Calibrating Investment Return Expectations

US Nuclear Regulatory Commission

Decommissioning Fund Workshop

March 2, 2011

Nuclear
Decommissioning
Trust Fund Conference

Jon Brusven, CFA
Associate Director
NDT Fund Conference

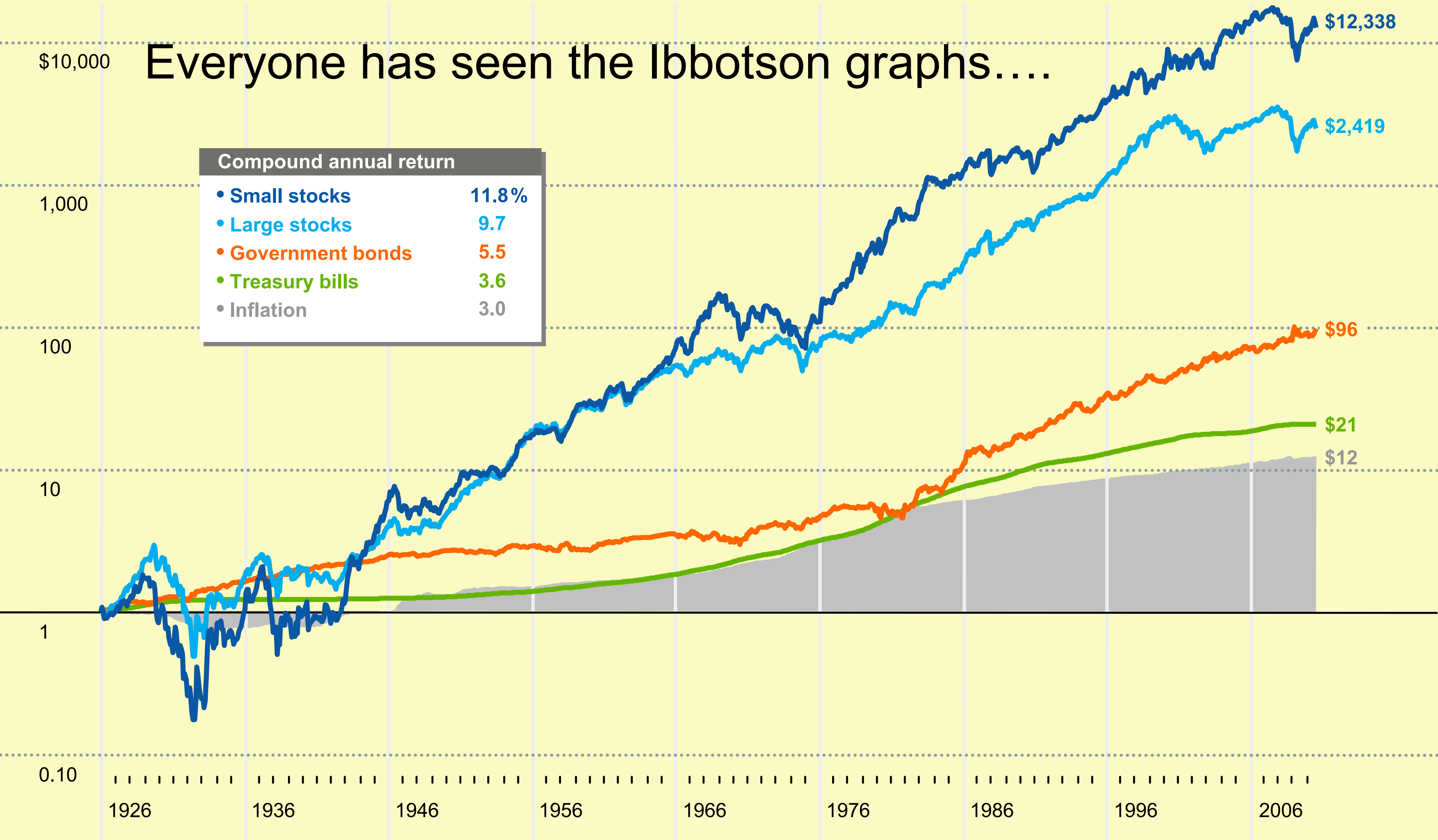
Asset Class Return Expectations: The Dilemma

- Stock markets have provided dismal returns over the last decade which has been an enormous setback for dedicated funds (NDTs, pensions, etc).
- Returns in financial markets are mean-reverting but not sequentially random (autocorrelation). **At times (perhaps most times) the best forecast for long term (ie 10-year) returns is not the 100-year average.**
- There are strong reasons to expect that the return potential available in major asset classes continues to be sub-average.
- The "equity premium" is unusually high, but unfortunately that probably says more about Treasury bond valuations than equity valuations.

Ibbotson® SBBI®

Stocks, Bonds, Bills, and Inflation Jan 1926–June 2010

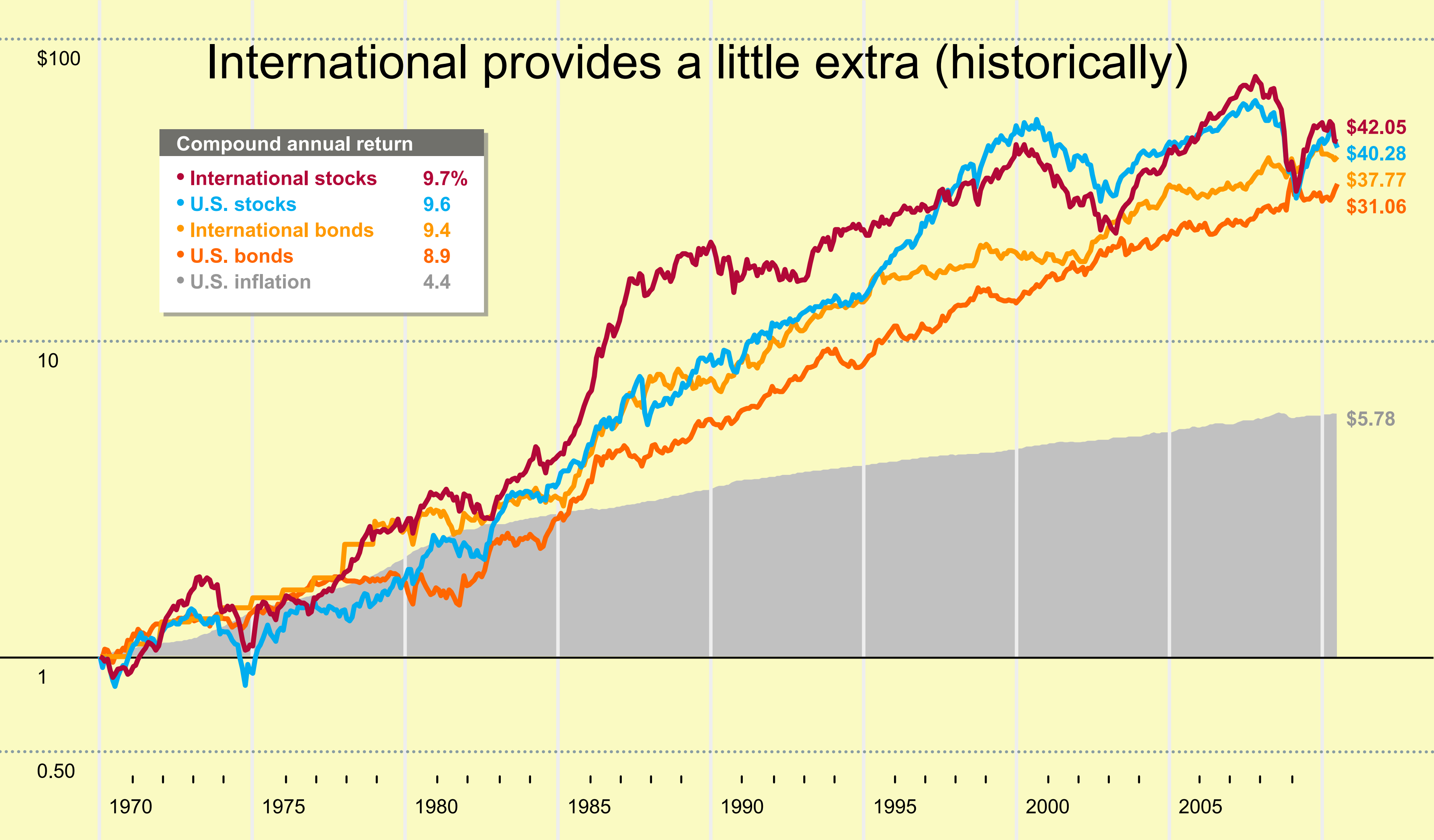
Everyone has seen the Ibbotson graphs….



Past performance is no guarantee of future results. Hypothetical value of $1 invested at the beginning of 1926. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. 10/1/2010

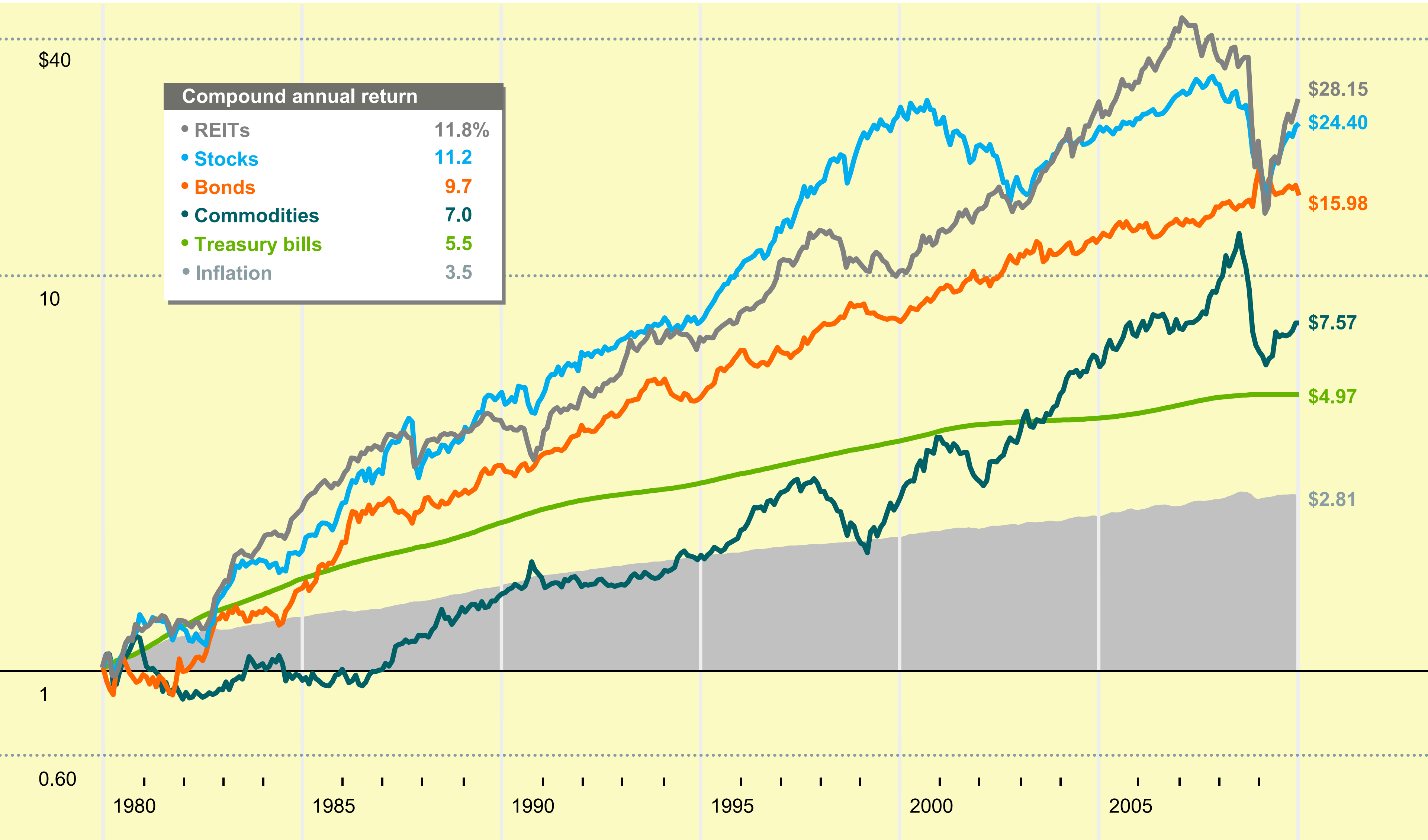
Global Investing

Jan 1970–June 2010



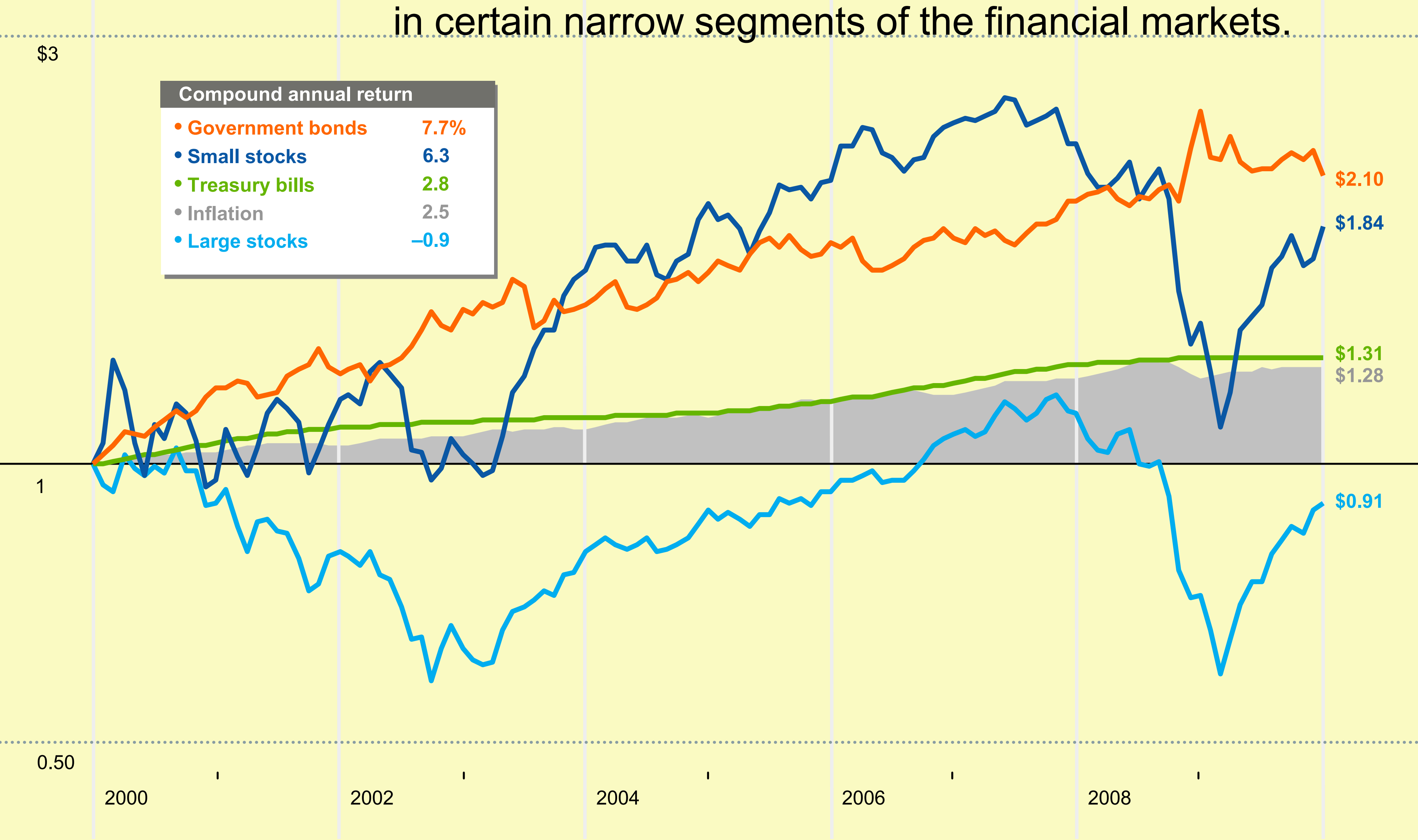
Past performance is no guarantee of future results. Hypothetical value of $1 invested at the beginning of 1970. All values in U.S. dollars. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. 10/1/2010

Stocks, Bonds, Bills, REITs, and Commodities
1980–2009



The Past 10 Years
2000–2009

The last decade was devastating unless you were only in certain narrow segments of the financial markets.



Past performance is no guarantee of future results. Hypothetical value of $1 invested at the beginning of 2000. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. 3/1/2010

Long-Term Asset-Class Performance
1926–2009

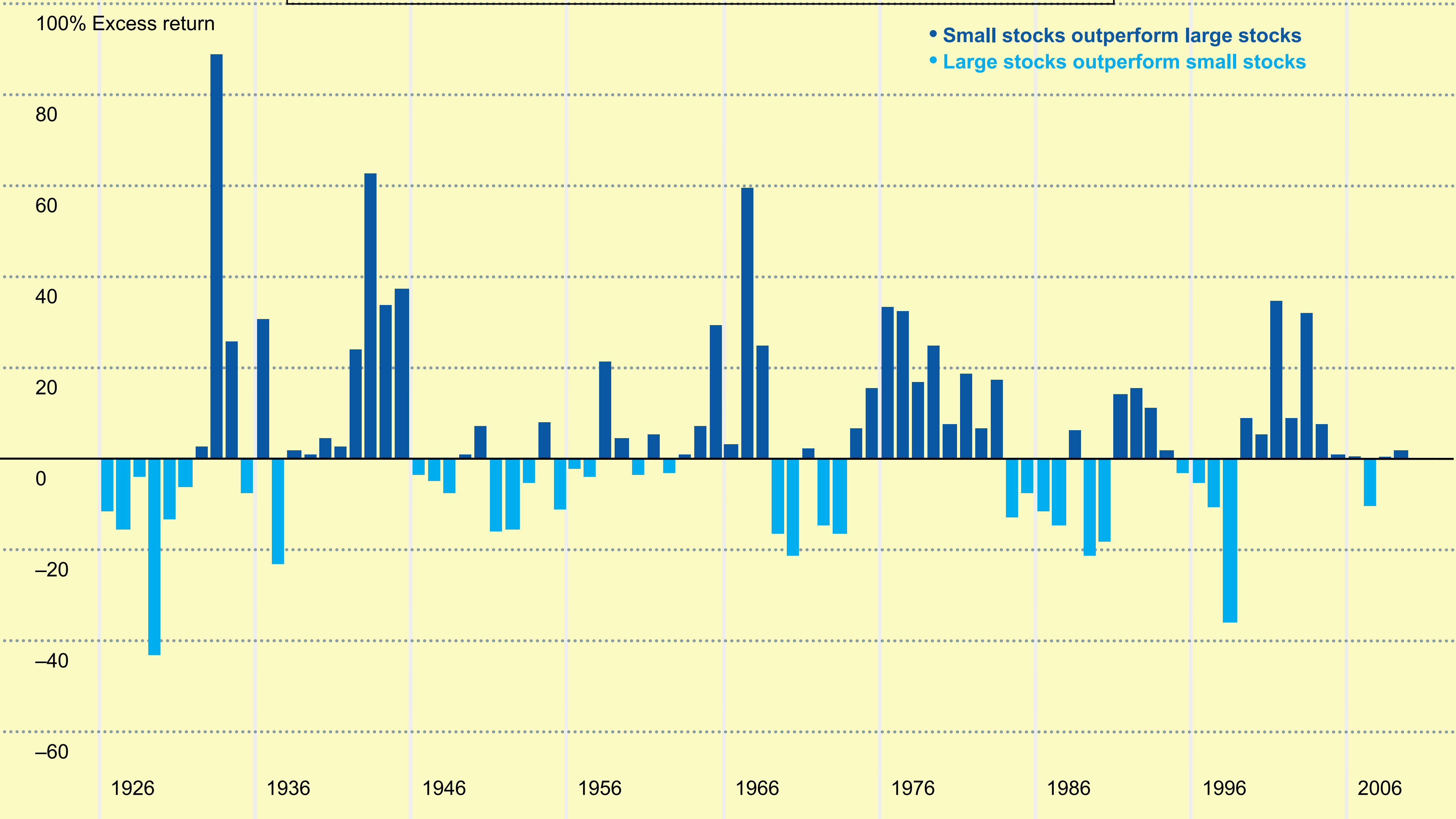
		Small stocks	Large stocks	Government bonds	Treasury bills
Annual	Compound annual return	11.9%	9.8%	5.4%	3.7%
	Standard deviation	32.8%	20.5%	9.6%	3.1%

Should this be our expectation for the future?

Past performance is no guarantee of future results. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index.
3/1/2010

Small Stock Annual Returns Relative to Large Stocks
1926–2009

Autocorrelation = Annual returns are not random!



Past performance is no guarantee of future results. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. 3/1/2010

Asset-Class Winners and Losers

Annual returns are not random!

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Jan-June 2010
Highest return	37.6%	23.0	33.4	28.6	29.8	21.5	22.8	17.8	60.7	20.7	14.0	26.9	11.6	25.9	32.5	13.6
	34.5	17.6	22.8	20.3	27.3	5.9	3.8	1.6	39.2	18.4	7.8	16.2	9.9	1.6	28.1	0.9
	31.7	10.3	15.9	13.1	21.0	0.6	3.7	–6.5	28.7	12.0	7.3	15.8	5.5	–20.7	26.5	0.0
	23.8	6.4	15.9	12.2	14.3	–3.6	–0.8	–13.3	24.8	10.9	5.7	12.9	5.4	–36.7	14.0	–1.0
	11.6	5.2	5.3	4.9	4.7	–9.1	–11.9	–15.7	1.4	8.5	4.9	4.8	4.7	–37.0	0.1	–6.7
Lowest return	5.6	–0.9	2.1	–7.3	–9.0	–14.0	–21.2	–22.1	1.0	1.2	3.0	1.2	–5.2	–43.1	–14.9	–12.9

• Small stocks • Large stocks • International stocks • Long-term government bonds • Treasury bills • Diversified portfolio

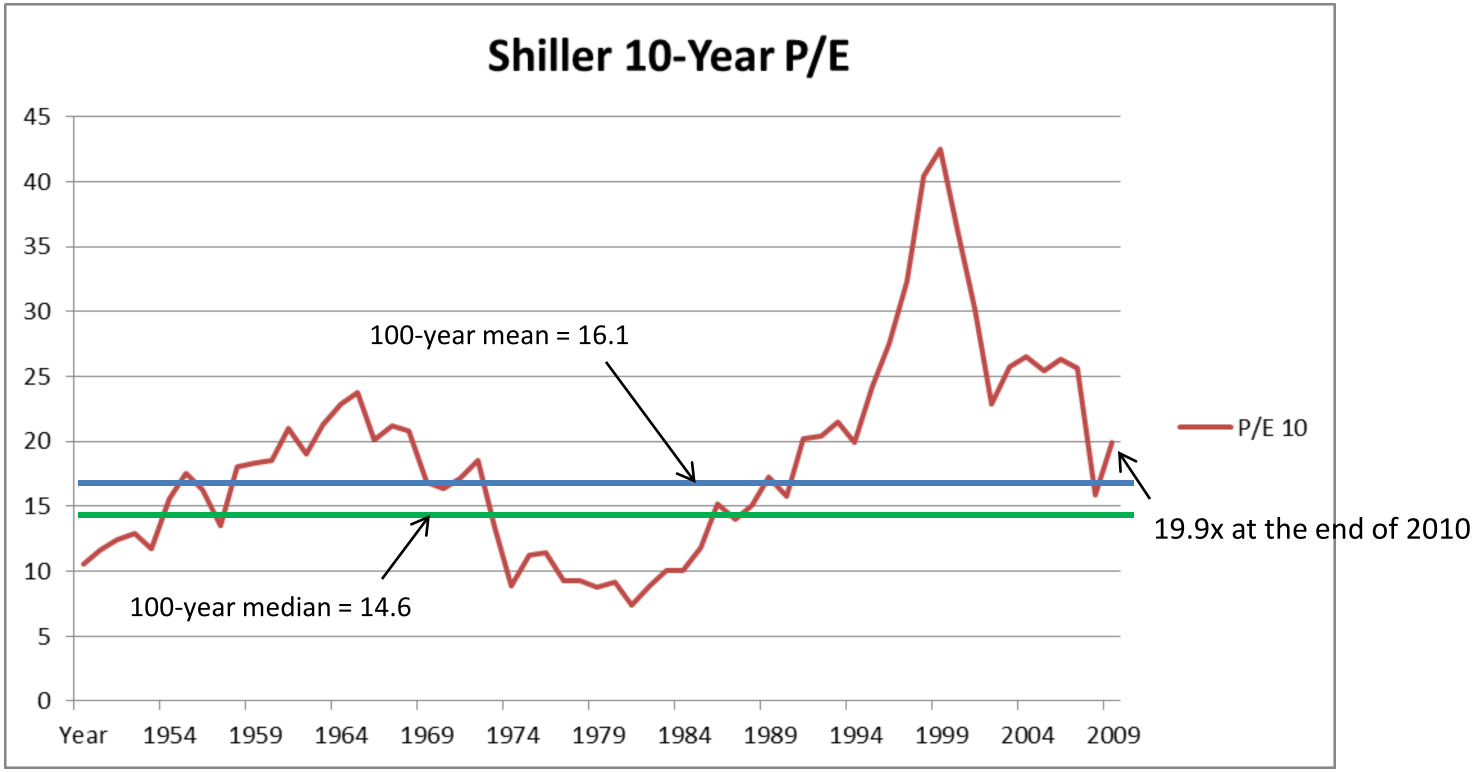
Because returns are not random, one can predict that equity returns will continue to be much slower than in the 80's and 90's

	1981-2000 Annualized	Future	
Dividend Yield	3.4%	< 2.0%	
Profit Growth	6.6%	5.0-7.0%	
P/E Increase	5.7%	0.0%	!
Total	15.7%	7.0-9.0%	!

P/E's increase when inflation, interest rates and capital gains tax rates fall

Source: CRSP, Standard & Poor's, Bernstein

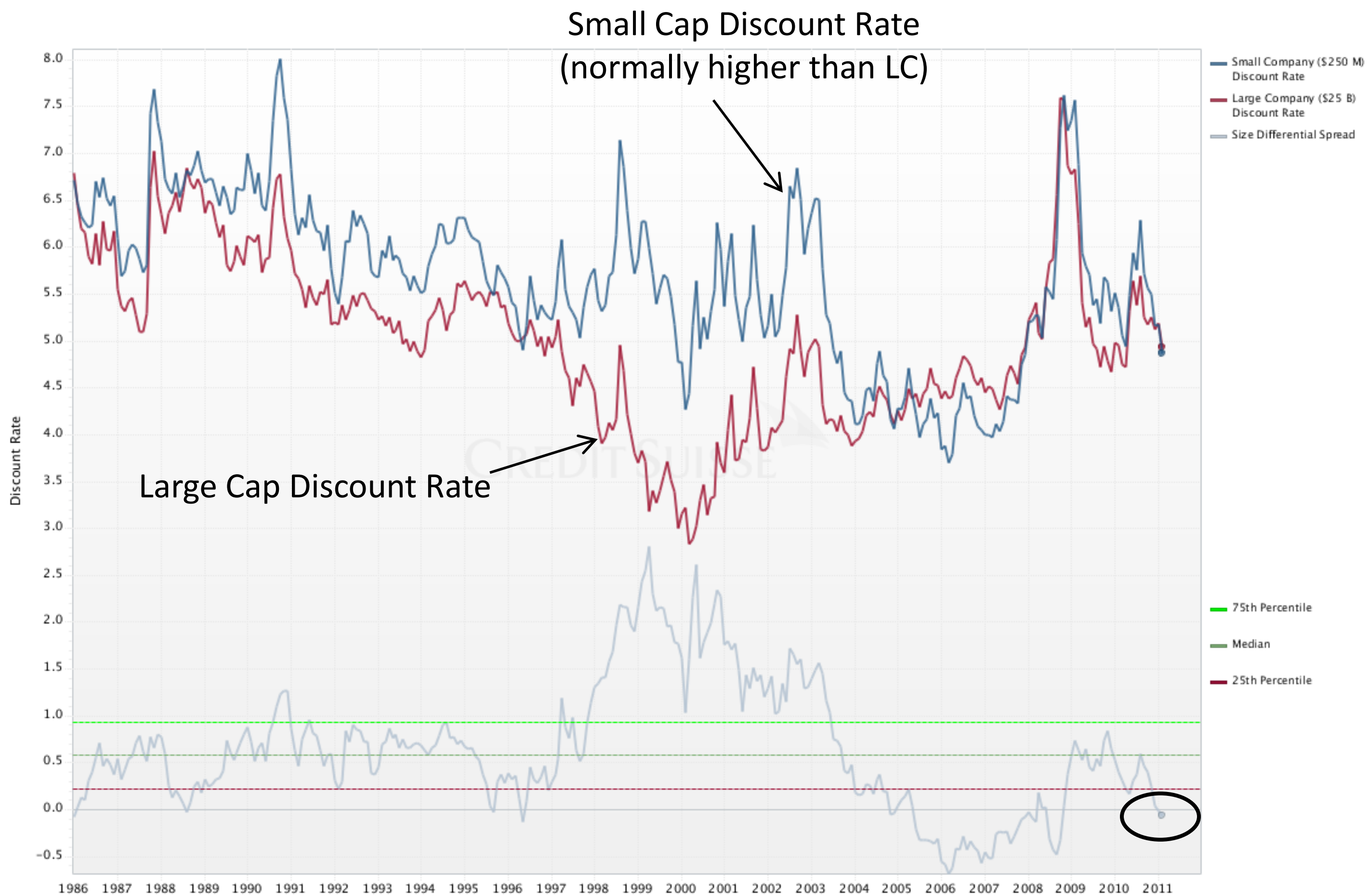
Long-Run US Stock Market P/E Is Still High



Source: Robert Shiller PhD/Yale Economics Department

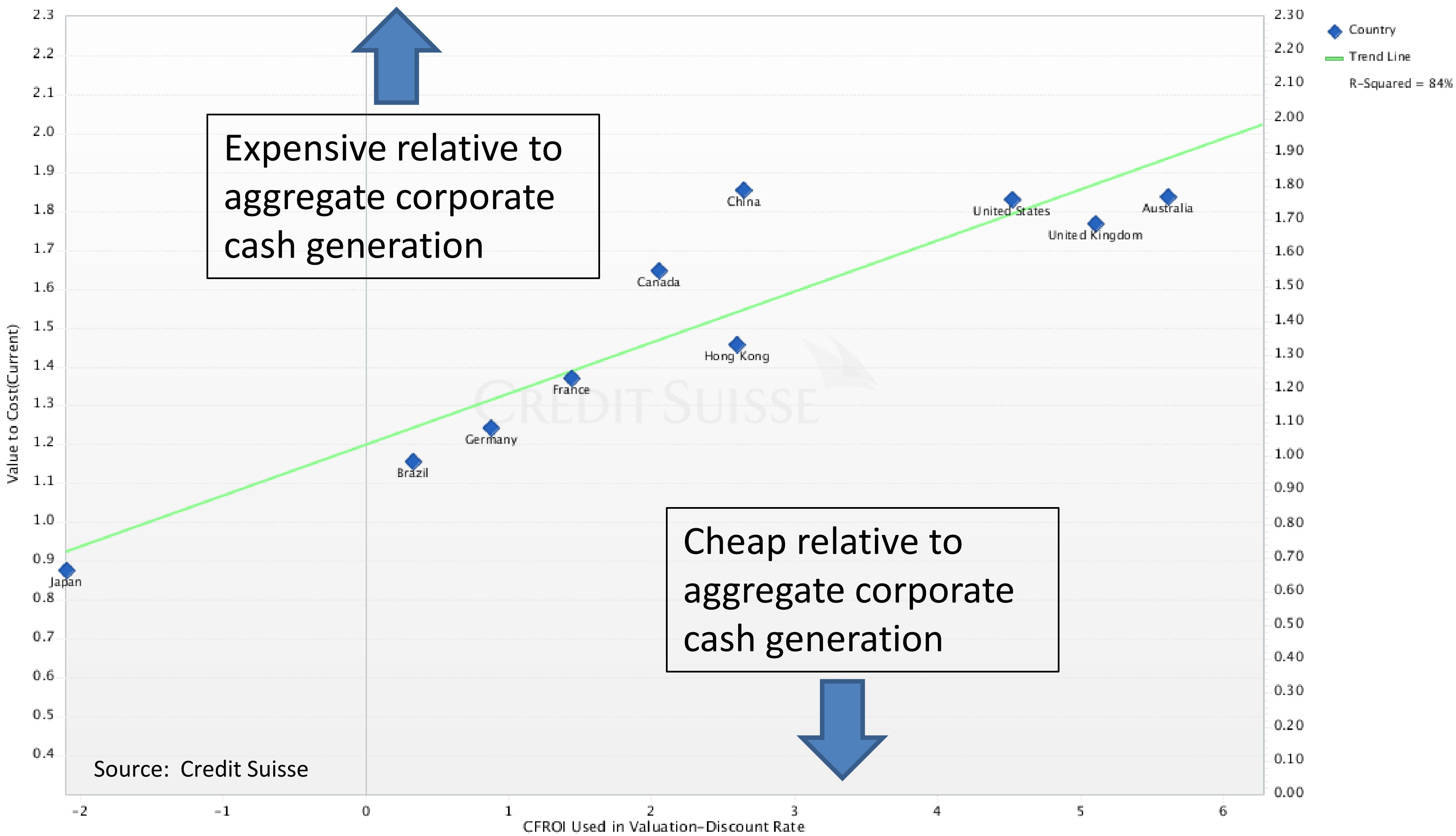
Ten year smoothed P/Es are not predictive of returns over the next 1-2 years but rather 5-10 years. P/Es **should** be relatively high when interest rates and inflation are low but neither are likely to go lower (or even stay as low as they are now). Suggests below average prospective US equity market returns.

Smaller cap stocks are relatively expensive

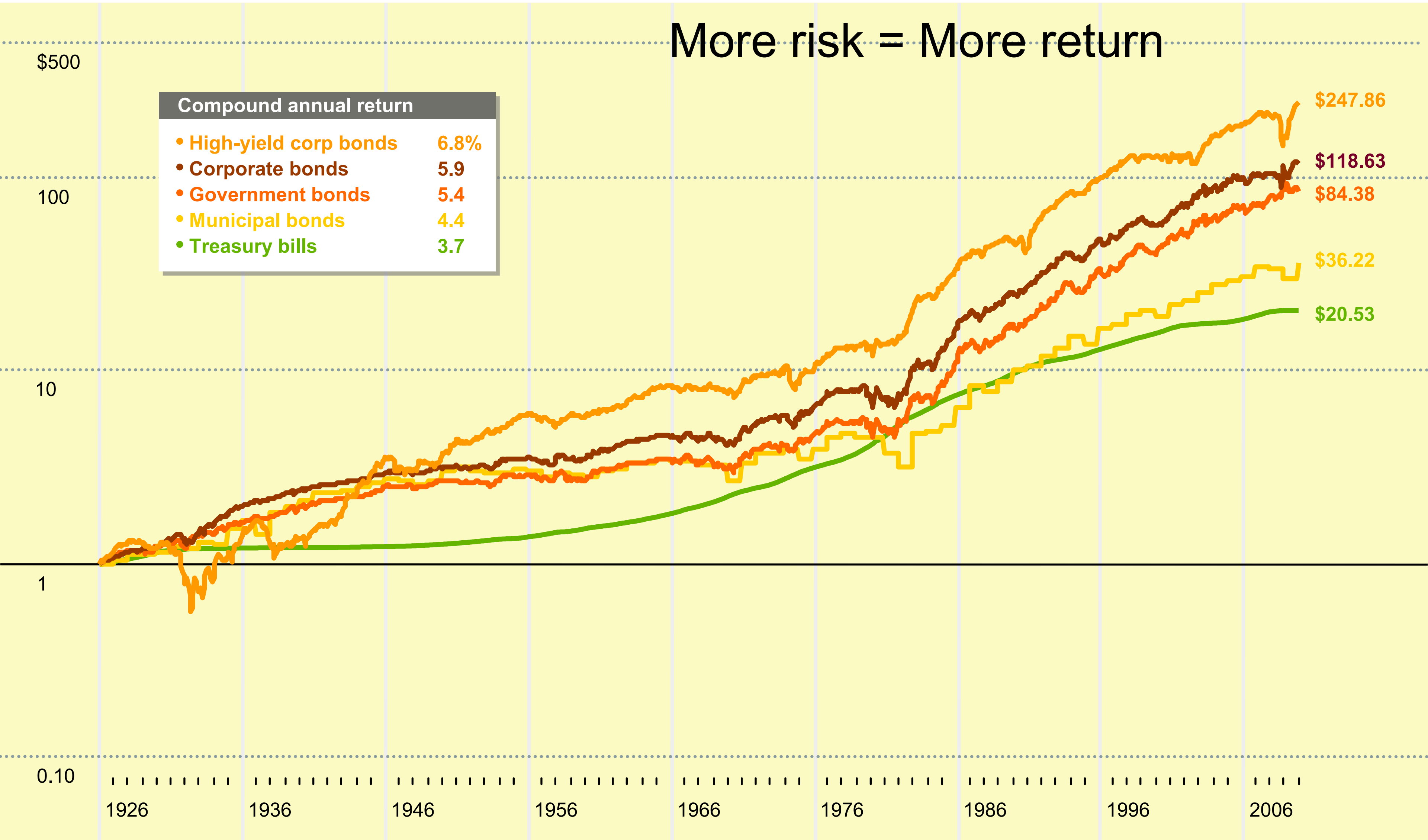


Source: Credit Suisse

Foreign Markets' Excess Return Potential Isn't Unusual

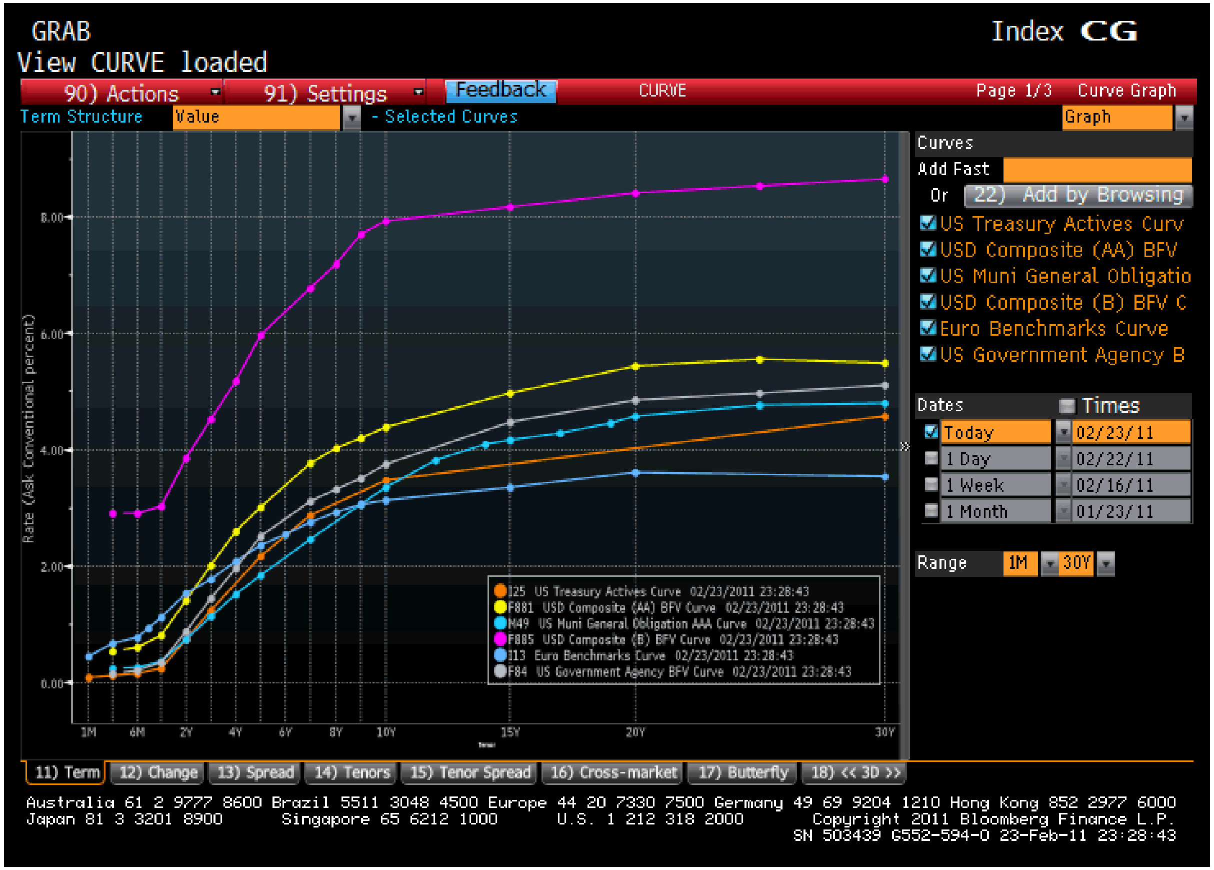


Bond Market Performance
1926–2009



Past performance is no guarantee of future results. Hypothetical value of $1 invested at the beginning of 1926. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. 3/1/2010

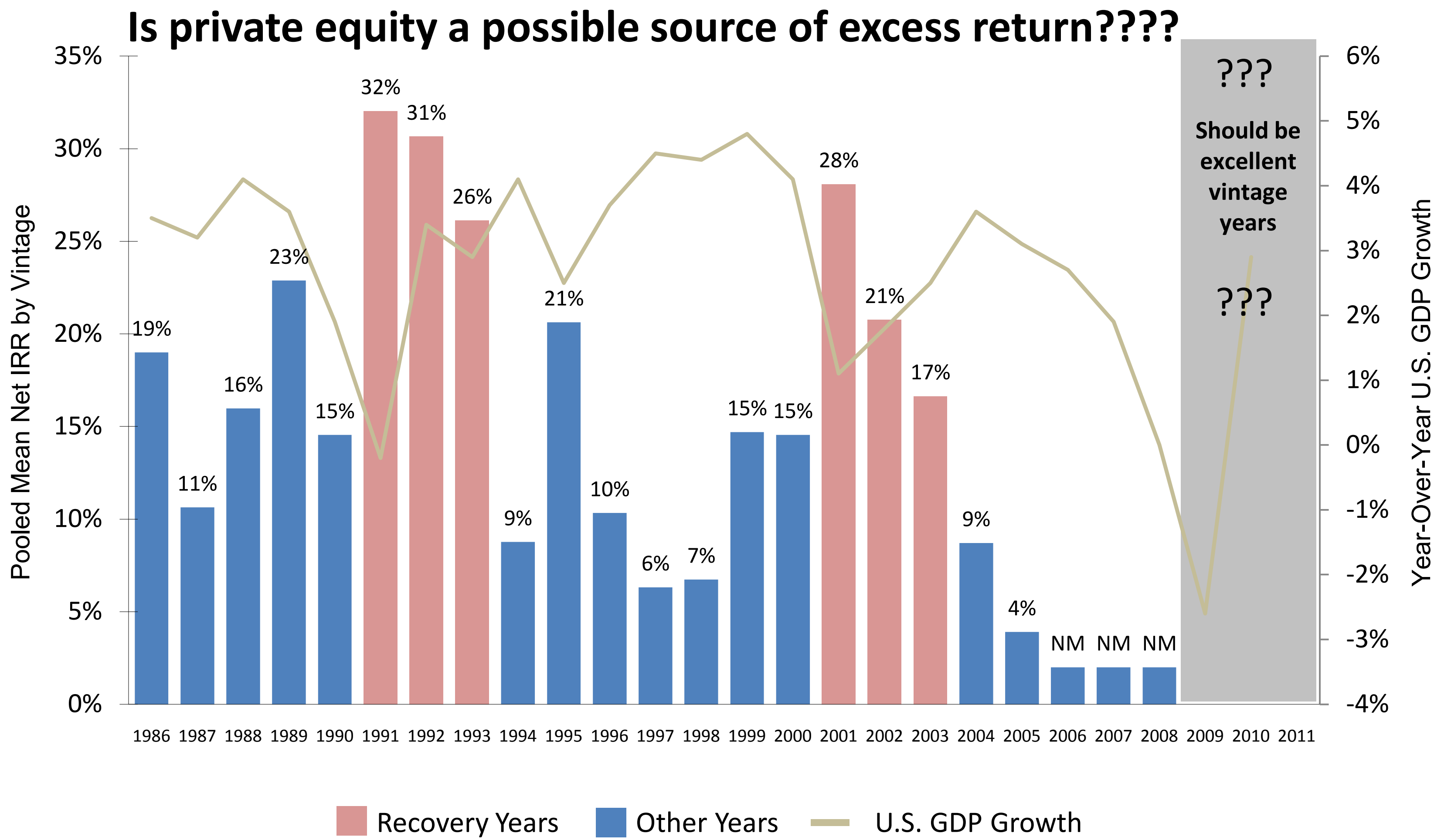
Bond Duration Dilemma – Current Environment



The yield curve is steep but still relatively low on the long end… A lot of extra risk to capture a mediocre return, but going short and waiting it out dilutes long term returns as well.

Post-Recession Years Have Provided Best Private Equity Vintages

Private Equity Returns by Vintage vs. U.S. GDP Growth



Sources: U.S. Department of Commerce (GDP data 1986-2010); Cambridge Associates LLC (U.S. Private Equity Benchmark Statistics as of September 30, 2010. Pooled mean net IRR to limited partners by vintage year. Based on data compiled from 858 U.S. private equity funds, including fully liquidated partnerships, formed between 1986 and 2009). Returns are net of fees, expenses and carried interest. Vintage year funds formed since 2006 are too young to have produced meaningful returns. Analysis and comparison of partnership returns to benchmark statistics may be irrelevant. Past performance is no indication of future performance or results.

Asset Class Return Expectations

- The return prospects for most major asset classes continues to be below average – not negative, just sub-par. A bad decade doesn't necessarily foreshadow a roaring one.
  - Developed market equities could do better than expected if emerging economies spark unusual earnings growth in developed economies.
- Incremental return may be found in "alternative investments" such as private equity (which typically do well after periods of distress) or "safe spread" approaches in fixed income investing. But the economic truth that More Return = More Risk remains in effect.