalization-weighted index comprised of H-Shares listed on the Hong Kong Stock Exchange and included in the Hang Seng Mainland Composite Index. The base value of this index is 2000 as of Jan 3, 2000.

The **JPMorgan Corporate Emerging Markets Bond Index** (JPM CEMBI) is a global, liquid corporate emerging markets benchmark that tracks U.S.-denominated corporate bonds issued by emerging markets entities.

JPMorgan Emerging Local Markets Index Plus (Unhedged) tracks total returns for local currency-denominated money market instruments in 24 emerging markets countries with at least U.S. $10 billion of external trade.

The **JPMorgan Government Bond Index-Emerging Markets** (GBI-EM) indices are comprehensive emerging markets debt benchmarks that track local currency bonds issued by Emerging Market governments. The index was launched in June 2005 and is the first comprehensive global local Emerging Markets index.

The **Macquarie Global Infrastructure Index** Series (MGII), which is calculated and managed by FTSE, is designed to reflect the performance of companies within the infrastructure industry, principally those engaged in the management, ownership and or operation of infrastructure and utility assets.

The **MSCI Emerging Markets Index** is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 21 emerging market country indices: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey.

The **MSCI Europe Index** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index consists of the following 16 developed market country indices: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

The **MSCI Japan Index** is a market capitalization weighted index composed of approximately 277 issues, and is generally representative of the market structure of Japan.The index is calculated separately; without dividends, with gross dividends reinvested and estimated tax withheld, and with gross dividends reinvested, in both U.S. Dollars and local currency.

The **S&P 500 Index** is an unmanaged market index generally considered representative of the stock market as a whole. The index focuses on the Large-Cap segment of the U.S. equities market.

The **S&P/TSX 60 Index** is a list of the 60 largest companies on the Toronto Stock Exchange as measured by market capitalization. This Canadian index offers exposure across 10 economic sectors, and is maintained by the Canadian S&P Index Committee.

The **Shanghai Stock Exchange Composite Index** is a capitalization-weighted index. The index tracks the daily price performance of all A-shares and B-shares listed on the Shanghai Stock Exchange. The index was developed on December 19, 1990 with a base value of 100.

Shenzhen Composite Index is an actual market-cap weighted index (no free float factor) that tracks the stock performance of all the A-share and B-share lists on Shenzhen Stock Exchange. The index was developed on April 3, 1991 with a base price of 100.

The **TOPIX (Tokyo Stock Price Index)** is a capitalization-weighted composite of all stocks trading on the first section of the Tokyo Stock Exchange ("TSE"), supplemented by size groups that classify first section companies as small, medium, and large and by sub-indices for each of the 33 industry groups. It is not possible to invest directly in an unmanaged index.

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Agenda Item III.B.

Board Education

Monthly Performance Reports

October 16, 2015

Dave Hunter, Executive Director/CIO

Darren Schulz, CFA, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Reviewing Monthly Performance Reports – Overview

- **The following pages provide an overview of how to review TFFR's Monthly Investment Performance Reports (although it is relevant for all SIB clients).**
- **Performance reports are available on the RIO website on a monthly basis noting that monthly data is preliminary and subject to change.**
  http://www.nd.gov/rio/RIO_ref/report_list.asp?rType=performance&rFolder=TFFR&rName=Teachers' Fund For Retirement
- **Quarterly performance is available on the RIO website generally 45-to-50 days after each quarter.** http://www.nd.gov/rio/SIB/Publications/PerformanceReports/2015-06PerformanceReport.pdf
- **In general, RIO recommends the reader review investment performance using the following order (or hierarchy):**
  1. Total Fund Returns (to assess overall plan performance);
  2. Global Equity (57% target allocation);
  3. Global Fixed Income (22% target allocation);
  4. Global Real Assets (20% target allocation);
  5. Subsectors of the 3 major asset classes (e.g. Real Estate or Timber); and
  6. Investment Manager/Strategy (e.g. TIR – Teredo or TIR – Springbank).
- **Given the long-term investment horizon of most SIB clients, there should be a greater emphasis placed on 5-year returns over shorter periods.**

Monthly Performance Report – TFFR Total Fund Returns

Review "Total Fund" Performance (Current Year) - Compare "Total Fund" Net Returns for the Current Fiscal Year (Column F, Row 1) to the Policy Target Benchmark (Column F, Row 2) to see if the **Total Relative Return** (Column F, Row 3) **exceeded our Policy Benchmark** (based on board approved asset allocation policy).

Column >	A	B	C	D	E	F	G	H	I	J	K	L
		June-15			Current Fiscal YTD		Prior Year FY14		3 Years Ended		5 Years Ended	
			Allocation						6/30/2015		6/30/2015	
Row		Market Value	Actual	Policy	Gross [5]	Net	Gross [5]	Net	Gross [5]	Net	Gross [5]	Net
1	TOTAL FUND	2,103,807,352	100.0%	100.0%	3.86%	3.52%	16.90%	16.53%	11.43%	11.09%	11.38%	11.01%
2	*POLICY TARGET BENCHMARK*				*2.16%*	***2.16%***	*15.74%*	*15.74%*	*9.80%*	*9.80%*	*9.97%*	***9.97%***
3	TOTAL RELATIVE RETURN				1.70%	1.36%	1.17%	0.79%	1.64%	1.29%	1.41%	1.04%

Review "Total Fund" Performance (5-Years) - Compare "Total Fund" Net Returns for the 5 Years Ended June 30, 2015 (Column L, Row 1) to the Policy Benchmark (Column L, Row 2) to see if the **Total Relative Return** (Column L, Row 3) **exceeded the Policy Benchmark Target** (based on the board approved asset allocation).

Summary: If the Total Relative Return is positive, the SIB's strategic and/or core investment belief that "active management generates excess income over passive investing" is validated for the stated reporting period.

NOTE: All SIB client specific monthly reporting is preliminary and subject to change noting it is unaudited data.

ND TEACHERS FUND FOR RETIREMENT
INVESTMENT PERFORMANCE REPORT AS OF JUNE 30, 2015

	June-15					Current Fiscal YTD		Prior Year FY14		3 Years Ended 6/30/2015		5 Years Ended 6/30/2015	
		Allocation		Quarter									
	Market Value	Actual	Policy	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net
TOTAL FUND	**2,103,807,352**	**100.0%**	**100.0%**	**0.83%**	**0.78%**	**3.86%**	**3.52%**	**16.90%**	**16.53%**	**11.43%**	**11.09%**	**11.38%**	**11.01%**
POLICY TARGET BENCHMARK				*0.26%*	*0.26%*	*2.16%*	*2.16%*	*15.74%*	*15.74%*	*9.80%*	*9.80%*	*9.97%*	*9.97%*
ATTRIBUTION ANALYSIS													
Asset Allocation				**-0.04%**	**-0.04%**	**-0.05%**	**-0.05%**	**0.23%**	**0.23%**	**0.08%**	**0.08%**	**0.05%**	**0.05%**
Manager Selection				**0.61%**	**0.56%**	**1.75%**	**1.41%**	**0.93%**	**0.56%**	**1.56%**	**1.21%**	**1.36%**	**0.99%**
TOTAL RELATIVE RETURN				0.57%	0.52%	1.70%	1.36%	1.17%	0.79%	1.64%	1.29%	1.41%	1.04%
GLOBAL EQUITIES	***1,198,248,840***	***57.0%***	***57.0%***	***0.81%***	***0.77%***	***3.51%***	***3.17%***	***22.39%***	***21.97%***	***14.76%***	***14.38%***		
Benchmark			52.0%	***0.17%***	***0.17%***	***1.55%***	***1.55%***	***22.03%***	***22.03%***	***13.53%***	***13.53%***		
Epoch (1)	144,434,304	6.9%	7.0%	0.21%	0.05%	8.58%	7.85%	18.24%	17.41%	15.77%	15.00%	14.20%	13.31%
LSV	188,899,108	9.0%	9.0%	1.29%	1.26%	1.94%	1.03%	27.77%	27.33%	N/A	N/A	N/A	N/A
Total Global Equities	**333,333,412**	**15.8%**	**16.0%**	**0.84%**	**0.75%**	**4.68%**	**3.84%**	**23.24%**	**22.64%**	**12.99%**	**12.57%**		
MSCI World				***0.31%***	***0.31%***	***1.43%***	***1.43%***	***24.05%***	***24.05%***	***14.27%***	***14.27%***		
Domestic - broad	***462,458,815***	***22.0%***	***21.5%***	***0.39%***	***0.37%***	***8.65%***	***8.47%***	***25.23%***	***24.86%***	***19.06%***	***18.77%***		
Benchmark				***0.20%***	***0.20%***	***7.26%***	***7.26%***	***25.02%***	***25.02%***	***17.81%***	***17.81%***		
Large Cap Domestic													
LA Capital	136,652,294	6.5%	6.6%	0.91%	0.86%	12.76%	12.52%	25.82%	25.56%	19.03%	18.79%	19.06%	18.84%
Russell 1000 Growth				***0.12%***	***0.12%***	***10.56%***	***10.56%***	***26.92%***	***26.92%***	***17.99%***	***17.99%***	***18.59%***	***18.59%***
LA Capital	88,504,777	4.2%	3.3%	-0.28%	-0.31%	8.26%	8.12%	24.42%	24.27%	17.89%	17.73%	17.86%	17.64%
Russell 1000				***0.11%***	***0.11%***	***7.37%***	***7.37%***	***25.36%***	***25.36%***	***17.73%***	***17.73%***	***17.58%***	***17.58%***
Northern Trust	54,205,987	2.6%	3.3%	-0.36%	-0.36%	6.26%	5.89%	26.83%	25.90%	18.57%	18.03%	18.27%	17.86%
Clifton	76,862,284	3.7%	3.3%	-0.01%	-0.01%	7.43%	7.41%	24.65%	24.65%	17.27%	17.26%	N/A	N/A
S&P 500				***0.28%***	***0.28%***	***7.42%***	***7.42%***	***24.61%***	***24.61%***	***17.31%***	***17.31%***	***17.34%***	***17.34%***
Total Large Cap Domestic	**356,225,342**	**16.9%**	**16.6%**	**0.22%**	**0.19%**	**9.48%**	**9.30%**	**25.21%**	**24.96%**	**19.06%**	**18.85%**	**17.97%**	**17.69%**
Russell 1000 (2)				***0.11%***	***0.11%***	***7.37%***	***7.37%***	***25.36%***	***25.36%***	***17.73%***	***17.73%***	***17.57%***	***17.57%***
Small Cap Domestic													
SEI	-	0.0%	0.0%	N/A	N/A	N/A	N/A	-90.87%	-90.87%	N/A	N/A	N/A	N/A
Callan (5)	52,557,829	2.5%	2.4%	0.88%	0.88%	3.98%	3.98%	25.27%	24.40%	18.49%	18.00%	17.77%	17.18%
Clifton	53,675,644	2.6%	2.4%	1.04%	1.04%	7.58%	7.17%	24.95%	24.29%	18.98%	18.44%	N/A	N/A
Total Small Cap Domestic	**106,233,472**	**5.0%**	**4.8%**	**0.96%**	**0.96%**	**5.77%**	**5.57%**	**25.13%**	**24.36%**	**18.85%**	**18.34%**	**18.02%**	**17.48%**
Russell 2000				***0.42%***	***0.42%***	***6.49%***	***6.49%***	***23.64%***	***23.64%***	***17.81%***	***17.81%***	***17.08%***	***17.08%***
International - broad	***320,794,475***	***15.2%***	***14.5%***	***2.23%***	***2.19%***	***-2.62%***	***-2.82%***	***23.73%***	***23.29%***	***12.35%***	***11.91%***		
Benchmark				***0.65%***	***0.65%***	***-4.34%***	***-4.34%***	***21.81%***	***21.81%***	***10.41%***	***10.41%***		
Developed International													
Capital Group	63,915,295	3.0%	3.5%	1.89%	1.80%	-1.78%	-2.20%	21.31%	20.79%	13.07%	12.59%	9.84%	9.33%
MSCI EAFE (3)				***0.62%***	***0.62%***	***-4.22%***	***-4.22%***	***23.57%***	***23.57%***	***11.97%***	***11.97%***	***8.38%***	***8.38%***
NTGI	115,231,023	0.0%	5.9%	0.64%	0.64%	-4.98%	-5.01%	N/A	N/A	N/A	N/A	N/A	N/A
MSCI World Ex US				***0.48%***	***0.48%***	***-5.28%***	***-5.28%***						
DFA (5)	36,995,983	1.8%	1.2%	5.19%	5.19%	-3.27%	-3.27%	36.64%	35.75%	18.18%	17.71%	13.39%	12.81%
Wellington	42,062,448	2.0%	1.2%	5.84%	5.63%	0.53%	-0.31%	29.23%	28.18%	17.91%	16.99%	15.88%	14.97%
S&P/Citigroup BMI EPAC < $2BN				***5.97%***	***5.97%***	***1.14%***	***1.14%***	***26.39%***	***26.39%***	***14.70%***	***14.70%***	***11.08%***	***11.08%***
Total Developed International	**258,204,749**	**12.3%**	**11.8%**	**2.41%**	**2.35%**	**-3.10%**	**-3.34%**	**26.29%**	**25.89%**	**13.96%**	**13.52%**	**10.66%**	**10.22%**
MSCI EAFE (3)				***0.62%***	***0.62%***	***-4.22%***	***-4.22%***	***23.57%***	***23.57%***	***11.97%***	***11.97%***	***8.38%***	***8.38%***
Emerging Markets													
JP Morgan	-	0.0%	0.0%	N/A	N/A	N/A	N/A	11.04%	9.86%	N/A	N/A	9.58%	8.73%
NTGI	-	0.0%	0.0%	N/A	N/A	N/A	N/A	14.40%	14.30%	N/A	N/A	N/A	N/A
Axiom	47,800,359	2.3%	2.1%	1.39%	1.39%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DFA (5)	14,789,367	0.7%	0.7%	1.97%	1.97%	-1.73%	-1.73%	16.64%	15.89%	7.76%	7.30%	6.78%	6.17%
Total Emerging Markets	**62,589,726**	**3.0%**	**2.8%**	**1.53%**	**1.53%**	**-0.86%**	**-0.88%**	**12.68%**	**12.12%**	**5.31%**	**4.89%**	**6.29%**	**5.75%**
MSCI Emerging Markets				***0.69%***	***0.69%***	***-5.13%***	***-5.13%***	***14.31%***	***14.31%***	***3.71%***	***3.71%***	***3.75%***	***3.75%***

NOTE: All SIB client specific monthly reporting is preliminary and subject to change noting it is unaudited data.

Monthly Performance – TFFR Global Equities

Review "Global Equities" Performance (Current Year) - Compare "Global Equities" Net Returns for the Current Fiscal Year (Column F, Row 4) to the Benchmark (Column F, Row 5) to see if the **Net Return of Global Equities exceeded our Benchmark (e.g. 3.17% minus 1.55% = 1.62%).**

Column >	A	B	C	D	E	F	G	H	I	J	K	L
		June-15			Current Fiscal YTD		Prior Year FY14		3 Years Ended 6/30/2015		5 Years Ended 6/30/2015	
			Allocation									
Row		Market Value	Actual	Policy	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net
1	TOTAL FUND	2,103,807,352	100.0%	100.0%	3.86%	3.52%	16.90%	16.53%	11.43%	11.09%	11.38%	11.01%
2	*POLICY TARGET BENCHMARK*				*2.16%*	***2.16%***	*15.74%*	*15.74%*	*9.80%*	*9.80%*	*9.97%*	***9.97%***
3	TOTAL RELATIVE RETURN				1.70%	1.36%	1.17%	0.79%	1.64%	1.29%	1.41%	1.04%
4	***GLOBAL EQUITIES***	***1,198,248,840***	***57.0%***	***57.0%***	***3.51%***	***3.17%***	***22.39%***	***21.97%***	***14.76%***	***14.38%***		
5	***Benchmark***			***52.0%***	***1.55%***	***1.55%***	***22.03%***	***22.03%***	***13.53%***	***13.53%***		

Review "Global Equities" Performance (Medium-Term) - Compare Net Returns for the 3 Years Ended June 30, 2015 (Column J, Row 4) to the Policy Benchmark (Column L, Row 5) to see if the **Net Return of Global Equities exceeded the Benchmark (e.g. 14.38% less 13.53% = 0.85%). Global Equity active management created 0.85% of Excess Return for the 3-years ended June 30, 2015, while Actual and Target asset allocations were consistent at 57.0% (Columns C and D, Row 4).**

NOTE: All SIB client specific monthly reporting is preliminary and subject to change noting it is unaudited data.

Monthly Performance – TFFR Global Fixed Income

Global Fixed Income Returns (Current Year) - Compare "Global Fixed Income" Net Returns in the Current Year (Column F, Row 6) to the Benchmark (Column F, Row 7) to see if **Net Return Fixed Income > Benchmark (e.g. 0.30% less -2.22% = 2.52%).**

Column >	A	B	C	D	E	F	G	H	I	J	K	L
		June-15			Current Fiscal YTD		Prior Year FY14		3 Years Ended 6/30/2015		5 Years Ended 6/30/2015	
			Allocation									
Row		Market Value	Actual	Policy	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net	Gross (5)	Net
1	**TOTAL FUND**	**2,103,807,352**	**100.0%**	**100.0%**	**3.86%**	**3.52%**	**16.90%**	**16.53%**	**11.43%**	**11.09%**	**11.38%**	**11.01%**
2	*POLICY TARGET BENCHMARK*				*2.16%*	***2.16%***	*15.74%*	*15.74%*	*9.80%*	*9.80%*	*9.97%*	***9.97%***
3	**TOTAL RELATIVE RETURN**				**1.70%**	**1.36%**	**1.17%**	**0.79%**	**1.64%**	**1.29%**	**1.41%**	**1.04%**
4	***GLOBAL EQUITIES***	***1,198,248,840***	***57.0%***	***57.0%***	***3.51%***	***3.17%***	***22.39%***	***21.97%***	***14.76%***	***14.38%***		
5	***Benchmark***			***52.0%***	***1.55%***	***1.55%***	***22.03%***	***22.03%***	***13.53%***	***13.53%***		
	Global Equity Detail Collapsed											
6	***GLOBAL FIXED INCOME***	***484,399,254***	***23.0%***	***22.0%***	***0.56%***	***0.30%***	***8.04%***	***7.80%***	***4.80%***	***4.56%***		
7	***Benchmark***				***-2.22%***	***-2.22%***	***7.16%***	***7.16%***	***1.89%***	***1.89%***		

Global Fixed Income (Medium Term) - Compare Net Returns for the 3 Years Ended June 30, 2015 (Column J, Row 6) to the Benchmark (Column L, Row 7). **Active management created 2.55% of Excess Return within Global Fixed Income for the 3-years ended June 30, 2015 (e.g. 4.56% less 1.89% = 2.67%), while Actual and Target asset allocations were within 1% (Columns C and D, Row 6).**

NOTE: All SIB client specific monthly reporting is preliminary and subject to change noting it is unaudited data.

Monthly Performance – TFFR Global Real Assets

Row	A	B	C	D	F	H	J	L
		June-15			Current	Prior	3 Years	5 Years
	NOTE:		Allocation		FY 15	FY 14	6/30/15	6/30/15
	Gross Return columns are hidden.	Market Value	Actual	Policy	Net	Net	Net	Net
10	***GLOBAL REAL ASSETS***	***391,531,027***	***18.6%***	***20.0%***	***9.11%***	***11.00%***	***9.33%***	
11	***Benchmark***				***8.78%***	***8.55%***	***8.47%***	
	Global Real Estate							
13	INVESCO - Core	84,131,631			15.97%	10.48%	13.07%	14.50%
14	INVESCO - Fund II (5)	8,272,376			6.23%	14.49%	14.50%	24.83%
15	INVESCO - Fund III (5)	14,794,492			18.70%	18.28%	17.92%	N/A
16	INVESCO - Fund IV (6)	10,879,401			N/A	N/A	N/A	N/A
17	INVESCO - Asia Real Estate Fund	4,954,617			16.19%	15.25%	8.12%	3.24%
19	J.P. Morgan Strategic & Special Fu	76,525,028			13.64%	14.04%	13.78%	14.67%
20	J.P. Morgan Alternative Property Fu	163,336			-33.28%	4.18%	-7.16%	1.30%
21	J.P. Morgan Greater Europe Fund (	11,650,750			16.90%	66.58%	0.01%	N/A
22	J.P. Morgan Greater China Propert	4,550,524			16.74%	70.53%	23.88%	16.34%
23	**Total Global Real Estate**	**215,922,154**	**10.3%**	**10.0%**	**15.25%**	**16.24%**	**13.99%**	**15.52%**
24	***NCREIF TOTAL INDEX***				***12.98%***	***11.21%***	***11.63%***	***12.72%***
	Timber	45.8160%						
25	TIR - Teredo	27,899,514	1.3%		15.52%	6.64%	9.18%	6.18%
26	TIR - Springbank	53,377,730	2.5%		-1.98%	0.22%	-1.41%	-2.17%
27	**Total Timber (5)**	**81,277,245**	**3.9%**	**5.0%**	**3.95%**	**2.62%**	**2.37%**	
28	***NCREIF Timberland Index***				***10.02%***	***9.94%***	***9.77%***	***6.10%***
	Infrastructure							
29	JP Morgan (Asian) (5)	13,860,194	0.7%		-2.58%	3.71%	7.80%	4.26%
30	JP Morgan (IIF)	62,108,361	3.0%		0.23%	8.81%	6.12%	5.44%
31	Grosvenor (formerly Credit Suisse)	17,670,025	0.8%		5.37%	12.90%	9.19%	N/A
32	Grosvenor CIS II (6)	693,048	0.0%		N/A	N/A	N/A	
33	**Total Infrastructure**	**94,331,628**	**4.5%**	**5.0%**	**0.72%**	**8.83%**	**6.95%**	
34	***CPI***				***-0.38%***	***2.05%***	***1.13%***	

Performance Notes:

Global Real Asset returns have exceeded performance benchmarks for the 1-year and 3-year periods ended June 30, 2015.

1-Year Actual Net Return of 9.11% (Column F, Row 10) **versus Benchmark of 8.78%** (Column F, Row 11).

3-Years Actual Net Return of 9.33% (Column J, Row 10) **versus Benchmark of 8.47%** (Column J, Row 11).

Timber has materially under-performed the Benchmark in recent years (Columns F, H, J and L, Rows 27 and 28).

1-Year (3.95% versus 10.02%)
3-Yrs. (2.37% versus 9.77%).

Note: Global Real Asset allocations are within 1% to 2% of target levels noting that this asset class does not lend itself to precise quarterly rebalancing due to these investments being significantly less liquid than public equity and public debt investments.

NDRIO Investment Performance Summary - Quarterly

ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2015

		Investment Performance (net of fees)																
		Quarter Ended					Fiscal Years ended June 30					Periods ended 6/30/15 (annualized)						
Fund Name	Market Values as of 6/30/15	9/30/14	12/31/14	3/31/15	6/30/15	FYTD 2015	2014	2013	2012	2011	2010	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Pension Trust Fund																		
Teachers' Fund for Retirement (TFFR)	2,103,807,352	-1.14%	1.55%	2.31%	0.78%	3.52%	16.53%	13.57%	-1.12%	24.05%	13.87%	11.06%	10.94%	5.87%	4.99%	7.23%	7.80%	8.37%
Public Employees Retirement System (PERS)	2,422,579,596	-1.11%	1.57%	2.31%	0.75%	3.53%	16.38%	13.44%	-0.12%	21.27%	13.67%	10.98%	10.61%	5.98%	5.54%	7.65%	8.01%	8.68%
City of Bismarck Employees Pension	81,745,818	-0.91%	1.71%	2.29%	0.58%	3.69%	14.56%	12.41%	1.57%	20.32%	12.74%	10.12%	10.29%	6.00%	5.65%	7.52%	8.38%	*
City of Bismarck Police Pension	35,889,943	-1.09%	1.66%	2.30%	0.68%	3.56%	15.27%	13.03%	1.31%	21.10%	13.30%	10.50%	10.61%	6.01%	5.48%	7.40%	8.25%	*
Job Service of North Dakota Pension	96,392,560	-0.69%	2.14%	2.43%	-0.57%	3.30%	13.54%	11.71%	3.09%	16.39%	13.63%	9.42%	9.47%	6.16%	5.52%	8.47%	*	*
City of Fargo Employees Pension	1,461	0.01%	0.02%	0.02%	0.02%	0.06%	8.42%	13.90%	0.97%	21.58%	14.82%	7.31%	8.69%	*	*	*	*	*
City of Grand Forks Employees Pension	59,232,374	-0.95%	1.89%	2.21%	0.38%	3.53%	16.33%	14.01%	1.09%	21.64%	13.91%	11.15%	11.04%	*	*	*	*	*
Grand Forks Park District	6,035,137	-0.39%	2.15%	2.43%	0.00%	4.22%	16.44%	14.43%	0.86%	20.98%	*	11.57%	11.12%	*	*	*	*	*
Subtotal Pension Trust Fund	4,805,684,242																	
Insurance Trust Fund																		
Workforce Safety & Insurance (WSI)	1,762,659,137	-0.43%	1.85%	2.36%	-0.52%	3.26%	11.71%	8.31%	6.17%	13.23%	11.94%	7.71%	8.48%	5.65%	5.43%	7.08%	7.62%	*
State Fire and Tornado Fund	23,416,231	-0.89%	2.19%	2.47%	-0.60%	3.16%	12.78%	10.59%	4.93%	14.52%	14.52%	8.76%	9.11%	6.14%	5.49%	6.62%	6.91%	*
State Bonding Fund	3,180,024	0.08%	0.84%	1.22%	-0.88%	1.25%	4.06%	2.96%	5.31%	5.01%	8.63%	2.75%	3.71%	2.25%	3.04%	4.77%	5.46%	*
Petroleum Tank Release Compensation Fund	7,162,837	0.07%	0.76%	1.11%	-0.80%	1.13%	3.68%	2.47%	4.84%	4.97%	7.79%	2.42%	3.41%	2.06%	2.70%	4.71%	*	*
Insurance Regulatory Trust Fund	2,636,660	-0.86%	1.56%	1.87%	-0.52%	2.04%	9.88%	8.49%	2.82%	11.61%	10.29%	6.75%	6.90%	5.06%	4.69%	6.06%	6.01%	*
State Risk Management Fund	6,849,216	-0.29%	2.96%	2.36%	-0.96%	4.08%	12.29%	10.19%	7.63%	14.36%	16.02%	8.80%	9.65%	6.37%	5.57%	*	*	*
State Risk Management Workers Comp Fund	6,224,541	-0.39%	3.34%	2.46%	-0.86%	4.57%	13.68%	11.61%	7.40%	16.23%	16.40%	9.88%	10.62%	6.64%	*	*	*	*
Cultural Endowment Fund	383,050	-1.11%	3.43%	2.86%	0.02%	5.22%	16.94%	15.58%	4.65%	21.33%	14.89%	12.46%	12.55%	6.75%	*	*	*	*
Budget Stabilization Fund	574,011,150	0.11%	0.44%	0.93%	0.38%	1.86%	1.94%	1.87%	2.03%	3.73%	7.38%	1.89%	2.29%	*	*	*	*	*
ND Association of Counties (NDACo) Fund	3,833,499	-0.82%	1.89%	2.36%	-0.65%	2.77%	11.61%	9.46%	1.69%	17.73%	15.34%	7.88%	8.49%	5.09%	4.61%	*	*	*
Bismarck Deferred Sick Leave Account	872,178	-0.81%	2.02%	2.54%	-0.77%	2.95%	12.32%	9.83%	5.69%	13.80%	15.30%	8.29%	8.84%	6.19%	5.76%	*	*	*
City of Fargo FargoDome Permanent Fund	41,007,046	-1.65%	2.61%	2.72%	-0.28%	3.38%	16.34%	13.46%	3.14%	19.16%	16.78%	10.92%	10.89%	6.41%	*	*	*	*
State Board of Medical Examiners Fund	2,174,702	-0.58%	1.19%	1.75%	0.32%	2.70%	*	*	*	*	*	*	*	*	*	*	*	*
PERS Group Insurance Account	39,653,686	0.00%	0.00%	0.00%	0.00%	0.01%	0.06%	0.27%	0.24%	0.31%	0.36%	0.11%	0.18%	1.55%	1.92%	*	*	*
Subtotal Insurance Trust Fund	2,474,063,958																	
Legacy Fund	3,328,631,302	-1.77%	2.07%	2.81%	0.22%	3.31%	6.64%	1.15%	*	*	*	3.69%	*	*	*	*	*	*
PERS Retiree Insurance Credit Fund	97,671,059	-1.12%	2.51%	2.16%	-0.47%	3.06%	16.53%	14.80%	2.62%	21.65%	16.86%	11.30%	11.47%	6.11%	4.75%	7.27%	7.53%	*
Total Assets Under SIB Management	10,706,050,561																	

* These funds do not have the specified periods of history under SIB management.

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

http://www.nd.gov/rio/SIB/Publications/PerformanceReports/2015-06PerformanceReport.pdf

SIB Investment Ends – TFFR Quarterly Performance

SIB clients should receive investment returns consistent with their written investment policies and market variables. This "End" is evaluated based on comparison of each client's (a) actual net rate of return, (b) standard deviation and (c) risk adjusted excess return, to the client's policy benchmark over a minimum period of 5 years.

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
TEACHERS' FUND FOR RETIREMENT (TFFR)					
Total Fund Return - Net	**3.52%**	**11.06%**	**10.94%**	7.9%	**0.57%**
Policy Benchmark Return	2.16%	9.78%	9.97%	7.6%	
EXCESS RETURN	**1.36%**	**1.28%**	**0.97%**	**104%**	

Net Return: TFFR's net investment rate of return for the 5-year period ended June 30, 2015 was **10.94%** versus a policy benchmark of **9.97%** resulting in an **Excess Return of 0.97% (or 97 bps)**.

Risk: TFFR's standard deviation for the 5-year period ended March 31, 2015 was 7.9% versus a policy benchmark of 7.6% resulting in a **portfolio risk ratio of 104%**. This is within TFFR's stated risk tolerance which indicates this ratio should **not exceed 115%**.

The Risk-Adjusted Excess Return of TFFR's portfolio (net of fees and expenses) was **0.57%** for the 5-year period ended June 30, 2015, thereby exceeding the stated policy benchmark.

TFFR Long Term Results Meet or Exceed Expectations

ND RETIREMENT AND INVESTMENT OFFICE
ND STATE INVESTMENT BOARD
INVESTMENT PERFORMANCE SUMMARY
AS OF JUNE 30, 2015

Investment Performance (net of fees)

		Fiscal Years ended June 30					Periods ended 6/30/15 (annualized)				
Fund Name	FYTD 2015	2014	2013	2012	2011	2010	3 Years	5 Years	10 Years	20 Years	30 Years
TFFR	3.52%	16.53%	13.57%	-1.12%	24.05%	13.87%	**11.06%**	**10.94%**	5.87%	7.23%	**8.37%**

Note: Asset allocation largely drives investment performance. Each fund has a unique allocation that takes into consideration return objectives, risk tolerance, liquidity constraints, and unique circumstances. Such considerations must be taken into account when comparing investment returns. **All figures are preliminary and subject to revision.**

The TFFR Pension Plan is a Long Term Investor

Net investment returns for the TFFR Pension Plan continue to exceed 8% over the past 3-, 5- and 30-year periods despite disappointing conditions in the international equity and debt markets which declined by over 4% and 13%, respectively, during the most recent fiscal year end.

AGENDA ITEM III.C.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 16, 2015

SUBJECT: Board Education – Industry Conferences and Fiduciary Duty

---

During the past year, SIB members and RIO personnel have actively participated in numerous educational opportunities including industry conferences and specialized training courses in investments, retirement benefit services, auditing, ethics, fiduciary duty, governance and systems. At our last SIB meeting, RIO noted that the Callan National Conference is highly recommended for all current SIB members and newer SIB members may also benefit from attending the Introduction to Investments conference at Callan College. A listing of these educational initiatives attended by SIB and RIO members is summarized in the Appendix.

In order to expand awareness of the important role played by our SIB members in acting as a trustee, RIO is re-distributing "A Primer for Investment Trustees". Over the next several board meetings, RIO will highlight key "**Takeaways**" from each section and invite a board discussion on any related topics, questions or concerns which may benefit from a broader exchange of ideas. This publication is highly recommended by: 1) nearly every state investment officer that Darren Schulz and I have met with over the past two years; 2) the Research Foundation of the CFA Institute; 3) the investment consultant community; and 4) many of our own SIB members.

This month, RIO is focusing on the Introduction and Section 1. **As a result, RIO encourages SIB and RIO members to review <u>pages 1-to-22</u> of "A Primer for Investment Trustees".**

<u>Introduction</u>:

"**Trustee is broadly referred to as any person serving on a governing body charged with high level supervision of invested assets**."

"**Our Target Audience –** From the start, we want to put your mind at ease on one critical point: Extensive investment experience is not required for you to serve effectively in a trustee role."

"**A working knowledge of basic investment principles and concepts** will help you exercise good judgment in making decisions in your trustee role."

<u>Section 1: Governance Structure</u>

"Governance structure is the framework that connects a fund's various decision makers to one another." As example, SIB client boards (such as TFFR) set the asset allocation policy and the SIB, acting through RIO implement the client approved asset allocation policy (as documented in the investment policy statement). **Other key components of governance structure include the hiring of investment personnel to implement the SIB actions including: 1)** selecting a custodian (Northern Trust) to safe guard plan assets and serve as a third party record keeper; **2)** selecting investment managers to invest funds within each specific asset class; and **3)** hiring an investment consultant to aid in manager selection due diligence and performance monitoring.

APPENDIX

Listing of Conferences, Forums and Workshops attended by RIO Team Members:

National Council on Teacher Retirement Annual Conference

National Council on Teacher Retirement System Director's Meeting

National Council on Teacher Retirement Communications Workshop

Public Pension Financial Forum

National Pension Education Association Annual Conference

National Association of State Investment Officers (NASIO)

National Association of State Investment Professionals (NASIP)

Fiduciary Investor's Symposium (University of Chicago)

Great Plains Institutional Investor Forum (Minneapolis, MN)

Mountain States Institutional Investor Forum (Denver, CO)

Public Retirement Information Systems Management Annual Conference

International Foundation for Employee Benefit Plans

CPAS Annual Users Conference

Callan Annual Conference

Callan College

SIB members have attended the following conferences in recent years:

1. Callan National Conference (San Francisco)
2. Callan College – Introduction to Investments (Chicago)
3. Common Fund Forum
4. National Conference on Teacher Retirement - Trustee Workshop (TFFR members)
5. National Conference on Teacher Retirement - Annual Conference (TFFR members)

The "**Callan National Conference"** (in San Francisco on January 25-27, 2016) has been well received by all attending SIB members and there is no tuition fee and includes meals at all events. The **"Introduction to Investments"** conference offered by Callan (in Chicago on October 27-28, 2015), has been well received by newer board members and costs $2,350 in tuition per participant.

NOTE: SIB Governance Policy B-7 encourages the development of a board education plan including investment education. RIO encourages all SIB members to participate in educational opportunities as their respective schedules permit and highly recommends the investment conferences offered by our consultant.

Jeffery V. Bailey, CFA
Target Corporation

Jesse L. Phillips, CFA
University of California

Thomas M. Richards, CFA
Nuveen HydePark Group

A Primer for Investment Trustees

RESEARCH FOUNDATION OF CFA INSTITUTE

Statement of Purpose

The Research Foundation of CFA Institute is a not-for-profit organization established to promote the development and dissemination of relevant research for investment practitioners worldwide.

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To Megan and Stephen

JVB

In memory of my mother

JLP

To Diane

TMR

Biographies

Jeffery V. Bailey, CFA, is director, Financial Benefits & Analysis at Target Corporation, where he supervises the investment programs and administration of the company's defined-benefit and defined-contribution plans, nonqualified retirement plans, and health and welfare plans. Formerly, Mr. Bailey was a managing partner of Richards & Tierney, a Chicago-based pension consulting firm specializing in quantitative risk control techniques. Prior to that position, he was assistant executive director of the Minnesota State Board of Investment, which manages the pension assets of Minnesota public employees. Mr. Bailey has published numerous articles about pension management. He co-authored the textbooks *Investments* and *Fundamentals of Investments* with William F. Sharpe and Gordon J. Alexander and co-authored the Research Foundation of CFA Institute publication *Controlling Misfit Risk in Multiple-Manager Investment Programs* with David E. Tierney. Mr. Bailey received a BA in economics from Oakland University and an MA in economics and MBA in finance from the University of Minnesota.

Jesse L. Phillips, CFA, as a member of the Treasurer's Office of the University of California system, is responsible for risk management for the system's more than $60 billion of pension, endowment, defined-contribution, and working capital assets. His duties include asset allocation, investment policy development, and the integration of risk management into all aspects of the Treasurer's investment process. Prior to joining the Treasurer's Office, he worked at Northrop Grumman Corporation—first, as senior corporate mergers and acquisitions analyst and later, as manager of risk analysis and research in the Treasury Department. Mr. Phillips also worked as corporate planning analyst with Florida Power & Light Company and as senior financial analyst with Storer Communications, both in Miami, Florida. He began his career as an accountant/analyst at BDO Seidman and was a licensed CPA. Mr. Phillips earned his BA in mathematics and economics and MA in applied mathematics at the University of California, Los Angeles, and his MBA in finance at the University of Miami.

Thomas M. Richards, CFA, currently serves as a consultant to the Nuveen HydePark Group. He is co-founder of Richards & Tierney, an investment consulting firm that provided specialized investment analytical services to large investment institutions. In 2007, Nuveen Investments acquired Richards & Tierney. Mr. Richards has published a variety of articles in pension finance literature and has been a frequent speaker at investment conferences and seminars. He is a co-author with Jeffery V. Bailey and David E. Tierney of the chapter on performance evaluation published in the textbooks *Managing Investment Portfolios* and *Investment Performance Measurement.* He earned a BS in mathematics from Bucknell University and an MS in finance (with distinction) from the Pennsylvania State University. Mr. Richards is chairman of the board of trustees for the Research Foundation of CFA Institute.

Acknowledgements

Attempting to place yourself in the position of a new trustee, particularly one without an extensive investment background, is not an easy task. Once you've become familiar with the role and the subject matter, it is difficult to recreate the concerns and questions that arise when someone is initially joining an investment committee. Thus, a major challenge in writing this book was to present the "newcomer" perspective and provide fledgling trustees with sufficient information to operate effectively but not overwhelm them with facts and concepts. In searching for that balance, we benefited from the comments of numerous individuals who provided valuable reviews of the book during its development. The authors would like to thank Gary Brinson, Beth Dubberley, Bruce Duncan, John Freeman, Doug Gorence, Joyce Keller, Scott Kennedy, Ed Kunzman, John Mulligan, John Nagorniak, Ann Posey, Bob Seng, Larry Siegel, and Dave Tierney for their assistance and support. We also acknowledge financial support from the Research Foundation of CFA Institute.

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CFA Institute
CE Qualified Activity

This publication qualifies for 5 CE credits under the guidelines of the CFA Institute Continuing Education Program.

Foreword

For more than 35 years, I have had a strong commitment to the Research Foundation of CFA Institute. The Foundation strives to facilitate in-depth, high-quality discussion of investment issues oriented to the practical application of investment finance. The research covers all fields of investment and is directed at all parties who play a role in investment decision making. The body of work that the Research Foundation has produced is an invaluable library for anyone who is directly or indirectly involved with investment asset management.

A Primer for Investment Trustees ("*Primer*") is a powerful text, in keeping with the Research Foundation's mission. The authors provide a comprehensive discussion of investment issues relevant to a very important constituency of the investment community—namely, investment trustees. Most of these individuals have had successful careers but not necessarily in the investment field. In their capacities as trustees, they are not responsible for day-to-day decision making at the funds that they serve, but they do bear responsibility for setting investment policy and assessing performance. They serve at public and private pension funds, endowments, foundations, insurance companies, Taft–Hartley funds, and a wide variety of special-purpose trust funds. What these funds have in common is a reliance on their trustees to provide policy direction and oversight of their investment programs.

Although trustees do not need to be investment experts, they must have a solid grasp of basic investment principles in order to exercise good judgment in their investment decisions. In my many years of investment experience, I have worked with a wide array of investment trustees and I have seen how a lack of investment understanding can seriously harm an investment program and limit the likelihood of achieving the fund's mission.

Gaining a proper understanding of investment principles can be a challenging experience for trustees, particularly new trustees. They often receive only a rudimentary orientation session and must learn by listening to what is said by others, experts and nonexperts alike—who are often difficult to tell apart. There are few resources to which trustees can turn for help. In my judgment, the *Primer* is an ideal resource for filling that void and providing trustees with a knowledge base that will enable them to fulfill their responsibilities successfully. Authors Jeff Bailey, Jesse Phillips, and Tom Richards provide an excellent focus from the perspective of the trustee while avoiding the use of complex investment terminology. The *Primer* is an "easy read," which is particularly helpful to trustees who likely have other full-time jobs.

Although the *Primer*'s main audience is investment trustees, it also can be beneficial to investment professionals and other parties who work directly or indirectly with investment trustees. For example, the fund's staff, outside consultants, professional investment managers, actuaries, accountants, custodians, lawyers, fund contributors, and fund beneficiaries interact with fund trustees. All these groups can benefit by understanding the investment trustee's perspective, circumstances, and responsibilities. Such an understanding will facilitate better communications and allow all parties to work together more effectively.

I wholeheartedly recommend the *Primer* to all investment trustees—new and experienced—to investment professionals who work with trustees, and to those who have an interest in understanding the role and responsibilities of an important constituency of the investment community.

Gary P. Brinson, CFA
Chicago, Illinois
October 2010

Introduction

As the old saying goes, what wise men
do in the beginning, fools do in the end.

—Warren Buffett

Let's face it. Few business assignments are more intimidating than being placed in a position of responsibility outside your area of expertise. Surrounded by subject matter experts awaiting your direction, you find yourself actually expected to make decisions. Even though you are told in the beginning that there are no dumb questions, you don't want to provide the exception to the rule. A multitude of technical reports full of unfamiliar and complex concepts are quickly thrown at you. Your real day job keeps you busy and offers few opportunities for learning about your new position. So, you sit silent at meetings, lacking confidence, frustrated and concerned about your ability to contribute productively. Well, welcome to the world of the newly appointed investment trustee.

Our Target Audience

Over the years, we have been fortunate to work with trustees coming from many walks of life. Often, these individuals, although quite successful in their respective professions, possess little investment knowledge or experience. Yet, they take on responsibility for the oversight of financial assets that have a material impact on the welfare of their funds' beneficiaries. If you count yourself as one of these diligent laypeople, then you belong to the target audience for this book.

From the start, we want to put your mind at ease on one critical point: Extensive investment expertise is not required for you to serve effectively in a trustee role. Nevertheless, for you to exercise good judgment in making decisions, you should possess at least a working understanding of basic investment principles and concepts. We believe that you can acquire this knowledge with a modicum of effort. The purpose of this book is to provide trustees, particularly if they are new to their positions, with a primer that will help them begin to successfully fulfill their responsibilities.

Throughout the book, we use the term "trustee" broadly (and not in the legal sense of the word) to describe any person serving on a governing body who is charged with high-level supervision of investment assets. This governing body could be a pension investment committee at a corporation, an investment advisory council at a public retirement system, a board of trustees at an endowment fund, or something similar. If you are a member of such a group, then for our purposes, you are an investment trustee, regardless of your particular title. Importantly, we recognize that you do not have day-to-day responsibility for *managing* investment portfolios. Instead, you periodically receive reports from and meet with the staff of the fund that you oversee to discuss broad issues related to investment policy and performance results. As a result, the challenges and opportunities that you face are quite different from those of the staff who must manage ongoing operations.

Our audience also extends to the investment professionals who directly interact with you and to other parties who have a special interest in your fund. These persons include the fund's staff, outside consultants, professional investment managers, actuaries, accountants, custodians, lawyers, and importantly, the beneficiaries of the fund. In most cases, the topics that we cover are familiar to investment professionals. Other interested parties may have little or no such knowledge. Nevertheless, both groups can benefit by taking your perspective and considering the learning curve and questions that you face, thereby gaining useful insights into how to work with you effectively.

Although many of the standard issues in investment finance have quantitative aspects, we avoid the use of formulas in this book and, instead, describe the relevant issues in a conceptual, straightforward manner (which, in many cases, is a harder task than presenting mathematical relationships). Our discussion will proceed as though we are having a conversation with a new trustee who has just become a member of a fund's investment committee. We will refer interchangeably to the "trustees" and the "investment committee."

The new trustee could be a representative of a company's human resources department who has been appointed to the retirement fund investment committee. She could be a retired judge who has been asked to serve as an investment trustee for a special asbestosis trust fund. He could be a college alumnus who started a successful technology company, earned a vast sum of money (a considerable amount of which he donated to his alma mater), and now serves on the board of directors of the school's endowment fund. She could be a union shop steward who has been chosen to serve on the investment committee of a ***Taft–Hartley fund***. Or he could be a former professional wrestler who, as governor of a major state, has the responsibility of chairing the investment board of a multi-billion-dollar public pension fund. (Note the type of fund in the previous sentence that is in boldface italics. As part of your learning process, we provide at the end of this book a Glossary of Investment Terms. Beginning with Session 1, terms that are defined in the glossary are shown in the text the first time in boldface italics.)

We have had personal experience over the years with each of these types of individuals and many more. All of the trustees with whom we have worked earnestly desired to do a good job during their "watch." Just as you do, they wanted the fund to be in as sound or even better shape when they left the investment committee as it was when they joined it. Of course, this outcome often depends on the performance of the capital markets, something over which you have no control. Nevertheless, favorable investment markets have a way of masking uninformed and poor trustee oversight, and weak investment markets often expose deficiencies and magnify a trustee's ***fiduciary*** risk. Our objective is to help you understand important investment issues and ensure that appropriate policies, processes, procedures, philosophies, and people are in place so that the fund may succeed regardless of the investment environment.

Organization of the Book

In this book, we focus on subjects critical to your success as a trustee. We believe that to create and maintain a well-managed investment program, you and your fellow trustees should have, at a minimum, a solid grasp of the following foundational topics as they apply to your fund: governance structure, investment policy, the fund's mission, investment objectives, investment risk tolerance, investment assets, performance evaluation, and ethics in investing.

We have divided this book into sessions dealing with each of these topics. In each session, we present the material in the form of an overview that an investment staff person for the fund is providing to a new trustee—Molly Grove. Molly started a very successful company providing high-tech information services to medical doctors in small communities. Because of her success and philanthropy, she is held in high regard and has been named a regent of the state's university system. As part of her responsibilities as a regent, she has been assigned to serve on the university's investment committee. The investments of the university system include a defined-benefit (DB) plan, a defined-contribution (DC) plan, an endowment fund, a foundation, and a self-insurance trust. The investment committee has oversight responsibility for all of these funds. We refer to Molly and the rest of the investment committee as dealing with "the Fund." For the most part, the Fund may be any of the university's investment pools because the trustee's role usually is not materially different among the specific types of funds involved. On those occasions when we need to make a distinction regarding one fund or another, we specifically point out which fund is being discussed.

Our conversation with Molly on each of the topics is followed by a recap, called "takeaways." We then offer a set of questions we believe would be useful for Molly to ask the staff member with whom she is having the conversation.

Although these lists are not exhaustive, they do provide you with an opportunity to drill down further into each session topic. New trustees are often uncomfortable asking questions of experienced investment staff. We want to assure you not only that the example questions that we provide (and others, of course) are appropriate to ask but also that the staff members may not necessarily have ready answers. Thus, both parties can learn through intelligent questions.

You might wonder about one topic conspicuously lacking in this book—namely, legal issues relating to fiduciary responsibilities of the trustee. We have excluded such a discussion not because the associated issues are unimportant but because we are investment practitioners, not attorneys. The material concerning legal responsibilities is complex and voluminous. Also, there are substantial differences in fiduciary law, unlike in investment issues, among the various types of funds and geographical boundaries. As a result, the topic deserves its own publication written by a legal expert.

In spite of this disclaimer, we will go out on a limb and mention one basic legal principle that we believe you should understand. (Please discuss this principle with your plan's legal counsel if you want to know more.) That principle is termed the "prudent investor rule." The core of this rule is as follows:

> A trustee shall invest and manage trust assets as a prudent investor would, by considering the purposes, terms, distribution requirements, and other circumstances of the trust. In satisfying this standard, the trustee shall exercise reasonable care, skill, and caution. (Uniform Prudent Investors Act 1994)

Although many of the matters requiring investment expertise can and should be delegated to experts, *you* must have a solid grasp of the "purposes, terms, distribution requirements, and other circumstances of the trust." We believe that this book will provide you with valuable assistance toward this end.

Before we begin the discussion between Molly and the investment staff, let's first conduct a brief summary of the topics that we will cover.

Governance Structure. Governance structure encompasses the responsibilities of the various types of decision makers within an investment program and how these decision makers relate to one another. In addition to you and the other trustees, decision makers include such groups as the investment staff, consultants, investment managers, custodians, and actuaries.

You will find that a solid governance structure effectively addresses three key areas: responsibility, authority, and accountability. Numerous questions flow from an examination of the governance structure, including the following: What functions are required to successfully run an investment program? What is their importance to the investment program? Who typically performs these functions? What sorts of reporting relationships exist among the decision makers? What are the incentive arrangements? Where does the buck stop?

Within the governance framework, you, as a trustee, are positioned at the top. Trustee responsibilities may vary considerably from fund to fund. In part, these differences relate to the size and resources of the fund. Nevertheless, how you carry out your responsibilities does affect investment program performance. Trustee approaches can range from an unhealthy involvement in the smallest operational decisions to a similarly unproductive disengaged attitude. In our discussion, we will consider what your oversight responsibilities should entail, which decisions you should be responsible for, and which ones you should delegate. We believe the *process* by which you arrive at decisions is, in many ways, as important as the actual decisions. In particular, you should take ownership of your oversight responsibilities. You should delegate to those who have the required expertise, experience, and authority to do their jobs. And you should hold all parties accountable for actions that they take (or fail to take). We believe this basic philosophy distinguishes strong governance structures from weak ones.

Investment Policy. Your most valuable contribution as a trustee will be setting investment policy for the fund. Although you don't manage the fund on a day-to-day basis, you do determine the key strategic priorities for the fund that are encompassed in the investment policy. Others may assist you in drafting that policy, but only the trustees can establish it as the roadmap for the fund.

In broad terms, investment policy defines how the investment program will be managed. Investment policy specifies the procedures, guidelines, and constraints for decision making and management. Ideally, you will thoroughly document those decisions in a written investment policy statement.

Your focus in setting investment policy should be on how you trade off expected return and risk in seeking to achieve the fund's objectives—essentially, the creation of a risk budget. In establishing this trade-off, you will be required to specify how the fund should be allocated to various types of assets and, within each of those types, what sorts of investment strategies should be used and what benchmarks the investment results will be assessed against.

You will find that investment policy serves its most useful role as a stabilizer in stressful markets. In good times, pressure rarely builds to change the investment program. Not so when the storm clouds roll in. People have a natural tendency to predict the worst will happen when times are bad and, conversely, to extrapolate that good times will last forever. The ability to stick to your established strategic priorities in periods when the temptation to alter the investment program is most intense will save you from counterproductive changes at just the wrong time.

The Fund's Mission. Among the key elements of investment policy is establishing the mission of the fund. A fund is a pool of assets created to accomplish certain society-enhancing goals. Simple as the task may sound, your first important job as a new trustee is to understand the fund's purpose. In a broad sense, all funds exist to provide payments to beneficiaries. For example, corporations and public entities establish defined-benefit or defined-contribution plans to provide retirement benefits to employees. Civic-minded persons contribute to endowment funds to grant long-term financial support to worthwhile causes. Insurance companies establish investment funds to pay future loss claims. Parents set up education trusts to fund their children's future schooling.

In simple terms, regardless of what type of fund you are working with, three things happen: (1) money—that is, contributions in various forms—flows into the fund from external sources, (2) the value of the fund increases or decreases depending on how the investment markets perform and how the fund's assets are invested and managed, and (3) money flows out of the fund to pay the fund beneficiaries—that is, benefit payments in various forms are made. There are differences among funds with regard to the amount and certainty of the inflows and outflows, but you should understand how, why, and when money is expected to flow into and out of the investment fund.

A fund typically has numerous stakeholders, and their needs and desires often conflict with one another. Thus, a fundamental responsibility of a trustee is to articulate and prioritize these conflicting aspects of the fund's mission.

Investment Objectives. Investment policy outlines the path that you wish your investment program to follow. As part of setting that direction, you need to express how you, as a trustee, define success for the program—that is, its objectives. You should specify what sorts of investment outcomes signal that the investment program has been successful. To avoid confusion and second guessing, you will want these investment objectives to possess certain characteristics. Specifically, they should be clear and objective, measurable, attainable, reflective of the trustees' willingness to bear risk, and specified in advance of the evaluation period.

Investment objectives play both a prospective and retrospective role. Prospectively, they help you structure your investment program in terms of the rewards that you expect and the risks that you are willing to take in order to meet the fund's mission. Retrospectively, they assist you in assessing the effectiveness of the investment program and thereby suggest when to take corrective action and when to continue with current practices.

Investment Risk Tolerance. Many trustees focus solely on investment returns earned by their funds without taking the time to understand the investment risk involved in producing those returns. By "risk," we mean the potential for serious losses in pursuit of the fund's mission. The myopia regarding risk occurs because returns are visible but risk is not. Yet, you have little control over the returns earned by the fund. Instead, your responsibility is to engage with the other trustees to establish the investment committee's collective risk tolerance.

The staff and consultants will assist you in expressing this risk tolerance. They should also present you with procedures for measuring and controlling the amount of risk the fund is assuming. The process of setting this risk budget can be formal and quantitative, or it can be subjective and qualitative. The key is that you recognize that higher expected returns come at the price of increased risk. Furthermore, taking more risk does not guarantee higher returns; it only makes such returns *possible*. You should periodically review reports that indicate whether the risk-budgeting procedures are being followed and whether the fund's risk management efforts are effective.

You will need to differentiate between your views about the appropriate risk level for your own investment portfolio and the appropriate risk level the investment committee should take as it invests the fund's assets. Your personal financial circumstances and investment time horizon will not be the same as those of the fund that you oversee. As a trustee, you must be able to set aside your personal opinions and consider only what is best for the investment program over the long run.

Investment Assets. You will want to be familiar with how different assets are categorized and managed. For investment policy purposes, fund decision makers divide the investment world into various asset types, called "asset classes." Typical asset class designations include equities, fixed income, real estate, and so on. The granularity of the categorizations varies widely among funds.

The grouping of investments into classes is supported by the availability of a broad array of market indices representing publicly traded equity, fixed income, and other types of securities divided into seemingly uncountable variations. These indices serve the valuable functions of defining the *opportunity set* for the investment program and providing a window on the risk and return history of specific asset classes. That history, in turn, becomes an important input for developing allocations to the various asset classes.

Regardless of the types of assets held, you will need to make decisions regarding the broad structural aspects of how the investment program is managed. You have the choice of assigning staff members to manage directly all or a portion of the fund's assets (internal management) or using outside investment firms (external management). Each type of management offers certain advantages and disadvantages, although external management tends to be the prevailing model.

Another important issue involves whether to manage the fund's asset class investments passively or actively. You can choose either to seek to match the performance of a given index (passive management) or to attempt to exceed the performance of that index (active management). The higher expected returns of active management must be weighed against the associated additional risk and incremental cost.

In addition to the traditional investments in publicly traded stocks and bonds, funds often hold positions in various forms of illiquid assets, which are referred to as "alternative investments." These assets include, to name a few, real estate, venture capital, and hedge funds. Although these investments are more complex and expensive to manage than the traditional kind, funds use them in the hope of earning a premium return by bearing the associated illiquidity risk and taking advantage of the opportunity to search among potentially less efficiently priced assets.

Performance Evaluation. Performance evaluation provides a regular assessment of the fund's performance relative to your investment objectives. Properly conducted, performance evaluation reinforces the hierarchy of accountability, responsibility, and authority defined in the fund's governance structure. Performance evaluation serves as a feedback-and-control mechanism by identifying the investment program's strengths and weaknesses.

Performance evaluation can be broken down into three primary components:

- *Performance measurement*—calculation of the returns earned by the fund and comparison of those returns with the returns of appropriate benchmarks.
- *Performance attribution*—identification of the factors that led to the fund's performance relative to the benchmarks.
- *Performance appraisal*—assessment of the sustainability of the fund's returns relative to those of the benchmarks.

Trustees sometimes confuse performance measurement with performance evaluation. But simply measuring returns is only the beginning of the evaluation process. By asking what caused the performance of the fund relative to that of appropriate benchmarks and by inquiring into the quality (i.e., magnitude and consistency) of that ***relative performance***, you gain valuable insights into the effectiveness of the investment program.

Ethics in Investing. Trustees, along with all of the other parties involved in the fund's governance structure, should always be conscious of the question, Is this [action being contemplated] in the best interests of the fund's beneficiaries? Unfortunately, the answer is not always obvious. Certain actions can be construed to profit a particular party other than the fund's beneficiaries. A fine line often exists, which calls for carefully exercised discretion.

Our discussion of ethical investment practices is meant to create awareness of the subject's importance. You don't need an exhaustive list of "dos and don'ts." Rather, your emphasis should be on the importance of the policies and procedures designed to be most advantageous to the fund's beneficiaries. You should ensure that the fund has management controls that incentivize ethical investment behavior—not only of the trustees and investment staff but also of all parties involved in the fund's governance structure. These guidelines should be consistent with industry best practices.

Takeaways

- We use the term "trustee" to broadly refer to any person serving on a governing body charged with high-level supervision of invested assets.
- Extensive investment experience is not required to serve effectively as a trustee.
- A working knowledge of basic investment principles and concepts, however, will help you exercise good judgment in making decisions in your trustee role.
- This book is divided into chapters dealing with the following foundational topics: governance structure, investment policy, the fund's mission, investment objectives, investment risk management, investment assets, performance evaluation, and ethics in investing.

Session 1. Governance Structure

Knowing others is wisdom; knowing the self is enlightenment.
Mastering others requires force; mastering the self needs strength.

—*Lao Tzu*

Welcome, Molly, to the Freedonia University ***Investment Committee***. We have a lot of material to cover with you in this orientation. We will stick to the basics and avoid going into too much detail on any particular topic. You will have plenty of opportunities outside of this meeting to discuss the ideas that we cover today.

Governance Basics

Molly, let's begin our discussion of your role as an investment trustee by considering how the Fund's decision makers interact with one another. Many persons and organizations make investment-related decisions at various levels for the Fund. The framework that connects these decision makers is the ***governance structure***. A strong, well-articulated governance structure provides the mechanism for decision makers to function together effectively. A weak, ill-defined governance structure breeds confusion and acrimony.

Nothing can guarantee that the Fund won't experience disappointing investment outcomes. A strong governance structure is your best assurance, however, that if such a result does occur, it won't have been caused by preventable weaknesses inadvertently designed into the investment program.

Because the ***trustees*** sit at the apex of the Fund's organizational hierarchy, familiarity with your role and with that of others in the governance structure is essential. Moreover, if you can satisfy yourself that the governance structure is sound, then you will rest easier knowing that you have fulfilled an important ***fiduciary duty*** to the Fund.

We like to think of the Fund's governance structure as a three-legged stool. Each leg of the stool provides support and balance for the investment program. And like a stool, the investment program cannot stand without all three of these legs. The three legs of the Fund's governance structure are as follows:

- *Roles and responsibilities*—a delineation of functions that the various decision makers are assigned to perform.
- *Lines of authority*—a description of the latitude that decision makers have to carry out their responsibilities and a specification of their reporting arrangements.

- *Accountability standards*—a statement of expectations regarding the effectiveness of the decision makers combined with a set of procedures for reviewing and, if needed, responding to the actions of those decision makers to whom responsibility is delegated.

There are other aspects of the Fund's governance structure that keep it strong:

- *Due diligence*—appropriate oversight of the investment program's operations.
- *Checks and balances*—decentralized decision making and the ability of one set of decision makers to challenge others.
- *Reporting and monitoring*—adequate and timely distribution of information to decision makers.
- *Transparency*—access to the details behind the Fund's investment transactions, fees, expenses, and cash flows.
- *Compliance with industry best practices*—periodic review of other funds' operations and modification of the investment program when appropriate.

The investment committee articulates the Fund's governance structure in a formal policy document called the "governance policy statement" (GPS). In particular, Molly, you will use the Fund's GPS to delineate the roles and responsibilities of the trustees and the ***staff***. The clarity this document provides helps all decision makers avoid misperceptions and confusion. It promotes an open dialogue among the Fund's decision makers and permits them to concentrate on their specific assignments. The investment committee bears responsibility for periodically reviewing and, as appropriate, updating the GPS. As an example, **Appendix A** in your materials contains a copy of the Freedonia University Endowment Fund's GPS. Unfortunately, most funds do not clearly document their governance structures. Instead, they base their structures on a set of organizational precedents and practices, some of which have been written down and some of which simply follow tradition. For funds in this situation, it is important that regular discussions take place among the decision makers to ensure that they understand and remain in agreement regarding the governance structure's key features.

Roles and Responsibilities

Five primary groups of decision makers have a significant impact on the investment program: you and your fellow trustees, the investment staff, investment management firms (who we will refer to as "***investment managers***"), the ***custodian bank***, and the ***investment consultant***(s). Other persons and organizations, such as legal and accounting groups, affect the design and function of the investment program to a much smaller degree. We generally won't consider them as we review the governance structure. So, let's first introduce the principal parties and briefly describe their roles within the investment program.

Trustees. As we mentioned, the trustees reside at the pinnacle of the investment organizational pyramid. The buck, so to speak, stops with the Freedonia University Investment Committee. In essence, you and the other trustees are responsible for the overall success of the investment program. However, because you have no hands-on involvement in implementing the Fund's investments, you fulfill your responsibility by determining an appropriate direction for the investment program, by empowering experienced people to carry the Fund in that direction, and finally, by monitoring and evaluating investment results.

Specifically, the trustees hold the responsibility for setting broad ***investment policy*** and overseeing its implementation. (We will discuss investment policy in Session 2.) You carry out that responsibility in three primary ways. First, the trustees appoint the chief investment officer (CIO), and he reports directly to you. On an annual basis, the investment committee conducts a formal review of his job performance, the results of which determine his compensation for the following year. You share that review with the CIO in a frank discussion behind closed doors. You also approve his selection of senior staff members and sign off on his evaluation of those staff members. This leadership team is critical to effectively translating your vision of investment policy into a concrete investment program.

Second, the trustees work with the CIO to develop and, on occasion, update the ***investment policy statement***, which describes the key aspects of the Fund's investment policy. Typically, the staff initiates these updates, but in the end, the investment committee alone decides whether to alter the investment policy.

Finally, the investment committee periodically reviews investment results as presented by the CIO and determines whether the Fund is on course to achieve its objectives as envisioned in the investment policy. If the trustees believe that the Fund is performing appropriately, then you act to reinforce the positive aspects of the organization and encourage corrections of any weaknesses. If significant changes are warranted—a rare occurrence—then you can step in and make key senior staffing and policy changes to maintain the integrity of the investment program.

Before leaving the discussion of trustees, we would be remiss if we did not mention an issue that complicates governance in many funds. It is the fact that governance is often divided between two or more groups of trustees. For example, there may be an investment committee to make investment decisions, a finance committee to determine the level of spending or the structure of ***benefits***, and a funding committee responsible for the level of ***contributions*** that flow into the fund. Without clear communication and cooperation among these committees, promises to spend or pay benefits may be incompatible with the investment environment or risk-bearing capacity of a fund or they may be inconsistent with a fund's expected cash flows.

Investment Staff. The investment staff carries out the day-to-day operations of the investment program. Led by the CIO, the staff converts the investment policy established by the trustees into specific implementation procedures, such as keeping the Fund's allocation to designated ***asset classes*** and investment managers at assigned target levels. The staff maintains appropriate ***liquidity*** to meet the Fund's obligations; performs oversight of the Fund's investment managers, both individually and in aggregate; and makes modifications to the investment manager lineup as deemed necessary. The Freedonia trustees have delegated the authority to hire and fire investment managers to the CIO, although at some other funds, the trustees retain that discretion. The staff has responsibility for maintaining bank custodial relationships and also for periodically preparing reports for the investment committee and other interested parties regarding the activities and performance of the investment program. The managers regularly report their investment results to the staff; they offer explanations for those results and discuss current strategies. As part of the due diligence process, the staff typically meets with the managers at least once a year to discuss their current investment strategies and investment performance results. The staff periodically visits the managers' offices to gain a greater awareness of the managers' operations and personnel.

Although it is not the case with most organizations, at some funds, the staff directly invests some or all of a fund's assets. If the organization is large enough and has the ability to pay sufficient compensation to attract talented people, this approach can be cost-effective. Such in-house investment management presents its own unique governance issues, however, because risk-control responsibilities become intertwined with incentives to maximize returns. That arrangement puts added responsibility on the trustees to actively monitor the decision making and ***risk management*** of the investment staff. For that reason alone, many funds choose not to manage assets in-house. We'll return to external and internal management in Session 6 on investment assets.

The size of the investment staff differs widely among organizations. Generally, funds with more assets can afford to, and do, hire larger staffs than funds with fewer assets. Funds that manage assets internally carry even larger staffs. Smaller funds may have only one or two professionals on the staff, and the trustees may even carry out certain staff roles to compensate for this lack of people.

Some funds, particularly small ones, outsource all their staff functions. Certain external providers offer a full package of services, such as investment management, fund accounting, ***performance evaluation***, brokerage, payment of benefits, and actuarial reports. The organizations that offer these services include money managers, bank custodians, investment consultants, actuarial firms, and investment brokerage companies. Although outsourcing is an attractive option for some funds, this arrangement can limit a fund's investment options and does not eliminate a trustee's fiduciary liability. Moreover, it can create ***agency conflicts*** between the provider and the fund because of different incentives. (For example, a service provider may seek to maximize its fee revenue rather than focusing on offering value to the fund's beneficiaries.)

The attraction of outsourcing is largely economic. Hiring and retaining a competent investment organization is expensive. The size of Freedonia University's invested assets justifies hiring a CIO and staff. Nevertheless, small funds and those with limited financial resources to hire staff members should carefully weigh the costs and benefits of outsourcing.

Investment Managers. Investment managers, whether represented by external organizations or by internal staff, make decisions regarding which particular assets to buy and sell. The staff members at most funds prefer to hire a variety of managers, largely organized around various types of ***financial assets***, such as U.S. and non-U.S. equities, ***fixed-income securities***, and ***private equity***. Some "absolute return" (or ***hedge fund***) managers operate under broader ***mandates*** and may choose among various asset types in search of attractive returns.

The investment committee at Freedonia University has directed the staff to use ***active management*** as opposed to ***passive management***. The active managers use their investment analysis and portfolio management skills to attempt to outperform, after fees and expenses, ***benchmarks*** consistent with their areas of expertise. Passive managers, in contrast, attempt to match the performance, before fees and expenses, of their benchmarks. Although active managers bring with them the opportunity to exceed the return of their benchmarks, they also carry with them the risk of underperformance. This ***active management risk***, combined with the higher management fees and transaction costs associated with active management, has led trustees at some funds to manage part or all of their assets passively. We'll talk more about active and passive management in Session 6 on investment assets.

Within their designated investment mandates, the Fund's active managers have broad discretion to construct portfolios. The staff develops, and the investment committee approves, investment guidelines that specify the types of ***securities*** that will be held in the managers' portfolios, the level of risk that the managers are expected to take, and the benchmarks with which their investment results will be compared. In some cases, the managers' compensation is based on their performance relative to their benchmarks. Well-constructed investment guidelines place enough restrictions on the managers' investment activities to prevent large negative performance "surprises"—those in which results fall far from expectations. Still, well-designed guidelines should not seriously constrain the managers' exercise of their investment judgment.

Custodian Bank. The Fund's custodian bank supplies important safekeeping, recordkeeping, and valuation services. For many of the Fund's investment managers, the bank holds ownership of the publicly traded securities in which the managers invest. The bank carries out settlements of trades ordered by the managers (but not the trades themselves). Periodically, the bank reports details of the Fund's recent transactions and current holdings. The valuation of those holdings can be a trivial task in the case of public equities but can be problematic with esoteric assets, such as complex fixed-income securities that rarely trade. The Fund's custodian bank also offers ancillary services, including securities lending and ***performance measurement***. It also provides the raw material for the various audits the Fund undergoes annually. With the requirements in recent years for greater financial-reporting transparency, the custodian bank has taken on broader reporting responsibilities.

Consultants. The investment committee retains investment consultants to provide a variety of services. These consultants offer an extension of resources and expertise that would be too costly to maintain full time. Funds differ in their use of consultants. Some rely heavily on them, whereas others use them for narrow and specific purposes. Many organizations use consultants for two primary tasks: to advise on strategic issues, such as investment policy, and to provide manager selection and performance evaluation. In the case of strategic issues, consultants provide independent information and opinions to the trustees.

Consultants do not serve as a parallel staff but, rather, complement the staff's work. In the case of manager selection and performance evaluation, consultants have specialized resources, skills, and experience that are difficult for an investment staff to acquire and maintain. As requested, consultants regularly attend investment committee meetings to offer their insights. Some of the trustees meet regularly with the consultants, just as the CIO and other senior staff members do, to seek advice on issues facing the Fund.

Lines of Authority

Molly, as you well know from your own professional experiences, responsibility and authority must go hand in hand. To give certain decision makers the responsibility for performing aspects of managing investments but not to provide those same decision makers with the authority to carry out their professional judgments is a sure means of creating a dysfunctional organization. Investments, with their highly quantifiable results, are exceedingly prone to various forms of second guessing that undermine official delegation of authority.

Unfortunately, this problem most commonly occurs in the relationship between the trustees and the investment staff. Explicit authority may be delegated by the trustees to the staff, while some or all of the trustees retain *implicit* authority. The Freedonia investment staff has been fortunate to maintain a positive working relationship with the investment committee. For example, the trustees authorize the staff to retain and dismiss investment managers, a common arrangement at many funds. The trustees have been careful in the past not to second-guess staff decisions concerning manager retention. At some other funds, the trustees constantly ask probing questions about the individual investments undertaken by the managers and then pass judgment on the results of those investments. In many of those instances, the clear intent is not simply to understand how those managers are operating but to suggest that the staff's decisions in hiring those managers were not appropriate.

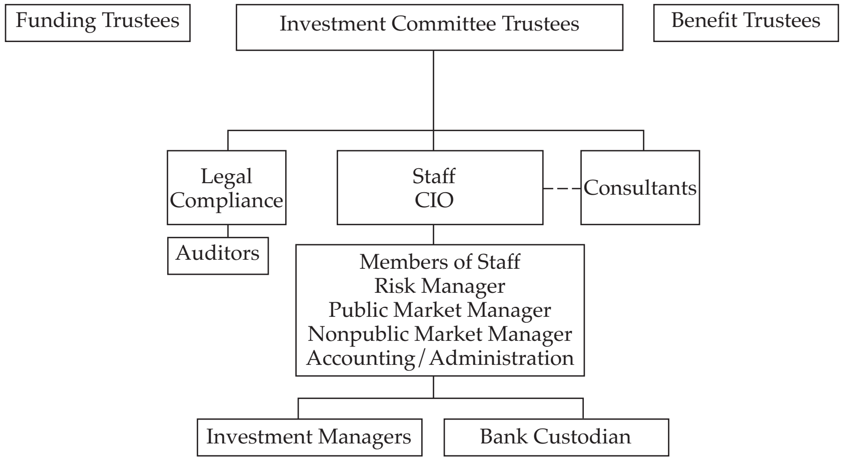
The implied message in such a situation is that, despite the explicit hiring authority granted to the investment staff, the trustees retain the authority to hire and fire managers. The staff then interprets this message as a warning not to act too independently of the trustees. The staff may fire some managers whom its members approve but judge to be in disfavor with the trustees, or the staff members may fail to hire an attractive manager out of concern that the trustees may not approve of that manager. But the trustees at these funds generally do not possess the expertise to identify successful managers prospectively, and in the end, the implicit withholding of authority from their staff corrodes the manager selection process. The trustees may ultimately be correct about a particular manager, but unless they can suggest fundamental deficiencies in their staff's *processes*, their after-the-fact criticism of the processes' results can disempower and demoralize the staff. The Freedonia University Investment Committee wisely avoids this problem by focusing its evaluations on the performance of the Fund's aggregate assets as opposed to the individual managers' investment results.

Of course, a similar problem can exist between the investment staff and investment managers. Managers are explicitly delegated authority to make portfolio construction decisions for their clients' accounts within specified investment guidelines. Again, the staff can implicitly withhold that authority by frequently questioning portfolio decisions after the fact. However, because investment managers are more diversified in their client bases than a fund staff, the managers are better positioned to fend off these efforts on the part of the staff than the staff is prepared to hold the line against meddling trustees. Nevertheless, if a staff constantly picks away at individual decisions on the part of a fund's managers, the managers may withhold their more unconventional ideas from the portfolios, to the ultimate detriment of the fund.

The solution to these problems is conceptually simple but, at times, difficult to put into practice. It is that (1) the lines of authority must be clearly specified and (2) the supervising decision makers must scrupulously refrain from reaching down to the reporting decision makers and attempting to control decisions. Furthermore, the reporting decision makers need to feel empowered to push back and remind the supervising decision makers in those instances when the line between explicit and implicit authority becomes blurred. Documenting the lines of authority through the GPS is the ideal solution, but even if such documentation exists, a culture of full and frank discussions must be maintained.

Like most organizations, the investment committee has authorized an organizational chart that identifies the Fund's lines of authority. We have attached that chart to your presentation materials as **Figure 1**. In addition to simply specifying the lines of authority, the investment committee has incorporated the other elements of a strong governance structure mentioned earlier—due diligence, checks and balances, reporting and monitoring, transparency, and compliance with best practices—to align implicit with explicit authority.

Figure 1. Freedonia University Investment Committee Organization Chart



Accountability Standards

Accountability provides the third leg of a strong governance structure. You can assign responsibility for an investment function to a person or a group and give that person or group the authority to carry out that function. Those steps are necessary—but not sufficient. Everyone wants responsibility and authority; few, however, want accountability. Yet, if the appropriate level of accountability is missing, then the trustees cannot expect that person or group to be properly incentivized to carry out the function in a way that best meets the goals of the Fund.

As a result, the investment committee has mandated that accountability standards be established throughout the governance structure. Wherever key decisions are being made, the trustees have insisted that accountability standards be set for the decision makers. Regardless of their specific design, those accountability standards have common characteristics. They are

- appropriate and realistic (i.e., commensurate with the given authority),
- established in advance,
- agreed to by both the supervising and subordinate persons or groups,
- evaluated in the context of the expected range of outcomes, and
- designed to provide formal procedures for supervising authorities to review the results of subordinates' decisions.

Consider that the investment committee assigns the CIO a set of accountability standards for use in his annual evaluation. Those standards include both a "personal results" component and an "investment results" component. The personal results component relates primarily to how well the CIO interacts with the staff and trustees. Topping this list must be open and direct communication. For example, an appropriate expectation, Molly, is that you and the other trustees be comfortable asking the CIO any question that comes to mind and that you receive a prompt and understandable answer. Timely reporting, effective management of the staff, and productive relationships with other stakeholders and outside organizations will also factor into this personal evaluation.

The investment results component is based on the Fund's management relative to defined expectations. The CIO cannot guarantee investment outcomes, and his investment performance objectives recognize that fact. Still, you should want the CIO to feel that if the Fund performs well, he will participate in that success. For example, the trustees have decided that the Fund's return relative to established benchmarks and the maintenance of the asset mix within policy guidelines should factor into the CIO's investment results component.

In an investment program, surprises will always occur, some of them potentially quite disappointing. Often, it is not clear how to evaluate them, even with a solid set of accountability standards in place. Among other questions, you will likely want to ask whether the CIO had the authority to make a different outcome happen and whether the process under which the adverse outcome occurred was prudent and properly implemented. In addition, you should consider whether the bad result could reasonably have been predicted and prepared for. Molly, your conclusions will likely involve a fair amount of subjectivity. One of the primary reasons you were invited to be a trustee, however, is that you have a history of good judgment. In an uncertain investment world, that characteristic is of critical importance.

More on the Trustees

Your fellow trustees recognize that appropriate organizational design of the investment committee can enhance the Fund's governance structure. As a result, the trustees have focused on several key aspects of membership and meeting format, including the following:

- number of members,
- member selection,
- diversity of experience,
- member tenure,
- leadership,
- frequency of meetings,
- meeting length, and
- meeting agendas.

The Freedonia University Investment Committee is composed of seven trustees. Having too many trustees makes scheduling meetings difficult; having too few trustees increases the potential for one or two persons to dominate the decision making. A subcommittee of the Board of Regents takes nominations and ultimately recommends trustees to the full board for approval. This independent selection process prevents current trustees from controlling the choice of new members. As a result, new trustees join without owing an allegiance to existing committee members.

In recruiting attractive trustee candidates, the regents look for individuals with a wide range of career experiences. Although the regents consider investment knowledge to be a positive attribute, they certainly don't view it as a prerequisite to be selected as a trustee. In fact, several trustees have been chosen because of their experience in areas outside of investing—managing large businesses, for example. The regents prefer to strike a balance on the investment committee between investment experience and other backgrounds. A diverse membership makes it less likely that "groupthink" will dominate the board's decisions regarding investment policy. Because of their diversity, the trustees are an active group who vigorously debate the relevant issues and are open to dissenting, but constructive, ideas.

The trustees serve three-year terms and can be reappointed for one additional term before they must leave the investment committee for at least two years. In this way, the trustees do not become too comfortable in their positions but have enough time to understand the university's funds and to function effectively. Moreover, this forced turnover periodically brings in fresh ideas through new members. Terms are staggered to avoid wholesale membership change and a resulting loss of institutional knowledge. The investment committee's chair and vice chair are appointed by the regents—again, to prevent one individual from holding too much power within the group.

The investment committee members hold in-person meetings at least three times a year and arrange for telephone meetings as necessary. The in-person meetings are important because they promote effective discussion among the trustees and between the trustees and the investment staff. The trustees prefer quarterly meetings to keep on top of pressing issues and to review investment results on a timely basis. The CIO, in consultation with the investment committee chair, controls the meeting agenda. The trustees favor meetings that last no more than half a day, thereby allowing the participants to remain fresh and productive throughout the meeting.

Funds take varying approaches toward membership and meetings, but the investment committee at Freedonia is fairly conventional. Institutional situations cause some differences (for example, a public pension plan may have statutory membership requirements). Other differences may be the result of decisions made long ago that the funds have grown accustomed to. Regardless, the trustees review the membership and meeting guidelines periodically to stay in line with best practices.

Takeaways

- The governance structure is the framework that connects a fund's various decision makers to one another.
- The key elements of the governance structure are described in a formal governance policy statement (GPS).
- A sound governance structure has three primary components: roles and responsibilities, lines of authority, and accountability standards.
- Roles and responsibilities define the functions the various decision makers are assigned to perform.

- Lines of authority both describe the power given to decision makers to carry out their responsibilities and specify to whom those decision makers report.
- Accountability standards state the expectations regarding the effectiveness of the decision makers and the procedures for reviewing their actions.
- Sound governance also requires
  - appropriate diligence procedures,
  - checks and balances with regard to the various decision makers,
  - timely reporting and monitoring,
  - transparency of decisions and details of investment transactions and holdings, and
  - compliance with industry best practices.
- Important trustee membership issues include the number of trustees, selection process, diversity of experience, tenure, and leadership.
- Meeting schedules also deserve consideration, including meeting frequency, meeting length, and meeting agendas.

QUESTIONS MOLLY SHOULD ASK

About governance policy

- Is the Fund's governance structure formally documented? If so, may I see the document? If a GPS does not exist, how is the Fund's governance structure understood and communicated?
- How is the governance of the Fund organized? Who are the key participants in the structure? How do they relate to one another in terms of accountability and authority?
- Are responsibility, accountability, and authority appropriately aligned in all areas of the Fund's governance structure? Are there any areas of concern? If so, what are the issues involved?

The investment staff

- How is the staff organized? What are the professional backgrounds of the CIO and his senior managers?
- How is the CIO evaluated? What have been the recent results of his evaluations?
- Does the staff have the resources to adequately carry out its responsibilities? If not, what are the concerns?
- What is the compensation structure (e.g., base salary, bonus, deferred compensation, perquisites) for the CIO? Who determines staff compensation?
- How is the staff budget determined? What is the size of that budget? How is it allocated by major account?

- What investment management decisions are delegated solely to our CIO and the staff? Do we have a set of performance expectations for these persons with respect to those decisions?

Relationships among key decision makers

- What investment management decisions does the investment committee retain in whole or in part? What is the purpose of retaining these decision-making responsibilities?
- What regular reports do the staff, the custodian, and the consultant provide to the investment committee?
- Are the trustees relatively involved as a group in terms of managing the staff, or do they tend to be "hands-off"?
- When there are disagreements between the trustees and the staff, how are they resolved? Are there any issues that continue to fester?
- Where are the Fund's assets held? Who has authority to access those assets? What types of safeguards do we have to prevent unauthorized access to the Fund's assets?
- What valuation methods does the custodian use to value the assets? What sorts of quality checks are applied to the reported numbers?
- Do we retain a consultant? If so, how do the trustees and the staff use our consultant? What is our record of following the consultant's recommendations?
- How long has it been since the consultant and the custodian relationships were reviewed? What were the results of those reviews?

The trustees

- Who are the current trustees? How long have they been on the investment committee? What are their backgrounds?
- Who selects the trustees? What is the selection process? What criteria are considered most important in selecting a new trustee?
- What types of training are provided to new trustees?
- How is the leadership of the trustees chosen? Are there informal leaders who differ from the officially chosen leaders?
- How are the trustee meetings usually run? What topics tend to dominate the agendas? Is there a bias toward reviewing past performance as opposed to addressing forward-looking strategic issues?
- Are the minutes of the past trustee meetings available for review?
- How do the trustees protect against groupthink?
- What are the core beliefs of the trustees as a body?
- How are the trustees evaluated, both individually and as a group?

ND Retirement and Investment Office

State Investment Board
Teachers' Fund for Retirement

1930 Burnt Boat Drive
P.O. Box 7100
Bismarck, ND 58507-7100
Telephone 701-328-9885
Toll Free 800-952-2970
Fax 701-328-9897
www.nd.gov/rio

AGENDA ITEM III.D.

MEMO

TO: STATE INVESTMENT BOARD

FROM: CONNIE FLANAGAN

DATE: OCTOBER 16, 2015

RE: ADDITIONAL RECOVERED FUNDS - WG TRADING

On October 9, 2015, RIO received notice from our external counsel, K&L Gates, that the receiver in the WG Trading fraud case has filed a motion and supporting papers that request, authorization to make a third distribution of receivership assets to investors. This proposed third distribution would include a total of $5,944,067.48 related to the SIB's investment with Westridge/WG Trading. This distribution would increase the SIB's total recovery from the receivership assets to $73,012,495.33 or approximately 97% of the original cost basis of our investments. The motion does not specify when the receiver expects to make this distribution.

I have attached a summary which includes the two previous distributions and the proposed third distribution, allocated among the SIB clients who were invested in the affected portfolios.

SUMMARY OF WG TRADING FRAUD RECOVERY

	Initial Recovery April 2011 (in thousands)	Subsequent Recovery April 2013 (in thousands)	Subsequent Recovery Pending (in thousands)	Cost Basis (in thousands)	Net Realized loss (in thousands)
Teachers' Fund for Retirement	$ 23,001	$ 1,129	$ 2,139	$ 27,080	$ (811)
Public Employees Retirement System	26,012	1,277	2,418	30,626	(919)
Bismarck City Employee Pension Plan	503	25	47	592	(17)
Bismarck City Police Pension Plan	268	13	25	316	(10)
Job Service of ND	1,408	69	131	1,657	(49)
City of Fargo Employee Pension Plan	445	22	41	524	(16)
Workforce Safety & Insurance	10,616	521	987	12,499	(375)
State Fire & Tornado	512	25	48	603	(18)
State Bonding	51	2	5	60	(2)
Risk Mgmt	88	4	8	104	(4)
Risk Mgmt Work Comp	63	3	6	74	(2)
Insurance Regulatory Trust Fund	16	1	1	18	-
Petroleum Tank Release Comp Fund	155	8	14	182	(5)
ND Ass'n of Counties Fund	54	3	5	64	(2)
City of Bismarck Deferred Sick Leave	13	1	1	15	-
City of Fargo FargoDome Permanent Fund	718	35	67	846	(26)
Cultural Endowment Fund	8	-	1	10	(1)
Totals	$ 63,931	$ 3,138	$ 5,944	$ 75,270	$ (2,257)

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MEMO

TO: STATE INVESTMENT BOARD

FROM: CONNIE FLANAGAN

DATE: OCTOBER 6, 2015

RE: FOLLOW-UP ON FORM ADV QUESTIONS

At the September 25th SIB meeting, some questions were asked regarding the Form ADV compliance log that was provided. Specifically, what is a Form ADV and can we see an example?

Here is a link that describes what a Form ADV is: http://www.sec.gov/answers/formadv.htm.

Additionally, the compliance log that was provided included a link to a website where you can search by firm for their most recently submitted Form ADV.

The link is http://www.adviserinfo.sec.gov/IAPD/Content/Search/iapd_Search.aspx.

Choose "Firm" near the bottom of the first screen and when the search section comes up below that, just type in the name of a firm and click "Start Search". On the next page you will see the results of your search. Click on the Investment Adviser Firm link that corresponds with the firm you wish to view (firms with multiple divisions will have multiple ADVs). When the new page comes up, click on the SEC link and that will take you to the Form ADV information. The left side bar lists all the sections of the form. There is a lot of information included in these forms and the screens aren't all that easy to maneuver but this will give you an idea of the type of information that is included in these reports.

Please feel free to contact me with any additional questions. My email address is cflanagan@nd.gov and my direct line is 701-328-9892.

AGENDA ITEM III.F.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 21, 2015

SUBJECT: Litigation Monitoring – First Reading (Governance Policy Proposal E-14)

During our most recent review of the SIB Governance Manual, RIO and legal counsel identified an area in which existing SIB policies and practices can be enhanced from a documentation perspective. As a result, legal counsel Janilyn Murtha kindly provided RIO with proposed language to formally document the "Securities Monitoring and Litigation Policy" generally followed by the SIB in recent years along with proposed language to more clearly define future roles and responsibilities of RIO and SIB. <u>A key component includes guidelines for seeking "active participation" in cases and monitoring the vast majority of cases which fall into the "non-active recovery" classification</u>.

In the past, RIO and the SIB have primarily relied on our custodian, Northern Trust, for monitoring and reporting of securities litigation. Based on recent custodial reviews of Northern Trust's overall operations, our investment consultant did not identify any material weaknesses in Northern Trust's securities litigation monitoring policies or practices. However, there has been an increase in the number of international securities litigation cases in recent years. In order to address this matter and enhance our ability to monitor international securities litigation cases in the future, the RIO intends to work with our custodian (and potentially other service providers) to develop an international securities litigation monitoring proposal in early-2016. It is important to note that legal counsel also intends to provide additional language relating to international securities litigation monitoring policy in early-2016.

The proposed language which follows will be inserted into Section E. Investments of the SIB Governance Manual if formally approved by the SIB in 2016. Given that this is a "First Reading" of a newly proposed governance section, RIO is only requesting preliminary input from the SIB at this time.

POLICY: ENDS **POLICY TITLE:** *SECURITIES MONITORING AND LITIGATION POLICY*

General Purpose

1. The North Dakota State Investment Board ("SIB") is a fiduciary for assets held in trust for the benefit of SIB clients' including their beneficiaries and to defray expenses of administration of their respective investment funds.

2. In order to carry out its fiduciary duty to prudently invest and diversify the assets of the various investment funds, the SIB invests considerable assets in global public securities markets.

3. The efficient and effective deployment of plan assets requires that in seeking returns market risks must be prudently assumed and managed. Investing in publicly-traded securities in regulated markets under accounting, disclosure and business practice laws and regulations provides general, but not perfect assurance that the information forming the basis for investments is accurate, conforms with accepted accounting practices, and is not distorted due to misfeasance, malfeasance or nonfeasance, or the timing of information disclosures by persons or entities with the ability to affect market prices of the those investment securities.

4. Legal action is sometimes necessary to attempt to recover all or part of losses the fund may incur due to alleged improper action or inaction that results in the impairment of the value of the fund's security holdings.

5. Most such actions will be prosecuted by the class action bar whether or not the SIB takes an active role as a plaintiff or a passive role as a member of a certified class of plaintiffs. Any ultimate award or settlement from a class action filing will be ratably allocated among legitimate claimants.

6. The SIB will generally only consider pursuing active participation in securities actions when such a role is expected to add value by enhancing the prospect for recovery, increasing the amount of recovery, or assuring more efficient and effective prosecution of the case.

   For purposes of this Policy, "active participation" means seeking status as lead plaintiff, co-lead plaintiff, or filing separate legal action.

Non-Active Recovery and Filing

1. SIB will require as part of its agreement with its custodial bank, that adequate securities class action monitoring is maintained on an ongoing basis, sufficient to assure that most of the actual awards and settlements for such cases are tracked and identified and that proof of claim forms, including supporting documentation, will be properly and timely filed.

2. To augment and enhance coverage, identification and tracking of class-action cases (potential or actual) SIB may engage one or more legal firms that specialize in monitoring and prosecuting security class-action cases; any such engagement is subject to the special appointment requirements of N.D.C.C. § 54-12-08. For these purposes only, such firm(s) may be granted ongoing access to security holdings information through the custodian bank.

   A monitoring agreement with any law firm for monitoring service access and reporting will not commit SIB to employing said firm in the event that it seeks to represent SIB as an active participant in any securities related litigation. Such representation must be effected by a separate retainer agreement between the SIB and said firm, or another, depending on such factors as the potential monetary scope, the nature of the case and industry specialty that may be required, the allocation of current or past cases among candidate firms, the likely duration and cost of prosecuting such a case, retainer fees or contingency splits, the venue in which the case is to be filed, and other considerations.

3. The custodial bank will be required to provide the Retirement and Investment Office ("RIO") with periodic reports that detail class action cases monitored, claims filed, and award or settlement distributions received. RIO will maintain these records and provide an update to the SIB with regards to accounting information on distributions received on claims filed by the custodian bank on our behalf.

Active Participation in Cases

1. The Executive Director will initiate active participation in securities cases only upon prior review and approval of the SIB. Before bringing any recommendations to the Board, the Executive Director with significant assistance by legal counsel from the Office of the Attorney General, will assess the merits and prospects for active participation by reference to the criteria and factors outlined in this section.

2. Decision Criteria and Factors

    a. The decision to participate in an active capacity in security litigation should be based on the totality of the circumstances. Dollar loss amounts are important, but not the sole or overriding factor to consider in making such recommendations by the Executive Director, or determinations by the SIB.

    b. Potential losses to SIB clients must be significant in order to warrant participation as a lead plaintiff, co-lead plaintiff, or separate "opt-out" litigant. Generally, in cases where the potential loss does not exceed the greater of 0.1% of trust assets or $1 million, the SIB will avoid active participation.

    c. The *prima facia* merits of the claim for loss, and the factual basis for the action, recognizing that the full discovery process will not commence until the class has been certified by the court in which such case is to be filed.

    d. The availability of witnesses, and possible support that may be obtained from investment managers, consultants, and the custodial bank through discovery.

    e. The potential that any defendants or insurers will be able to pay an adequate recovery to the class, without impairing the value of any current security holdings SIB may yet hold in the issuer in the portfolio.

    f. The ability of the law firm recommending action on the part of SIB to prosecute the case effectively, in the venue where such case is likely to be filed, and the experience of the firm in managing such cases individually or in partnership with other firms.

    g. Potential long-term benefits from corporate governance changes from pursuing litigation.

    h. The ability of SIB to serve as a fiduciary on behalf of all class members in the case, especially in relative terms to other institutional investors that may be considering the same case.

    i. Potential costs that may be incurred. Special consideration must be given to any case that must be filed in a non-U.S. venue under the "Morrison" criteria established by the U. S. Supreme Court in a 2010 decision, since costs of litigation and potential liabilities of unsuccessful claims may be significant.

j. Current workload and staffing resources required for the fulfillment of SIB's primary member service functions, and whether participation might displace time and staff resources needed for core business functions.

Roles in Managing and Monitoring Litigation

1. The SIB will make the final determination of whether it is in SIB's best interest to pursue active participation in any case and whether to engage any law firm and the terms of such engagement.

2. Decisions regarding the conduct and implementation of the Board's decision to participate will be the responsibility of the Executive Director, or an approved member of the management staff if he so delegates. When feasible and advisable, the Executive Director shall seek advice and direction from the Board on strategic and legal issues that may arise in prosecuting the action on behalf of the SIB and its clients. The Executive Director shall timely report to the Board on the progress of the litigation.

3. The Executive Director shall be responsible for management of the relationship with any portfolio monitoring law firm or organization for such purpose. Based on the need for additional coverage, the Executive Director will determine whether one or several firms are needed to fulfill the goals of this Policy and may terminate such monitoring agreements as judgment advises.

4. Any agreement for portfolio monitoring services that includes a fee or subscription cost must first be approved by the SIB before execution by the Executive Director.

Policy Review

1. The Board shall review this policy at least every three years to ensure that it remains relevant and appropriate.

AGENDA ITEM IV.A.

TO: State Investment Board

FROM: Dave Hunter, Executive Director/CIO

DATE: October 16, 2015

SUBJECT: SIB Client Satisfaction Survey

The Audit Services team conducted the 2015 Customer Satisfaction Survey over the past four months. Survey responses were received from all but one customer board. Several methods were used this year to collect the survey data including customer created paper forms, SurveyMonkey, and PDF. In the future, there is a desire to move to one format.

Overall, SIB clients assigned a 3.7 overall rating in 2015 which is the same as in 2014. This numerical rating was based on 4.0 scale as follows:

Excellent	4.0
Above Average	3.0
Average	2.0
Poor	1.0
Not Applicable	-

The Supervisor of Audit Services, Terra Miller Bowley, can address any questions or comments. I am also able to answer any questions relating to the survey comments immediately below.

Overall Customer Satisfaction Survey Comments and Impressions:

- Provide June 30 financial statements for our investments by September 1.
- RIO does an excellent job for us. Staff is very professional, available, and helpful. They have put forth a great effort for our funds and have our complete confidence.
- Continue to provide the same clarity in the reports and the same prompt response to questions and requests.
- The RIO staff works diligently to be proactive which was especially evident with the GASB changes. Much work was done to educate all stakeholders to implement a relatively smooth transition.
- It may be just me, because I am new to the board, but I have a hard time getting information I may need from the monthly reports.
- Office personnel are very professional and serve customers well.
- Service is great, we are very pleased!
- We have been very pleased with the performance of the NDSIB in regards to managing the City of Grand Forks pension plan.

Note: In response to the first bullet point, RIO has not historically closed our fiscal year-end financial reporting until the external audit is substantially complete which generally does not take place until mid-to-late September. In response to the fifth bullet point above, RIO intends to provide additional training relating to the review of monthly performance reports (and the key role served by our valued trustees).

CUSTOMER SATISFACTION SURVEY
NORTH DAKOTA STATE INVESTMENT BOARD
2015

Evaluation Forms Sent	13
Evaluation Forms Returned	12

1. Handling of telephone calls promptly and professionally.

Excellent	Above Average	Average	Poor	N/A
7	3	0	0	2

2. Clarity and effectiveness of letters, reports, and presentations.

Excellent	Above Average	Average	Poor	N/A
6	5	0	0	1

3. Detail provided on reports.

Excellent	Above Average	Average	Poor	N/A
6	5	0	0	1

4. Delivery of high-quality service.

Excellent	Above Average	Average	Poor	N/A
8	2	0	0	2

5. Accessibility.

Excellent	Above Average	Average	Poor	N/A
7	3	0	0	2

6. Responsiveness.

Excellent	Above Average	Average	Poor	N/A
4	2	0	0	6

7. Efficiency.

Excellent	Above Average	Average	Poor	N/A
8	2	0	0	2

8. Knowledge of investments.

Excellent	Above Average	Average	Poor	N/A
7	3	0	0	2

Summary of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	53	25	0	0	18
Grade	4	3	2	1	0
Percent	55%	26%	0%	0%	19%
Average	**3.7**				

CUSTOMER SATISFACTION SURVEY
NORTH DAKOTA STATE INVESTMENT BOARD
2014

Evaluation Forms Sent	13
Evaluation Forms Returned	12

1. Handling of telephone calls promptly and professionally.

Excellent	Above Average	Average	Poor	N/A
9	2			1

- In the instances that I have called and/or visited the NDRIO offices, I have immediately been properly referred, had questions answered appropriately. Additionally as a superintendent, I occasionally hear from teachers related to these services. They have consistently been positive in regards to the communication from NDRIO.

2. Clarity and effectiveness of letters, reports, and presentations.

Excellent	Above Average	Average	Poor	N/A
6	5			1

- Fay and the other TFFR staff has done an excellent job in reaching out to various stakeholders to inform on timely issues of value to TFFR and its members. Additionally, the GASB trainings led by NDRIO staff have been, and will continue to be, a crucial aspect of proper implementation. I feel that NDRIO is well prepared to provide this training and recognizes the value.

3. Detail provided on reports.

Excellent	Above Average	Average	Poor	N/A
6	5			1

- All of the NDRIO staff provides consistent and high-value reporting on each agenda item every month. I have not yet asked a question that I could not find the answer to in the materials provided to us each month.

4. Delivery of high-quality service.

Excellent	Above Average	Average	Poor	N/A
9	2			1

- My basis for this rating is the high quality of information sharing that goes into recommendations to the SIB/TFFR boards. In every instance, I have felt that I not only have the appropriate information necessary to make a decision, but a rationalized recommendation. The NDRIO staff recognizes that all decision are done in the interest of the fund and action is consistent that fiduciary responsibility.

5. **Accessibility.**

Excellent	Above Average	Average	Poor	N/A
9	2			1

- As stated in other factors, I feel that NDRIO has reached out to numerous groups on timely issues. In the past year, this has included the presentations to celebrate the TFFR anniversary and GASB Implementation. I appreciate that presentations are available online for access as well. I find the website to be a resource that provides a high level of accessibility and transparency.

6. **Responsiveness.**

Excellent	Above Average	Average	Poor	N/A
9	2			1

- I have only had a few instances in which this factor would apply, but in all of them the responses have been as quick as I could have expected. In organizing my new trustee training, Fay was very efficient in organizing those plans. Additionally, I have had a few requests to David related to investments and the evaluation procedure. In every instance, David responded immediately and completely to me on all questions and requests.

7. **Efficiency.**

Excellent	Above Average	Average	Poor	N/A
8	3			1

- I'm struggling with understanding how to rate this factor. I believe that NDRIO staff is efficient as they have been managing at a high-level without a full contingent of staff, but I'm choosing to provide an N/A as I don't believe I can accurately rate the factor.

  (Please note no N/A was attributed for this survey above, as board majority voted Excellent).

8. **Knowledge of investments.**

Excellent	Above Average	Average	Poor	N/A
7	4			1

- As stated in the factor for delivery of high-quality service, every recommendation provided by the NDRIO staff comes with all necessary background to make a sound board decision. The fund is producing at a high-level while maintaining risk aversion. I'm not sure what more we could ask of the NDRIO staff in this area.

SUMMARY of SIB Client Satisfaction Survey Ratings:

	Excellent	Above Average	Average	Poor	N/A
Totals	63	25	0	0	8
Grade	4	3	2	1	0
Percent	66%	26%	0%	0%	8%
Average	3.7				

MEMORANDUM

TO: **State Investment Board (SIB)**

FROM: **Rebecca Dorwart, SIB Audit Committee Chair**

DATE: **October 23, 2015**

SUBJECT: **Fiscal Year End Audit Committee Activities Update**
July 1, 2014 to June 30, 2015

The Audit Committee is a standing committee of the State Investment Board (SIB) authorized under the SIB Governance Policy B-6, Standing Committees. Its primary function is to assist the SIB in fulfilling its oversight responsibilities of the Retirement and Investment Office (RIO) internal and external audit programs, including the financial reporting process, internal controls, and compliance with laws, regulations, policies, and procedures.

Members of the Audit Committee for the 2014-2015 fiscal year were: Rebecca Dorwart, Chair; Mike Gessner, Vice Chair/SIB Liaison representing the Teachers' Fund For Retirement (TFFR) Board; Karol Riedman, Health Dept.; Mike Sandal, representing the Public Employees Retirement System (PERS) Board; and Cindy Ternes, designee from Workforce Safety & Insurance representing elected and appointed officials. The Audit Committee held four regular meetings during the fiscal year ended June 30, 2015.

Activities of the Audit Committee during the past year included:

- The Committee provided input on job duties and responsibilities for the Supervisor of Audit Services position and participated in the recruitment and selection process. The Supervisor of Audit Services position was filled on October 13, 2014.

- The Committee provided guidance related to audit activities and planning for Fiscal Year July 1, 2014 through June 30, 2015. Progress was monitored on a quarterly basis. Audit activities included:

    - Twenty-four employer audits including twenty-two <u>TFFR Compliance Audits</u> and two <u>Not In Compliance (NIC) Reviews</u>. Compliance with the definition of salary as it appears in NDCC 15-39.1-04(9) is reviewed along with service hours and eligibility.
    - Four <u>TFFR File Maintenance Audits</u> were completed. Changes made to TFFR member account data by RIO employees are reviewed.
    - Annual <u>Benefit Payment Audit</u> was completed. Deaths, purchases of service, refunds, long outstanding checks, and long term annuitants are reviewed to ensure that established policy and procedures are being adhered to.
    - Annual <u>Salary Verification Project</u> was completed. Salaries and contributions reported to TFFR for the prior fiscal year for fifty randomly selected member accounts are verified.
    - <u>TFFR Benefit Payment Cost Efficiency Review</u> was completed. Verified that retirement benefits are being paid at TFFR on a cost effective basis according to the *Ends* policy in the SIB Governance Manual.
    - <u>Executive Limitations Audit</u> was completed. Determined Executive Director/CIO level of compliance with SIB Governance Manual Executive Limitation policies (A-1 through A-11) for the calendar year ending December 31, 2014.

- The Committee received the results of the RIO financial audit for the fiscal year ended June 30, 2014 from independent auditors, CliftonLarsonAllen, LLP. They issued an unqualified opinion.

- The Committee reviewed the RIO financial audit plan for fiscal year ended June 30, 2015 with independent auditors, CliftonLarsonAllen, LLP. Discussion included scope of the audit to ensure complete coverage of financial information and additional education on GASB 67 and 68 statements for pension plan reporting.

- The Committee reviewed the Request for Proposal (RFP) for the selection of an independent auditor for the RIO for fiscal years 2015, 2016, and 2017. Discussion included a review of the overall process and selection criteria.

- The Committee adopted a detailed audit work plan, budgeted hours, and TFFR employer risk assessment for fiscal year July 1, 2015 to June 30, 2016.

- The Committee received staff updates on GASB 67 and 68 pension reporting requirements, implementation planning, census data audits, and employer training programs.

The above activities support the Committee's fulfillment of its oversight responsibilities. Please inform the Committee if there are special audits or activities the Board would like to have reviewed.

ND STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING

Friday, September 25, 2015 – 1:00 PM
State Capitol – Fort Union Room
600 East Blvd Ave, Bismarck, ND 58505-0130

AGENDA

1. Call to Order and Approval of Agenda – Chair (committee action) (5 minutes)

2. Approval of May 21, 2015 Minutes – Chair (committee action) (5 minutes)

3. Election of Chair, Vice Chair, and Liaison – Chair (committee action) (10 minutes)

4. 2014 – 2015 Year End Audit Activities Report – Terra Miller Bowley (committee action) (20 minutes)

5. 2014 – 2015 Audit Committee Report to SIB – Terra Miller Bowley (committee action) (10 minutes)

6. 2015 – 2016 First Quarter Audit Activities Update – Terra Miller Bowley (information) (10 minutes)

7. Audit Committee Charter – Terra Miller Bowley (committee action) (20 minutes)

8. Enhanced Transparency – SIB Audit Committee Materials (information) (5 minutes)

9. Other – Next SIB Audit Committee Meeting

   North Dakota State Capitol Building
   November 19, 2015 at 3:00 PM
   Peace Garden Room

10. Adjournment

Any individual requiring an auxiliary aid or service should contact the Retirement and Investment Office at (701) 328-9885 at least (3) days prior to the scheduled meeting.

STATE INVESTMENT BOARD
AUDIT COMMITTEE MEETING
MINUTES OF THE
MAY 21, 2015, MEETING

COMMITTEE MEMBERS PRESENT:	Rebecca Dorwart, Chair Mike Gessner, TFFR Board Mike Sandal, PERS Board Cindy Ternes, Workforce Safety & Insurance
COMMITTEE MEMBER ABSENT:	Karol Riedman, Health Dept.
STAFF PRESENT:	Connie Flanagan, Fiscal & Invt Op Mgr Bonnie Heit, Assistant to the Audit Committee David Hunter, Executive Director/CIO Fay Kopp, Deputy Executive Director/CRO Terra Miller Bowley, Suprv Audit Services Shelly Schumacher, Retirement Program Manager Dottie Thorsen, Internal Auditor
GUESTS:	Thomas Rey, CliftonLarsonAllen Jason Ostroski, CliftonLarsonAllen

CALL TO ORDER:

Ms. Dorwart called the State Investment Board (SIB) Audit Committee meeting to order at 3:00 p.m., on Thursday, May 21, 2015, at the State Capitol, Peace Garden Room, Bismarck, ND.

A quorum was present for the purpose of conducting business.

AGENDA:

IT WAS MOVED BY MS. TERNES AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO APPROVE THE AGENDA FOR THE MAY 21, 2015, MEETING AS DISTRIBUTED.

AYES: MR. SANDAL, MS. TERNES, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MS. RIEDMAN

MINUTES:

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO APPROVE THE FEBRUARY 26, 2015, MINUTES AS AMENDED.

AYES: MR. GESSNER, MR. SANDAL, MS. TERNES, AND MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MS. RIEDMAN

AUDIT SCOPE:

Mr. Rey reviewed the work plan for the audit of the Retirement and Investment Office's (RIO) financial statements and Teachers' Fund for Retirement (TFFR) GASB 68 schedules for the period ending June 30, 2015.

The preliminary fieldwork took place in May 2015. The census data and substantive procedures testing will take place July - September 2015 with the final audit report scheduled to be completed September/October 2015.

Mr. Rey also reviewed GASB 72, which will become effective for fiscal years beginning after June 15, 2015 (fiscal year ended June 30, 2016, for RIO). This statement will provide guidance for determining a fair value measurement for financial reporting purposes and will provide guidance for applying fair value to certain investments and disclosures related to all fair value measurements.

Mr. Ostroski also reviewed the audit results for GASB 68 schedules (schedules of employer allocations and the schedule of pension amounts by employer) for the period ending June 30, 2014. On-site census data testing was conducted on 17 employers. An unmodified clean opinion was issued on the schedules.

Ms. Kopp thanked the staff involved in the implementation, Ms. Miller Bowley, Ms. Flanagan, and Ms. Schumacher, as well as all of the support received from CLA and Segal.

AUDIT ACTIVITIES REPORT:

Ms. Miller Bowley updated the Audit Committee on Internal Audit activities for the third quarter period of January 1, 2015 - March 31, 2015.

Employer Compliance Audit Reports - Four employer audits were completed, seven employer audits were in progress, and one not in compliance review is in progress. As of March 31, 2015, sixteen employer audits and two not in compliance reviews have been completed.

The Internal Audit Division has been working with CLA on the GASB 68 Census Data Audits. Fieldwork on 17 employers was conducted and 202 member accounts were reviewed January 19-30, 2015. The audits were completed and two corrections were required.

At the request of CLA, the Internal Audit Division in conjunction with the Fiscal/Investment Operations Division also contacted thirty-three employers and requested confirmation of TFFR contributions for the fiscal year ending June 30, 2014.

File Maintenance Audit Report - The TFFR File Maintenance Audit was also completed and no exceptions were noted.

Annual Salary Verification Project - The Internal Audit Division assisted the Retirement Division in verifying salaries reported to TFFR for prior fiscal years 2012-13 and 2013-14 by participating employers. Five member accounts required corrections. Going forward, the Internal Audit Division will conduct the audit.

Executive Limitations - The Internal Audit Division also completed the Executive Limitations audit for the period of January 1, 2014, through December 31, 2014. The audit concluded the Executive Director/CIO is in compliance with the Executive Limitations policies A-1 through A-11.

Audit Services also conducted an agency wide survey of employees. The survey provided employees the opportunity to evaluate their immediate supervisor as well as other members of the management staff.

TFFR Cost Effective Benefit Payments - The Internal Audit Division was also asked by the Executive Director/CIO to verify that TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner. The audit is expected to be completed by June 2015.

Professional Development - The Supervisor of the Internal Audit Division will begin to pursue a Certified Internal Auditor designation. The Internal Audit Division also reinstated its membership with The Institute of Internal Auditors in October 2014, and attend the local chapter meetings.

IT WAS MOVED BY MR. SANDAL AND SECONDED BY MS. TERNES AND CARRIED ON A VOICE VOTE TO ACCEPT THE THIRD QUARTER AUDIT REPORT.

AYES: MS. TERNES, MR. SANDAL, MR. GESSNER, MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MS. RIEDMAN

Ms. Miller Bowley updated the Audit Committee on audit services activities for the period of April 1, 2015, through May 15, 2015.

As of May 15, 2015, four employer audits have been completed; seven audits are in progress, and one not in compliance is in progress. Four employer audits are pending. Year to date, a total of twenty employer audits have been completed and two not in compliance reviews have been completed.

GOVERNMENT FINANCE OFFICERS ASSOCIATION -

The Government Finance Officers Association (GFOA) has awarded RIO a Certificate of Achievement for Excellence in Financial Reporting for its Comprehensive Annual Financial Report for the year ended June 30, 2014. This marks the 17th consecutive year that the agency has received the designation.

The Audit Committee requested staff issue a news release regarding the GFOA award.

WORK PLAN:

Ms. Miller Bowley reviewed a proposed work plan for the Internal Audit Division for the period of July 1, 2015 - June 30, 2016.

The Audit Committee also received a breakdown of the budgeted hours for the period of July 1, 2015 - June 30, 2016, for the Internal Audit Division.

The Audit Committee was also provided a risk assessment for participating employers for the period of July 1, 2015 - June 30, 2016.

IT WAS MOVED BY MR. GESSNER AND SECONDED BY MR. SANDAL AND CARRIED ON A VOICE VOTE TO ACCEPT THE WORK PLAN FOR THE PERIOD OF JULY 1, 2015 - JUNE 30, 2016.

AYES: MR. GESSNER, MR. SANDAL, MS. TERNES, AND MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MS. RIEDMAN

MEETING SCHEDULE:

Ms. Miller Bowley distributed the 2015-16 Audit Committee meeting schedule.

IT WAS MOVED BY MS. TERNES AND SECONDED BY MR. GESSNER AND CARRIED ON A VOICE VOTE TO ACCEPT THE MEETING SCHEDULE FOR THE PERIOD OF JULY 1, 2015 - JUNE 30, 2016.

AYES: MR. SANDAL, MS. TERNES, MR. GESSNER, AND MS. DORWART
NAYS: NONE
MOTION CARRIED
ABSENT: MS. RIEDMAN

OTHER:

The next Audit Committee meeting is scheduled for September 25, 2015, at 1:00 p.m. at the State Capitol, Peace Garden Room, Bismarck ND.

ADJOURNMENT:

With no further business to come before the Audit Committee, Ms. Dorwart adjourned the meeting at 4:25 p.m.

Respectfully Submitted:

Rebecca Dorwart

Ms. Rebecca Dorwart, Chair
SIB Audit Committee

Bonnie Heit

Bonnie Heit
Assistant to the Audit Committee

State Investment Board

Annual Evaluation of RIO versus Policy Ends

October 16, 2015

Dave Hunter, Executive Director / CIO

Darren Schulz, Deputy Chief Investment Officer

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

Annual Board Planning Cycle – Biennial Agenda

Annual Board Planning Cycle
Biennial Agenda

Fiscal 2015-16	July 2015	August	September	October	November	December	January 2016	February	March	April	May	June
	Gov. Offsite - Election of Officers, - Appoint Audit Comm. - Plan Annual Agenda - Plan Board Education	**Annual Investment Performance Review** - Establish Investment Work Plan - Add Invest. Education	**Annual Review of Gov. Manual** *(Done)* - New Board Member Orientation Complete	**Annual Evaluation of RIO vs. *Ends* policies** - Annual Board Evaluation	**Investment Director Report on Investment Work Plan**	No Meeting Scheduled		**Investment Director Report on Investment Work Plan** - Exec. Limit. & CIO Review	**Review Budget Guidelines for next Biennium**		**Investment Director Report on Investment Work Plan** - Investment Guidelines	No Meeting Scheduled

Fiscal 2016-17	July 2016	August	September	October	November	December	January 2017	February	March	April	May	June
The SIB Meeting Agenda has not been establised for Fiscal 2016-17	**Gov. Offsite** - Election of Officers, - Appoint Audit Comm. - Plan Annual Agenda - Plan Board Education	**Annual Investment Performance Review** - Establish Investment Work Plan - Add Invest. Education	**Annual Review of Gov. Manual** - New Board Member Orientation Complete	**Annual Evaluation of RIO vs. *Ends* policies** - Annual Board Evaluation	**Investment Director Report on Investment Work Plan**	No Meeting Planned	- Legislative Update	**Investment Director Report on Investment Work Plan** - Exec. Limit. & CIO Review	**Confirm Budget Guidelines** - Legislative Update	- Legislative Update	**Investment Director Report on Investment Work Plan**	No Meeting Planned

1.) **SIB Governance Policy B-7 on Governance Process states that "the Board will follow a biennial agenda which (a) completes a re-exploration of Ends policies annually (April) and (b) continually improves its performance through attention to board education and to enriched input and deliberation."**
2.) **"In the first three months of the new cycle, the Board will develop its agenda for the ensuing year. Scheduled monitoring will be used to evaluate and adjust the annual agenda as needed."**
3.) **"The Board will identify areas of education and input needed to increase the level of wisdom forethought it can give to subsequent choices. A board education plan will be developed during July and August of each year."**

SIB Governance Process B.7: Annual Board Planning Cycle

October: Annual Meeting for Evaluation of RIO vs. Policy "Ends"

Background: **RIO's "Mission" is defined in SIB Governance Policy D-1 on "Ends".**

"The Retirement and Investment Office serves the SIB and exists in order that:

1) SIB clients receive investment returns, consistent with their written investment policies and market variables, in a cost effective investment manner and under the Prudent Investor Rule. (See pages 5 to 11 of this presentation for support documentation.)
2) Potential SIB clients have access to information regarding the investment services provided by the SIB. (SIB clients have access to RIO's public website and investment personnel.)
3) TFFR benefit recipients receive their retirement benefits in a cost effective and timely manner. (See SIB Audit Committee Report for support and documentation including a TFFR Benefit Payment Cost Efficiency Review performed by Audit Services in fiscal 2015.)
4) TFFR members have access to information which will allow them to become knowledgeable about the issues and process of retirement. (TFFR member surveys support this statement.)
5) SIB clients and TFFR benefit recipients receive satisfactory services from the boards and staff of the office." (SIB and TFFR client satisfaction surveys support this statement.)

Summary:

The SIB and RIO are achieving its' stated goals and mission based on SIB and TFFR client survey results and noting that every SIB client with a three-year track is generating positive excess return for the 3- and 5-year periods ended June 30, 2015, while adhering to prescribed risk metrics.

Annual Evaluation: RIO Mission to Achieve Policy Ends

<u>**Overview**</u>: **Pursuant to Section D.3 of the SIB Governance Manual**, SIB clients should receive investment returns consistent with their investment policies and market variables. This "End" is evaluated based on comparison of each client's actual net rate of return, standard deviation and risk adjusted excess return, to the client's policy benchmark over a minimum period of 5 years. The following five pages summarizes actual client level returns (net of fees), for the 1-, 3- and 5-year periods ended June 30, 2015. In order to determine relative performance, actual returns (net of fees) are compared to the policy benchmark for each relevant period. Risk metrics (standard deviation and risk adjusted excess return) are also reported for each SIB client, if applicable, for the 5-year period ended June 30, 2015.

<u>**Pension Trust**</u>: **All Pension Trust clients generated positive Excess Returns for the 1-, 3- and 5-year periods ended June 30, 2015, as summarized on the following two pages.** Over the past year, PERS and TFFR generated a net return of approximately 3.5% which exceeded the policy benchmark by over 1.36%. **Based on $4.44 billion of total assets for PERS and TFFR, this translates into $60 million of incremental income for the State's two largest pension plans in the last year** (e.g. $4.44 billion x 1.36% = $60 million). *The main drivers of excess returns in the overall Pension Trust were World Equity (0.49%), Domestic Fixed Income (0.40%), U.S. Equity (0.34%), International Equity and Fixed Income (0.23%) and Real Estate (0.18%), with Timber (-0.30%) representing the largest detractor during the past year.* **Risk Adjusted Excess Returns** for the five-years ended June 30, 2015 were positive for all current Pension Trust clients with one exception for the Grand Forks Park District Plan (which still generated a 11.1% return over the last along with 0.59% of excess return over the past five-years).

<u>**Insurance Trust**</u>: **All Insurance Trust clients generated positive Excess Returns for the 1-, 3- and 5-year periods ended June 30, 2015, with two 1-year exceptions for PERS Retiree Heath and PERS Group Insurance**. The PERS Retiree Health Insurance Credit Fund ($96 million) and Group Insurance Fund ($41 million) experienced negative excess returns of 0.51% and 0.01%, respectively, in the past year. Both funds had positive excess return for the 3- and 5-year periods ended June 30, 2015. RIO and PERS are reviewing the asset allocation for Group Insurance based on changing liquidity requirements. *The top two drivers of excess returns in the Insurance Trust were Domestic Fixed Income (0.23%) and Real Estate (0.17%), while the top three drivers of excess return in the Legacy Fund were International Equity (0.45%), U.S. Large Cap Equity (0.36%) and Real Estate (0.15%), over the last year.* **Risk Adjusted Excess Returns** were positive for all but one Insurance Trust client for the five-year period ended June 30, 2015.

Actual asset allocations are within Target ranges and guidelines as confirmed by Callan Associates as of June 30, 2015.

Note: Current year returns are unaudited and subject to change.

Pension Trust Return & Risk Summary – June 30, 2015

<u>Returns and Risk</u>: Every single Pension Trust client portfolio generated positive "Excess Return" over the last 1-, 3- and 5-year periods ended June 30, 2015, while adhering to prescribed risk levels (i.e. < 115% of policy) **with no exceptions.**

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
PERS (Main Plan)					
$ 2,401,309,136					
Total Fund Return - Net	**3.53%**	**10.98%**	**10.61%**	7.9%	**0.22%**
Policy Benchmark Return	2.16%	9.73%	10.00%	7.6%	
EXCESS RETURN	**1.38%**	**1.25%**	**0.61%**	**103.8%**	
TEACHERS' FUND FOR RETIREMENT (TFFR)					
$ 2,090,299,471					
Total Fund Return - Net	**3.52%**	**11.06%**	**10.94%**	7.9%	**0.57%**
Policy Benchmark Return	2.16%	9.78%	9.97%	7.6%	
EXCESS RETURN	**1.36%**	**1.28%**	**0.97%**	**103.8%**	
CITY OF BISMARCK EMPLOYEES PENSION					
$ 81,230,926					
Total Fund Return - Net	**3.69%**	**10.12%**	**10.29%**	6.9%	**0.55%**
Policy Benchmark Return	2.31%	8.59%	9.37%	6.6%	
EXCESS RETURN	**1.38%**	**1.53%**	**0.92%**	**103.8%**	

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Pension Trust Return & Risk Summary – June 30, 2015

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
CITY OF BISMARCK POLICE PENSION					
$ 35,631,338					
Total Fund Return - Net	**3.56%**	**10.50%**	**10.61%**	7.4%	**0.54%**
Policy Benchmark Return	2.23%	9.07%	9.81%	7.2%	
EXCESS RETURN	**1.33%**	**1.44%**	**0.80%**	**102.5%**	
JOB SERVICE					
Total Fund Return - Net	**3.30%**	**9.43%**	**9.47%**	6.0%	**0.63%**
Policy Benchmark Return	1.59%	7.38%	8.33%	5.7%	
EXCESS RETURN	**1.71%**	**2.05%**	**1.14%**	**105.7%**	
CITY OF GRAND FORKS PENSION PLAN					
$ 56,504,623					
Total Fund Return - Net	**3.53%**	**11.15%**	**11.04%**	7.98%	**0.40%**
Policy Benchmark Return	2.23%	9.90%	10.36%	7.78%	
EXCESS RETURN	**1.30%**	**1.25%**	**0.68%**	**102.6%**	
GRAND FORKS PARK DISTRICT PENSION PLAN					
$ 6,033,693					
Total Fund Return - Net	**4.22%**	**11.57%**	**11.12%**	8.18%	**-0.15%**
Policy Benchmark Return	2.89%	10.27%	10.54%	7.63%	
EXCESS RETURN	**1.33%**	**1.29%**	**0.59%**	**107.2%**	

Risk Adjusted Excess Returns for the five-years ended June 30, 2015 were positive for all Pension Trust clients with one exception - the Grand Forks Park District Plan (which still generated 0.59% of excess return over the past five-years).

Risk Adjusted Excess Return measures actual portfolio results versus a benchmark adjusted by its risk relative to a benchmark portfolio. This metric is positive if excess returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Insurance Trust Return & Risk Summary – June 30, 2015

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
WORKFORCE SAFETY & INSURANCE (WSI)					
$ 1,770,406,238					
Total Fund Return - Net	**3.27%**	**7.71%**	**8.48%**	**3.9%**	**1.24%**
Policy Benchmark Return	2.65%	5.48%	6.69%	**3.6%**	
EXCESS RETURN	**0.61%**	**2.22%**	**1.78%**		
LEGACY FUND					
$ 3,194,769,809					
Total Fund Return - Net	**3.31%**	**3.69%**	**N/A**	**N/A**	**N/A**
Policy Benchmark Return	2.37%	2.73%	N/A	**N/A**	
EXCESS RETURN	**0.94%**	**0.96%**			
BUDGET STABILIZATION FUND					
$ 595,135,717					
Total Fund Return - Net	**1.86%**	**1.89%**	**2.28%**	**0.7%**	**0.32%**
Policy Benchmark Return	0.75%	0.55%	0.42%	**0.2%**	
EXCESS RETURN	**1.11%**	**1.34%**	**1.86%**		
FIRE & TORNADO FUND					
$ 25,431,804					
Total Fund Return - Net	**3.16%**	**8.76%**	**9.11%**	**5.3%**	**0.46%**
Policy Benchmark Return	2.49%	6.57%	7.15%	**4.4%**	
EXCESS RETURN	**0.67%**	**2.19%**	**1.95%**		

Returns and Risk: Actual investment returns of every Insurance Trust client exceeded their performance benchmarks for the five-years ended June 30, 2015 (if applicable). These "Excess Returns" were achieved while adhering to reasonable risk levels which were generally within 100 bps of policy levels.

Note: Excess Return values for WSI and the Legacy Fund were impacted by asset allocation changes in the last year.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Insurance Trust Return & Risk Summary – June 30, 2015

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
STATE BONDING FUND					
$ 3,339,532					
Total Fund Return - Net	**1.25%**	**2.75%**	**3.71%**	**2.0%**	**1.31%**
Policy Benchmark Return	1.04%	1.04%	1.88%	**1.7%**	
EXCESS RETURN	**0.21%**	**1.71%**	**1.83%**		
INSURANCE REGULATORY TRUST FUND (IRTF)					
$ 658,357					
Total Fund Return - Net	**2.04%**	**6.75%**	**6.90%**	**4.5%**	**0.32%**
Policy Benchmark Return	1.75%	5.33%	5.59%	**3.8%**	
EXCESS RETURN	**0.29%**	**1.42%**	**1.30%**		
PETROLEUM TANK RELEASE COMPENSATION FUND					
$ 7,232,124					
Total Fund Return - Net	**1.13%**	**2.42%**	**3.41%**	**1.8%**	**1.23%**
Policy Benchmark Return	0.94%	0.95%	1.71%	**1.5%**	
EXCESS RETURN	**0.19%**	**1.47%**	**1.69%**		
STATE RISK MANAGEMENT FUND					
$ 6,929,517					
Total Fund Return - Net	**4.08%**	**8.80%**	**9.65%**	**4.8%**	**0.36%**
Policy Benchmark Return	3.46%	6.41%	7.46%	**3.9%**	
EXCESS RETURN	**0.62%**	**2.39%**	**2.19%**		
STATE RISK MANAGEMENT WORKERS COMP FUND					
$ 6,290,439					
Total Fund Return - Net	**4.57%**	**9.88%**	**10.62%**	**5.7%**	**0.39%**
Policy Benchmark Return	3.88%	7.55%	8.53%	**4.8%**	
EXCESS RETURN	**0.69%**	**2.33%**	**2.09%**		
ND ASSOCIATION OF COUNTIES FUND (NDACo)					
$ 3,562,951					
Total Fund Return - Net	**2.77%**	**7.88%**	**8.49%**	**6.1%**	**0.61%**
Policy Benchmark Return	2.16%	5.73%	6.58%	**5.1%**	
EXCESS RETURN	**0.61%**	**2.15%**	**1.91%**		

Risk Adjusted Excess Return measures a portfolio's excess return adjusted by its risk relative to a benchmark portfolio. This metric is positive if returns are due to "smart" investment decisions or negative if driven by excess risk.

Note: Every Insurance Trust client generated positive Risk Adjusted Excess Return over the past 5-years, with one exception for PERS Retiree Health Insurance Credit Fund (on the next page).

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Insurance Trust Return & Risk Summary – June 30, 2015

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
CITY OF BISMARCK DEFERRED SICK LEAVE ACCOUNT					
$ 881,132					
Total Fund Return - Net	**2.95%**	**8.29%**	**8.84%**	**4.8%**	**0.44%**
Policy Benchmark Return	2.31%	5.88%	6.62%	**3.8%**	
EXCESS RETURN	**0.65%**	**2.42%**	**2.22%**		
FARGODOME PERMANENT FUND					
$ 41,752,458					
Total Fund Return - Net	**3.38%**	**10.92%**	**10.89%**	**7.6%**	**0.54%**
Policy Benchmark Return	2.57%	8.94%	9.34%	**6.9%**	
EXCESS RETURN	**0.81%**	**1.98%**	**1.55%**		
CULTURAL ENDOWMENT FUND					
$ 383,865					
Total Fund Return - Net	**5.22%**	**12.46%**	**12.55%**	**8.0%**	**0.59%**
Policy Benchmark Return	4.24%	10.38%	10.69%	**7.2%**	
EXCESS RETURN	**0.98%**	**2.08%**	**1.85%**		
BOARD OF MEDICAL EXAMINERS					
$ 2,168,964					
Total Fund Return - Net	**2.70%**				**N/A**
Policy Benchmark Return	1.84%				
EXCESS RETURN	**0.86%**				
PERS RETIREE HEALTH					
$ 96,499,236					
Total Fund Return - Net	**3.06%**	**11.30%**	**11.47%**	**8.6%**	**-0.22%**
Policy Benchmark Return	3.57%	10.51%	10.85%	**8.0%**	
EXCESS RETURN	**-0.51%**	**0.79%**	**0.62%**		
PERS GROUP INSURANCE					
$ 41,205,242					
Total Fund Return - Net	**0.01%**	**0.10%**	**0.17%**	**0.1%**	**0.04%**
Policy Benchmark Return	0.02%	0.06%	0.08%	**0.0%**	
EXCESS RETURN	**-0.01%**	**0.03%**	**0.09%**		

PERS Retiree Heath and PERS Group Insurance did not generate positive "Excess Return" over the past year, although 3- and 5-year performance was consistent with expectations.

Note: Every Insurance Trust client generated positive Risk Adjusted Excess Return over the past 5-years (if applicable), excluding the PERS Retiree Health Insurance Credit Fund which still posted a net return of 11.47% and excess return of 0.62% over the last 5-years.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Investment Fees and Expenses - Overview

Summary: During the last two-years, investment management fees and expenses as a % of average assets under management declined from **0.65%** (or 65 basis points) in fiscal 2013 to **0.51%** (or 51 basis points) in fiscal 2014 to **0.47%** (or 47 basis points) in fiscal 2015.

All State Investment Board Clients	Average Assets Under Management	Investment Fees and Expenses	Basis Points
Fiscal Year Ended June 30, 2013	**$ 6.9 billion**	**$ 44.7 million**	**0.65%**
Fiscal Year Ended June 30, 2014	**$ 8.6 billion**	**$ 43.6 million**	**0.51%**
Fiscal Year Ended June 30, 2015	**$ 10.1 billion**	**$ 47.8 million**	**0.47%**

- Based on $10 billion of average assets under management, this decline of **14 bps** in fiscal 2014 and **3 bps** in fiscal 2015 translates into approximately $17 million of annual incremental savings.

- RIO expects to realize additional savings in future years including approximately $3 million (one-time adjustment) in reduced timber management incentive fees in late-2015 and over $200,000 (per year) of incremental savings from the Novarca fee review initiative. SIB clients will also benefit from the recent implementation of a conservative securities lending program (estimated at $500,000/year).

A basis point (or "bp") is equal to one one-hundredth of one percent (or 0.01%) such that 100 basis points ("bps") is equivalent to 1%.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Active Management Incremental Returns Exceed Investment Fees

	1 Yr Ended 6/30/2015	3 Yrs Ended 6/30/2015	5 Yrs Ended 6/30/2015	Risk 5 Yrs Ended 6/30/2015	Risk Adj Excess Return 5 Yrs Ended 6/30/2015
PUBLIC EMPLOYEES RETIREMENT SYSTEM (PERS)				**115% Limit**	
Total Fund Return - Net	3.53%	10.98%	10.61%	7.9%	**0.22%**
Policy Benchmark Return	2.16%	9.73%	10.00%	7.6%	
Total Relative Return	**1.38%**	**1.25%**	**0.61%**	**104%**	
TEACHERS' FUND FOR RETIREMENT (TFFR)				**115% Limit**	
Total Fund Return - Net	3.52%	11.06%	10.94%	7.9%	**0.57%**
Policy Benchmark Return	2.16%	9.78%	9.97%	7.6%	
Total Relative Return	**1.36%**	**1.28%**	**0.97%**	**104%**	

Risk: Investment performance has been achieved while adhering to prescribed risk management guidelines which limit portfolio risk (as measured by standard deviation) to 115% of policy, as the actual level of **105%** is within the approved limit.

Five-Year Impact on Returns: Active management has generated over $130 million of incremental income for the Pension Trust for the 5-year period ended June 30, 2015.

One-Year Impact on Returns:

- **Active management has generated $60 million of incremental income for PERS and TFFR in fiscal 2015 ($4.44 billion x 1.37% = $60 million).**
- **This $60 million of incremental income is after $28 million in fees (for TFFR and PERS), so we received $3 back for every $1 paid out for fees last year ($60 million + $28 million = $88 million / $28 million).**
- **PERS generated 1.38% of excess return during the past year. Based on average invested assets of $2.37 billion, this translates into over $32 million of incremental plan income.**
- **TFFR generated 1.36% of excess return in fiscal 2015. Based on $2.06 billion on average assets, this translates into $28 million of additional income.**
- **Overall, SIB clients received a 3:1 return on $48 million of investment management fees in the last fiscal year.**

Note: PERS/TFFR = $60 million Legacy = $24 million WSI = $10 million BSF = $6 million Total = $100 million

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

State Investment Board – Client Assets Under Management

Fund Name	Market Values as of 6/30/15 [1]	Market Values as of 6/30/14 [2]
Pension Trust Fund		
Public Employees Retirement System (PERS)	2,422,579,596	2,332,744,037
Teachers' Fund for Retirement (TFFR)	2,103,807,352	2,061,684,912
Job Service of North Dakota Pension	96,392,560	97,825,769
City of Bismarck Employees Pension	81,745,818	78,804,326
City of Grand Forks Employees Pension	59,232,374	57,896,611
City of Bismarck Police Pension	35,889,943	34,643,204
Grand Forks Park District	6,035,137	5,938,993
City of Fargo Employees Pension	1,461	9,702
Subtotal Pension Trust Fund	**4,805,684,242**	**4,669,547,555**
Insurance Trust Fund		
Legacy Fund		2,215,941,142
Workforce Safety & Insurance (WSI)	1,762,659,137	1,703,987,980
Budget Stabilization Fund	574,011,150	586,199,881
City of Fargo FargoDome Permanent Fund	41,007,046	41,775,992
PERS Group Insurance Account	39,653,686	37,425,567
State Fire and Tornado Fund	23,416,231	29,223,707
Petroleum Tank Release Compensation Fund	7,162,837	7,092,998
State Risk Management Fund	6,849,216	6,948,162
State Risk Management Workers Comp Fund	6,224,541	5,965,322
ND Association of Counties (NDACo) Fund	3,833,499	3,445,373
State Bonding Fund	3,180,024	3,268,991
Insurance Regulatory Trust Fund	2,636,660	1,146,038
ND Board of Medical Examiners	2,174,702	1,889,897
Bismarck Deferred Sick Leave Account	872,178	849,818
Cultural Endowment Fund	383,050	364,979
Subtotal Insurance Trust Fund	**2,474,063,957**	**4,645,525,847**
Legacy Trust Fund		
Legacy Fund	3,328,631,302	
PERS Retiree Insurance Credit Fund	97,671,059	90,360,366
Total Assets Under SIB Management	**10,706,050,560**	**9,405,433,768**

[1] *6/30/15 market values are unaudited and subject to change.*

[2] *6/30/14 market values as stated in the Comprehensive Annual Financial Report.*

- SIB Client Assets Under Management grew by approximately 14% or $1.3 billion in the last year.
- The Pension Trust posted a net return of 3.5%, while the Insurance Trust generated a 2.3% net return in the last year. Investments were responsible for gains of $164 million for the Pension Trust and $58 million for the Insurance Trust excluding Legacy Fund assets.
- Legacy assets increased by 50% (or $1.1 billion) primarily due to tax collections, although net returns were 3.3% for the year ended June 30, 2015.
- SIB client assets exceeded $10.7 billion based on unaudited valuations as of June 30, 2015.

Note: All amounts are deemed to be materially accurate, but are unaudited and subject to change.

Strategic Investment Beliefs

Updated for June 30, 2015 Results

September 17, 2015

Note: “Strategic Investment Beliefs” is provided for informational purposes only as it was previously distributed at our SIB meeting on Sep. 25, 2015.

Dave Hunter, Executive Director / CIO

ND Retirement & Investment Office (RIO)

State Investment Board (SIB)

NDRIO 2015-17 Strategic Investment Plan

Fundamental Investment Beliefs

Asset allocation decisions are the primary driver of investment returns, but the prudent use of active investment management is an important contributor towards ensuring our clients attain their stated investment objectives. SIB clients generated over $200 million of incremental income via the prudent use of active investment management over the past five years including $100 million of excess return for the fiscal year ended June 30, 2015.

Strategic Investment Plan

1. Reaffirm the organizational commitment to our current governance structure including a persistent awareness to the importance of continuing board education.

2. Enhance transparency and understanding of our core goals and beliefs.
    a. Remain steadfast in our commitment to the prudent use of active investment management.
    b. Expand awareness to downside risk management which is essential to achieving our long term investment goals.
    c. Given actual and projected growth of SIB client assets and the heightened public awareness of the Legacy Fund, align our investment platforms to promote greater clarity and efficiency in reporting and implementing client investment policies.

3. Expand RIO's influence and ability to create positive and sustainable change by developing relationships with existing clients, organizations and legislative leaders.
    a. Enhance community outreach to build upon public awareness and confidence.
    b. Develop concise presentations which highlight our overall risk, return and cost control framework including our progress towards attaining our long-term goals.

4. Heighten employee engagement by promoting an open and collaborative work environment while encouraging employee participation in staff meetings, offer more opportunities to impact RIO's change initiatives and improve overall compensation levels.
    a. RIO's ability to continue to deliver strong results is dependent on the combined efforts of our highly valuable team members.

5. Enhance our existing risk management tools and processes by developing a more robust risk management framework utilizing proven risk management solutions with a focus on portfolio construction and downside risk management (or "stress test" scenarios).
    a. A robust risk management framework provides a foundation to understand downside risks and our ability to withstand market corrections in varying stress test scenarios.

6. Evaluate and expand the efficient use of technology in our investment program activities including risk management, compliance monitoring, client satisfaction surveys, website design and communications in order to increase overall efficiency and effectiveness.

NORTH DAKOTA RETIREMENT AND INVESTMENT OFFICE

QUARTERLY MONITORING REPORT

Quarter Ended September 30, 2015

EXECUTIVE LIMITATIONS / STAFF RELATIONS

The Executive Limitation “Staff Relations” deals with the treatment of staff at RIO. The executive director “shall not cause or allow any condition or any communication which is unfair, undignified, or disrespectful.” This Executive Limitation lists six specific limitations that range from personnel policies to exit interviews. All the limitations are intended to protect staff from unfair, undignified, or disrespectful treatment by management.

During the past quarter, there were no exceptions to this Executive Limitation.

The Executive Director conducted individual meetings with every RIO team member during the third calendar quarter of 2015 in connection with annual performance reviews and well deserved salary increases. Office meetings were also held with the full RIO team in order to promote an open and collaborative work environment while enhancing team member communication, awareness and engagement.

We continue to search for a new Data Processing Coordinator noting that this position has been vacant since May 29, 2015. Rich Nagel, as Supervisor of Information Systems, has done a fine job expanding his considerable duties and responsibilities to fulfill our IT needs while we seek a qualified candidate to assist him in the near future.

BUDGETING / FINANCIAL CONDITION

AS OF SEPTEMBER 30, 2015

			EXPENDITURES			
	2015-2017 BUDGET	ADJUSTED APPROPRIATION	BIENNIUM TO DATE ACTUAL	BUDGET AVAILABLE	% BUDGET AVAILABLE	% OF BIENNIUM REMAINING
SALARIES AND BENEFITS	$ 4,340,551.00	$ 4,340,551.00	$ 500,523.80	$ 3,840,027.20	88.47%	87.50%
OPERATING EXPENDITURES	990,874.00	990,874.00	77,684.86	913,189.14	92.16%	87.50%
CONTINGENCY	82,000.00	82,000.00	0.00	82,000.00	100.00%	87.50%
TOTAL	$ 5,413,425.00	$ 5,413,425.00	$ 578,208.66	4,835,216.34	89.32%	87.50%

EXPENDITURE REPORT

QUARTER ENDED SEPTEMBER 30, 2015

	INVESTMENT	RETIREMENT	QUARTERLY TOTALS	FISCAL YEAR TO - DATE	BIENNIUM TO - DATE
CONTINUING APPROPRIATIONS					
INVESTMENT EXPENDITURES (SEE ATTACHED DETAIL)	$ 11,839,016.17	$ 0.00	$ 11,839,016.17	$ 11,839,016.17	$ 11,839,016.17
MEMBER CLAIMS					
1. ANNUITY PAYMENTS	0.00	44,708,763.02	44,708,763.02	44,708,763.02	44,708,763.02
2. REFUND PAYMENTS	0.00	1,647,030.52	1,647,030.52	1,647,030.52	1,647,030.52
TOTAL MEMBER CLAIMS	0.00	46,355,793.54	46,355,793.54	46,355,793.54	46,355,793.54
OTHER CONTINUING APPROPRIATIONS	35,106.60	34,047.50	69,154.10	69,154.10	69,154.10
TOTAL CONTINUING APPROPRIATIONS	11,874,122.77	46,389,841.04	58,263,963.81	58,263,963.81	58,263,963.81
BUDGETED EXPENDITURES					
1. SALARIES & BENEFITS					
SALARIES	190,166.95	182,388.05	372,555.00	372,555.00	372,555.00
OVERTIME/TEMPORARY	0.00	0.00	0.00	0.00	0.00
TERMINATION SALARY & BENEFITS	0.00	0.00	0.00	0.00	0.00
FRINGE BENEFITS	57,041.91	70,926.89	127,968.80	127,968.80	127,968.80
TOTAL SALARY & BENEFITS	247,208.86	253,314.94	500,523.80	500,523.80	500,523.80
2. OPERATING EXPENDITURES					
DATA PROCESSING	2,236.55	11,022.47	13,259.02	13,259.02	13,259.02
TELECOMMUNICATIONS - ISD	553.74	1,072.01	1,625.75	1,625.75	1,625.75
TRAVEL	743.15	4,515.11	5,258.26	5,258.26	5,258.26
IT - SOFTWARE/SUPPLIES	0.00	0.00	0.00	0.00	0.00
POSTAGE SERVICES	722.28	17,098.37	17,820.65	17,820.65	17,820.65
IT - CONTRACTUAL SERVICES	150.45	310.46	460.91	460.91	460.91
BUILDING/LAND RENT & LEASES	7,761.24	12,935.31	20,696.55	20,696.55	20,696.55
DUES & PROF. DEVELOPMENT	4,455.00	4,970.00	9,425.00	9,425.00	9,425.00
OPERATING FEES & SERVICES	689.43	965.21	1,654.64	1,654.64	1,654.64
REPAIR SERVICE	0.00	0.00	0.00	0.00	0.00
PROFESSIONAL SERVICES	495.58	1,884.42	2,380.00	2,380.00	2,380.00
INSURANCE	46.38	80.69	127.07	127.07	127.07
OFFICE SUPPLIES	26.62	101.05	127.67	127.67	127.67
PRINTING	842.04	3,906.48	4,748.52	4,748.52	4,748.52
PROFESSIONAL SUPPLIES & MATERIALS	0.00	0.00	0.00	0.00	0.00
MISCELLANEOUS SUPPLIES	23.66	77.16	100.82	100.82	100.82
IT EQUIPMENT UNDER $5000	0.00	0.00	0.00	0.00	0.00
OFFICE EQUIPMENT & FURNITURE UNDER $5000	0.00	0.00	0.00	0.00	0.00
TOTAL OPERATING EXPENDITURES	18,746.12	58,938.74	77,684.86	77,684.86	77,684.86
3. CONTINGENCY	0.00	0.00	0.00	0.00	0.00
TOTAL BUDGETED EXPENDITURES	265,954.98	312,253.68	578,208.66	578,208.66	578,208.66
TOTAL EXPENDITURES	$ 12,104,971.15	$ 46,668,047.22	$ 58,842,172.47	$ 58,842,172.47	$ 58,842,172.47

INVESTMENT EXPENDITURE DETAIL

FEES PAID DURING THE QUARTER ENDED SEPTEMBER 30, 2015

FOR QUARTER ENDED 3/31/15		
PENSION REAL ESTATE		
JP Morgan (Special & Strategic)		384,916.50
PENSION INVESTMENT GRADE FIXED INCOME POOL		
JP Morgan		61,989.32
INSURANCE SHORT TERM FIXED		
Babson	103,331.09	
JP Morgan	70,730.61	
TOTAL INSURANCE SHORT TERM FIXED		174,061.70
LEGACY FUND SHORT TERM FIXED		
Babson	5,126.69	
JP Morgan	3,232.29	
TOTAL LEGACY FUND SHORT TERM FIXED		8,358.98
TOTAL FOR QUARTER ENDED 3/31/15		**629,326.50**
FOR QUARTER ENDED 6/30/15		
PENSION DEVELOPED INTERNATIONAL EQUITY POOL		
Capital Guardian	142,984.04	
Northern Trust	20,903.33	
Wellington	187,005.49	
TOTAL PENSION INTERNATIONAL EQUITY		350,892.86
PENSION GLOBAL EQUITY POOL		
Epoch	530,931.32	
LSV	107,094.00	
LSV - Performance Fee	3,224,432.83	
TOTAL PENSION GLOBAL EQUITY		3,862,458.15
PENSION BELOW INVESTMENT GRADE FIXED		
Loomis Sayles		284,988.67
PENSION INVESTMENT GRADE FIXED INCOME POOL		
JP Morgan	64,551.27	
PIMCO	122,714.16	
State Street	7,732.78	
TOTAL PENSION INVESTMENT GRADE FIXED INCOME		194,998.21
PENSION INFRASTRUCTURE POOL		
JP Morgan		314,282.82
PENSION LARGE CAP EQUITY POOL		
Clifton S&P 500 (Performance)	3,940.00	
LA Capital	199,281.53	
TOTAL PENSION LARGE CAP EQUITY		203,221.53
PENSION SMALL CAP EQUITY POOL		
Clifton (Performance Fee)		452,665.00
PENSION REAL ESTATE		
JP Morgan (Special & Strategic)	392,739.91	
Invesco	158,999.94	
TOTAL PENSION REAL ESTATE		551,739.85
PENSION INTERNATIONAL FIXED INCOME		
Brandywine	125,243.49	
UBS	81,972.34	
TOTAL PENSION INTERNATIONAL FIXED INCOME		207,215.83

INVESTMENT EXPENDITURE DETAIL

FEES PAID DURING THE QUARTER ENDED SEPTEMBER 30, 2015

INSURANCE FIXED INCOME POOL		
Prudential	61,066.16	
State Street	11,475.71	
Wells	138,223.21	
Western Asset	107,036.52	
TOTAL INSURANCE FIXED INCOME		317,801.60
INSURANCE LARGE CAP EQUITY POOL		
Clifton (Performance Fee)	30,653.00	
LA Capital	40,782.93	
LSV	50,082.50	
TOTAL INSURANCE LARGE CAP		121,518.43
INSURANCE SMALL CAP EQUITY POOL		
Clifton (Performance Fee)	273,080.00	
Research Affiliates	17,665.36	
TOTAL INSURANCE SMALL CAP		290,745.36
INSURANCE INT'L EQUITY		
Capital Guardian	79,955.40	
LSV	63,252.00	
TOTAL INSURANCE INT'L EQUITY		143,207.40
INSURANCE DIVERSIFIED REAL ASSETS		
JP Morgan	162,693.19	
Western Asset	36,672.36	
TOTAL INSURANCE DIVERSIFIED REAL ASSETS		199,365.55
INSURANCE REAL ESTATE		
Invesco	48,738.97	
JP Morgan	163,767.89	
TOTAL INSURANCE REAL ESTATE		212,506.86
INSURANCE SHORT TERM FIXED		
Babson	104,097.65	
JP Morgan	70,509.96	
TOTAL INSURANCE SHORT TERM FIXED		174,607.61
LEGACY FIXED INCOME		
Prudential	87,649.96	
State Street	13,460.53	
Wells	161,535.46	
Western Asset	123,015.99	
TOTAL INSURANCE FIXED INCOME		385,661.94
LEGACY LARGE CAP EQUITY		
Clifton (Performance Fee)	94,882.00	
LA Capital	200,281.32	
LSV	161,620.50	
TOTAL INSURANCE LARGE CAP		456,783.82
LEGACY SMALL CAP EQUITY		
Clifton (Performance Fee)	823,405.00	
Research Affiliates	66,661.07	
TOTAL INSURANCE SMALL CAP		890,066.07
LEGACY INT'L EQUITY		
Capital Guardian	253,874.24	
LSV	256,633.00	
TOTAL INSURANCE INT'L EQUITY		510,507.24

INVESTMENT EXPENDITURE DETAIL

FEES PAID DURING THE QUARTER ENDED SEPTEMBER 30, 2015

LEGACY DIVERSIFIED REAL ASSETS		
JP Morgan	162,128.53	
Western Asset	84,845.16	
TOTAL INSURANCE DIVERSIFIED REAL ASSETS		246,973.69
LEGACY REAL ESTATE		
Invesco	74,679.28	
JP Morgan	229,165.37	
TOTAL INSURANCE REAL ESTATE		303,844.65
PERS RETIREE HEALTH INSURANCE CREDIT FUND		
SEI		67,642.47
CUSTODIAN		
Northern Trust		286,030.46
CONSULTANT		
Adams Street	36,072.00	
Callan	101,260.68	
Novarca	15,688.00	
TOTAL CONSULTANT		153,020.68
TOTAL FOR QUARTER ENDED 6/30/15		**11,182,746.75**
FOR QUARTER ENDED 9/30/15		
PENSION PRIVATE EQUITY		
Adams Street Partners		8,618.00
PENSION CASH		
Northern Trust		18,324.92
TOTAL FOR QUARTER ENDED 9/30/15		**26,942.92**
TOTAL FEES PAID DURING QUARTER ENDED 9/30/2015		**11,839,016.17**

Quarterly Report on Ends
Q1:FY16

Investment Program

Continuing due diligence conducted on the following organizations:

Adams Street	DFA	SEI
Babson	Grosvenor	State Street
Blackrock	Invest America	TIR
Brandywine	JPMorgan	UBS
Callan	Loomis Sayles	Vanguard
Calvert	Manulife	Western Asset
Capital Group	ParametricClifton	Wellington
Corsair	PIMCO	Wells
Declaration	Prudential	

Initial due diligence conducted on the following organizations:

AllianceBernstein	Millenium Global
Apollo	Morgan Stanley
AQR	Neuberger Berman
Calamos	RBC
Kepos	Silver Creek
Goldman Sachs	TCW
Janus	Western National
LGT	Westwood Global

At the July SIB meeting, the Board approved an investment policy statement for the Tobacco Prevention & Control Trust Fund, which included explicit language acknowledging that the tobacco-free restriction may impair the Fund's ability to maximize investment returns as compared to investments that do not restrict the investable universe by imposing a tobacco-free constraint.

At the August SIB meeting, the Board approved a de-risking investment solution managed by SEI Investments on behalf of the Job Service Pension Plan. SEI will be developing and managing a comprehensive de-risking glide path solution utilizing sub-advised SEI strategies. The transfer of Job Service assets is expected to be completed at the end of October following a legal contract review.

The Board approved the retention of State Street Global Advisors to manage tobacco-free passive fixed income and equity mandates on behalf of the Tobacco Prevention and Control Trust Fund at the August SIB meeting. Fund assets were transferred to SSgA at the end of September following a legal contract review.

Staff received completed due diligence questionnaires from parties of interest as part of discussions with the North Dakota Bankers Associations and representative money managers. Bell Wealth Management and Alerus Financial were two institutions that offered institutional-grade platforms for consideration in future search activity should there be a mutual alignment of the investment needs of SIB clients.

At the August SIB meeting, the Board approved a revised investment policy statement on behalf of the Budget Stabilization Fund, which included enhanced documentation standards and risk control factors for the Bank of North Dakota Match Loan CD Program.

Staff provided the Board an update on continuing progress on the reduction of investment program fees and expenses at the September SIB meeting. In fiscal years 2014 and 2015, approximately $17 million in annual incremental savings have been realized across all SIB client assets under management. Novarca is continuing its review of select public equity mandates and all private equity partnerships. As of September 18th, Novarca has identified $220,000 in annual savings through the negotiation of new fee schedules with LSV.

At the September SIB meeting, the Board approved a new commitment of up to $30 million with Adams Street Partners' ASP 2015 Global Fund on behalf of the Pension Trust. Additionally, the Board approved the retention of Callan Associates to conduct a search for a private equity manager to complement existing and follow-on partnerships with ASP given the current underweight relative to policy for the asset class.

Staff finalized revised terms for a new operating agreement ending September 30, 2022 on the Timberland Investment Resources Springbank LLC investment.

Staff attended meetings with the following entities: TFFR Board and NDPERS Investment Subcommittee.

Staff is continuing its review of third-party total plan risk management software vendors with the goal of implementing an enhanced risk management system utilizing holdings-based analysis across all investment programs overseen by the SIB.

Staff continues to conduct preliminary due diligence on possible managers/products for future consideration.

Staff continues to monitor each client's asset allocation monthly and makes rebalancing decisions based on rebalancing policy and cash flow requirements.

Quarterly Monitoring Report on TFFR Ends
Quarter Ended September 30, 2015

Retirement Program

This report highlights exceptions to normal operating conditions.

- TFFR Board selected Callan Associates to perform 5-year Asset Liability Study.
- TFFR staff began testing and incorporating new mortality tables and investment return assumption from Actuarial Experience Study into pension administration software to update benefit option and service purchase calculations.
- TFFR legal counsel advised that in order to implement the U.S. Supreme Court decision in *Obergefell v. Hodges* which requires every state to license same-sex marriages and recognize same-sex marriages licensed in other states, the TFFR plan must recognize and accord same-sex spouses the same rights and benefits as opposite-sex spouses under the plan.
- Segal conducted IRS compliance review in preparation for submitting TFFR plan for IRS determination letter later this year.
- TFFR has started the process to update TFFR Administrative Rules to define certain terms for administrative clarification, update language to maintain compliance with federal IRC requirements (HEART Act), and update recently revised actuarial assumption changes.
- TFFR staff worked with the Education Standards and Practice Board (ESPB), Department of Public Instruction (DPI), and the Governor's Office to clarify the treatment of "community experts" for TFFR participation purposes. Non-licensed "community experts" approved by ESPB to fill certain vacant teaching positions for the 2015-16 school year will not be eligible to participate in TFFR.

NDSIB Watch List

PIMCO data as of 09/30/2015

PIMCO MBS (Pen.)	*$181,424,321*		
	Returns	Index[2]	Excess
1 Year	2.15	2.28	(0.13)
2 Year	3.01	3.46	(0.45)
Inception*	2.17	2.33	(0.16)
*Funded 3/31/2012			

PIMCO Unconstrained (Pen.)	*$91,931,887*		
	Returns	Index[3]	Excess
1 Year	0.93	0.25	0.67
2 Year	1.16	0.25	0.91
Inception*	1.34	0.29	1.05
*Funded 3/12/2012			

Callan data as of 09/30/2015

Callan Small Cap Equity	*$107,803,433*		
	Returns	Index[4]	Excess
1 Year	3.99	6.49	(2.50)
3 Year	17.94	17.81	0.13
5 Year	17.12	17.08	0.04
Inception*	6.20	6.06	0.14
*Funded 05/03/2006			

UBS data as of 09/30/2015

UBS Global Bond	*$99,749,885*		
	Returns	Index[5]	Excess
1 Year	(13.46)	(13.19)	(0.27)
3 Year	(3.22)	(2.83)	(0.39)
5 Year	0.89	1.08	(0.19)
Inception*	6.07	5.78	0.29
*Funded 07/01/1989			

Capital Guardian data as of 09/30/2015

Cap Guardian Intl Equity (PEN)	*$119,663,413*		
	Returns	Index[1]	Excess
1 Year	(1.78)	(4.22)	2.45
3 Year	13.07	11.97	1.09
5 Year	9.84	9.54	0.30
Inception*	7.65	4.97	2.68
*Funded 03/01/1992			

Cap Guardian Intl Equity (INS)	*$55,687,789*		
	Returns	Index[1]	Excess
1 Year	(1.35)	(4.22)	2.87
3 Year	12.88	11.97	0.90
5 Year	9.57	9.54	0.03
Inception*	5.31	4.29	1.02
*Funded 04/01/1997			

Cap Guardian Intl Equity (LEG)	*$246,439,725*		
	Returns	Index[1]	Excess
1 Year			
3 Year			
5 Year			
Inception*			
*Funded 02/02/2015			

Note: Performance data for Legacy account is inlcuded in INS data due to the recent transition

[1] MSCI EAFE
[2] Barclays Mortgage Index
[3] Libor 3-Month
[4] Russell 2000
[5] Barclays Global Agg. Ex US

Note: Returns for PIMCO and CALLAN are net of fees, UBS & CAPITAL GUARDIAN use gross due to data availability

The AMBACHTSHEER Letter
Sustainable Pension Design • Effective Pension Management

September 2015

INVESTING FOR THE LONG-TERM:

HOW SHOULD WE MEASURE 'PERFORMANCE'?

"What gets measured gets managed."

Peter Drucker

Long-Term Investing: Measuring Results

One of the important outcomes of the *Focusing Capital on the Long-Term (FCLT)* initiative was its "Long-Term Portfolio Guide" published earlier this year. A motivation for the Guide was the discovery of a serious aspiration/implementation gap in a survey on investor attitudes and practices related to long-term investing.[i] This past April's *Letter* "Investing for the Long-Term: From Saying to Doing" summarized the recommendations in the 54-page *FCLT* Guide. A number of these recommendations revolved around investment results benchmarking and evaluation.

Investment results benchmarking and evaluation activities trigger an important governance question. Paraphrasing Peter Drucker: 'if we are going to manage a long-term investment program, how should we measure its performance?' A simplistic response would be: 'over long-horizon evaluation periods'. It is simplistic because boards cannot wait 10-20 years to see how their organization's long-term investment program turned out. Boards should insist on sensible progress markers along journeys lasting 10-20 years. What might such markers look like? Our first exploration of this question was set out in the July 2013 *Letter*. We revisit the question here.

Sensible Progress Markers

First, what is long-term investing? John Maynard Keynes described it as participating in a process that converts savings into wealth-producing capital, which in turn returns investment income back to investors. It is not trading securities in investment markets with the goal of producing capital gains at the expense of other traders (Keynes called this 'beauty contest' investing). Yet, it is the success or failure of these 'beauty contest' trading strategies that most current investment performance measurement systems are best designed to measure. And to invoke Drucker once again, what gets measured gets managed. If we measure the wrong things, we will manage the wrong things.

So how do we steer performance measurement away from its current short-term trading focus, and towards measuring success (or failure) to create value for beneficiaries in longer term timeframes? The answer must lie in focusing less on short term total return outcomes driven by capital value changes, and more on the size, quality, and growth of the longer term income streams the investments should be producing, and on the governance and managerial effectiveness of the investee organizations expected to produce these income streams. With this reorientation towards long term investment income generation, it becomes reasonable for boards to ask for regular progress reports on the performance of the income streams the invested capital is producing, and on the health and effectiveness of the investee organizations generating these income streams.

Assessing Investee Organization Health and Effectiveness

How can we monitor the health and effectiveness of the investee organizations generating investment income streams? The July 2014 *Letter* provided part of the answer by describing the international *Integrated Reporting* (<*IR*>) initiative. The initiative is leading to a fundamental redefinition of 'material' corporate information. The four key <*IR*> concepts are:

1. From Mission/Vision to Business Model: develop a clear narrative that links the purpose of the organization to a description of how it converts inputs to outcomes. This conversion process involves assessing opportunities and risks, strategy and resource allocation decisions, and results evaluation, all overseen by a robust governance process.
2. The Six Capitals: think carefully about the relevance and importance for organizational success of six forms of capital: financial, manufactured, intellectual, human, social, and natural. All are stores of value, and all are potentially important inputs into the organization's business model, and hence potential factors in assessing the organization's long-term sustainability and success.
3. Outcomes: are the internal and external consequences (positive and negative) resulting from the organization's business activities and outputs. Internal examples could relate to employee morale or organizational reputation. External examples could relate to customer satisfaction or environmental effects.
4. Value Creation: goes beyond assessing the organization's financial performance (e.g., as might be measured by changes in the present value of future cash-flows). A broader context includes an understanding that future cash-flows and other conceptions of value are dependent on broader definitions of 'capital' (e.g., competitive advantage), on the optimal use of Free Cash-Flow (FCF), and an expanded range of time horizons.

The July 2014 *Letter* noted that this reporting framework is not only relevant for investee corporations, but also for pension organizations themselves.

An article by Roland Burgman and Mark Van Clieaf offers a more finance-oriented perspective on assessing the health and effectiveness of investee corporations.[ii] They emphasize the importance of metrics such as Economic Profit (EP) and Return on Invested Capital (ROIC). EP captures corporate profitability net of a capital charge. ROIC minus the weighted cost of capital captures a corporation's excess return on corporate capital employed. They note that management's job is to organize to maximize longer term EP growth and excess ROIC on a sustainable basis through continuous innovation, using all forms of capital available to the organization. They also note that many executive compensation schemes in the corporate sector today are not driven by these financial and non-financial indicators of longer term value creation, and that FCF can be easily misspent.

Michael Mauboussin and Alfred Rappaport cover similar ground by asserting that corporate value-creation is about maximizing the present value of future risk-adjusted long-term cash-flows.[iii] As a practical matter, this means investors must monitor three things:

1. The Governing Objective: is the corporation's governing objective clearly expressed?
2. Supporting Policies: is the corporation actually doing the things needed to achieve its governing objective? (e.g., in product quality, innovation, customer satisfaction, employee satisfaction, safety).
3. Disclosure: is the corporation using the <*IR*> framework to disclose what and how it is doing?

The point here is that engaged long-term investors know a lot about the organizations they invest in. They have clear expectations at the time the original investment is made. They have effective tools to assess actual unfolding investee organization behavior and results versus expectations, and they will engage the boards and managements of these corporations when deemed necessary. An article by Alex van den Velden and Otto van Buul demonstrates how this long-term investing approach can work in practice at the portfolio level.[iv] Key metrics they monitor over time include:

- Geographic distribution of portfolio company revenues/cash-flows
- Industrial sector distribution of portfolio company revenues / cash-flows
- Portfolio company revenues / cash-flows growth last five years
- Portfolio company carbon intensity (e.g., CO2 Emissions/revenues)

It is periodic information on these long-term investment and assessment processes that the boards of the investment organizations should be seeking as part of fulfilling their fiduciary duty.

Investment Income Production as 'Performance'

The production of a predictable, sustainable investment income stream back to the investment organization is a critical success element in long-term investment programs. Whether this is in fact happening (or not) should be a critical focus for performance measurement in these programs. Why? Because capital allocated to these programs should be patient capital, with only the sustainable investment income it generates available for pension or endowment payments, or for re-investment.

Shorter term capital value blips and dips are of no consequence here...unless they reflect an impairment of the investee organization's future ability to generate and pay out investment income. As the investment horizon stretches out into the longer term, healthy, rising income streams in the forms of revenues, earnings, and dividends will eventually produce rising capital values as well.

So what does a protocol that monitors investment income production look like? To the best of my knowledge, this question was first addressed by Robert (Tad) Jeffrey in a 1977 Journal of Portfolio Management article titled "Internal Portfolio Growth: the Better Measure", with the subtitle explanation "Unless you're in a liquidating mode, what really matters is the growth in earnings and dividends, not the market value, of your portfolio". Jeffrey observed that investment income behavior is much more predictable than changes in capital values, and that presumably so he thought, investment managers monitor predicted investment income experience vs. actual experience closely over time. To his surprise, he found that "no managers who we contacted were able to answer this question satisfactorily".

A Harvard MBA by training, and the CEO of a manufacturing company by experience, Jeffrey designed a simple investment income monitoring protocol himself. It is set out in Table 1.

Table 1: A Simple Investment Income Monitoring Protocol

Dividend Income	Is actual dividend income in line with expectations? If not, why not? Answering this question requires tracking dividend payout policies, actual dividend changes, currency impacts, asset mix changes, etc. Looking ahead, what should we expect from here?
Interest Income	Is actual interest income in line with expectations? If not, why not? Answering this question requires tracking the shape of the yield curve, bond portfolio duration, use of leverage, currency impacts, asset mix changes, etc. Looking ahead, what should we expect from here?
Other Income Sources	(e.g., security lending, option writing): Is actual income from other sources in line with expectations? If not, why not? Looking ahead, what should we expect from here?
Total Investment Income	Is actual total investment income in line with expectations? If not, deviations will be explainable based on analysis of the investment income components making up the total. Looking ahead, what should we expect from here? Are we on track to meeting our longer term goals? If not, what are our decision options?
Distributions	How are we spending our investment income? Is it in line with our goals (e.g., payout vs. re-investment)? What are the communication implications to beneficiaries? Looking ahead, are our projected distributions in line with our distribution goals? If not, what are our decision options?
Cash-Flow	Are we cash-flow positive, neutral, or negative? Is this in line with expectations? If not, why not? Looking ahead, what should we expect from here? If projections show we will go cash-flow negative, what are the action implications?

As he had converted the manufacturing company into a family investment company by selling its business assets for cash, he had strong personal motivation to do so. Today, 40 years later, Jeffrey's protocol (improved and updated over time) continues to provide the board of directors of the family investment company with valuable investment income 'performance' information critical to determining a sustainable, inter-generationally fair, dividend payout policy of the company.

With the investment income monitoring protocol set out in Table 1 as a guide, the company has been able to achieve its primary long horizon objective over the course of the last 40 years: to pay out a growing stream of inflation-adjusted dividends to family beneficiaries over time, while also maintaining the capability of the portfolio to continue to do so into the indefinite future. Since inception, both corporate assets and annual dividends paid out to beneficiaries have doubled in real terms. This remarkable result was due in no small part to how the company defined, and measured 'success' over that 40-year period.[v]

Total Fund Return Still Matters

The primary message of this *Letter* is that long-term investors should care about, and truly understand the investment income performance of the funds they manage. This does not mean that they should ignore total fund return performance (i.e., returns that include capital value changes). Instead, the point is that long-term investors understand the importance of putting the income-generation horse before the capital values cart. They understand that ultimately, it is the quantity and quality of the investment income stream that drives capital values, and not the other way around. This understanding gives long-term investors a fundamental advantage over short horizon 'beauty contest' investors. Even if long-term investors are only approximately right about the quantity, quality, and price of investment income streams they are buying and holding, they should be able to generate higher risk-adjusted net total returns over long periods of time (i.e. 10 years or longer) than most short-horizon investors playing trading games. A growing body of actual results is confirming this hypothesis.[vi]

The *Letter* ends where it started. Long-term investing is moving from saying to doing. Thus we must think carefully about the performance measurement implications of this shift. This means separating the role of the income-generating horse from that of the capital cart. We must measure what we want to manage.

Endnotes

i. Ambachtsheer and McLaughlin (2015), "Do Pension Funds Invest for the Long-Term?", KPA Advisory Services.
ii. Burgman and Van Clieaf (2012), "Total Shareholder Returns and Management Performance", Rotman International Journal of Pension Management, Fall.
iii. Mauboussin and Rappaport (2015), "Transparent Corporate Objectives", Journal of Applied Corporate Finance.
iv. Van der Velden and van Buul (2012), "Really Investing for the Long Term: a Case Study", Rotman International Journal of Pension Management, Spring.
v. I have been a member of the Jeffrey Company's Board of Directors for 23 years.
vi. The Jeffrey Company itself stands out as a singular example. See also Ambachtsheer (2014), "The Case for Long-Termism", Rotman International Journal of Pension Management, Fall, and Eccles, Ioannis, and Serafeim (2012), "The Impact of Corporate Sustainability on Organizational Processes and Performance", NBER Working Paper.

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