CalPERS
Investment Beliefs

May 14, 2012

What Are Investment Beliefs?

- Investment beliefs are statements about various aspects of capital markets and investor behavior that inform investment strategies and decisions.

- Investment beliefs must be based on sound theory, empirical evidence and/or practical insights from experience.

Why Are Investment Beliefs Important?

- Clear set of investment beliefs provides a basis for strategic management of the investment portfolio.
- Serve as a tool for investment decision making.
- Provide a framework for assessing new investment strategies and avoid making changes on an ad-hoc basis.
- Provide a context for value adding investment management.
- Can improve governance.

Investment Beliefs – Final Recommendations

1. Strategic asset allocation is the dominant determinant of return and risk.
2. A return premium is required to take on risky assets.
3. Premium is required for illiquidity.
4. Long term investment horizon is an advantage.
5. Inefficiencies in the market create investment opportunities.
6. Cost matter.
7. Risk is multi-faceted and not fully quantifiable.

Investment Beliefs – Board Ranking*

	Strongly Agree & Agree	Neutral	Disagree	Strongly Disagree
Inefficiencies in the market create investment opportunities	100%	-	-	-
Long term investment horizon is an advantage	93%	9%	-	-
Be unconventional – Do not follow the herd	91%	9%	-	-
Costs matter because they reduce returns	91%	-	9%	-
Strategic asset allocation is the dominant determinant of return and risk	90%	-	-	9%
A return premium is required to take on risk	90%	-	-	9%
Premium is required for illiquidity	80%	18%	-	-
Asset valuations are mean reverting	73%	27%	-	-
Make it as simple as possible; simple solution is often the best	63%	18%	18%	-
Risk is not fully measurable	54%	-	45%	-
ESG factors impact risk and return over the long term	45%	27%	18%	9%

*Ranking based on combined strongly agree & agree

Investment Beliefs – Staff Ranking*

	# of Staff Votes	Percentage of Staff Votes
A return premium is required to take on risk	48	63%
Risk is not fully measurable	35	46%
Strategic asset allocation is the dominant determinant of return and risk	27	36%
Costs matter because they reduce returns	23	30%
Premium is required for illiquidity	20	26%
Long term investment horizon is an advantage	14	18%
Inefficiencies in the market create investment opportunities	10	13%
Asset valuations are mean reverting	6	8%
ESG factors impact risk and return over the long term	6	8%
Be unconventional – Do not follow the herd	5	7%
Make it as simple as possible; simple solution is often the best	1	1%

*(76 participants, included: SIO, SPM, PM, IOIII)

CalPERS Investment Beliefs – Evidence

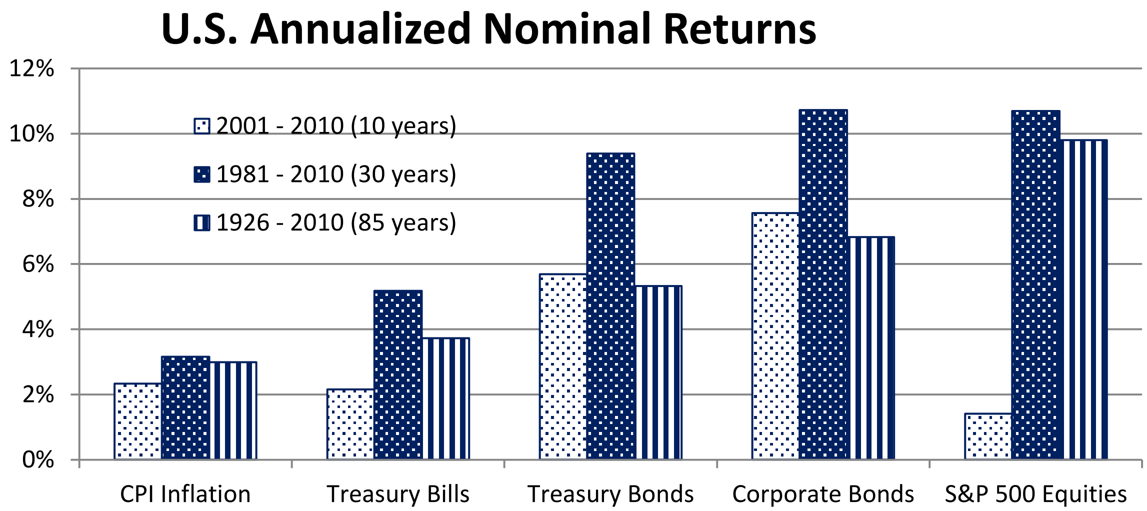
1. Strategic asset allocation is the dominant determinant of return and risk.

- Asset allocation determines the risk return trade off at the total fund.
- Asset allocation is the primary risk management tool.
- Risk diversification is a key objective of asset allocation.
- Asset allocation is the principal determinant of the long term performance of the fund.
  - Asset allocation policy explains about 100% of the level of return across funds* and 90% of the variability of returns of a fund.**
- CalPERS experience is similar to these conclusions.

Sources
*Ibbotson and Kaplan, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent Performance?"; Financial Analyst's Journal January/February 2000 (Appendix 3)

**Gary P. Brinson; Brian D. Singer; and Gilbert L. Beebower; "Determinants of Portfolio Performance; An Update"; Financial Analysts Journal May-June 1991 (Appendix 4)

2. A return premium is required to take on risk.



Calendar-year Annualized Compound Nominal Returns of U.S. Assets

	CPI Inflation	Treasury Bills	Treasury Bonds	Corporate Bonds	Credit Risk Premium	S&P 500 Equities	Equity Risk Premium
2001 - 2010 (10 years)	2.34%	2.16%	5.69%	7.57%	5.41%	1.41%	-0.75%
1981 - 2010 (30 years)	3.16%	5.18%	9.39%	10.72%	5.55%	10.69%	5.52%
1926 - 2010 (85 years)	2.99%	3.72%	5.33%	6.83%	3.10%	9.81%	6.09%

Credit Risk Premium = Corporate Bond return minus Treasury Bill return

Equity Risk Premium = S&P 500 Equity return minus Treasury Bill return

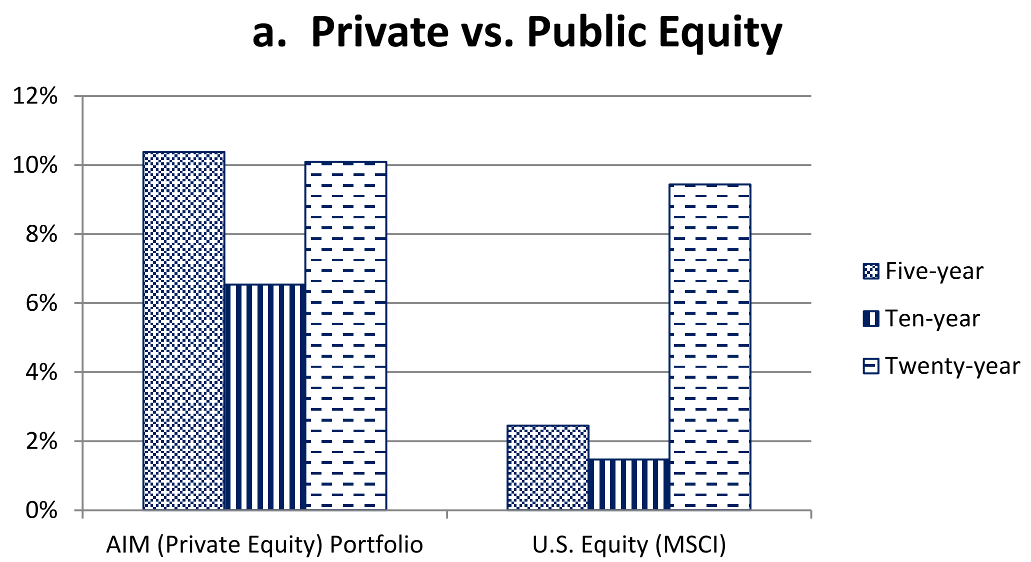
2. A return premium is required to take on risk.

Periods of Low or Negative Equity Risk Premium

Period	Equity Risk Premium
1926-1941 (16 yr)	1.64%
1965-1982 (18 yr)	-0.06%
1999-2010 (12 yr)	-0.71%

- Risky assets such as corporate bonds and equities provide a reliable return premium over the long term.
- There can be intermittent periods when this premium may not materialize.

3. Premium is required for illiquidity.



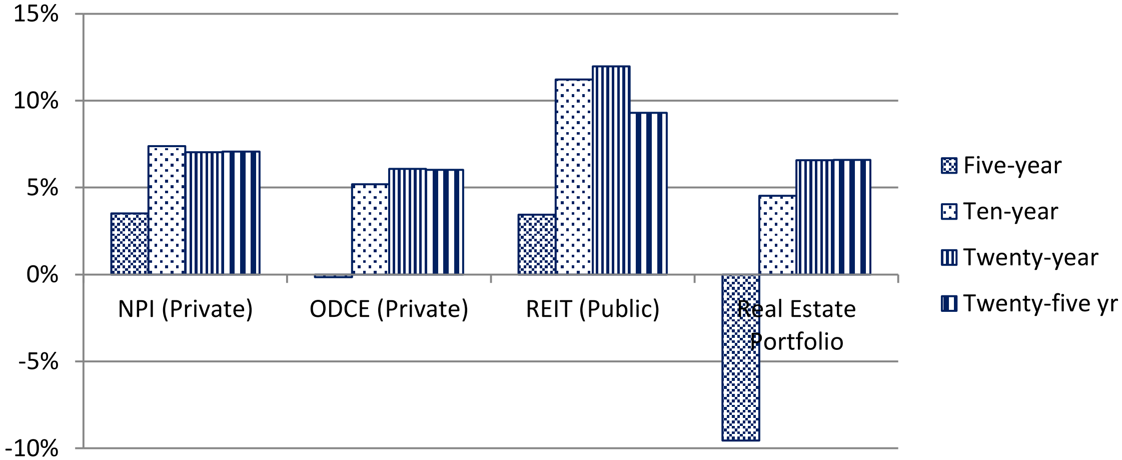
Annualized Nominal Compound Returns ending 2010

	AIM (Private Equity) Portfolio	U.S. Equity (MSCI)	Premium
Five-year	10.38%	2.45%	7.93%
Ten-year	6.54%	1.47%	5.07%
Twenty-year	10.09%	9.43%	0.66%

source: mystatestreet, MSCI
AIM returns are not lagged.

3. Premium is required for illiquidity.

b. Private vs. Public Real Estate



Real Estate Annualized Nominal Compound Returns ending 2010

	NPI (Private)	ODCE (Private)	REIT (Public)	Real Estate Portfolio
Five-year	3.51%	-0.16%	3.44%	-9.55%
Ten-year	7.38%	5.19%	11.22%	4.52%
Twenty-year	7.04%	6.07%	11.98%	6.57%
Twenty-five yr	7.07%	6.01%	9.30%	6.59%

Sources: NAREIT, NCREIF, State Street

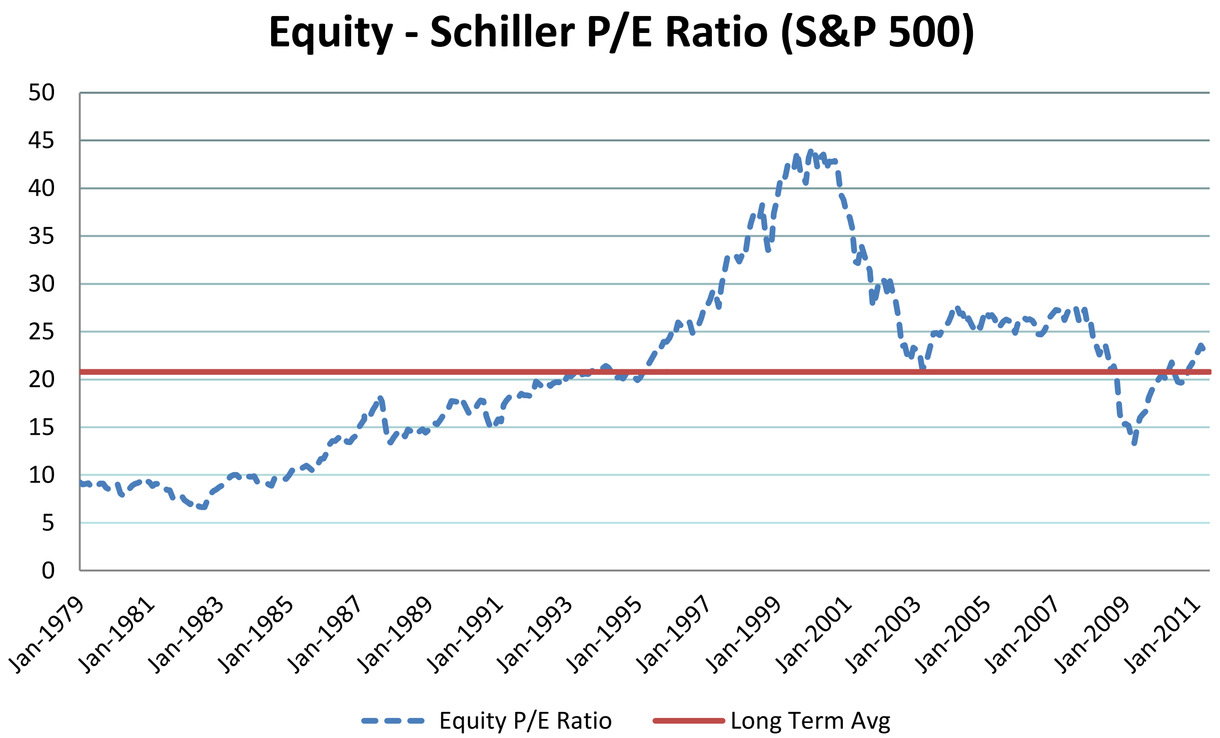
Illiquidity premium is not evident in Real Estate.

4. Long term investment horizon is an advantage.

- Long term investment horizon is an advantage for bearing risks over economic and market cycles.

- Long term investment horizon is an advantage for investing in illiquid assets to earn a premium.

5. Inefficiencies in the market create investment opportunities.



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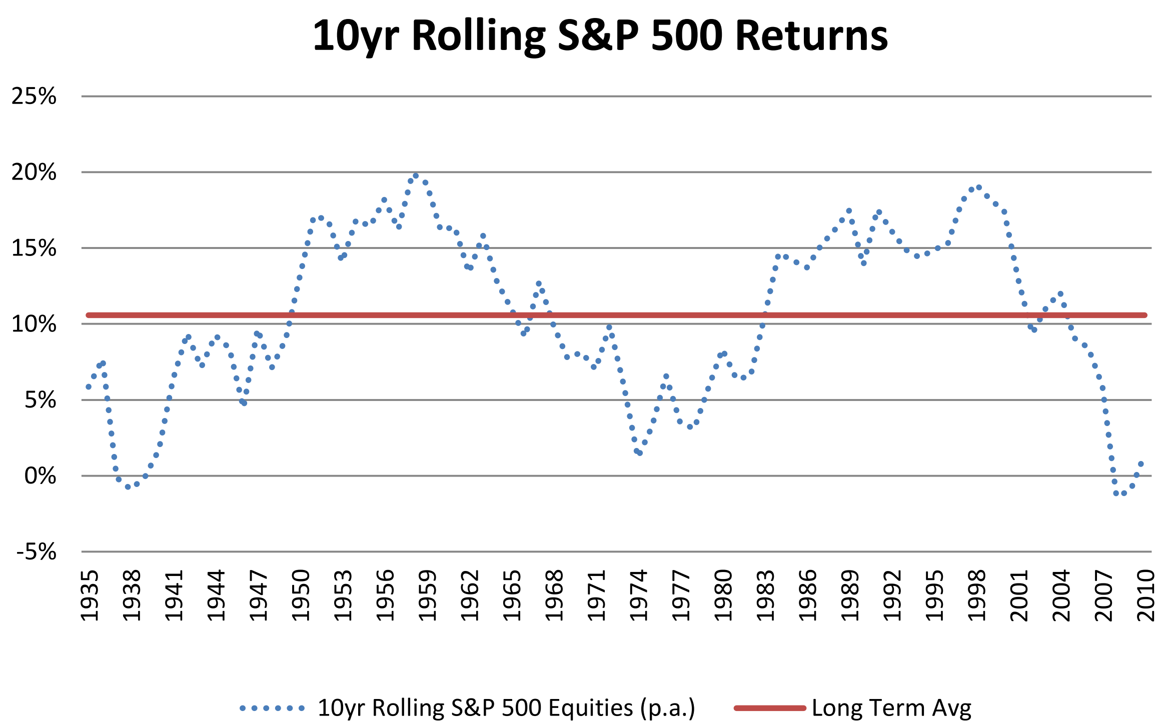

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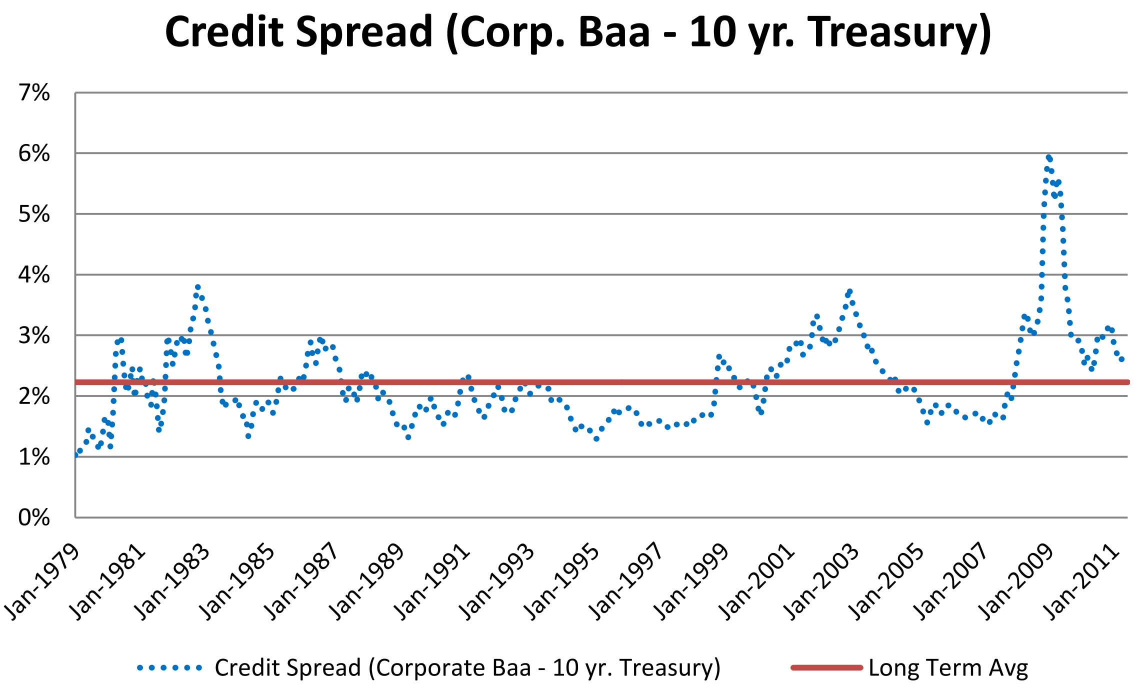

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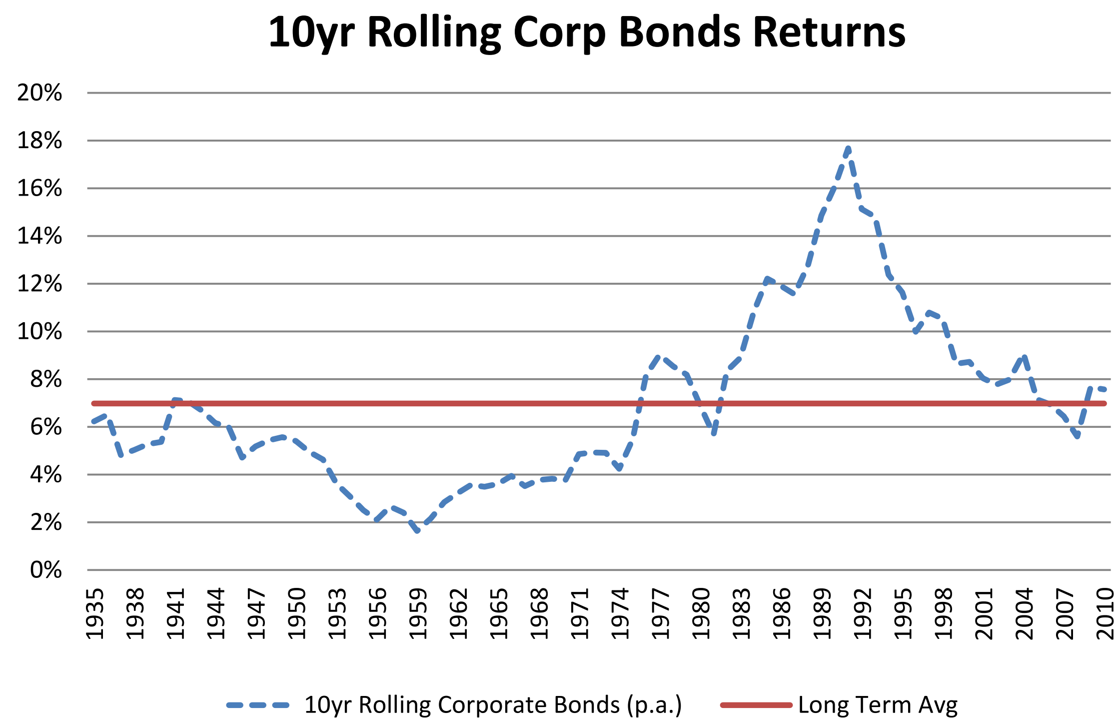

6. Costs matter.

Return - 1 year Ending March 31, 2011

Asset Class	Gross	Net	Fees
Global Equity	15.58	15.50	0.08
Fixed Income	8.64	8.63	0.01
AIM*	22.68	22.67	0.01
Real Estate	4.37	2.68	1.69
Inflation – linked	11.92	11.31	0.61
Total Fund	13.10	12.90	0.20

- High fee assets such as private equity (AIM), real estate and hedge funds (RMARS) must overcome a high barrier to exceed benchmarks.
- Internal management is preferred in publicly traded assets when we possess in-house capabilities due to low costs.

**AIM – gross returns are net of fees deducted at source by partners. AIM fees are estimated to be around 1.6%*

7. Risk is multi-faceted and not fully quantifiable.

- The universe of risks that need to be addressed is evolving and changing.
- Quantitative risk measures fail to control or identify many loss situations.
- Risk measures based on normal probability distributions are not representative of outcomes.
- Quantitative risk measures can be valuable tools when used in conjunction with good judgment and sound process.
- Tail risks can only be managed through explicit hedges.
- The goal of risk management is to provide risk insight and intelligence.