Groundhog Day

Yeske Buie

The more things change . . .

"The error of optimism dies in the crisis, but in dying it gives birth to an error of pessimism. This new era is born not an infant, but a giant.

Arthur C. Pigou, Cambridge economist, 1920

Fundamental Realities

- **<u>Problem</u>:** We don't know what's going to happen next.

- **<u>The REAL problem</u>:** We keep convincing ourselves that we do.

Nassim Taleb

- The Black Swan: an event that is completely outside our assumptions.
- What we do AFTER the Black Swan: we *explain* to ourselves how *inevitable* it was, thus leading to the belief that we'll be able to predict the next one.
- Can you say . . .
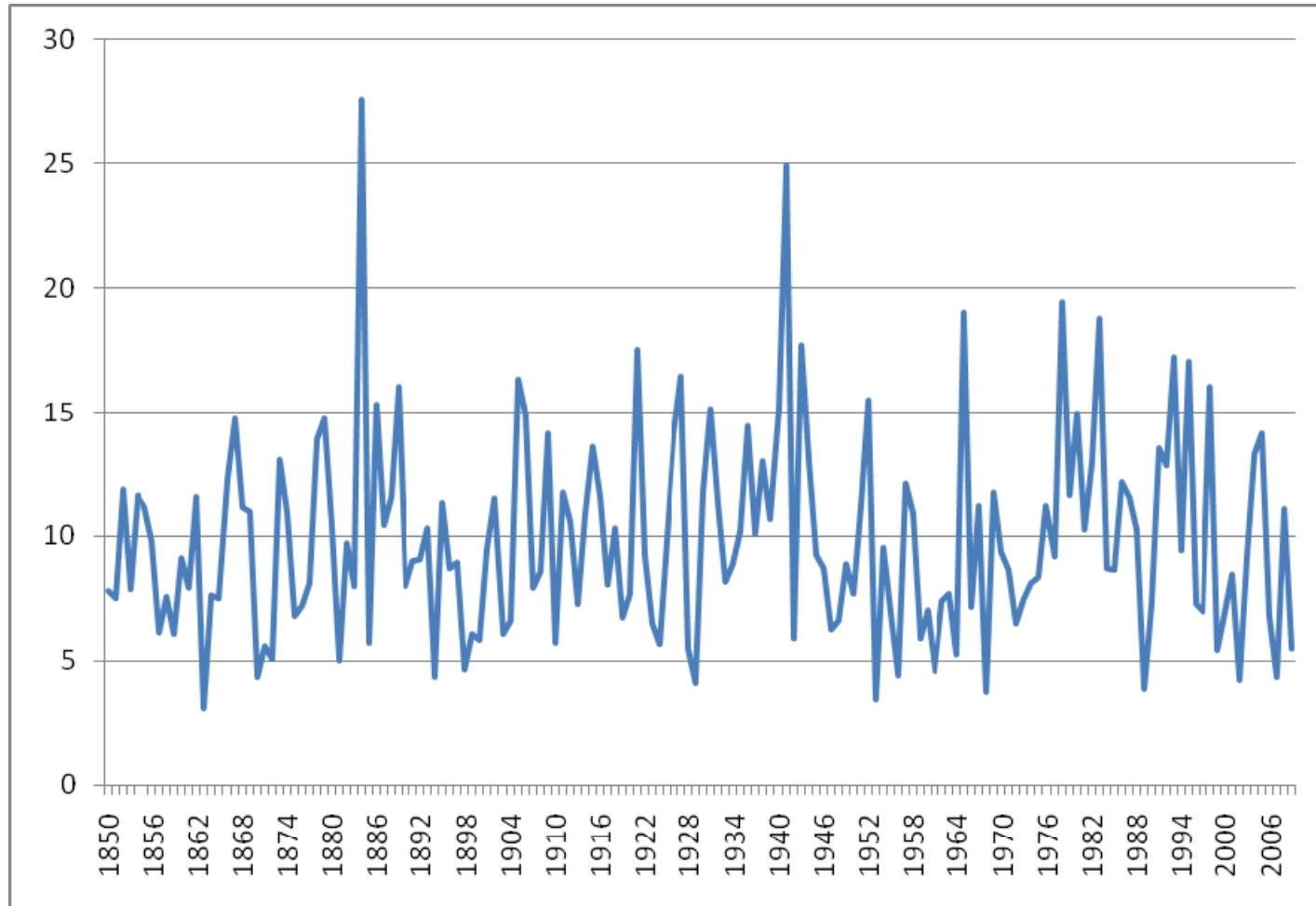- Tech Stock Bubble
- Real Estate Bubble
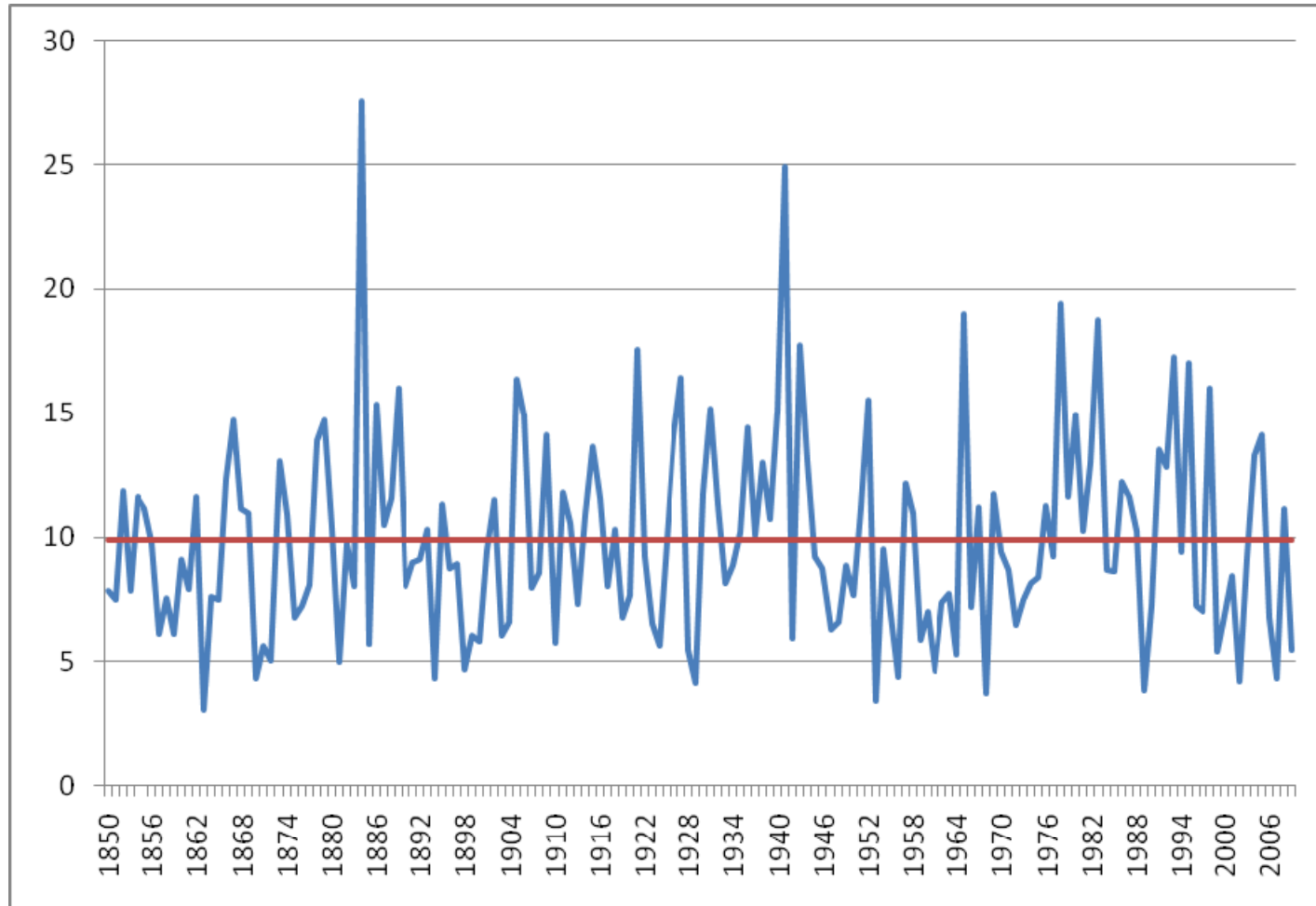
The Limits of Prediction

Highest Return ↑ ... ↓ **Lowest Return**

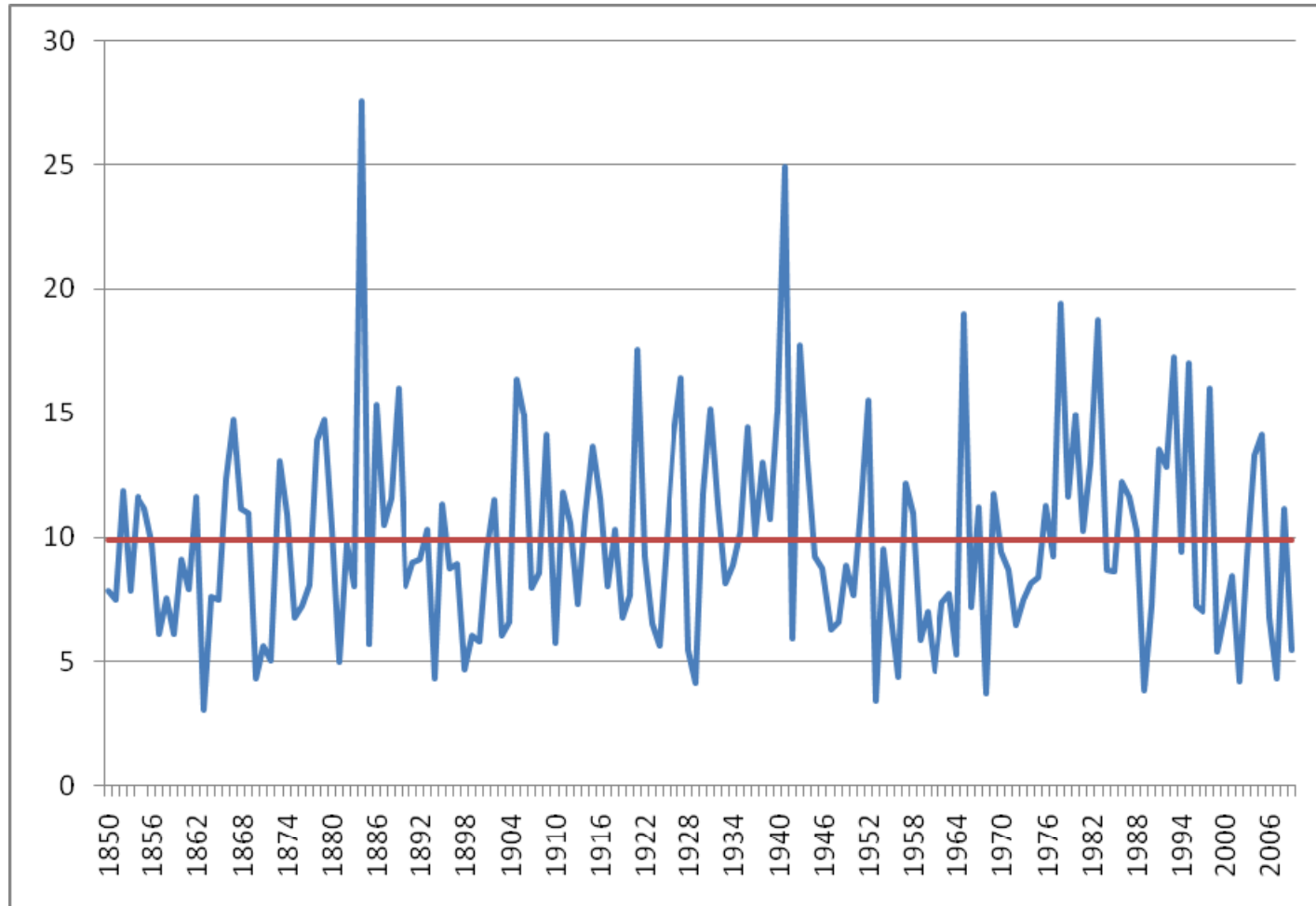| 1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Austria 176.27	Spain 121.22	Japan 43.00	Belg. 53.61	Austria 103.91	UK 10.29	H.K. 49.51	H.K. 32.29	H.K. 116.67	Norway 23.57	Switz. 44.11	Spain 40.05	Switz. 44.25	Belg. 67.76	Sing. 99.42	Switz. 5.83	Austral. 1.68	Austria 16.56	Austria 58.03	Austria 71.52	Can. 28.31	Spain 49.36	H.K. 41.20	Japan -29.21	Norway 87.07
Ger. 135.23	Italy 108.31	Spain 36.91	Den. 52.70	Ger. 46.28	H.K. 9.18	Austral. 33.65	Switz. 17.24	Sing. 67.97	Japan 21.44	US 37.14	Sweden 37.22	Italy 35.50	Italy 52.53	Sweden 79.76	Can. 5.35	Austria -5.63	Austral. -1.34	Spain 55.70	Belg. 43.53	Japan 25.52	Sing. 46.71	Ger. 35.21	Switz. -30.49	Austral. 76.43
Italy 131.71	Japan 99.41	UK 35.07	Sweden 48.32	Norway 45.53	Austria 6.35	US 30.07	US 6.39	Switz. 45.75	Sweden 18.33	Sweden 33.39	H.K. 33.07	Den. 34.54	Spain 49.90	Japan 61.54	Den. 3.47	Norway -10.90	Italy -7.25	Sweden 54.73	Austria 38.39	Austria 24.64	Norway 45.12	Norway 31.43	US -37.57	Sing. 73.96
Switz. 105.76	Belg. 78.39	Den. 13.23	Norway 42.40	Den. 43.92	Norway 0.66	Sing. 24.94	France 6.29	Norway 42.02	Neth. 11.70	Spain 29.83	Neth. 28.64	US 33.38	France 41.53	H.K. 59.51	Norway -0.89	Spain -11.34	Switz. -7.33	Austria 54.73	Sweden 36.28	Norway 24.50	Sweden 43.39	Can. 29.57	Spain -40.60	Sweden 64.16
France 82.03	France 78.36	Can. 11.66	France 37.86	Sing. 42.29	Den. -0.91	France 17.83	France 2.80	Sweden 37.00	Italy 11.55	Neth. 27.72	Neth. 27.51	Spain 25.43	US 30.14	US 51.77	Italy -1.31	Can. -12.22	Japan -10.30	Can. 54.14	Italy 32.49	Den. 24.26	Den. 38.77	Sing. 28.35	France -43.27	H.K. 60.15
Belg. 76.60	Sweden 65.60	Austral. 9.25	Austral. 36.40	France 36.14	US -3.15	Neth. 17.81	Neth. 2.30	Ger. 35.67	Belg. 8.23	Belg. 25.88	UK 27.44	Ger. 24.58	Ger. 29.44	Norway 31.68	Neth. -4.10	US -12.39	Switz. -10.30	Den. 52.27	Den. 30.82	Switz. 16.33	Belg. 36.66	Austral. 28.34	Can. -45.51	Belg. 57.49
Norway 68.62	H.K. 56.10	Belg. 7.86	Japan 35.38	Neth. 35.78	Neth. -3.19	Den. 16.55	Belg. -1.46	Neth. 35.28	Sing. 6.70	H.K. 22.58	Can. 26.34	Neth. 23.77	Switz. 23.53	France 29.26	France -4.32	UK -14.06	Sing. -11.05	Austral. 49.94	Austral. 30.34	Austral. 16.02	Austria 36.54	Den. 25.59	Ger. -45.87	Can. 56.18
Den. 60.30	Sing. 45.18	Neth. 7.06	Sing. 33.35	Sweden 31.82	Switz. -6.22	UK 16.02	UK -3.67	Austral. 35.18	Austral. 5.40	UK 21.26	US 23.24	UK 22.61	Neth. 23.22	Ger. 21.92	US -9.94	Can. -14.80	Can. -13.21	Norway 39.39	Spain 28.93	Sing. 14.37	Ger. 35.99	Spain 23.95	Sing. -47.35	UK 43.48
Neth. 59.62	Austral. 42.28	Norway 5.66	H.K. 28.10	US 30.01	US -9.36	Switz. 15.75	Den. -10.28	Den. 32.81	Ger. 4.66	Den. 18.78	UK 21.80	Belg. 13.56	UK 17.82	Den. 20.03	US -11.54	H.K. -18.61	US -14.96	Den. 38.19	H.K. 24.98	Neth. 13.85	France 34.48	US 20.59	Den. -47.56	Austria 43.20
Sweden 56.94	Neth. 40.73	US 2.91	Ger. 20.60	Switz. 26.20	Belg. -10.97	Spain 15.62	Austria -10.64	Spain 29.76	Den. 3.76	Ger. 16.41	France 21.19	Sweden 12.93	Sweden 13.96	Austral. 17.62	Austria -11.97	UK -20.44	UK -15.22	France 37.81	Sing. 22.27	Sweden 10.31	Italy 32.49	France 13.24	Neth. -48.22	Neth. 42.25
Spain 54.73	Ger. 35.29	Sing. 2.29	US 14.61	UK 21.87	Sing. -11.68	Sweden 14.42	Austral. -10.84	Italy 28.53	Switz. 3.54	Can. 16.09	Austral. 16.47	France 11.94	Den. 8.98	UK 12.44	Switz. -12.84	Spain -21.36	Spain -15.29	Japan 35.90	Can. 22.20	Ger. 9.92	Neth. 31.38	UK 8.36	UK -48.34	Den. 36.57
UK 53.04	Austria 34.75	Austria 2.23	Can. 14.25	Can. 21.36	France -13.84	Belg. 13.76	Can. -14.22	Austria 28.09	US 1.13	France 14.12	Ger. 13.57	Can. 11.20	Austral. 6.07	Can. 12.08	H.K. -14.75	Neth. -22.11	Den. -16.04	Belg. 32.31	UK 19.57	Can. 9.88	UK 30.86	Italy 6.06	Sweden -49.86	France 31.83
H.K. 51.68	Switz. 33.37	Sweden 2.00	Neth. 14.17	Italy 19.41	Spain -13.84	Japan 8.91	Sweden -14.43	Japan 25.45	UK -1.61	Austral. 11.19	Italy 12.59	Norway 6.25	Japan 5.03	Neth. 6.88	Ger. -15.59	France -22.36	H.K. -17.79	UK 31.26	France 18.48	Belg. 9.05	UK 30.61	US 5.44	Italy -49.98	Italy 26.57
Japan 43.03	UK 26.96	H.K. -4.12	Spain 13.55	Belg. 17.30	Can. -15.32	Can. 8.29	Japan -21.45	UK 24.43	Spain -4.82	Sing. 6.47	Belg. 12.03	Austria 1.58	Austria 0.34	Spain 4.83	Spain -15.86	Austria -22.39	Neth. -20.84	H.K. 29.93	Ger. 16.17	H.K. 8.40	H.K. 30.35	Switz. 5.29	Austral. -50.67	US 26.25
US 31.08	US 16.28	Switz. -9.46	Italy 11.46	Spain 9.75	Austral. -17.53	Ger. 8.15	Spain -21.86	Belg. 23.51	Can. -4.86	Norway 6.02	Austria 4.51	Austral. -10.43	H.K. -2.90	Italy -0.26	Belg. -16.85	Sing. -23.42	France -21.19	Japan 29.04	UK 15.86	US 7.35	Switz. 27.40	Austria 2.17	H.K. -51.21	Switz. 25.31
Austral. 19.55	Can. 7.44	France -13.82	Switz. 6.17	Austral. 9.29	Italy -19.20	Italy -1.83	Italy -22.22	France 20.90	France -5.18	Italy 1.05	Switz. 2.27	H.K. -23.28	Can. -7.43	Switz. -7.03	Sweden -21.27	US -26.60	US -23.09	Switz. 28.41	US 14.96	US 5.14	Sweden 17.8	Norway 0.62	Norway -64.24	Ger. 25.15
Can. 15.05	Den. 1.25	Italy -21.31	UK 5.93	H.K. 8.38	Sweden -21.00	Austria -12.23	Norway -22.30	Can. 15.10	Austria -6.28	Japan 0.70	Japan -6.88	Japan -23.67	Sing. -12.86	Austria -9.11	Sing. -27.73	Sweden -27.18	Sweden -30.49	Sing. 28.22	Neth. 12.24	Spain 4.41	US 14.67	Belg. -2.73	Belg. -66.48	Spain
Sing. -22.18	Norway -2.52	Ger. -24.75	Austria 0.58	Japan 1.72	Japan -36.11	Norway -15.50	Sing. -28.25	US 9.15	H.K. -28.91	Austria -4.73	Norway -15.50	Sing. -30.05	Norway -30.06	Belg.	Japan -30.05	Japan -30.06	Japan -33.19	US 22.80	Italy 1.90	Italy 1.90	Japan 6.24	Japan -4.23	Austria -68.41	Japan 6.25

Volatile Asset Class
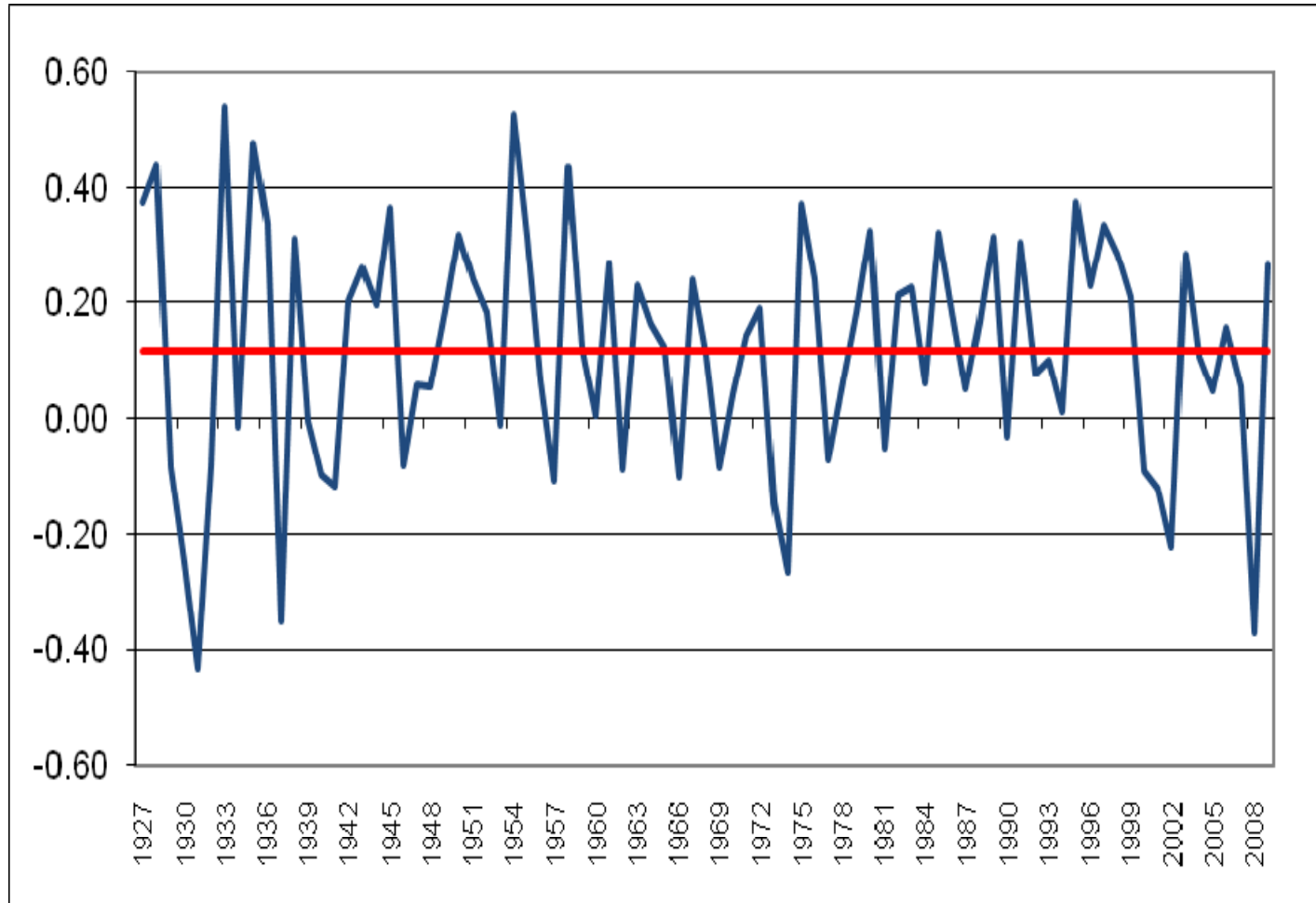
Volatile Asset Class

Annual Rainfall

San Diego, CA 1850 - 2009

And What's This?

S&P 500 1927 - 2009

The Markets Are Like the Weather

Complexity Theory

- **<u>Definition</u>:** the study of complex and chaotic systems and how order, pattern, and structure can arise from them.
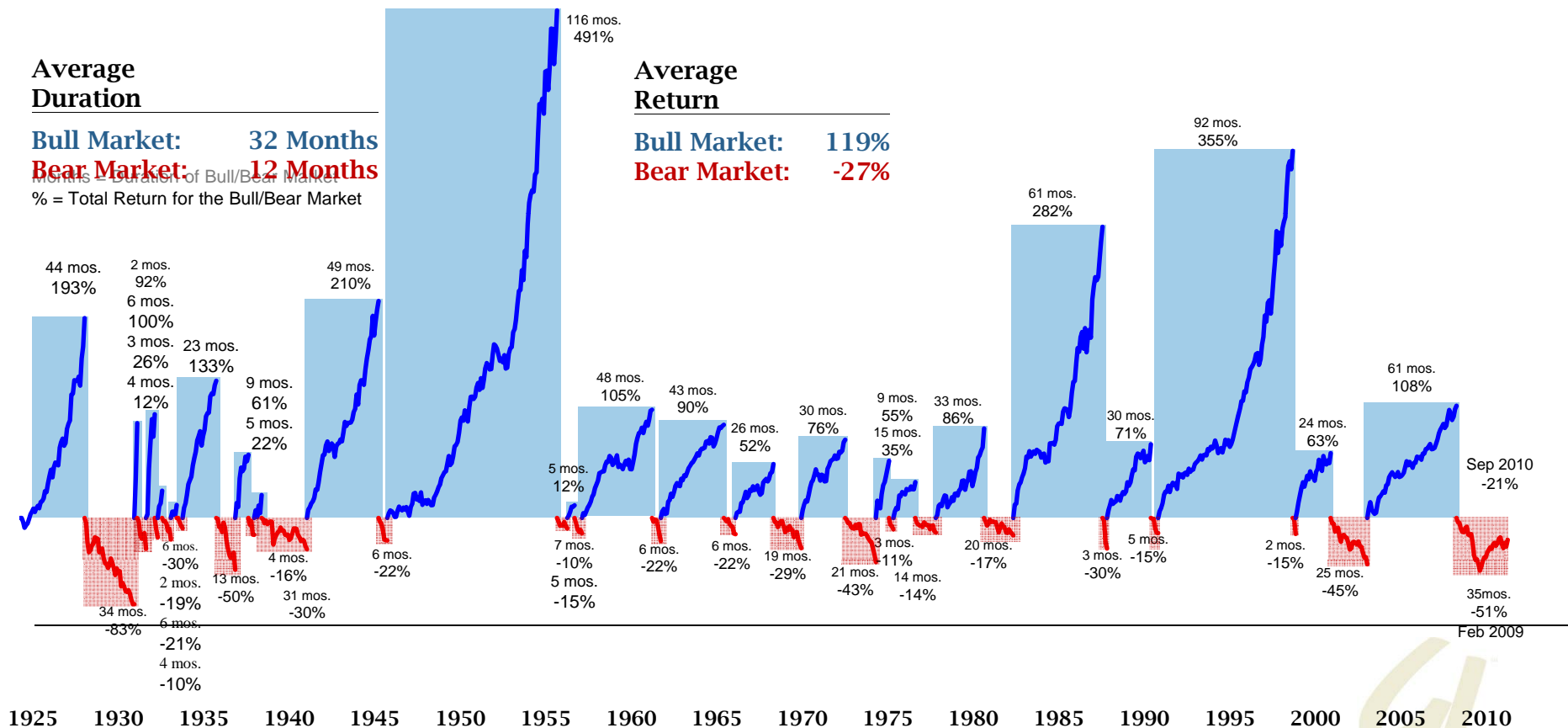 See also chaos.

Order, Pattern, and Structure

- What are the regularities that we find?
- The ebb and flow of the business cycle
- Equity returns over the risk-free return
- Value stocks over growth stocks
- Small company stocks over large

Bull and Bear Markets

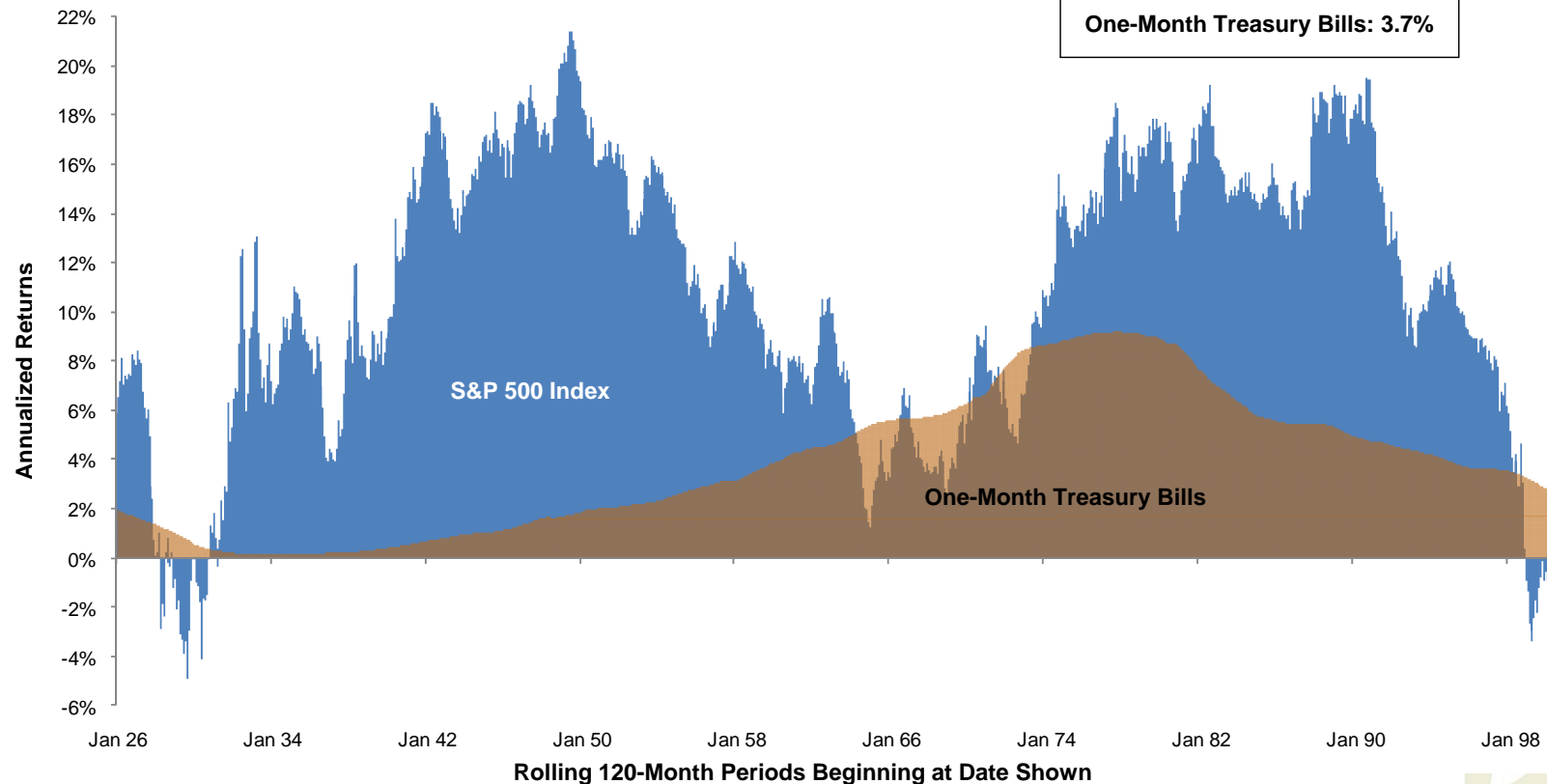## S&P 500 Index (USD) Monthly Returns: January 1926–September 2010

Months = Duration of Bull/Bear Market
% = Total Return for the Bull/Bear Market

Average Duration

Bull Market: 32 Months
Bear Market: 12 Months

Average Return

Bull Market: 119%
Bear Market: -27%

116 mos. 491%

44 mos. 193%
2 mos. 92%
6 mos. 100%
3 mos. 26%
23 mos. 133%
4 mos. 12%
49 mos. 210%
9 mos. 61%
5 mos. 22%
48 mos. 105%
43 mos. 90%
26 mos. 52%
30 mos. 76%
9 mos. 55%
15 mos. 35%
33 mos. 86%
61 mos. 282%
92 mos. 355%
30 mos. 71%
24 mos. 63%
61 mos. 108%
5 mos. 12%
Sep 2010 -21%

6 mos. -30%
2 mos. -19%
34 mos. -83%
6 mos. -21%
4 mos. -10%
13 mos. -50%
4 mos. -16%
31 mos. -30%
6 mos. -22%
7 mos. -10%
5 mos. -15%
6 mos. -22%
6 mos. -22%
19 mos. -29%
3 mos. -11%
21 mos. -43%
14 mos. -14%
20 mos. -17%
3 mos. -30%
5 mos. -15%
2 mos. -15%
25 mos. -45%
35 mos. -51%
Feb 2009

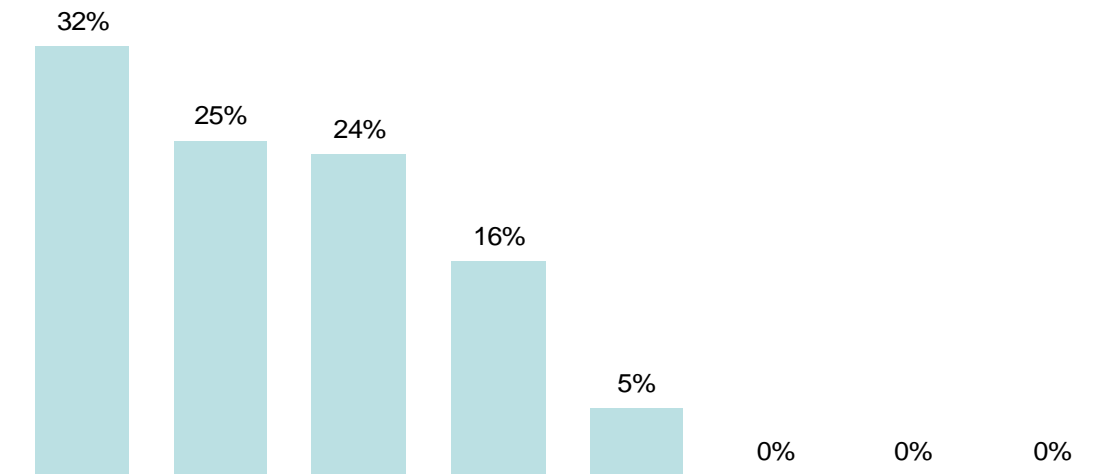1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010

Indices are not available for direct investment; its performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results. The S&P data are provided by Standard & Poor's Index Services Group. Bull and bear markets are defined in hindsight using cumulative monthly returns. A bear market (1) begins with a negative monthly return, (2) must achieve a cumulative return less than or equal to -10%, and (3) ends at the most negative cumulative return prior to achieving a positive cumulative return. All data points which are not considered part of a bear market are designated as a bull market.

Bull and Bear Markets

MSCI EAFE Index, (USD) Monthly Returns: January 1970–September 2010

Average Duration

Bull Market:	**24 Months**
Bear Market:	**12 Months**

Months = Duration of Bull/Bear Market
% = Total Return for the Bull/Bear Market

37 mos.
323%

55 mos.
206%

34 mos.
103%

39 mos.
93%

57mos.
93%

18 mos.
67%

7 mos.
41%

26 mos.
47%

13 mos.
36%

15 mos.
53%

4 mos.
19%

5 mos.
26%

18%

Sep 2010
-29%

5 mos.
-15%

5 mos.
-13%

9 mos.
-13%

2 mos.
-11 %

17 mos.
-20%

4 mos.
-17%

2 mos.
-15%

20 mos.
-15%

4 mos.
-11%

2 mos.
-15%

18 mos.
-42%

9 mos.
-31%

39 mos.
-48%

35 mos.
-57%
Feb 2009

1970	1974	1978	1982	1986	1990	1994	1998	2002	2006	2010

Stocks vs. the Risk-Free Rate
January 1926–December 2009

The S&P 500 has Beaten Treasury Bills in 84% of all Ten-Year Periods
Rolling 120-Month Annualized Returns (889 Total Periods)

January 1926–December 2009	
Annualized Return	
S&P 500 Index:	**9.8%**
One-Month Treasury Bills:	**3.7%**

S&P 500 Index

One-Month Treasury Bills

Annualized Returns

Rolling 120-Month Periods Beginning at Date Shown

Fixed Income vs. Large Stocks
Monthly: January 1926-December 2009

Rolling Time Periods	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	30 Years	40 Years
Total Number of Periods	997	973	949	889	829	769	649	529
Number of Periods One-Month T-Bills Outperformed S&P 500 Index	323	242	226	138	44	0	0	0

32% 25% 24% 16% 5% 0% 0% 0%

Percentage of All Rolling Periods Where One-Month T-Bills Outperformed S&P 500 Index

Value Stocks vs. Large Stocks
Monthly: July 1926-December 2009

Rolling Time Periods	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	30 Years	40 Years
Total Number of Periods	991	967	943	883	823	763	643	523
Number of Periods US Large Value Index Outperformed S&P 500 Index	578	599	601	627	655	609	579	511

58%   62%   64%   71%   80%   80%   90%   98%
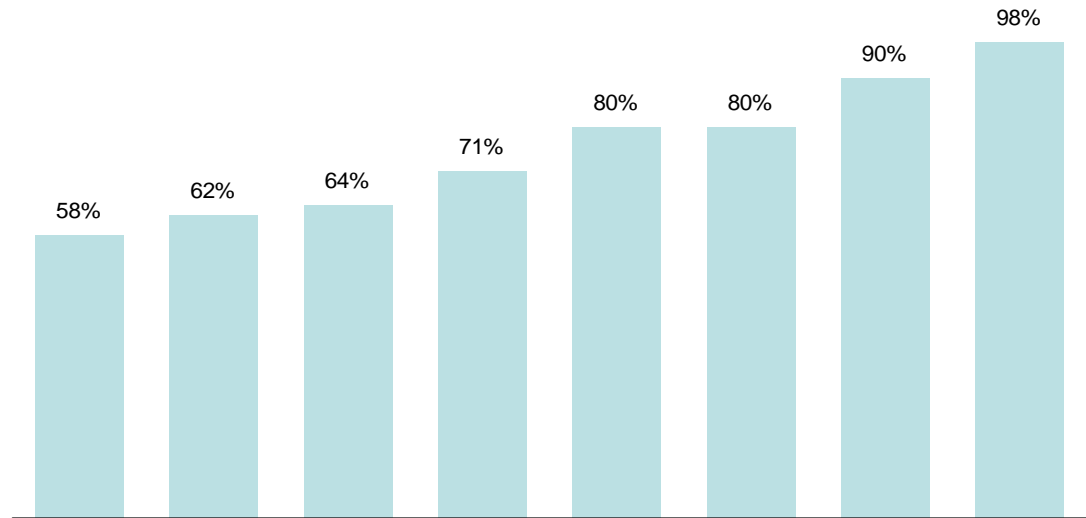
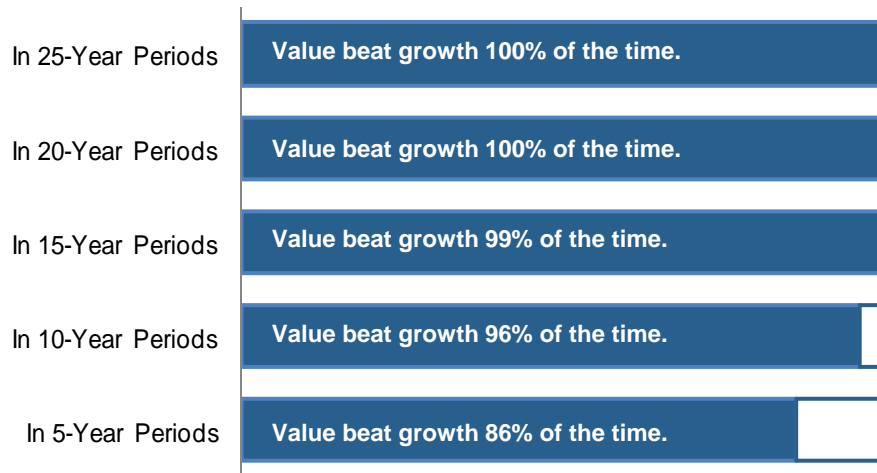**Percentage of All Rolling Periods Where US Large Value Index Outperformed S&P 500 Index**

US Large Value Index is Fama/French US Large Value Index (ex utilities), provided by Fama/French. The S&P data are provided by Standard & Poor's Index Services Group. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio.
Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. Even a long-term investment approach cannot guarantee a profit. Economic, political, and issuer-specific events will cause the value of securities, and the portfolios that own them, to rise or fall. Because the value of your investment in a portfolio will fluctuate, there is a risk that you will lose money. Indexes are referred to for comparative purposes only and do not represent similar asset classes in terms of components or risk exposure; thus, their returns may vary significantly. The S&P 500 Index measures the performance of large cap US stocks. US Large Value Index measures the performance of US stocks with lower price-to-book ratios.
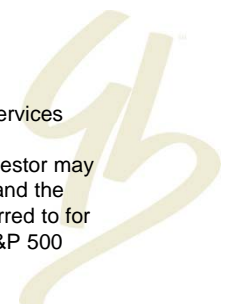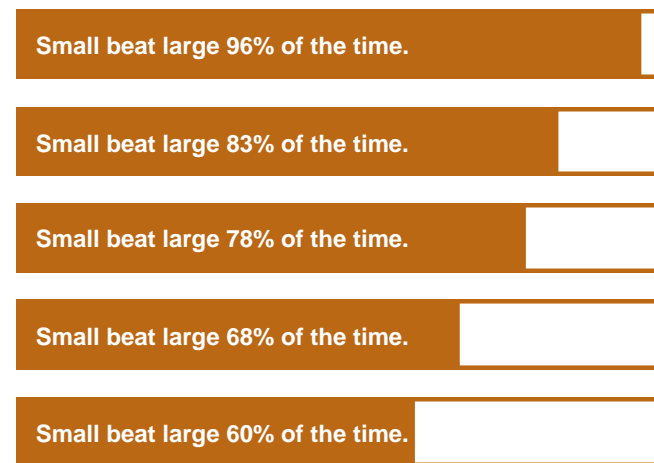
Value Beats Growth and Small Beats Large
July1926-December 2009

US Value vs. US Growth

In 25-Year Periods	Value beat growth 100% of the time.
In 20-Year Periods	Value beat growth 100% of the time.
In 15-Year Periods	Value beat growth 99% of the time.
In 10-Year Periods	Value beat growth 96% of the time.
In 5-Year Periods	Value beat growth 86% of the time.

US Small vs. US Large

Small beat large 96% of the time.
Small beat large 83% of the time.
Small beat large 78% of the time.
Small beat large 68% of the time.
Small beat large 60% of the time.

Periods based on rolling annualized returns. 703 total 25-year periods. 763 total 20-year periods.
823 total 15-year periods. 883 total 10-year periods. 943 total 5-year periods.
Performance based on Fama/French Research Factors. Securities of small companies are often less liquid than those of large companies. As a result, small company stocks may fluctuate relatively more in price. Mutual funds distributed by DFA Securities LLC.
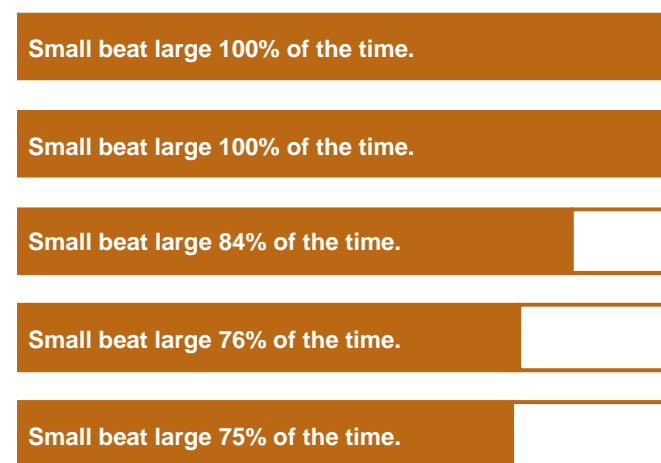
And It's the Same the World Over
January1975-December 2009

International Value vs. International Growth

Period	
In 25-Year Periods	Value beat growth 100% of the time.
In 20-Year Periods	Value beat growth 100% of the time.
In 15-Year Periods	Value beat growth 100% of the time.
In 10-Year Periods	Value beat growth 100% of the time.
In 5-Year Periods	Value beat growth 98% of the time.

International Small vs. International Large

Period	
In 25-Year Periods	Small beat large 100% of the time.
In 20-Year Periods	Small beat large 100% of the time.
In 15-Year Periods	Small beat large 84% of the time.
In 10-Year Periods	Small beat large 76% of the time.
In 5-Year Periods	Small beat large 75% of the time.

Why should we expect this to continue?

- Markets are social constructs: they represent the collective actions of human beings
- The aggregate behavior of large groups of people exhibits regularities (even if it's complex and chaotic in the short-run)
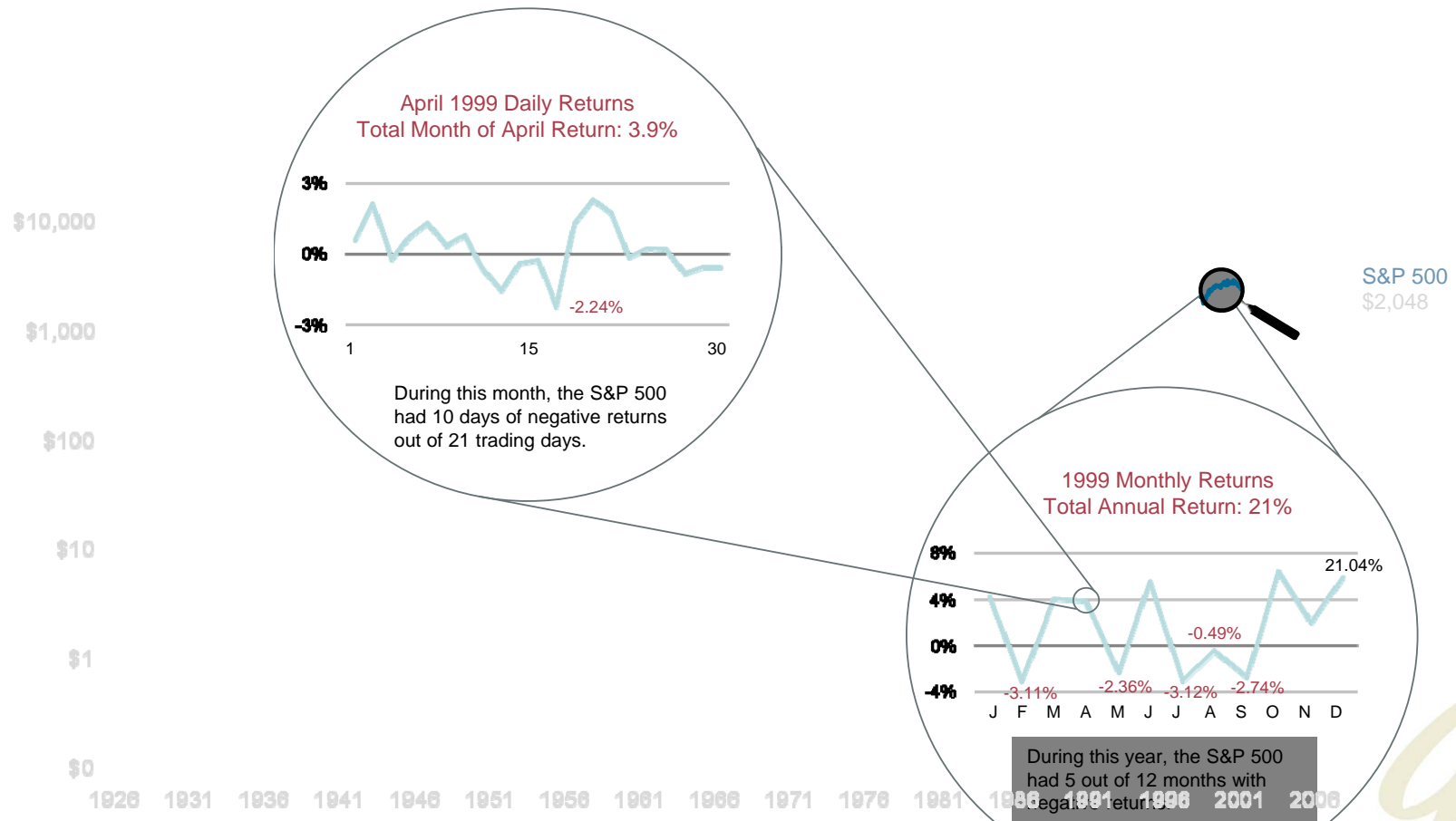- The Wisdom of Crowds
- The Invisible Hand

It's also a question of perspective

- Time frame matters!
- Even during periods of positive stock returns, investors may experience substantial volatility.
- Short-term volatility is a typical characteristic of stock market investing.
- Long-term returns are the sum of short-term volatility.

Time Frame Matters!

April 1999 Daily Returns
Total Month of April Return: 3.9%

3%

0%

-2.24%

-3%

1   15   30

During this month, the S&P 500 had 10 days of negative returns out of 21 trading days.

S&P 500
$2,048

1999 Monthly Returns
Total Annual Return: 21%

8%   21.04%

4%

0%   -0.49%

-3.11%   -2.36%   -3.12% -2.74%

-4%

J F M A M J J A S O N D

During this year, the S&P 500 had 5 out of 12 months with negative returns.

$10,000

$1,000

$100

$10

$1

$0

1926 1931 1936 1941 1946 1951 1956 1961 1966 1971 1976 1981 1986 1991 1996 2001 2006

But, what about the economy?

- Does low future economic growth imply low future equity returns?

Low Economic Growth Does Not Predict Low Future Returns

Developed Markets (1971-2008)	Avg. Return	Std Deviation	Avg. GDP Gwth
High-Growth Countries	12.90	23.07	0.92
Low-Growth Countries	13.52	23.04	-4.02

Poor economic performance gets "priced into" the markets. Investors around the world are risk-averse and price securities to provide an appropriate risk-adjusted return whatever's happening in the economy as a whole.

So, what do we do with this information?

- ## Have a plan
  - So we know what to do when it's hard to know what to do.

- ## Have a plan that builds resilience and flexibility into your financial life
  - Because we don't know what the world holds for us or how our needs will change over time.
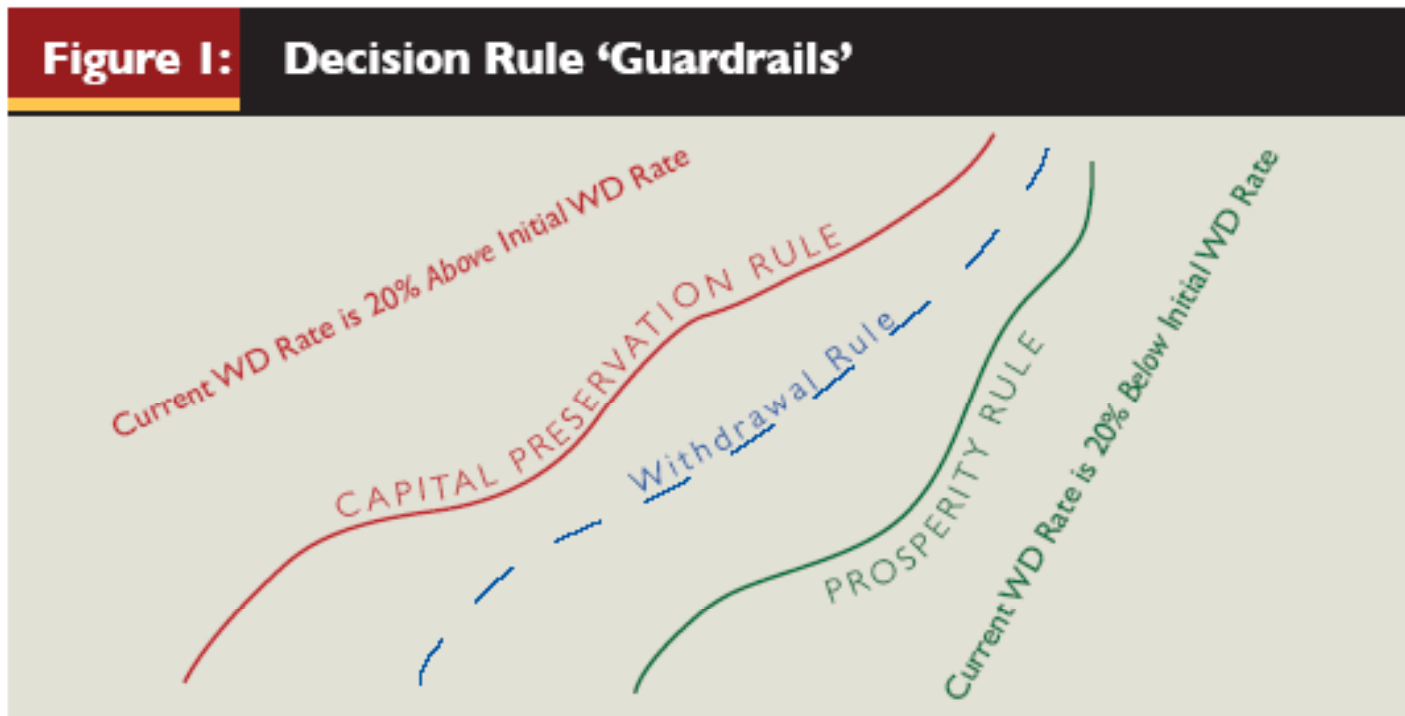 - Don't bet on a single scenario!

Have a Plan

- **Comprehensive Financial Plan**
  - Cash reserves / emergency fund
  - The right types and amounts of insurance
  - Appropriate estate arrangements
  - Safe Withdrawal Rate Policies
  - Investment Policies

Safe Withdrawal Policies

Cornerstone Wealth Advisors and Journal of Financial Planning, 2006

Have a Sound Investment Process

1. Identify asset classes with attractive returns for risks taken.
2. Explore the covariance matrix.
3. Select efficient building blocks.
4. Implement.
5. Monitor, rebalance, report.
6. Repeat.

Building Flexibility Into the Portfolio

- Efficient building blocks:
  - low-cost, no-load institutional fund portfolios
- Inefficient building blocks (AVOID!):
  - Non-trading REITS
  - Real estate partnerships
  - Hedge funds
  - Absolute return funds
  - Commodities futures strategies

Summary of Key Concepts

- The economy and the financial markets are too complex and chaotic for reliable prediction.
- Complex chaotic systems still possess regularities, however, which can be observed and incorporated into our plans.
- Think big picture when planning for the future.
- Build flexibility into your financial arrangements, don't bet on one outcome!

Groundhog Day

"History may not repeat, but it sure does rhyme."

Mark Twain