Arizona State Retirement System

Investment Committee

Investment Program Updates

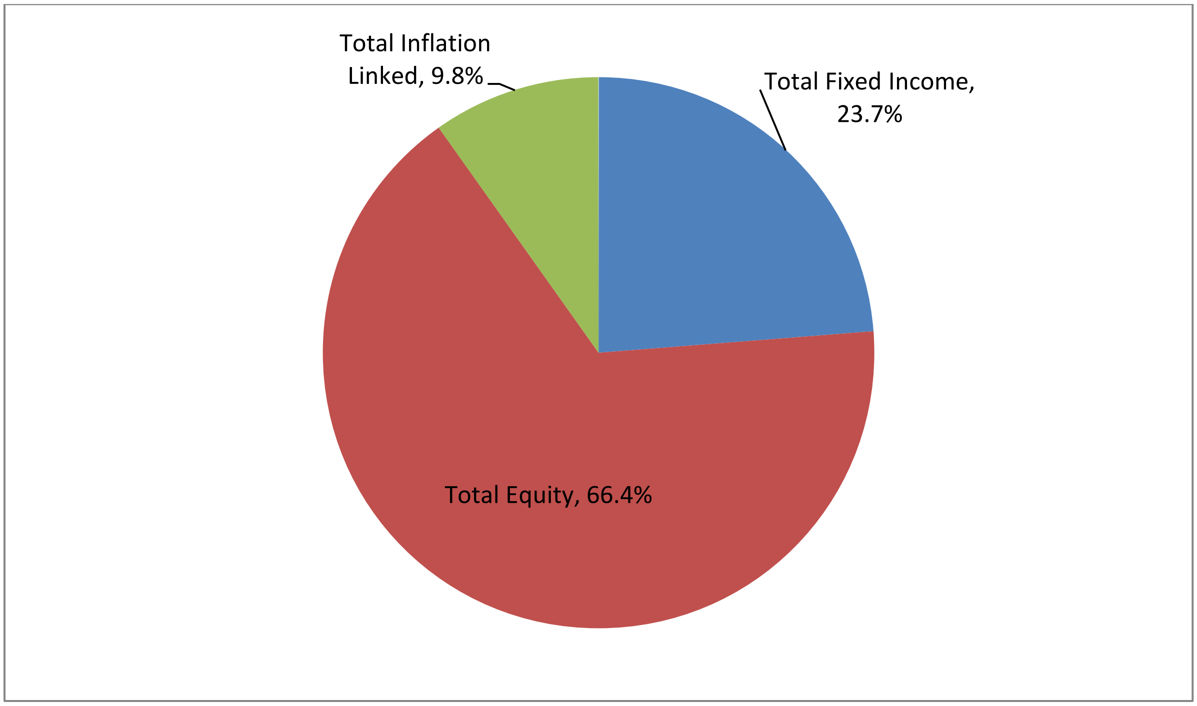
April 21, 2014

Presented by:
Gary R. Dokes, Chief Investment Officer, ASRS
David Underwood, Assistant Chief Investment Officer, ASRS
Karl Polen, Head of Private Markets Investing, ASRS
Al Alaimo, Fixed Income Portfolio Manager, ASRS
Eric Glass, Portfolio Manager of Private Markets, ASRS

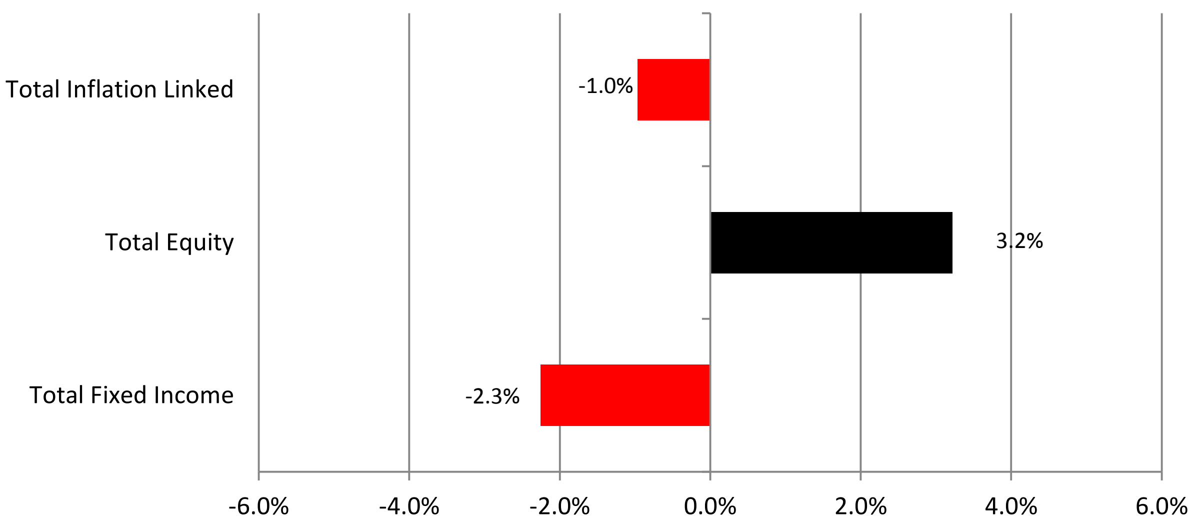
CONTENTS

TOTAL FUND POSITIONING – 3/31/14

ACTUAL PORTFOLIO



ACTUAL PORTFOLIO (ASSUMED GTAA ALLOCATION VS. ADJUSTED SAA POLICY *)



**Real Estate and Private Equity actual weight is equal to policy weight during the implementation of the asset class.*

**Over/Underweights include both GTAA positions as well as IMD tactical considerations.*

Note: Opportunistic & Private Debt, Opportunistic Private Equity, Farmland & Timber, Real Estate and Private Equity market values are reported on a quarter-lag and adjusted to include the current quarter's cash flows. Within the Assumed GTAA Allocation vs. Adjusted SAA Policy chart, Real Estate was prorated to domestic equity, international equity and fixed income. Private Equity was prorated to domestic equity.

Pension (Plan, System, HBS Assets)		ASRS Market Value Report				As of:		Monday, March 31, 2014	
Account Manager	Account Manager Style	Fixed Income		Equity		Inflation Linked		Total	Pct of Fund
		Active	Enh/Passive	Active	Enh/Passive	Active	Enh/Passive		
State Street B&T: Boston	Master Cash & Pension Acct.		668,231,933					668,231,933	2.00%
	Cash Total							$668,231,933	2.00%
PIMCO: Newport Beach	Active (Core)	301,089,052						301,089,052	0.90%
GTAA Managers (2)	Active GTAA	1,155,569,518						1,155,569,518	3.47%
Blackrock: San Francisco	Passive (Intermediate Gov Credit)		23,569,869					23,569,869	0.07%
ASRS: Phoenix	Enhanced Passive F2		1,940,911,283					1,940,911,283	5.82%
	Core Fixed Income Total							$3,421,139,723	10.26%
								Core Fixed Income Policy	13.00%
Columbia: Minneapolis	Active	731,783,304						731,783,304	2.20%
Shenkman: Connecticut	Active	172,116,768						172,116,768	0.52%
JP Morgan: Indianapolis	Active	324,226,603						324,226,603	0.97%
	High Yield Fixed Income Total							$1,228,126,675	3.68%
								High Yield Fixed Income Policy	5.00%
	US Fixed Income Total							$4,649,266,398	13.95%
								US Fixed Income Policy Range: 8% - 28%	18.00%
PIMCO (local): Newport Beach	Active	336,660,915						336,660,915	1.01%
Ashmore (blended): London	Active	540,667,626						540,667,626	1.62%
	EM Debt Total							$877,328,541	2.63%
								EM Debt Policy	4.00%
	Opportunistic Debt							$832,880,904	2.50%
								Opportunistic Debt Policy Range: 0% - 10%	0.00%
	Private Debt Total							$886,494,747	2.66%
								Private Debt Policy	3.00%
	Fixed Income Total							$7,914,202,522	23.74%
								Total Fixed Income Policy Range: 15% - 35%	25.00%
Intech: FL	Active (Growth)			514,705,913				514,705,913	1.54%
LSV: Chicago	Active (Value)			784,902,399				784,902,399	2.35%
GTAA Managers (2)	Active GTAA			1,087,871,238				1,087,871,238	3.26%
ASRS: Phoenix	Passive E2				4,763,885,237			4,763,885,237	14.29%
ASRS: Phoenix	Enhanced Passive E7				760,827,680			760,827,680	2.28%
ASRS: Phoenix	Enhanced Passive E8				496,000,067			496,000,067	1.49%
ASRS: Phoenix	Risk Factor Portfolio				487,044,775			487,044,775	1.46%
	Large Cap Equity Total							$8,896,836,937	26.69%
								Large Cap Policy	23.00%
Wellington: Boston	Active (Core)			431,484,848				431,484,848	1.29%
CRM: New York	Active (Value)			98,061,234				98,061,234	0.29%
ASRS: Phoenix	Passive E3 (Growth)				514,429,035			514,429,035	1.54%
ASRS: Phoenix	Passive E4 (Value)				518,994,907			518,994,907	1.56%
	Mid Cap Equity Total							$1,562,970,026	4.69%
								Mid Cap Policy	5.00%
TimesSquare: New York	Active SMID (Growth)			511,565,053				511,565,053	1.53%
DFA: Santa Monica	Active (Value)			451,558,755				451,558,755	1.35%
Champlain:Vermont	Active (Core)			114,835,849				114,835,849	0.34%
ASRS: Phoenix	Passive E6				496,209,001			496,209,001	1.49%
	Small Cap Equity Total							$1,574,168,658	4.72%
								Small Cap Policy	5.00%
	U.S. Equity Total							$12,033,975,620	36.10%
								US Equity Policy Range: 26% - 38%	33.00%
Brandes: San Diego	Active (Value)			529,903,150				529,903,150	1.59%
Aberdeen: Edinburgh	Active (Value)			498,708,468				498,708,468	1.50%
Hansberger: Ft. Lauderdale	Active (Growth)			337,330,198				337,330,198	1.01%
Walter Scott: Edinburgh	Active (Growth)			231,371,422				231,371,422	0.69%
GTAA Managers (2)	Active GTAA			981,483,893				981,483,893	2.94%
Blackrock: San Francisco	Passive (EAFE)				2,328,667,262			2,328,667,262	6.99%
	Large Cap Developed Non-US Equity Total							$4,907,488,594	14.72%
								Large Cap Developed Policy	14.00%
AQR: Greenwich	Active (EAFE SC)			177,876,683				177,876,683	0.53%
DFA: Santa Monica	Active (EAFE SC)			225,541,108				225,541,108	0.68%
Franklin Templeton: San Mateo	Active (EAFE SC)			419,961,362				419,961,362	1.26%
Blackrock: San Francisco	Passive (EAFE SC)				463,059,640			463,059,640	1.39%
	Small Cap Developed Non-US Equity Total							$1,286,446,446	3.86%
								Small Cap Developed Policy	3.00%
William Blair: Chicago	Active (EM)			436,362,182				436,362,182	1.31%
Eaton Vance: Boston	Active (EM)			483,504,382				483,504,382	1.45%
LSV: Chicago	Active (EM)			286,004,531				286,004,531	0.86%
Blackrock: San Francisco	Passive (EM)				648,915,959			648,915,959	1.95%
	Emerging Markets Equity Total							$1,854,787,054	5.56%
								Emerging Markets Policy	6.00%
	Non-US Equity Total							$8,048,722,094	24.15%
								Non-US Equity Policy Range: 16% - 28%	23.00%
	Private Equity Total							$1,871,081,318	5.61%
								Private Equity Policy Range: 5% - 9%	7.00%
	Opportunistic Equity							$190,723,503	0.57%
								Opportunistic Equity Policy Range: 0% - 3%	0.00%
	Equity Total							$22,144,502,536	66.43%
								Total Equity Policy Range: 53% - 73%	63.00%
Gresham: New York						845,513,408		845,513,408	2.54%
GTAA Managers (2)	Active GTAA					323,447,378		323,447,378	0.97%
	Commodities Total							$1,168,960,786	3.51%
								Commodities Policy Range: 1% - 7%	4.00%
GTAA Manager (1)	Active GTAA					44,113,440		44,113,440	0.13%
	Real Estate Total							$2,012,879,240	6.04%
								Real Estate Policy Range: 6% - 10%	8.00%
	Infrastructure Total							$0	0.00%
								Infrastructure Policy Range: 0% - 3%	0.00%
	Farmland & Timber Total					92,404,140		$92,404,140	0.28%
								Farmland & Timber Policy Range: 0% - 3%	0.00%
	Opportunistic Inflation Linked Total							$0	0.00%
								Opportunistic I/L Policy Range: 0% - 3%	0.00%
	Inflation Linked Total							$3,274,244,166	9.82%
								Inflation Linked Policy Range: 7%-15%	12.00%
	TOTAL Amounts	$4,448,608,533	$3,465,593,989	$10,664,869,344	$11,479,633,192	$3,366,648,306	$0	$33,332,949,224	Total Fund
	TOTAL Percent	13.35%	10.40%	31.99%	34.44%	10.10%	0.00%		

Asset Class	Actual Portfolio	SAA Policy: Target (Range)	Rebalancing Assumed Port	Rebalancing Adj Policy	Assumed - Adjusted % diff	Assumed - Adjusted $ diff	Policy Band check Actual - Adj	Passive Min	Passive Actual
Cash	2.00%								
Core	10.26%	13%						**50%**	**60%**
High Yield	3.68%	5%							
US Fixed Income	13.95%	18% (8-28%)	15.50%	18.55% (9-29%)	-3.05%	-$1,015,157,992	**OK**		
EM Debt	2.63%	4%		4.00%					
Opportunistic Debt	2.50%	0% (0-10%)	2.50%	0% (0-10%)	2.50%	$832,880,904	**OK**		
Private Debt	2.66%	3%		3.00%					
Total Fixed Income	**23.74%**	**25% (15-35%)**	**23.29%**	**25.55% (16-36%)**	**-2.26%**	**-$751,760,246**	**OK**		
Large Cap	26.69%	23%							
Mid Cap	4.69%	5%							
Small Cap	4.72%	5%							
US Equity	**36.10%**	**33% (26-38%)**	**37.47%**	**35.23% (28-40%)**	**2.24%**	**$747,659,381**	**OK**	**50%**	**64%**
Developed Large Cap	14.72%	14%							
Developed Small Cap	3.86%	3%							
Emerging Markets	5.56%	6%							
Non-US Equity	**24.15%**	**23% (16-28%)**	**23.90%**	**23.49% (16-28%)**	**0.41%**	**$135,342,071**	**OK**	**30%**	**43%**
Private Equity	5.61%	7% (5-9%)	5.61%	5.61% (4-8%)	0.00%	$0	**OK**		
Opportunistic Equity	0.57%	0% (0-3%)	0.57%	0% (0-3%)	0.57%	$190,723,503	**OK**		
Total Equity	**66.43%**	**63% (53-70%)**	**67.55%**	**64.33% (54-71%)**	**3.22%**	**$1,073,724,956**	**OK**		
Commodities	3.51%	4% (1-7%)	2.97%	4.08% (1-7%)	-1.11%	-$370,255,410	**OK**		
Real Estate	6.04%	8% (6-10%)	5.91%	6.04% (4-8%)	-0.13%	-$44,113,440	**OK**		
Infrastructure	0.00%	0% (0-3%)	0.00%	0% (0-3%)	0.00%	$0	**OK**		
Farmland & Timber	0.28%	0% (0-3%)	0.28%	0% (0-3%)	0.28%	$92,404,140	**OK**		
Opportunistic I/L	0.00%	0% (0-3%)	0.00%	0% (0-3%)	0.00%	$0	**OK**		
Total Inflation Linked	**9.82%**	**12% (8-16%)**	**9.15%**	**10.12% (6-14%)**	**-0.97%**	**-$321,964,710**	**OK**		
Total	**100.00%**	**100%**	**100.00%**	**100.00%**	**0.00%**	**$0**		**30%**	**40%**
								Internally Managed Portfolios:	
Total GTAA								**$9,491,257,212**	**28%**
Bridgewater	$3,006,649,615	9.0%					**Opportunistic definitions:**		
Windham	$585,835,853	1.8%					1) Tactical in nature: Function of market dislocation AND		
Total	**$3,592,485,467**	**10.8%**					2a) Outside SAA benchmark, OR		
Policy	**10% ±5%**	**OK**					2b) Within SAA benchmark but absolute return oriented		

(Notable changes from the previous month are highlighted in RED)

APRIL 2014

U.S. EQUITIES

Primary Market Metrics & Indicators:

1. Fundamentals: **POSITIVE**
   - Major risks have receded and economic data suggests stable, sub-trend growth into 2014.
   - Persistently high U.S. unemployment raise questions about a sustainable recovery, but no other tailspin issues have surfaced.
   - At risk longer term due to stimulus measures; inflation remains generally subdued.
   - There is considerable liquidity; Federal Reserve policy remains accommodative.
   - Overall U.S. corporate profits are still growing, but with decelerating momentum as revenue trends are flat and pressures on profit margin expansion are surfacing.

2. Valuations: **NEUTRAL (from POSITIVE)**
   - P/E ratios (forward) are now less generous, and marginally less so for the mid- and smaller-sized companies: S&P 500, 16.6x-19.4x, S&P MID, 15.8x-18.1x; S&P SC600, 17.1x-20.7x..
   - Historic P/Es imply advances of 5-10% for mid and small caps; 9-12% for S&P 500.
   - Still rising earnings and low yields on 10-Yr Treasury notes combine for equity risk premiums that are favorably above the 4.0% long-range average for large caps, but market advances have trimmed those of mid- and small-caps to near 3.0%.

3. Sentiment: **POSITIVE**
   - Lessened near-term equity market volatility (i.e., VIX Index) still reflects growing acceptance of risk-oriented assets.
   - Asset flows that had gone to bonds and non-U.S. equities until 2013 continue to shift toward equities, though not necessarily to stock mutual funds

Commentary:

Staff continues to systematically pare back the allocation to U.S. stocks, proportionally more so from the midcap and small-cap sub-classes. Strong price advances have outpaced earnings growth in these categories to the extent that their short-run risk premiums are less compelling. This has also been reflected in the waning performance of small-cap stocks *relative* to large-cap counterparts; over 1Q2014, both categories advanced, but small-caps rose by less than large-caps.

Though domestic equity market valuations are being stretched this does not suggest that they have reached over-extended, bubble-like levels; only that investors have re-rated valuations to the richer end of a more normalized range. This drives our "*Neutral*" opinion on valuations. Some correction in pricing, well short of a precipitous rout, is to be expected until the level of corporate profits notches sufficiently higher to enrich risk premiums. Portfolio rebalancing and profit-taking are normal and prudent activities after advances such as those experienced over the past year. Methodical buying of stocks once price corrections run their course is equally prudent. The reductions in our U.S. equities allocations adhere to those disciplines.

Apart from shifting a portion of U.S. assets to the EAFE asset sub-class of Non-U.S. equities late in 4Q2013, domestic equities has primarily been the funding source to meet both internal and external cash-flows. Demands elsewhere in Total Fund notwithstanding, staff anticipates reallocating additional assets opportunistically from U.S. Equities to the developed markets sub-class Non-U.S. Equities.

CURRENT PORTFOLIO POSTURE: Overweight vs. SAA target

NON – U.S. EQUITIES

Primary Market Metrics & Indicators:

1. Fundamentals: **POSITIVE**
   - GDP growth in the Eurozone has begun to look less recessional while that of the lesser-developed economies remains off its pace, but comparatively stronger.
   - Relatively inexpensive and available money supports a shift toward risk assets.
   - Monetary and economic policies are focused on controlling economic growth and fiscal stability.

2. Valuations: **POSITIVE**
   - Reasonable global valuations relative to U.S.; price-to-book values of 1.5x - 1.9x; P/Es of 13.5x – 15.2x on trend earnings.
   - Dividend yields are incrementally more favorable with most ranging from 1.5x to 1.6x that of the S&P500.

3. Sentiment: **POSITIVE**
   - Money flows continue toward both U.S. and non-U.S. equities; accepting the emerging economies markets, investors are less guarded and remain constructive on global risks.
   - Major non-U.S. markets performances are keeping pace with those of the U.S.

Commentary:

Global equities markets appear to have interpreted the near-term peaking of macroeconomic momentum as a rollover of GDP growth rather than the plateauing that is taking place and thus have discounted equities accordingly. Excess liquidity is supportive for re-rating equity risk premiums. Earnings of European corporations are still on trend for a 12-13% rate of growth this year, roughly half again faster than that expected for U.S. counterparts. Equity risk premiums of over 5%, besides outweighing those of U.S. stocks, offer ample compensation for investment.

From a fundamental standpoint, inventory levels of European corporations are at cyclically low levels and new orders indicators point to a production upturn and export-led growth. Anecdotal reports have indicated that there is some concern about the potential impact of China's economic slowdown on Europe, but that may be overdone. In fact, exports to China have already slowed but aren't decelerating further and demand is increasing from other importers.

The Japanese equities markets continue to be challenged after responding well earlier in 2013. Japanese economic reform continues, but the markets are waiting for follow-on to the Abe policies. The solid gains in personal consumption from the spurt of income growth appear vulnerable to a new round of taxes.

Emerging markets (EM) overall, are enigmatic. Having undergone two years of price correction, valuations for the most part remain attractive as compared to those of the developed economies. But an inherent “value trap” persists, as economic fundamentals continue to shift about for the larger countries, weaken for those with large external debt balances yet are surprisingly solid for many others. Not surprisingly, capital continues to be withdrawn indiscriminately from EM equity markets, despite select opportunities at the specific company level.

IMD moved equities positioning in late 4Q2013 to a more neutral allocation to both the U.S. markets asset class, and to the Non-U.S. developed-economies equities class, and expects to increase the Non-U.S. exposure opportunistically over the course of 2014.

CURRENT PORTFOLIO POSTURE: Approx. Equal Weight vs. SAA target

FIXED INCOME

Primary Markets Metrics & Indicators:

1. Fundamentals: **NEUTRAL**

- Over the past few years, fundamentals in the fixed income markets have been dominated by an extremely accommodative monetary policy by the Federal Reserve. This has included massive, unprecedented bond buying programs of both treasury bonds and agency MBS securities known as “quantitative easing” that began in 2009 during the credit crisis and continues to this day. The Fed has now gradually begun to reduce its monthly purchases with a potential complete cessation of bond buying by the end of this year. In addition, the Fed has pledged to keep short-term rates near zero over an extended time depending on select economic targets and conditions. While these policies have kept interest rates artificially low, the potential cessation of bond buying activities along with an improving U.S. economic outlook could lead to higher interest rates over an intermediate to long-term time frame.
- In the near-term, long-term interest rates have fallen in 2014 in response to a combination of factors including some disappointing economic data and concerns about growth in China and other emerging markets.

2. Valuations: **NEGATIVE**

- The core fixed income market is relatively unattractive due to low overall yields as Treasury rates remain at low levels, investment-grade credit spreads are relatively tight and spreads on agency MBS are somewhat compressed due to aggressive buying by the Fed. Ultimately, we believe the Fed will end its aggressive bond buying, and Treasury rates will rise over the intermediate-term from artificially low levels in the current market. That being said, core fixed income remains a safe haven in times of market turbulence and tends to perform well when risky assets such as equities sell off.

- With a benign outlook for corporate defaults and an overall demand in the market for yield, the valuation of high yield bonds has substantially compressed since mid-2012. As a result, the market has lost much of its return potential relative to prior years and will likely achieve low to mid-single-digit returns over the coming year.
- While emerging market debt denominated in local currencies offers attractive yields, the weak performance of emerging market currencies relative to the U.S. dollar has resulted in very poor performance of this market over the past year. Furthermore, a combination of global economic factors has raised the possibility of a continuation of poor returns this year. Of most concern is the potential for a sustained period of US dollar appreciation as has occurred periodically in the past (such as the 1990's) that could adversely affect the returns of EM local currency debt going forward.
- Private debt offers the most attractive opportunity in the fixed income markets with double-digit yields readily available for investors willing to accept illiquidity.
- Select areas of opportunistic debt such as distressed debt (both corporate and structured credit) and excess mortgage-servicing rights ("MSRs") also offer opportunities to potentially achieve double-digit returns.

3. Sentiment: **NEUTRAL**

- Following a multi-decade period of declining interest rates, IMD has modest concerns that investors sentiment is shifting away from fixed income. That being said, going forward, IMD believes demand will continue for income producing assets particularly those which offer a yield premium.

Commentary:

IMD remains underweight in its overall fixed income target due to the relatively low yields offered in the public fixed income markets as well as the risk of potentially higher treasury rates. ASRS is currently underweight in its SAAP target for core fixed income, high yield and emerging market debt. While core fixed income offers important defensive characteristics to potentially balance out the overall risks of the total fund portfolio, low levels of U.S. Treasuries and generally tight spreads in the investment-grade bond markets make it generally unattractive.

Furthermore, IMD remains concerned about the potential for higher Treasury rates and the impact on returns for core fixed income, should the Fed completely end its quantitative easing programs. In high yield, which historically is less sensitive to higher interest rates, spreads have compressed to levels which make potential returns much less compelling than in prior years. In emerging market debt, we are concerned about the potential for continued poor performance in this asset class due to risk of a potentially stronger US dollar.

IMD sees the most attractive opportunities in fixed income in select credit markets -- particularly private debt and opportunistic debt -- where compelling yield and total return opportunities exist. Opportunistic debt includes a number of mandates such as distressed debt and structured asset-backed securities that are likely to provide very attractive returns. Since December, we have established two new multi-strategy mandates with strategic partners in opportunistic debt to take advantage of potential investment opportunities as European banks disgorge troubled fixed income assets.

CURRENT PORTFOLIO POSTURE: UNDERWEIGHT vs. SAA target

REAL ESTATE

Primary Market Metrics & Indicators:

1. Fundamentals: **POSITIVE**
   - While vacancy is declining across the board, excess inventory remains a problem in some sectors especially retail and suburban office.
   - Our review of property market fundamentals leads to emphasize apartments, industrial properties, medical office buildings, senior housing self-storage, and student housing in our current investing efforts for demographic and macro policy reasons.
   - There are relatively few foreclosures on high quality property, but there continues to be pressures on refinancing of legacy leverage structures and we participate in those transactions through several of our manager relationships.
   - Single family housing has turned the corner with effects rippling through the economy. Recovery in construction and NOI has been led by apartments to date.
2. Valuations: **NEUTRAL**
   - On a total market basis, valuations have recovered from recession lows but are still about 15% below prior peak. However, coastal markets have rebounded more strongly than interior markets.
   - High quality coastal market properties are trading at historic low cap rates; however these cap rates still reflect approximately a normal spread to treasury. The financing market for assets of this quality has recovered and supports these valuations by providing fixed rate financing that mitigates the risk of later cap rate expansion. International investors looking for safe assets have contributed to demand in the coastal markets.
   - Recent increases in treasury rates do not appear to have affected commercial real estate valuations. Many observers believe that ~100bps of rate increase was already discounted into cap rates.
   - REITs are trading at a 4% premium to NAV with an average dividend yield of 3.9%. This reflects a 123bps spread to the 10 year treasury, which is a bit higher than the historical average of 108bps.
3. Sentiment: **POSITIVE**
   - U.S. focused real estate fund raising rose 13% to $76 billion per year. U.S. focused dry powder has trended down to approximately $80 billion.
   - Global commercial real estate transaction volume peaked at around $700 billion in 2007, but dropped to about a third of that during the global financial crisis. Current volume of approximately $550 billion is double the recession trough, but still well below the peak.
   - Debt availability has improved considerably since the depth of the recession, but is still tight by historic standards for all but the most desirable properties. Construction financing remains a considerable challenge, even for well justified projects.

Commentary:

IMD continues to implement its separate account real estate strategic manager program. ASRS adopted an updated pacing and implementation plan in December, calling for $500 million in new commitments in 2014 including $350M allocated to niche and tactical opportunities.

CURRENT PORTFOLIO POSTURE: UNDERWEIGHT * vs. SAA target *in program funding/build-out phase

PRIVATE EQUITY

Primary Market Metrics & Indicators:

1. Fundamentals: **POSITIVE**
   - The U.S. economy continues to show steady improvement.
     - ◊ The energy sector is dynamic with massive new investment in "tight oil" and related infrastructure and services, with supply improvements also resulting in improved energy efficiency particularly of benefit to manufacturers.
     - ◊ Healthcare is being reshaped to implement the requirements of "Obamacare"
     - ◊ The U.S. continues to be a global leader in technology innovation.
   - Europe continues to struggle in recovering from the financial crisis although recent data suggests a pickup in economic activity. Its problems are exacerbated by a unified currency without unified fiscal policy and it is expected to experience a very slow recovery.
   - Emerging markets have slowed while the largest emerging markets are transitioning to focus on domestic consumption.

2. Valuations: **NEUTRAL**
   - Purchase price multiples in 2013 (through Q3) were 8.4x, roughly flat from 2012 levels and below 2007 peak valuations. Over the course of 2013, large deal mutliples rose from 10x to 11x while small deals fell from 4.0x to 2.5x.
   - The leveraged loan and high yield debt markets were active in 2013 reaching multi-year highs for net issuance, albeit principally for refinancing. Single B leveraged loan and high yield spreads have recently dipped below 400bps.
   - Total leverage in 2013 (through Q3) ticked up to 5.3x from 5.1x in 2012, although still down ~0.8x turn from the 2007 peak.

3. Sentiment: **NEUTRAL**
   - Globally, fund raising was up from $381B (1,035 funds) closed 2012 to $454B (873 funds) closed in 2013. In aggregate, there are 2,000+ funds currently seeking ~$800B. In North America fund raising was up from $201B (475 funds) closed 2012 to $288B (487 funds) closed in 2013.
   - Dry powder of nearly $1.0 trillion globally in all categories rose from $941 at the end of 2012.
   - In 2013, PE deal flow fell 10% globally while the aggregate value of deals was up 10% in N. America, down 6% in Europe, and down 28% in Asia.
   - In 2013 there were 1,300+ exits valued at $300B, the highest count on record and matching the value of 2011. The average exit size of $500M was the same as 2012.
   - The IPO market continued to trend up in 2013 (particularly in H1) as equity markets rallied.

Commentary:

Areas of emphasis are U.S middle market buyout with focus on managers with strong operational capability. Vertical strategies in energy, healthcare and technology are under consideration. IMD will reduce emphasis on large buyout strategies though larger managers with specialized deal flow remain of interest. IMD will continue to monitor Europe for a favorable reentry point. IMD's pacing plan calls for $550M in commitments for 2014, with an additional $50M carried over from 2013.

CURRENT PORTFOLIO POSTURE: UNDERWEIGHT * vs. SAA target*in program funding/build-out phase

COMMODITIES

Primary Market Metrics & Indicators:

1. Fundamentals: **NEGATIVE**
   - The Fed continued to taper its QE program by $10B per month and reiterated that inflation was not a significant concern.
   - Recent data indicates the US economy has momentum, although the winter weather has impeded progress. Excluding exogenous factors, most commodity sectors appear well supplied, particularly for the current global slow growth environment.
   - After a strong harvest season, Ags will turn their attention to the upcoming planting season. Energy markets reflect the continued growth in US production, although cold winter weather and geopolitical events in Ukraine/Russia have kept prices up. Metals have been mixed as precious metals have benefitted from a flight to safety while industrial metals still exhibit weak demand.
2. Valuations: **NEUTRAL**
   - After being range bound from 245 – 260 in 2H 2013, the index has risen to 270.
   - Year-to-date, coffee, hogs, wheat have been the leaders with copper, lead, and aluminum being the biggest laggards.
   - The index on a year-to-date basis is up 7%, largely on cold winter weather and geopolitical concerns (ags & energy) and flight to safety (precious metals).
3. Sentiment: **NEUTRAL**
   - The improvement in macroeconomic sentiment in the U.S. year-to-date has softened while EM continues to exhibit weakness and therefore not resulted in flows into commodities.
   - Exogenous shocks have pushed up specific commodities in energy and ags although demand has largely not driven prices.
   - Looking across the individual commodities, most remain well supplied, which has been reflected in prices as inflationary fears have abated.

Commentary:

IMD maintained a tactical underweight position relative to the SAAP during 2013 and into 2014 after recognizing the potential effects of Fed tapering and Chinese transition. IMD recognizes that Fed tapering will be data dependent but the Fed has been clear about its intention to reduce stimulus. China's transition to a more consumer oriented economy will be gradual but the era of infrastructure build-out which fueled a portion of the demand for commodities is abating.

IMD will closely monitor the growth and inflation dynamics globally with improving economic conditions and inflationary pressures serving as a catalyst which may initiate a neutral position.

CURRENT PORTFOLIO POSTURE: UNDERWEIGHT vs. SAA target

OPPORTUNISTIC INVESTMENTS

IMD continues to monitor and assess co-investment flow from real estate, private equity and debt managers for select opportunistic equity investments in idiosyncratic opportunities with favorable capital market dynamics. Opportunistic investments are tactical in nature AND are outside ASRS SAAP benchmarks or are absolute return oriented.

CURRENT PORTFOLIO POSTURE: APPROX 3.5% of ASRS TOTAL MARKET VALUE

GLOSSARY

Commentary: Provides verbiage on 1) the current asset class market environment and possible changes to this environment and 2) ASRS asset class portfolio positioning relative to ASRS SAA policy, its rationale for positioning and anticipated changes which may occur in such positioning.

Current Portfolio Posture: Indicates ASRS asset class position relative to its asset allocation policy weight. "Overweight" indicates an asset class weight is greater than its policy target, "Neutral" indicates an equal weight and "Underweight" indicates a lesser weight than its policy target.

Investment House Views: Synthesizes IMD's current and forward-looking investment perspectives and tactical positioning in asset classes and investment strategies in which the ASRS invests.

Primary Market Metrics and Indicators: Broadly-defined metrics (Fundamentals, Valuations, and Sentiments) applied universally to ASRS asset classes and used collectively to evaluate existing market conditions. Indicators ("Positive," "Neutral" and "Negative") reflect IMD's existing views of these metrics and, in addition to other factors, generally determine the basis for the existing (and possible future changes) to ASRS aggregate portfolio position relative to or within ASRS SAA policy targets.

ASRS INVESTMENT MEETINGS										
2014		Asset Class Committees					Board Committee			Grand Totals
		Private Market Committee (PRIFMC)			Public Market Committee (PUBMC)		Investment Committee (IC)			
Quarter	Month	Dates		Total	Dates	Total	Dates		Total	
1st	January	1/15	1/31	2	1/31	1	1/31		1	9
	February	2/21		1			2/20	2/24	2	
	March	3/24		1	3/27	1				
2nd	April									
	May									
	June									
3rd	July									
	August									
	September									
4th	October									
	November									
	December									
Totals				4		2			3	9

PRIVATE MARKETS COMMITTEE (PRIVMC)

2/21/2014

- **Private Equity Program**
  - The Committee approved a $75 million commitment to a private equity (tech-focus) buyout manager, pending final legal negotiations. The ASRS is currently invested in a previous fund managed by this GP.
  - The Committee approved a $50 million commitment to a private equity buyout manager, pending final legal negotiations. The ASRS is currently invested in a previous fund managed by this GP.
- **Niche and Tactical Real Estate Investments**
  - The Committee approved a $350 million to niche and tactical real estate investments which authorize the development of a detail plan for implementation. Each investment will be presented to the Committee for discussion and potential approval.
- **Residential Land**
  - The Committee approved a $100 million commitment to residential land. Each investment will be presented to the Committee for discussion and potential approval.

3/24/14

- **Private Equity Program**
  - The Committee approved a $75 million commitment to a private equity buyout manager, pending final legal negotiations.
  - The Committee approved $50 million investment in private placement (bridge equity financing) in a company of an existing ASRS GP, pending legal negotiations. Due diligence and valuation analyses was conducted by KPMG; this investment will be part of the opportunistic equity portfolio.

PUBLIC MARKETS COMMITTEE (PUBMC)

03/27/14:

- **Public Equities Program**
  - The Committee approved a modification to the ASRS roster of Non-U.S. Developed equity managers (specific terminations/hiring and dollars) pending contract negotiations and the use of a transition manager service to assist IMD staff with the reallocation of securities and cash.

TACTICAL PORTFOLIO POSITIONING

In March, IMD migrated approximately $400 million from U.S. equities -- $260 million from passive strategies and $140 million from active managers – to a passive Blackrock core fixed income fund. This action reduced our policy overweight in equities and policy underweight in fixed income by approximately 1.25%. The rationale for this tactical repositioning was primarily based on asset class relative value and perceived managers' strength.

Additionally, IMD began defunding approximately $300 million opportunistic debt strategy with Guggenheim that invests in structured credit. While the Guggenheim mandate has performed well (16.8% ITD IRRs), the specific markets in which they invest no longer offer attractive return potential versus other opportunistic and private debt mandates. Liquidation of the Guggenheim account will occur on an orderly basis and be executed in the context of the market. Proceeds will be used to fund other opportunistic debt and private debt investment capital calls.

We will discuss this tactical portfolio repositioning in more detail at the IC meeting.

Note: tactical portfolio positioning is captured in the ASRS Asset Allocation report; the performance results of tactical positioning (vs. policy targets) are reflected in the ASRS Quarterly Total Fund Performance Attribution Analysis.

IMD (INVESTMENT MANAGEMENT DIVISION) ACTIVITIES, PROJECTS AND RESEARCH INITIATIVES

- As an update to the Director's biweekly staff Investment Idea Exchange meetings, IMD is researching and developing an enhanced methodology regarding ASRS cash flow management, portfolio rebalancing and tactical asset allocation processes. IMD has organized itself into a series of working groups to pursue a multi-step process which covers the following: literature review, identification of methods and goals, performance attribution, risk exposure and analysis, signals, modeling and synthetic implementation, actual implementation and ex-ante analysis and reporting.

  Substantial progress is being made in developing this framework. IMD is evaluating research literature such as TAA signals and optimization processes in addition to exploring various implementation platforms. A Black-Litterman model is being evaluated which incorporates IMD Investment House Views and ASRS SAAP with scenario analyses capabilities. Likewise, various attribution methodologies are being evaluated with the objective to better enhance measuring the effects of internal and external TAA.

  Completion of this work is expected in Q2-14 and will be discussed in more detail with the IC at that time.

- The redesign of ASRS securities lending program is pending final contract negotiations with State Street. The program will include two parts: 'base lending' to initiate a conservative strategic lending program and 'opportunistic lending' to profit from relatively large or one-off individual lending transactions, the latter of which will be evaluated and potentially approved on a case-by-case basis by the Director and CIO.

- The IMD is researching cash management options to mitigate cash drag on total fund returns and facilitate monthly pension funding requirements by ensuring that excess cash balances are synthetically exposed to either equity or fixed income markets. All options under consideration are designed to provide ample liquidity to meet pension funding needs while minimizing implementation and transaction costs.

  A final decision by the Director and CIO are expected in Q2-14; implementation will occur soon thereafter.

- In February, ASRS Private Markets PM facilitated a forum on the US home construction industry, discussing the structure of housing demand, the builder supply chain, homebuilders' perspective on risk management, the relationship between builders and land providers, and the mitigation of entitlement risk. These discussions provided context to and support for a potential further investment opportunity in residential real estate and included a panel of four experts in real estate.

- As a standard course of business, IMD meets with both incumbent and potential investment managers to discuss macro-economies and capital markets as well as providing a means to review new initiatives, relationships and new strategy offerings. Since the last IC meeting, IMD has met via conference call or in-person with a total of 71 investment managers: Private markets (RE, PE, Debt) – 46 and Public markets (Equity and Debt) – 25.

- IMD internally manages 7 public equities and fixed income portfolios which had an aggregate market value of over $9.5 billion or 30% of Total Fund. For CY2014 thru Feb 28, 3 of 7 met or exceeded their benchmarks, and 7 of 7 portfolios met or exceeded their benchmarks on an inception-to-date basis.