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U.S. MARKET COMMENTARY

WHAT DOES HISTORY TELL US?
PUTTING THE CURRENT MARKET
IN CONTEXT

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What Does History Tell Us? Putting the Current Market in Context

Given the dramatic developments over the past two months, the word "unprecedented" has become commonplace in describing the turmoil gripping the financial markets. Yet to students of capital markets history, financial panics and market meltdowns occur with surprising regularity. Although the current market gyrations are arguably the most volatile in the post–World War II dataset (post-1949) with which investors are most familiar, we disagree with those who strenuously argue that we are in wholly uncharted waters; the past still provides as good a guide as any to what to expect going forward. What history tells us is that a sharp rally is likely in the near term, but beyond that, investors will need to decide whether we truly face a repeat of the Great Depression and a further deep market plunge (is today 1929?) or whether we will simply grapple with a sharp global recession but avoid a long deflationary bust. If the former happens, look out below. If the latter, we may have already seen the worst of the pain. While the condensed guidebook of the past 25 years argues that investors should now be "buying the dips," the unabridged version warns that markets may well see new lows in 2009 and a challenging environment after that as we pay the full long-term costs of past credit excesses and increased government intervention. Yet history also indicates that despite what seems like a dismal future, long-term equity returns should be positive.

What Just Happened?!?

Despite the efforts of policymakers to backstop the global financial system and thaw the freeze in short-term credit markets, over late September and particularly October nearly every asset class has been hit by a wave of heavy selling. Some of this selling is a justified reassessment of the poor outlook for economic growth heading into 2009, but the violence of recent market moves is also driven in part by what seems to be forced deleveraging by a host of financial players (not just hedge funds) as market participants have sold what is liquid to meet a wide range of cash needs such as growing collateral and margin calls on leveraged investments, and redemption requests from investors.

Below we try to put the recent upheaval in context to give investors a sense of footing regarding what they have just gone through.

- **U.S. (and global) equities have just experienced a "waterfall" decline.** At one point in October, the S&P 500 was down nearly 27% before rallying near month-end. This decline ranks as the fourth-worst intra-month slide behind October 1929 (-33.7%), October 1987 (-31.5%), and September 1931 (-30.2%).
- **October 2008 was the worst month for U.S. equities since the crash of 1987 (Table A).** October's -16.8% return for the S&P 500 was the worst monthly performance for U.S. equities since the -21.5% return in October 1987. This return was worse than those of August 1998 (-14.5%), September 1974 (-11.5%), November 1973 (-11.1%), and September 2002 (-10.9%). Relative to the post-1927 period, however, October 2008 ranks ninth overall, as several months during 1929–49 saw monthly declines of over 20%.

- **This is the most volatile market since the 1930s.** Table B shows the 30-day moving average of the intra-day price range in the Dow Jones Industrial Average (DJIA) as a percentage of the price at the previous close. By late October the average daily swing in the DJIA was on the order of 6%, a level not seen since the 1930s. In contrast, the intensity of most postwar bear markets peaked when average intra-day volatility reached between 3% and 4%.

- **As a result, investors have experienced some of the best and worst single-day moves on record (Table C).** Aside from Black Monday in 1987, U.S. equities saw their three largest single down days of the postwar period in late September and October, with declines from 7.6% to 9.0%, as well as their two best days, with daily gains of over 10%. Not since the rebounds during 1929–33 has the S&P 500 posted double-digit daily returns.

- **The sell-off has been a 3 standard deviation event.** To give some sense as to how drastic the recent move has been, Table D shows the divergence of the S&P 500 from its 200-day moving average, or its near-term trend. The current divergence has been a 3 standard deviation event, a level seen only near market lows such as October 2002, December 1987, October 1974, March 1938, and June 1932 (which was a 4 standard deviation event!). Thus, U.S. equities have become very oversold, to the point that would imply some sort of intermediate rally is likely, and may already be underway. That we may be approaching some sort of intermediate low is also supported by the surge in volatility; Table E shows that volatility at such levels signaled market turning points in the past, although we still have not quite seen the sustained level of market gyrations witnessed during the 1930s.

- **The peak-to-trough decline thus far is the third worst since 1949 and seventh worst since 1928 (Table F).** Taking a step back, despite the amazing volatility, the aggregate losses thus far have not been unprecedented even for the postwar period; at its low on October 27, the S&P had fallen 45.8% from its October 2007 peak, compared to declines of 49.1% over March 2000 – October 2002 and 48.2% over January 1973 – October 1974. In the pre-war period, declines in the 50% range were in fact the norm. In the league table of "big" bear markets,[1] the current market ranks fifth or seventh, depending on whether you consider 1929–32 to be one big grizzly bear (an 86% drop) or a series of three substantial meltdowns. What has been shocking about the current bear market is the speed at which it has occurred. For example, while the "tech-wreck" unfolded over nearly three years, the current bear market is barely a year old, with the majority of the losses taking place over the last two months!

Understandably, investors are shell-shocked (or is it sell-shock?) after such a barrage. Large bear markets do not move in a straight line—a sharp countertrend rally at some point is the rule, not the exception. The fact that we have yet to embark on such a bounce is a testament to the powerful forces of deleveraging at play. Indeed, if anything is "different this time," it is that the number of leveraged players in both the market and the overall economy being squeezed is arguably greater than anything seen in the past few decades. Thus, the impact of the unwinding of the credit excesses may be felt for some time.

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[1] With a "big" bear market defined as declines in the S&P 500 of at least 30% without a 30% reversal.

So Where Are We Now?

Now that we have come through the waterfall, what should investors expect in the near term? The classic bear market pattern is that following such a large sell-off, the market begins a "bottoming process" during which the market may rally, but then retests its previous low several times, if not breaking to a new low, before stabilizing and embarking on a new bull market, cyclical or otherwise (Table G). As we have alluded to above, history suggests that a rally should soon be underway, although we are highly skeptical of those who are sounding the all-clear. Analysis by Ned Davis Research shows that following waterfall-type declines, the S&P 500 has bounced back and then broken to new lows in eight out of ten occurrences since 1929.

Our own analysis shows that the average subsequent one-month returns to the largest monthly declines in both the post-1928 and post-1949 periods are flat at best if not slightly negative. While average six- and 12-month returns were higher, there are plenty of periods where equity investors remained substantially underwater. The same goes for periods following the worst rolling 12-month periods, especially in the pre-war period, but also notably in 2001 and early 2002 (Tables A and H).

However, history argues that a market decline on the order of 40% should not be taken lightly. Table F shows the "big" bear markets since 1926 and subsequent returns. Aside from the initial sell-off in 1929, when the market fell 45% from September to November and the tumultuous period between 1930 and 1932, when the S&P 500 saw two 60% declines interrupted by significant rallies; every sell-off larger than 30% has seen positive subsequent returns over three-, six-, and 12-month periods, as well as positive five- and ten-year holding periods. However, to extrapolate this analysis forward requires the leap of faith that October is the absolute "low" for this cycle, an assumption that may still be premature. As mentioned earlier, the current losses are not unprecedented even by the standards of the postwar period, so further weakness from such levels cannot be ruled out.

Taking a step back, much of the discussion above relates to the cyclical or near-term outlook for equities and may obfuscate the bigger trends in the market. We have argued for some time that U.S. equities have been in a secular bear market since the tech bubble burst in early 2000, and believed that equity returns were destined to disappoint given that the excesses of the previous run-up had not yet been wrung out of the market. Even before October's meltdown, the trailing ten-year average annual compound *real* return for equity investors had been a pathetic 0.1% annually, underperforming both Treasury bonds and three-month T-bills over the same decade! After October, rolling ten-year equity real returns have now fallen to -2.46%, the lowest such rolling return since 1982, a major equity market low.

As Table I shows, we are now approaching secular lows in both nominal and real returns, although we may have more to go before reaching an absolute bottom. For example, the worst rolling ten-year periods for equities in inflation-adjusted terms were the periods ending in 1919–21, 1974–75, and 1978–82, with annualized real returns in the -4.6% to -2.5% range as rising inflation savaged equities in both periods. In nominal terms, the worst periods were in the deflationary environments of 1932–33 and 1937–41, with

returns ranging from 2% to -4%. While we would not be surprised to see current returns fall to such levels before all is said and done in this secular cycle, history indicates we have likely made most of the adjustment.

Importantly, subsequent ten-year returns from such levels have been uniformly positive. For the 20 instances where trailing ten-year real returns were as low or lower than current levels, subsequent ten-year real returns have averaged 12.3% annually, with a minimum real return of 5.8%. In looking at the 13 instances where nominal ten-year returns have been as low or lower, subsequent nominal returns have averaged 9.9%, with a minimum return of 7.3% nominal (Table J).

So arguably, based on the oversold conditions of U.S. equities over the past decade, today would seem to offer somewhat compelling long-term returns, even if the outlook for near-term returns is poor. The difference, of course, between achieving above or below average returns going forward is the starting level of valuations.

What Do Valuations Tell Us About Prospective Future Returns?

Table K shows the long-term history of our preferred valuation metric for U.S. equities, the so-called Shiller price-earnings (P/E) ratio based on the ten-year average of real earnings. U.S. equity valuations have reverted to their post-1910 mean of 16, while at its low in late October, the market traded on a P/E of 14 times normalized ten-year earnings. Table L shows several other "normalized" P/E measures, which also put the market's valuation multiple between 13 and 16. All of these measures argue that U.S. equities are at their cheapest levels since the early 1990s, fully reversing the valuation run-up of the tech-boom years.

What does this tell us, if anything, about future returns?

While valuations are a notoriously poor indicator of short-term market direction, Tables M and N show the relationship between P/E ratios and *long-term returns*: on average, the lower the P/E ratio the higher the subsequent ten-year return. Currently, U.S. equities are valued in the third quartile of historical P/Es (a range of 18.0 to 13.5), which has historically produced an average ten-year real return of 6.0%, albeit with a range spanning 16% to -5%. It is worth noting that all of the negative subsequent returns in this quartile generally occurred during the high inflation 1910s and early 1970s; as noted above, inflation, not deflation, has been the greater scourge of equities. More specifically, U.S. equities are in the sixth decile of historical normalized P/Es (a range of 14.3 to 16.7), which has seen average annual real returns of 7.2% over the subsequent ten years, or on par with historical norms. This compares much more favorably to the level of valuation present over the past decade (1998–2007), when equities were generally in the ninth and tenth deciles, and historically priced for very weak future returns, which has been the case.

Thus, U.S. equities for the first time in a decade are priced to offer investors something near long-run historical average returns. However, such returns are far from guaranteed in the short to intermediate term and could still be negative should P/E ratios continue to contract. Indeed, it has not been not until normalized P/E ratios have fallen into the first quartile range of 10.5 to 4.8 that returns have consistently been positive,

averaging 11% over ten-year periods. Encouragingly though, multiples outside the United States have hit single-digit levels, suggesting higher return potential vis-à-vis U.S. equities going forward, assuming that the historical U.S. experience holds true for non-U.S. markets, which we have little reason to believe otherwise.

However, equities may have already made an adequate valuation adjustment. While it is true that most secular bear markets end with single-digit normalized P/E ratios, history shows that since 1928, the average bear market has ended with normalized P/Es in the 8 to 14 range, undergoing an average P/E contraction of around 35% (Table O). Most "big" bear markets have seen P/E ratios contract close to 50% if not more, as was the case over 2000–03, 1973–74, 1939–42, and 1929–32. At the October low, normalized P/Es had fallen to 14, contracting some 47% from their 2007 high, putting the change in valuations in line with what history would expect of a big bear market.

Given this, it would seem that we have had sufficient valuation contraction to warrant at least a bear market rally. However, U.S. equities still do not seem priced for a doomsday scenario (unlike the credit markets), and the risk remains that given the formidable uncertainty facing the U.S. and global economies, markets may overshoot to the downside. Therefore, as history indicates, we would not be surprised to see substantially lower normalized P/E ratios before the secular bear market is over.

So How Bad Could Things Get?

In a worst-case scenario, should normalized P/E multiples hit their 1920 and 1932 lows of 5, then from the S&P 500 October close of 969 and P/E of 16 times normalized earnings of $60 per share, we would need to see the S&P fall another 69% to 300, taking the total peak-to-trough decline to 81%, a sell-off on par with the collapse of 1929–32. If we assume that normalized P/E ratios bottom out at 1 standard deviation below the norm at 8.7, a level consistent with previous secular bear market bottoms, we would need to see the S&P at roughly 520, implying another 46% drop for a peak-to-trough decline of 67%. Such a move would be the largest decline in the postwar period, and although unpleasant, it is within the realm of possibility. However, we would caution against such forecasts, as this assumes the multiple contraction is entirely price driven and occurs all at once. P/Es could still decline over the next few years when earnings begin to rise yet investors overly discount such a recovery as unsustainable. Such a mindset could develop should the economy remain weak for some time with plenty of false dawns, or should inflation rear its ugly head and interest rates rise.

But Don't Forget About Dividends…

It is often noted that it took nearly 25 years for U.S. equities to return to their 1929 highs. However, had investors reinvested their dividends throughout the period, they would have shaved ten years off the recovery period (Tables P and Q). While this is an extreme example, investors often overlook the power of

compounding dividends over long periods of time. Indeed, dividends account for over two-thirds of long-term equity returns.[2]

Although dividends will likely be cut in the coming quarters, the added kick of 3% dividend yields (DYs) in the United States and 4% to 5% in non-U.S. markets is an important source of return going forward, especially if bond yields remain low. Equities are currently outyielding cash by large margins and are also competing with government bond yields in some non-U.S. markets, which has been a powerful bullish signal in the past for relative performance of equities versus bonds. Yet the general rule that DYs should be below bond yields has only held true since 1958. For much of the past century it was considered sacred investment orthodoxy that equities should yield more than bonds to compensate for the inherent riskiness of stocks. Thus, it is not entirely unreasonable that we could return to such a quaint notion in the future.

Conclusion

We would agree with the recent remarks of investment manager John Hussman[3] that:

> The time for fear is when stocks are strenuously overvalued. The time to panic is when they are overvalued and market internals begin to deteriorate. We are beyond the time for fear, and beyond the time for panic. Still we are not yet to the point for aggressive investment positions. Rather, we are at the point where investors should be gradually increasing their exposure, open to the possibility that stocks could decline still lower.

Precedent would point to a market relief rally commencing sometime in the immediate future. However, we would not be surprised to see markets come under renewed pressure in early 2009 as the economic fallout from the credit crisis continues to unfold and the earnings cycle continues its downswing. Whether markets dive to new lows remains to be seen, and will be a function of how badly economic conditions deteriorate (especially in the emerging world). Too much uncertainty remains regarding the outlook for global growth and the impact of current government interventions to sound the all-clear.

However, the current rout already qualifies as one of the largest in the postwar period, and while the market outlook is daunting, we do not think a 1929–32 collapse of over 80% in prices is likely. Policymakers seem to be hell-bent on preventing a deflationary bust. We cannot know for certain how future macroeconomic conditions will unfold, but we take comfort from knowing that:

1. Heading into September 1929, equities had a ten-year trailing real average annual compound return of 19.2% and had massively outperformed bonds and cash. Heading into October 2008, equities had returned 0.1% over the previous decade and underperformed both bonds and cash.

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[2] If $100 dollars were invested in the S&P 500 in December 1968, it would have grown to $4,869.10 on a total return (or dividends reinvested) basis by December 2007, but it would have grown to only $1,413.20 based on price appreciation alone. The compounding of dividends over this period accounted for 71% of the total cumulative wealth earned.

[3] Hussman Funds *Weekly Market Comment*, "Risk Management and Hooke's Law," October 27, 2008.

2. Normalized P/Es in September 1929 were 31, while heading into October, valuations were 19 and are now 16, while Treasury and T-bill yields are near all-time lows.

3. In other words, we have already experienced much of the painful adjustments seen in historical secular bear markets, and while there is a tough road ahead, we see glimmers of light at the end of the tunnel.

An extremely negative outcome for equities in the short term cannot be entirely ruled out and investors need to be defensively positioned. However, betting on extreme outcomes as a result of recent market turmoil (i.e., radically reducing equity exposure for bonds and cash) may lead investors to change course again at the wrong time. We are already coming off one of the best periods of relative outperformance of Treasuries and cash over equities (Table R). And even though deflation fears are now rampant (and may drive bond yields even lower in the coming months), higher inflation in the future remains feasible as atonement for the oncoming deluge of fiscal and monetary stimuli.

While markets could move lower and valuations continue to de-rate, equities are fairly priced for the first time in a decade, implying that investors should not drastically underweight marketable equities, and should increasingly look to take advantage of market dislocations. Valuations, especially outside of the United States, now offer the scope for expanding when economic conditions improve. To the extent that investors are underweight equities, rebalancing makes sense today, especially when history argues subsequent long-term returns are poised to be positive going forward and outperform both Treasuries and cash over the long term. However, in the current environment, we continue to emphasize that investors need to address any potential liquidity issues they may face before redeploying assets.

The risk is that investors are too early and may catch the tail end of a difficult investing climate, while the equity risk premium may remain high (and valuations low) for some time. Yet trying to time the markets perfectly is a fool's game, and long-term prospective returns on equities seem to justify maintaining exposure; while buying equities in 1982 was much better than buying in 1974, both provided good long-term buying opportunities. The trick was to be properly defensively positioned to survive the lean times and to rebalance judiciously.

Table A

S&P 500 WORST MONTHS AND SUBSEQUENT RETURNS

January 1928 – October 2008

Post-1927 Period

Rank	Date	Monthly Return	Subsequent Return			
			1-Month	3-Month	6-Month	12-Month
1	09/30/31	-29.6	9.1	-14.8	-21.8	-10.2
2	03/31/38	-24.5	14.8	38.5	48.6	36.1
3	05/31/40	-23.5	8.3	15.7	18.2	7.7
4	05/31/32	-22.8	-0.1	91.4	51.5	129.5
5	10/31/87	-21.5	-8.2	2.9	5.5	14.8
6	04/30/32	-19.7	-22.8	6.9	23.6	52.2
7	10/31/29	-19.7	-13.1	-4.6	5.2	-26.8
8	02/28/33	-18.1	3.9	72.8	100.3	97.5
9	**10/31/08**	**-16.8**	---	---	---	---
10	06/30/30	-16.2	4.0	-8.2	-23.2	-23.7
11	08/31/98	-14.5	6.4	22.0	30.3	39.8
12	12/31/31	-13.9	-2.3	-8.2	-43.1	-8.9
13	09/30/37	-13.8	-9.7	-22.1	-35.9	-4.7
14	10/31/32	-13.6	-5.3	1.3	23.1	34.9
15	05/31/31	-13.3	14.5	8.0	-24.8	-63.2
16	03/31/39	-13.2	-0.2	0.0	21.4	17.2
17	11/30/29	-13.1	2.9	12.5	19.5	-17.3
18	09/30/30	-12.7	-8.5	-16.4	-7.9	-44.9
19	09/30/74	-11.5	16.8	9.4	34.5	38.1
20	03/31/32	-11.3	-19.7	-38.0	14.9	-14.5
21	07/31/34	-11.3	5.7	2.5	7.1	33.1
22	09/30/33	-11.1	-8.7	3.6	11.3	-4.0
23	11/30/73	-11.1	2.0	1.2	-7.3	-23.8
24	09/30/02	-10.9	8.8	8.4	5.0	24.4
25	11/30/48	-10.3	3.6	0.7	-0.5	16.5
	Average		0.1	7.7	10.6	12.5
	Max		16.8	91.4	100.3	129.5
	Min		-22.8	-38.0	-43.1	-63.2
	% Positive		58.3	75.0	70.8	58.3

Post-1949 Period

Rank	Date	Monthly Return	Subsequent Return			
			1-Month	3-Month	6-Month	12-Month
1	10/31/87	-21.5	-8.2	2.9	5.5	14.8
2	**10/31/08**	**-16.8**	---	---	---	---
3	08/31/98	-14.5	6.4	22.0	30.3	39.8
4	09/30/74	-11.5	16.8	9.4	34.5	38.1
5	11/30/73	-11.1	2.0	1.2	-7.3	-23.8
6	09/30/02	-10.9	8.8	8.4	5.0	24.4
7	03/31/80	-9.7	4.6	13.5	26.2	40.1
8	02/28/01	-9.1	-6.3	1.6	-8.0	-9.5
9	08/31/90	-9.0	-4.9	0.9	15.9	26.9
10	**09/30/08**	**-8.9**	**-16.8**	---	---	---
11	04/30/70	-8.7	-5.8	-3.3	4.2	32.1
12	10/31/78	-8.7	2.1	8.8	12.3	15.5
13	08/31/74	-8.6	-11.5	-1.7	16.0	26.2
14	**06/30/08**	**-8.4**	**-0.8**	**-8.4**	---	---
15	05/31/62	-8.3	-7.9	0.0	6.3	22.9
16	09/30/86	-8.3	5.8	5.6	28.1	43.4
17	11/30/87	-8.2	7.6	17.4	16.0	23.3
18	09/28/01	-8.1	1.9	10.7	11.0	-20.5
19	06/30/62	-7.9	6.7	3.7	17.3	31.1
20	11/30/00	-7.9	0.5	-5.4	-3.9	-12.2
21	07/31/02	-7.8	0.7	-2.4	-5.3	10.6
22	08/31/66	-7.5	-0.4	5.3	14.6	25.6
23	07/31/74	-7.4	-8.6	-5.6	-0.3	17.3
24	01/31/70	-7.4	5.6	-3.2	-6.4	17.0
25	06/28/02	-7.1	-7.8	-17.3	-10.3	0.3
	Average		-0.4	2.8	9.2	17.4
	Max		16.8	22.0	34.5	43.4
	Min		-16.8	-17.3	-10.3	-23.8
	% Positive		58.3	73.9	81.8	95.5

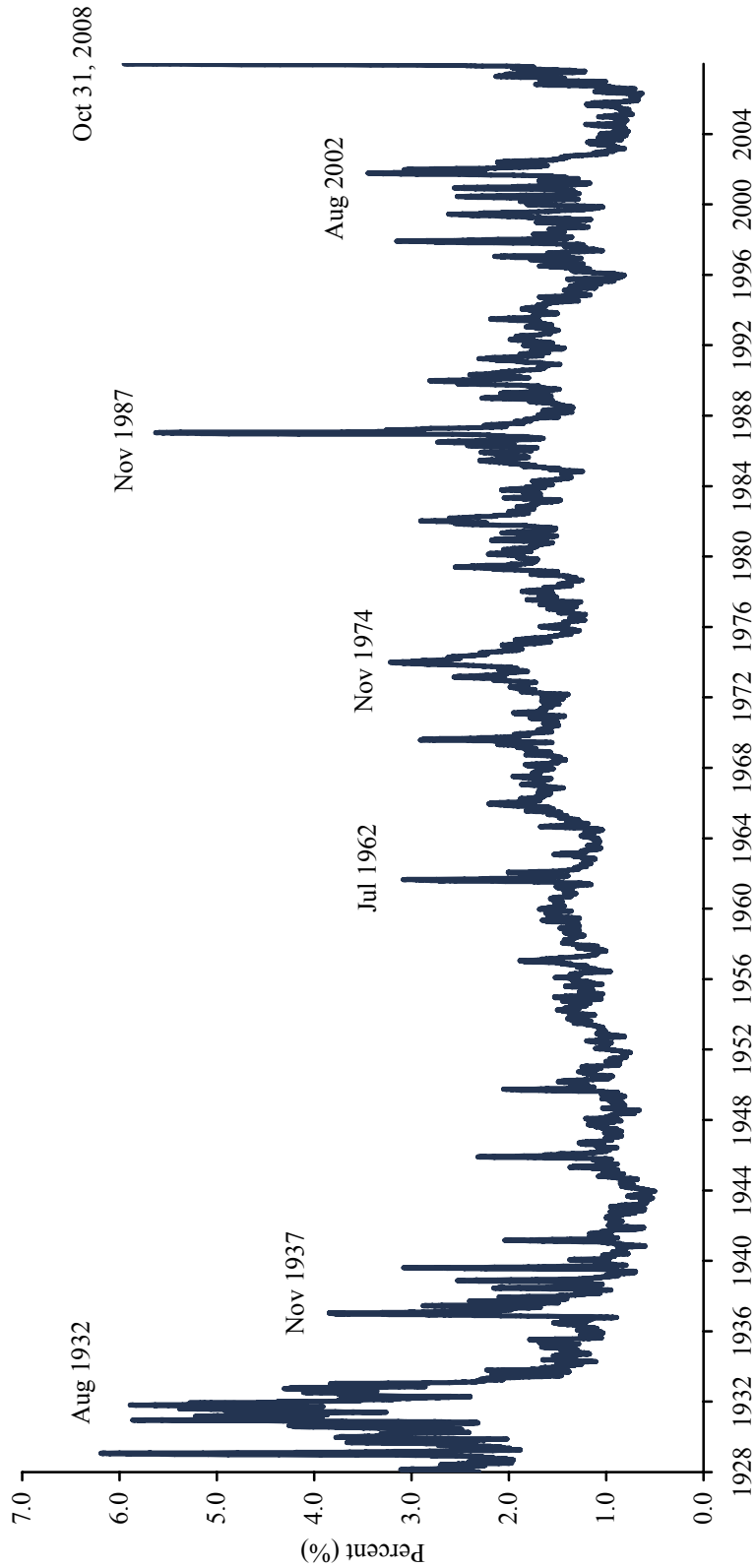Sources: Global Financial Data, Inc. and Thomson Datastream.

Note: Dates occuring in 2008 are bolded.

Table B

INTRA-DAY VOLATILITY

30-Day Average Intra-Day Percent Swing in the Dow Jones Industrial Average

September 1928 – October 2008

Source: Global Financial Data, Inc.

Note: Graph shows the 30-day average intra-day point change in the DJIA as a percentage of the previous day's closing level.

Table C

S&P 500 BEST AND WORST DAILY RETURNS

January 1, 1928 – October 31, 2008

Post-1927 Period				Post-1949 Period			
30 Best Days		30 Worst Days		30 Best Days		30 Worst Days	
Date	% Change	Date	% Change	Date	% Change	Date	% Change
03/15/33	16.6	10/19/87	-20.5	**10/13/08**	**11.6**	10/19/87	-20.5
10/30/29	12.5	10/28/29	-12.3	**10/28/08**	**10.8**	**10/15/08**	**-9.0**
10/06/31	12.4	10/29/29	-10.2	10/21/87	9.1	**09/29/08**	**-8.8**
09/21/32	11.7	11/06/29	-9.6	07/24/02	5.7	10/26/87	-8.3
10/13/08	**11.6**	10/18/37	-9.3	07/29/02	5.4	**10/09/08**	**-7.6**
10/28/08	**10.8**	**10/15/08**	**-9.0**	10/20/87	5.3	10/27/97	-6.9
09/05/39	9.6	07/20/33	-8.9	**09/30/08**	**5.3**	08/31/98	-6.8
04/20/33	9.5	**09/29/08**	**-8.8**	10/28/97	5.1	01/08/88	-6.8
10/21/87	9.1	07/21/33	-8.7	09/08/98	5.1	05/28/62	-6.7
11/14/29	8.9	10/26/87	-8.3	05/27/70	5.0	09/26/55	-6.6
08/03/32	8.8	10/05/32	-8.1	01/03/01	5.0	10/13/89	-6.1
10/08/31	8.5	08/12/32	-8.1	10/29/87	4.9	**10/22/08**	**-6.1**
02/11/32	8.4	07/26/34	-7.9	**10/20/08**	**4.8**	04/14/00	-5.8
02/13/32	8.4	05/31/32	-7.8	03/16/00	4.8	**10/07/08**	**-5.7**
12/18/31	8.3	**10/09/08**	**-7.6**	08/17/82	4.8	06/26/50	-5.4
07/24/33	8.2	05/14/40	-7.4	10/15/02	4.7	10/16/87	-5.2
06/03/31	7.5	09/24/31	-7.3	05/29/62	4.6	09/17/01	-4.9
10/20/37	7.5	09/12/32	-7.2	10/09/74	4.6	09/11/86	-4.8
11/10/32	7.5	06/15/33	-7.0	10/23/57	4.5	**09/17/08**	**-4.7**
06/10/32	7.4	10/27/97	-6.9	04/05/01	4.4	**09/15/08**	**-4.7**
05/06/32	7.3	10/07/32	-6.8	**09/18/08**	**4.3**	12/12/73	-4.6
08/15/32	7.3	08/31/98	-6.8	**10/16/08**	**4.3**	04/14/88	-4.3
06/19/33	7.2	01/08/88	-6.8	**03/18/08**	**4.2**	03/12/01	-4.3
04/19/33	7.2	10/16/33	-6.8	10/07/74	4.2	11/30/87	-4.2
10/11/32	7.1	09/03/46	-6.7	10/15/98	4.2	09/03/02	-4.2
10/14/32	7.0	05/21/40	-6.7	07/12/74	4.1	**10/02/08**	**-4.0**
01/06/32	6.8	05/28/62	-6.7	**09/19/08**	**4.0**	10/25/82	-4.0
06/04/32	6.7	09/26/55	-6.6	08/14/02	4.0	10/22/87	-3.9
04/09/38	6.7	11/11/29	-6.2	10/01/02	4.0	**10/06/08**	**-3.9**
09/23/31	6.6	09/21/33	-6.1	11/26/63	4.0	08/27/98	-3.8

Sources: Global Financial Data, Inc. and Thomson Datastream.

Note: Dates occuring in 2008 are bolded.

Table D

S&P 500 PERCENTAGE FROM 200-DAY MOVING AVERAGE

September 4, 1928 – October 31, 2008

Percentage From 200-Day Moving Average

3 Standard Deviations

-24.2
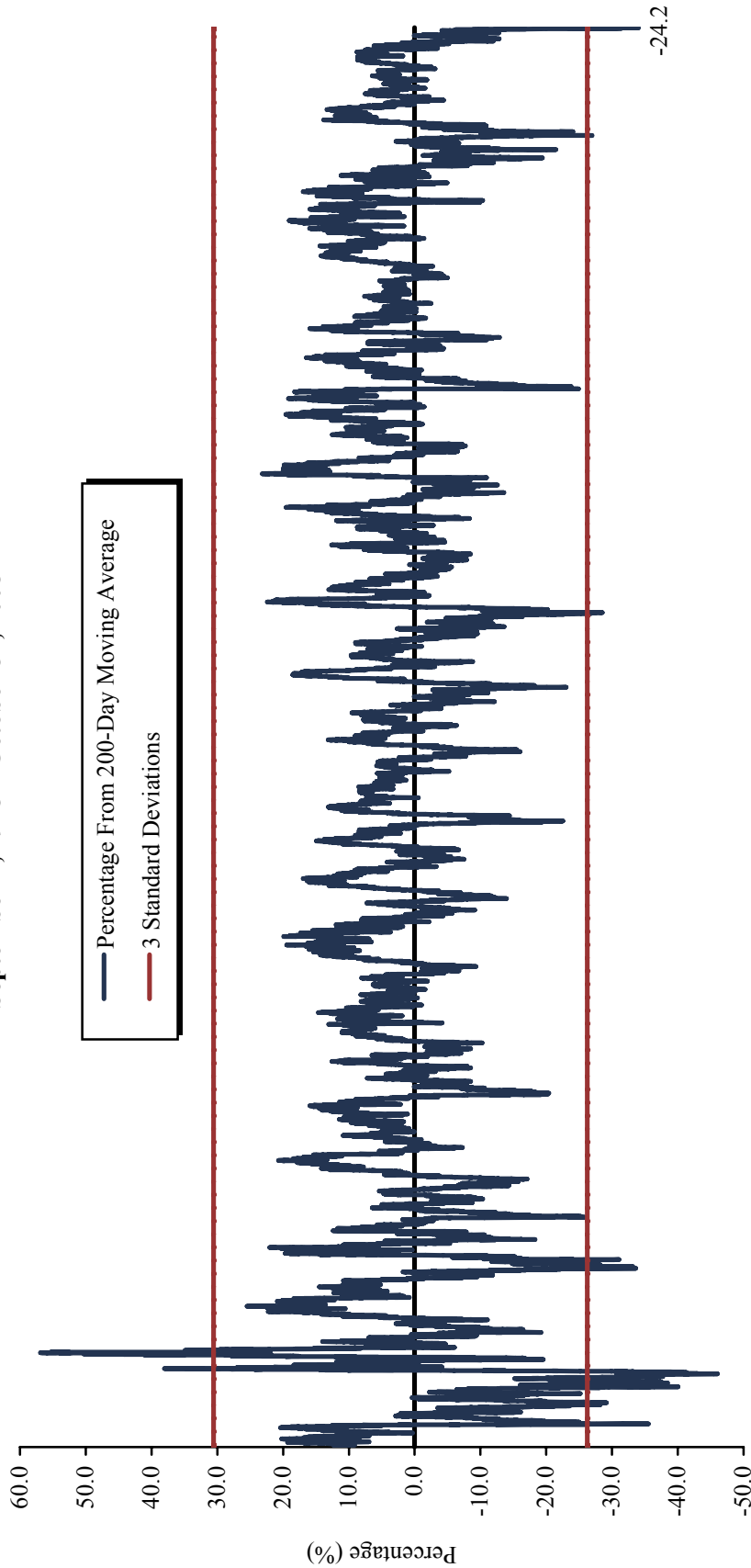
1928 1931 1934 1937 1940 1942 1945 1948 1951 1955 1958 1961 1965 1968 1971 1974 1978 1981 1984 1987 1991 1994 1997 2000 2004 2007

Percentage (%)

60.0 50.0 40.0 30.0 20.0 10.0 0.0 -10.0 -20.0 -30.0 -40.0 -50.0

Sources: Global Financial Data, Inc., Standard & Poor's, and Thomson Datastream.

Notes: Daily data from December 31, 1927, to December 31, 1965, provided by Global Financial Data, Inc. Daily data from January 3, 1966, to present provided by Thomson Datastream.

Table E

S&P 500 INDEX VOLATILITY 100-DAY MOVING AVERAGE

May 5, 1928 – October 31, 2008
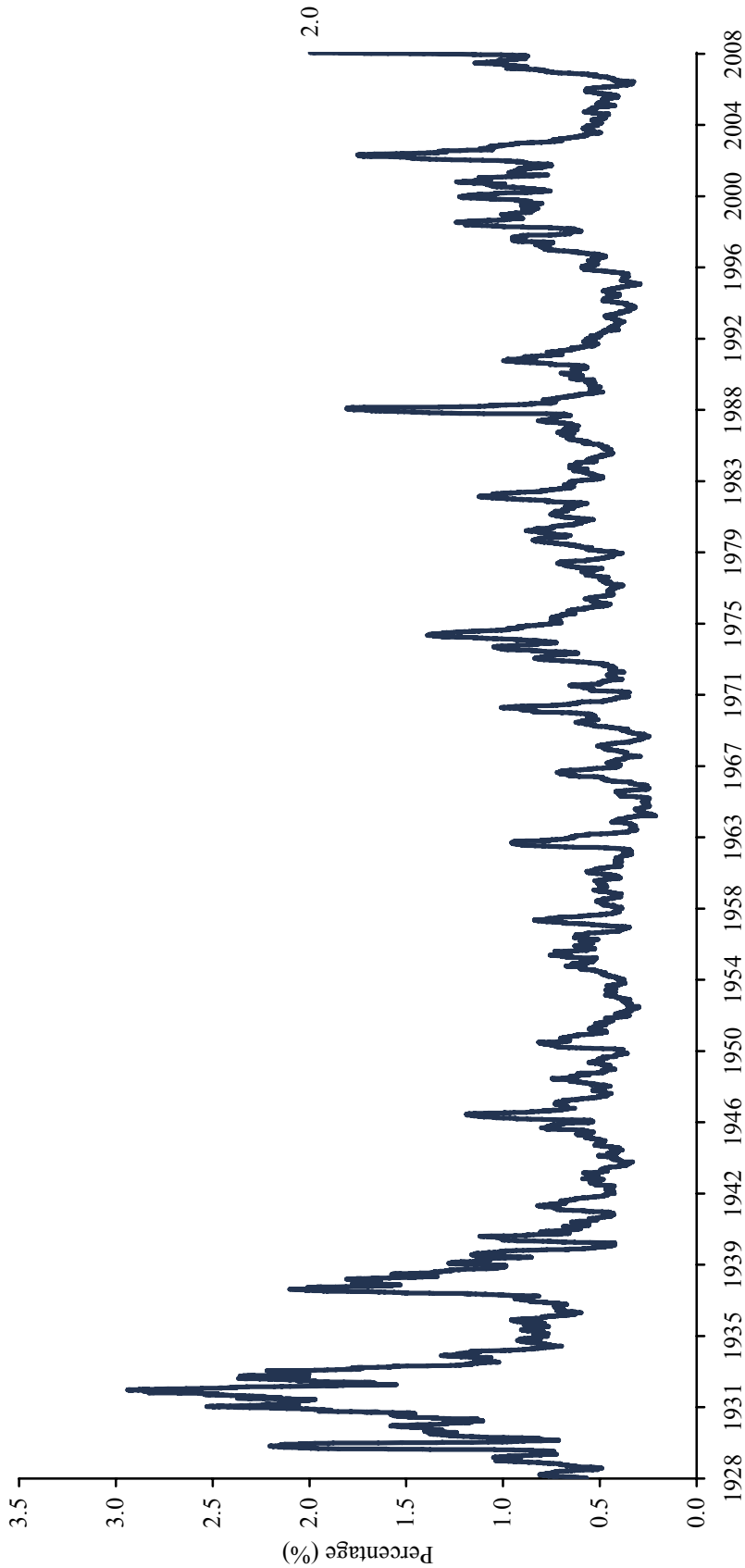
Sources: Global Financial Data, Inc., Standard & Poor's, and Thomson Datastream.

Notes: Daily data from January 3, 1928, to December 31, 1965, provided by Global Financial Data, Inc. Daily data from January 3, 1966, to present is provided by Thomson Datastream.

C|A

CAMBRIDGE ASSOCIATES LLC

Table F

LARGEST MARKET DECLINES

1926–2008

| | Market Peak | Market Trough | Bear Market Duration (Mos) | Peak-to-Trough Return (%) | Subsequent Return | | | | AACR | |
					1-Month	3-Month	6-Month	1-Year	5-Year	10-Year
*	Sep-07-1929	Jun-01-1932	32.7	-86.2	-0.1	91.4	51.5	129.5	35.2	11.9
1	Apr-10-1930	Oct-05-1931	17.8	-66.0	9.1	-14.8	-21.8	-10.2	15.9	5.9
2	Nov-09-1931	Jun-01-1932	6.7	-61.8	-0.1	91.4	51.5	129.5	35.2	11.9
3	Mar-06-1937	Mar-31-1938	12.8	-54.5	14.8	38.5	48.6	36.1	13.1	11.8
4	Mar-24-2000	Oct-09-2002	30.5	-49.1	8.8	8.4	5.0	24.4	15.5	---
5	Jan-11-1973	Oct-03-1974	20.7	-48.2	16.8	9.4	34.5	38.1	16.9	15.6
6	Nov-09-1938	Apr-28-1942	41.5	-45.8	7.1	13.9	27.5	61.3	19.5	18.3
7	**Oct-09-2007**	**Oct-27-2008**	**12.6**	**-45.8**	---	---	---	---	---	---
8	Sep-07-1929	Nov-13-1929	2.2	-44.7	2.9	12.5	19.5	-17.3	-10.1	-0.5
9	Sep-07-1932	Feb-27-1933	5.7	-40.6	3.9	72.8	100.3	97.5	20.0	12.6
10	Nov-29-1968	May-26-1970	17.8	-36.1	-4.7	7.6	16.1	34.8	7.3	8.3
11	Aug-25-1987	Dec-04-1987	3.3	-33.5	7.6	17.4	16.0	23.3	17.3	18.7
12	Feb-06-1934	Mar-14-1935	13.1	-31.8	10.1	22.8	39.6	83.0	13.0	10.8
13	Jul-18-1933	Oct-21-1933	3.1	-29.8	10.7	25.9	18.9	2.0	13.1	8.5
14	May-29-1946	Jun-13-1949	36.4	-29.6	0.3	9.2	17.1	41.6	23.0	21.3
	Average		16.0	-44.1	6.7	24.2	28.7	41.9	15.4	11.9
	Median		13.0	-45.2	7.6	13.9	19.5	36.1	15.9	11.9

Sources: Global Financial Data, Inc., Ned Davis Research, Inc., Standard & Poor's, and Thomson Datastream.

Notes: A "big" bear market is defined as an approximately 30% decline from peak to trough. Subsequent returns based on monthly data beginning at the nearest month-end to the actual market bottom. The period occuring in 2008 is bolded.

* The 1929–32 bear market is shown here in aggregate, while the 14 bear markets below it include the component sell-offs of September 1929 – November 1929, April 1930 – October 1931, and November 1931 – June 1932.

Table G

S&P 500 WATERFALL ACTION

Legend:
— Oct 31, 2007 – Nov 5, 2008
--- Aug 31, 2001 – Aug 31, 2003
— Sept 30, 1973 – Sept 30, 1975

X-axis: Days

Y-axis: Rebased to 100
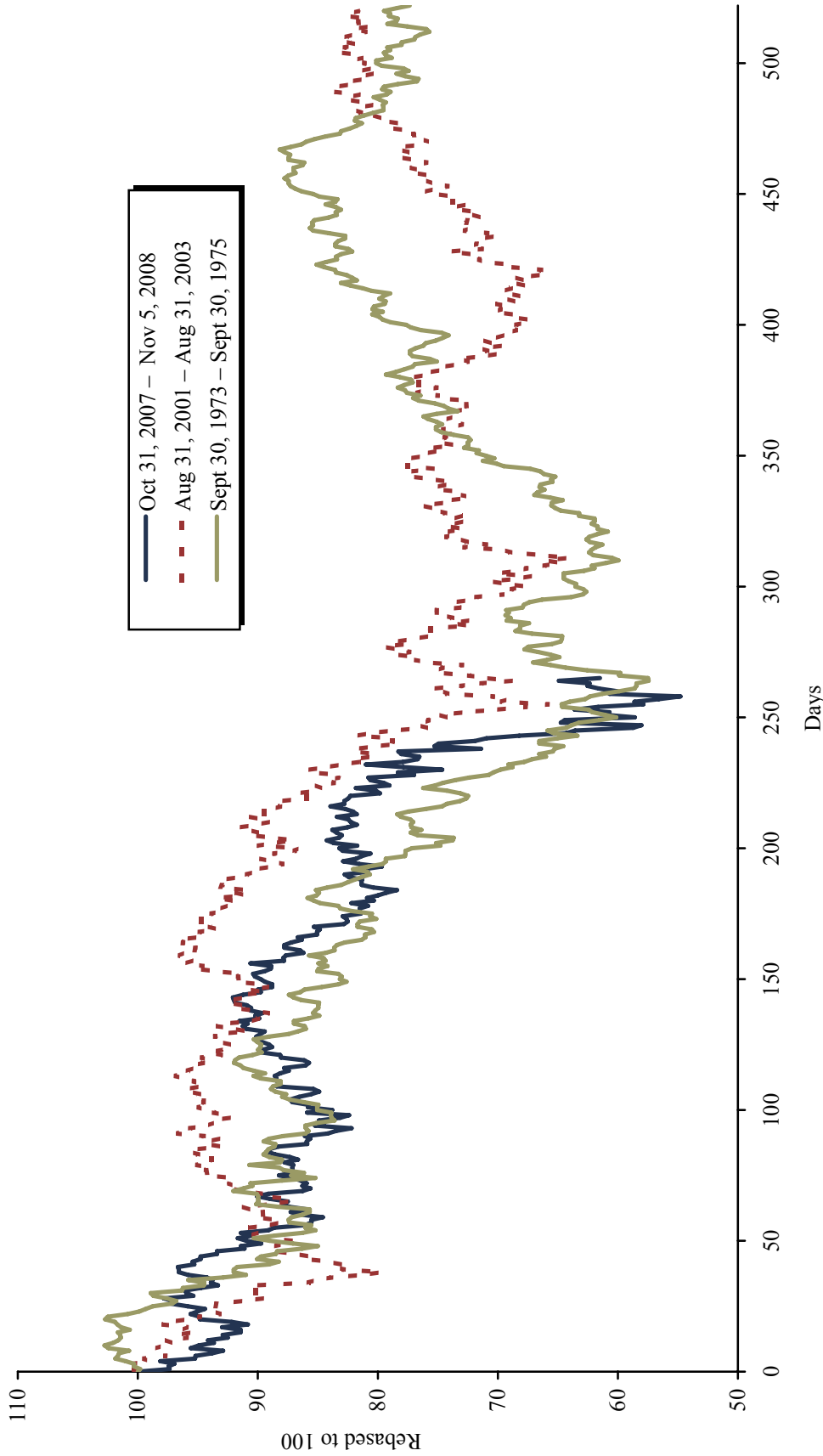
Sources: Goldman, Sachs & Co., Standard & Poor's, and Thomson Datastream.

Notes: Based on S&P 500 price returns. Graph covers the the one-year period before and one-year period after a waterfall decline. Price levels rebased to 100 one year before waterfall low.

Table H

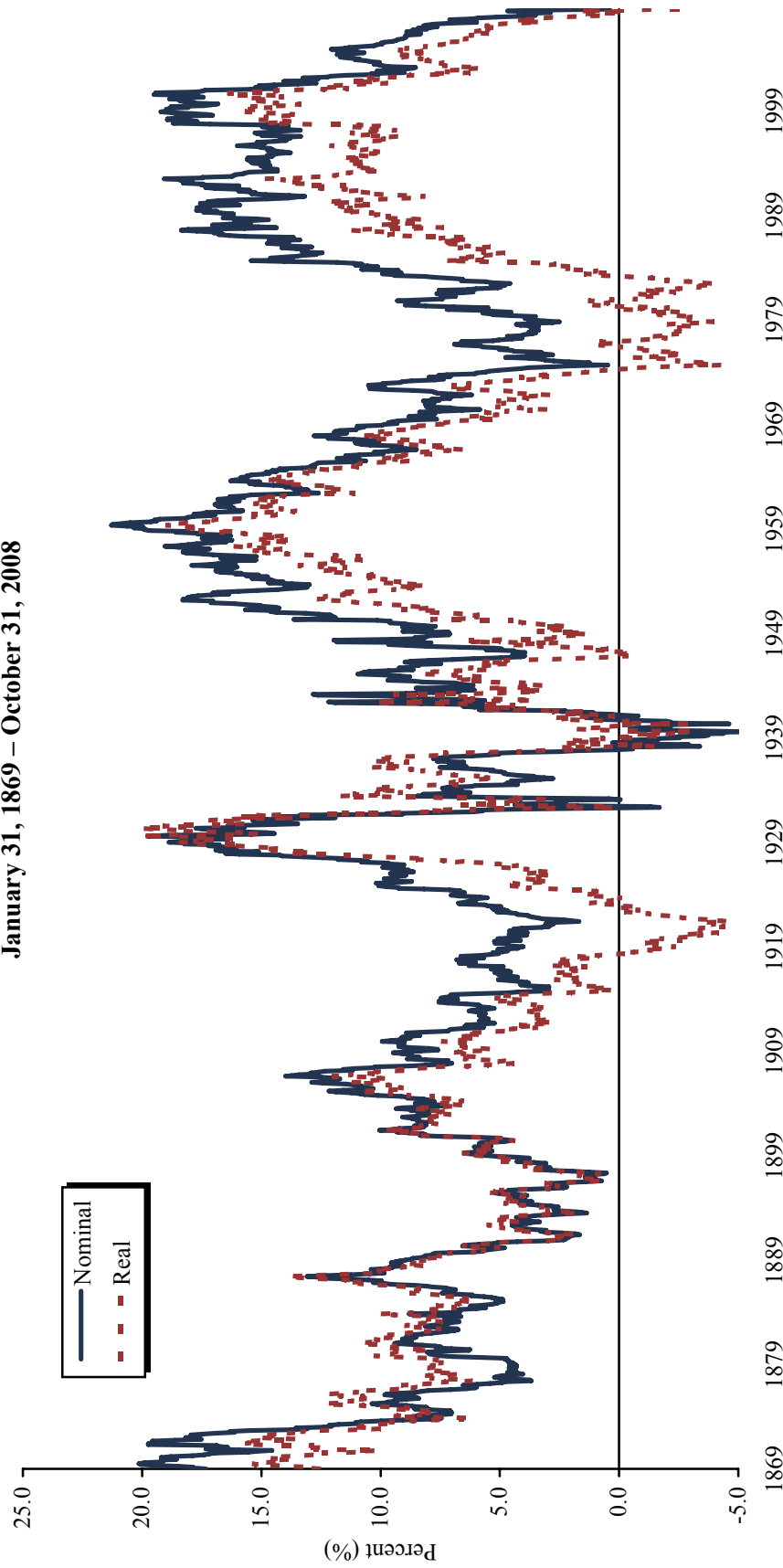**WORST ROLLING 12-MONTH PERFORMANCE AND SUBSEQUENT RETURNS**

Post-1927 Period

Date	Trailing 12-Month	Sub 1-Month	Sub 3-Month	Sub 6-Month	Sub 12-Month
06/30/32	-70.1	37.5	82.4	55.4	146.3
05/31/32	-65.7	-0.8	87.6	46.5	115.8
04/30/32	-61.4	-23.3	4.5	19.2	42.5
03/31/32	-56.2	-20.3	-39.4	10.5	-20.1
07/30/32	-55.6	37.6	14.0	13.8	63.2
02/29/32	-53.7	-11.8	-46.1	1.1	-31.9
03/31/38	-52.6	14.1	36.0	44.0	29.2
01/30/32	-51.0	5.3	-26.0	-22.7	-12.0
09/30/31	-47.8	8.4	-16.3	-24.6	-16.7
12/31/31	-47.0	-2.9	-9.9	-45.4	-15.2
05/29/31	-46.8	13.9	6.5	-27.1	-65.7
05/31/38	-43.0	24.7	30.0	37.4	25.1
11/30/31	-42.7	-14.5	-12.6	-52.9	-31.0
09/30/74	-41.4	16.3	7.9	31.2	32.0
04/30/38	-41.0	-4.4	27.8	35.7	12.6
01/31/38	-40.0	6.1	-9.3	15.9	15.1
08/31/32	-39.5	-3.6	-21.9	-32.6	32.3
04/30/31	-39.4	-13.7	-9.0	-30.2	-61.4
12/31/37	-38.6	1.4	-19.4	9.7	25.3
09/30/30	-38.4	-8.9	-17.5	-10.2	-47.8
10/31/31	-37.8	-9.8	-25.1	-44.6	-34.0
10/31/08	**-37.5**	---	---	---	---
02/28/38	-37.3	-25.1	-18.3	6.2	12.0
11/30/37	-35.7	-5.1	2.2	-16.6	14.6
07/31/31	-35.3	1.0	-23.3	-42.6	-55.6
Average		0.9	0.2	-1.0	7.3
Max		37.6	87.6	55.4	146.3
Min		-25.1	-46.1	-52.9	-65.7
% Positive		50.0	45.8	58.3	58.3

Post-1949 Period

Date	Trailing 12-Month	Sub 1-Month	Sub 3-Month	Sub 6-Month	Sub 12-Month
09/30/74	-41.4	16.3	7.9	31.2	32.0
10/31/08	**-37.5**	---	---	---	---
10/31/74	-31.8	-5.3	4.2	18.1	20.5
08/30/74	-30.8	-11.9	-3.0	13.1	20.4
12/31/74	-29.7	12.3	21.6	38.8	31.5
09/28/01	-27.5	1.8	10.3	10.2	-21.7
11/29/74	-27.1	-2.0	16.6	30.3	30.4
07/31/74	-26.7	-9.0	-6.8	-2.9	11.9
03/31/03	-26.1	8.1	14.9	17.4	32.8
05/29/70	-26.0	-5.0	6.5	13.9	30.2
10/31/01	-25.9	7.5	6.6	1.6	-16.4
06/30/70	-25.6	7.3	15.9	26.7	37.1
08/31/01	-25.3	-8.2	0.5	-2.4	-19.2
07/31/02	-24.7	0.5	-2.8	-6.1	8.6
01/31/03	-24.3	-1.7	7.2	15.7	32.2
02/28/03	-24.0	0.8	14.6	19.8	36.1
09/30/08	**-23.7**	**-16.8**	---	---	---
12/31/02	-23.4	-2.7	-3.6	10.8	26.4
03/30/01	-22.6	7.7	5.5	-10.3	-1.1
09/30/02	-21.7	8.6	7.9	4.0	22.2
04/30/70	-21.4	-6.1	-4.3	2.1	27.5
08/31/88	-20.7	4.0	4.7	10.5	34.4
01/31/75	-20.3	6.0	13.4	15.3	31.0
08/30/02	-19.2	-11.0	2.2	-8.2	10.0
06/28/02	-19.2	-7.9	-17.6	-11.1	-1.5
Average		-0.3	5.3	10.4	18.1
Max		16.3	21.6	38.8	37.1
Min		-16.8	-17.6	-11.1	-21.7
% Positive		54.2	82.6	82.6	87.0

Source: Global Financial Data, Inc. and Thomson Datastream.

Note: Dates occuring in 2008 are bolded.

Table I

S&P 500 INDEX ROLLING TEN-YEAR AACR

January 31, 1869 – October 31, 2008

Legend: Nominal / Real

Y-axis: Percent (%) — 25.0, 20.0, 15.0, 10.0, 5.0, 0.0, -5.0

X-axis: 1869, 1879, 1889, 1899, 1909, 1919, 1929, 1939, 1949, 1959, 1969, 1979, 1989, 1999

Sources: Global Financial Data, Inc., Standard & Poor's, and U.S. Department of Labor - Bureau of Labor Statistics.

Notes: Graph represents total return data. Data prior to 1926 represent the S&P Composite as calculated by Global Financial Data, Inc. Data from 1969 to present represent the S&P 500 Index. CPI-U data are through September 30, 2008.

Table J

SO BAD IT'S GOOD?

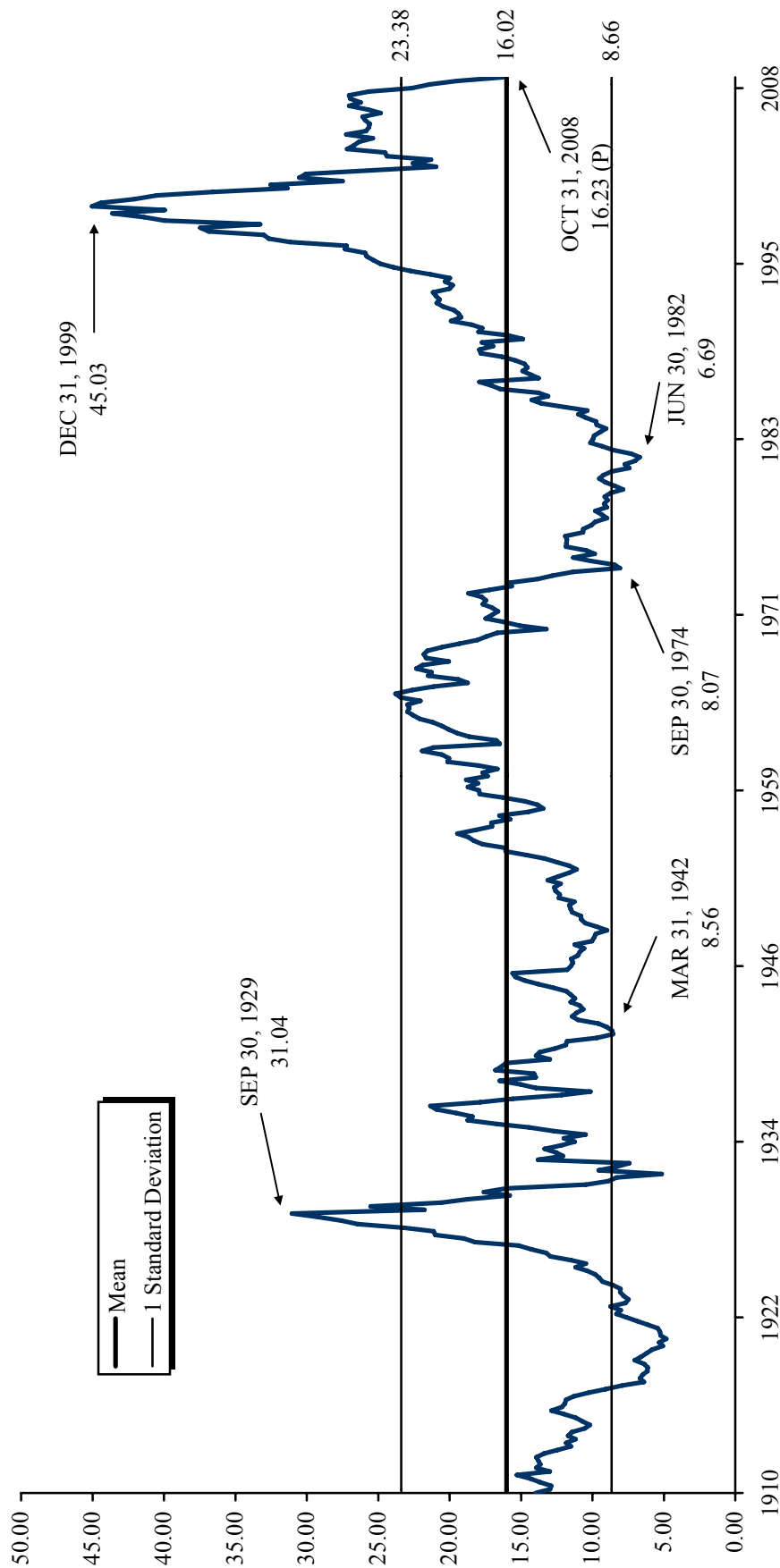**25 Worst S&P 500 Nominal and Real Ten-Year Periods and Subsequent Return**

1900–2008

10-Year Period Ending	Worst Trailing Nominal 10-Yr AACR	Subsequent Nominal 10-Yr AACR	10-Year Period Ending	Worst Trailing Real 10-Yr AACR	Subsequent Real 10-Yr AACR
06/30/39	-3.9	8.7	06/30/21	-4.6	16.2
03/31/39	-3.1	9.2	12/31/20	-4.4	16.3
09/30/39	-3.0	7.8	09/30/74	-4.3	7.3
03/31/38	-2.9	11.9	03/31/21	-4.0	16.8
03/31/40	-1.8	9.8	06/30/20	-3.8	18.4
06/30/40	-1.7	12.3	12/31/74	-3.8	6.8
06/30/32	-1.1	12.5	06/30/82	-3.7	14.1
12/31/38	-0.9	7.3	03/31/82	-3.4	13.6
09/30/38	-0.3	8.2	12/31/78	-3.3	9.7
12/31/39	-0.1	9.2	09/30/20	-3.2	17.0
09/30/40	0.0	12.6	09/30/82	-3.0	13.2
12/31/37	0.0	9.6	06/30/78	-2.9	9.5
06/30/38	0.2	9.6	09/30/21	-2.9	11.0
10/31/08	**0.4**	**?**	03/31/20	-2.8	18.6
03/31/41	0.4	14.6	12/31/19	-2.8	16.0
09/30/74	0.5	15.4	03/31/79	-2.7	9.8
03/31/33	0.8	13.0	09/30/75	-2.7	5.8
12/31/74	1.3	14.6	09/30/78	-2.6	8.6
06/30/41	1.5	14.4	03/31/78	-2.5	9.5
06/30/21	1.7	14.4	12/31/77	-2.5	8.2
12/31/40	1.8	13.4	**10/31/08**	**-2.5**	**?**
03/31/21	2.8	14.9	09/30/77	-2.4	10.9
09/30/75	2.8	13.3	06/30/79	-2.3	10.7
06/30/08	**2.9**	**?**	09/30/19	-2.3	19.3
09/30/37	2.9	6.7	12/31/75	-2.3	6.7

	Average	11.5		Average	12.2
	Max	15.4		Max	19.3
	Min	6.7		Min	5.8
	% Positive	100		% Positive	100

Sources: Global Financial Data, Inc. and Thomson Datastream.

Notes: AACRs based on quarterly total returns. The ten-year period from 1998 to 2008 is based on monthly returns through October. Dates occuring in 2008 are bolded.

Table K

S&P 500 NORMALIZED REAL PRICE-EARNINGS RATIOS SINCE 1910

DEC 31, 1999
45.03

SEP 30, 1929
31.04

23.38

16.02

8.66

OCT 31, 2008
16.23 (P)

JUN 30, 1982
6.69

SEP 30, 1974
8.07

MAR 31, 1942
8.56

Mean
1 Standard Deviation

Sources: Calculated from data provided by Standard & Poor's, Standard & Poor's Compustat, U.S. Department of Labor - Bureau of Labor Statistics, and *The Wall Street Journal.*

Notes: (P) Preliminary. Normalized real price-earnings ratios for the S&P 500 are calculated by dividing the current index value by the annualized average real earnings for the trailing ten years. CPI-U data are through September 30, 2008. S&P data are through October 31, 2008. Graph represents quarterly data.

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Table L

MSCI U.S. PRICE-EARNINGS VALUATIONS

December 31, 1969 – October 31, 2008

Trailing P/E

Ending Value: 14.1

Trend-Line P/E

Ending Value: 15.5

ROE-Adjusted P/E

Ending Value: 12.8

Shiller P/E

Ending Value: 14.8
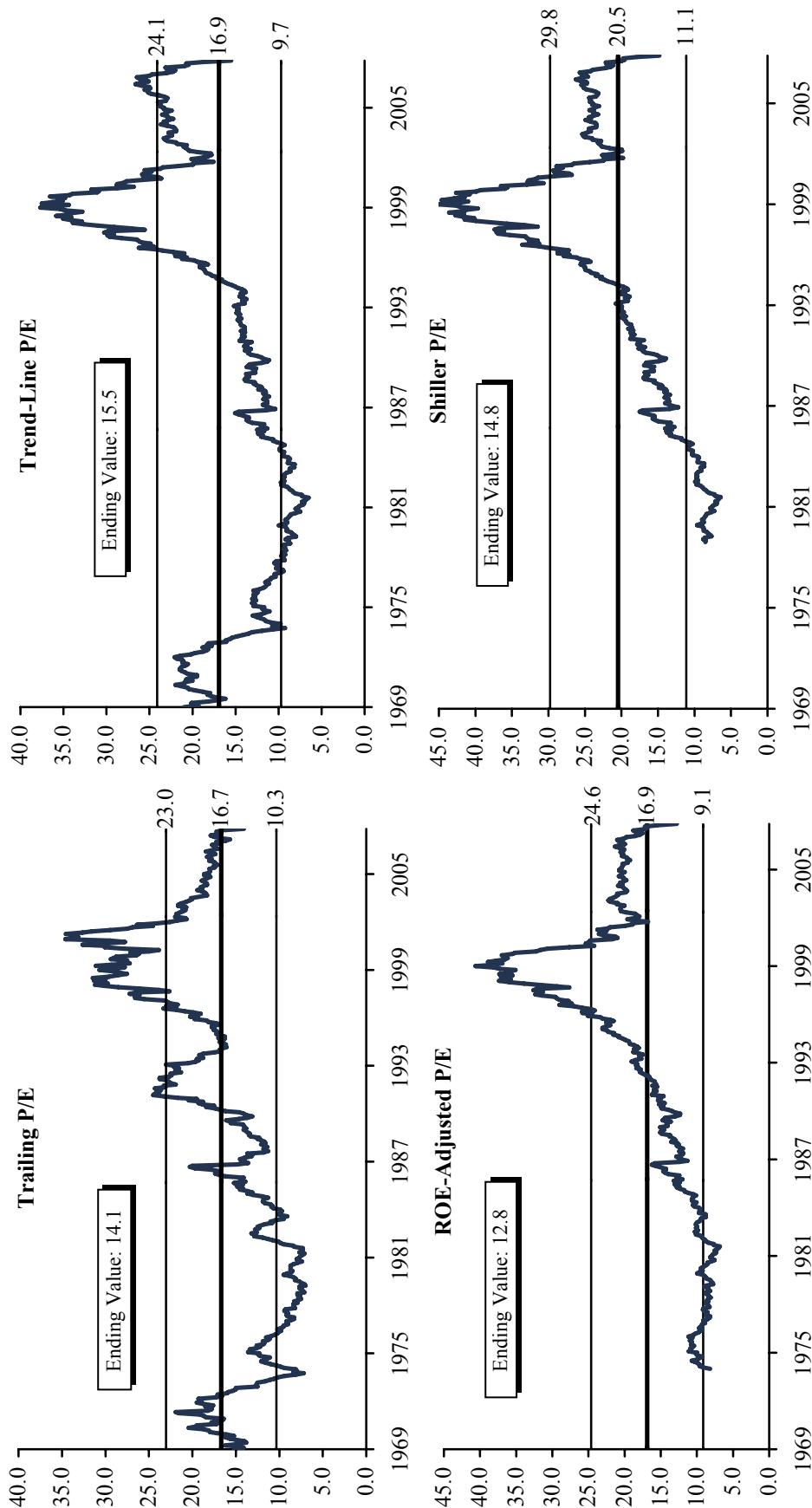
Sources: Global Financial Data, Inc., MSCI Inc., and Thomson Datastream. MSCI data provided "as is" without any express or implied warranties.

Notes: MSCI U.S. earnings per share are deflated by the U.S. CPI from 1969 to September 2008. The return on equity–adjusted price-earnings (P/E) data start on December 31, 1974. The Shiller P/E data start on November 30, 1979.

Table M

**RELATIONSHIP BETWEEN REAL NORMALIZED S&P 500 PRICE-EARNINGS RATIOS
AND SUBSEQUENT TEN-YEAR REAL AACR**

1910–2008
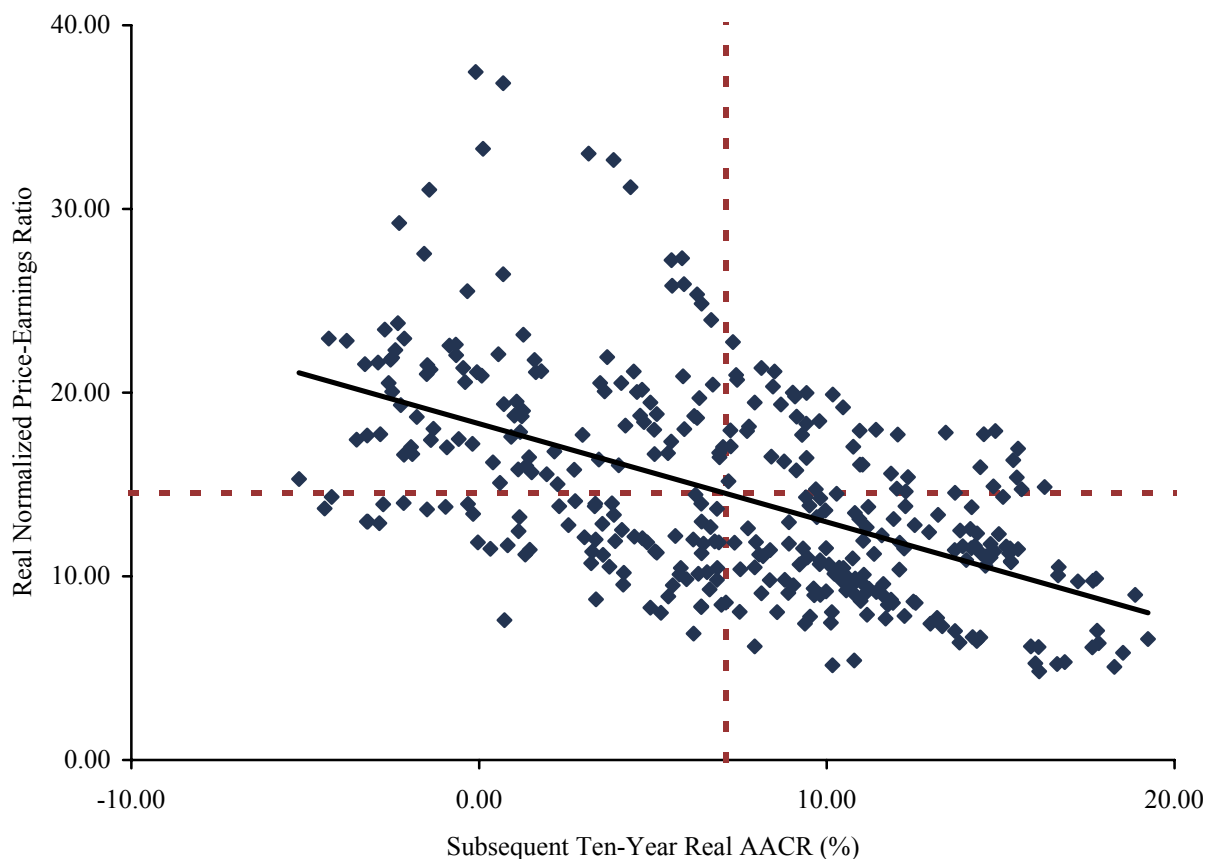
	Beginning Period Real Normalized S&P 500 P/E Ratio			Subsequent Ten-Year Real AACR (%)			
P/E Ratio Quartiles	Mean	High	Low	Mean	High	Low	Std Dev
First	8.33	10.45	4.82	10.93	19.24	0.73	4.12
Second	11.77	13.39	10.45	8.46	16.67	-3.23	5.11
Third	15.76	17.97	13.45	6.01	16.27	-5.17	5.98
Fourth	22.21	37.45	17.97	2.96	11.41	-4.32	4.21
Total	14.52	37.45	4.82	7.09	19.24	-5.17	5.72

Sources: Standard & Poor's, Thomson Datastream, and *The Wall Street Journal.*

Notes: Based on quarterly data. Last datapoint in the analysis reflects the real normalized price-earnings ratio as of September 1998 and subsequent real total returns from December 1998 to September 2008.

Table N

**S&P 500 REAL NORMALIZED PRICE-EARNINGS RATIOS
AND SUBSEQUENT REAL RETURNS**

1910–2008

Decile	Price-Earnings Range	Average Subsequent Real AACR (%)			
		One-Year	Five-Year	Ten-Year	15-Year
1	4.8 – 8.5	20.6	16.2	12.1	9.8
2	8.6 – 10.0	11.9	12.8	10.4	11.0
3	10.1 – 11.4	15.1	7.5	9.2	10.1
4	11.4 – 12.5	7.8	6.7	8.8	9.6
5	12.6 – 14.2	7.6	5.0	5.4	7.2
6	14.3 – 16.7	7.0	4.6	7.2	6.3
7	16.7 – 18.7	1.8	3.6	5.4	4.7
8	18.7 – 21.2	7.0	7.9	4.2	3.1
9	21.3 – 25.7	5.0	3.2	0.3	0.1
10	25.8 – 45.0	1.5	-1.5	NM	NM

Sources: Calculated from data provided by Standard & Poor's, Thomson Datastream, and *The Wall Street Journal.*

Notes: Analysis based on quarterly data through third quarter 2008. Given that the majority of tenth decile price-earnings ratios occurred in the late 1990s and early 2000s, subsequent ten- and 15-year average real returns are not meaningful (NM) due to limited number of observations.

Table O

BEAR MARKETS

1926–2008

Market Peak	Market Trough	Bear Market Duration (Mos)	Market Peak Level	Market Trough Level	Peak-to-Trough Return (%)	Trailing P/E Peak	Trailing P/E Trough	Trailing P/E % Change	Shiller P/E Peak	Shiller P/E Trough	Shiller P/E % Change
Sep-07-1929	Jun-01-1932	32.7	31.9	4.4	-86.2	19.7	10.9	-44.7	31.5	6.4	-79.7
Mar-06-1937	Mar-31-1938	12.8	18.7	8.5	-54.5	14.1	15.5	9.3	22.2	12.4	-44.4
Oct-25-1939	Apr-28-1942	30.0	13.2	7.5	-43.5	12.1	8.0	-34.0	16.8	8.5	-49.2
May-29-1946	Jun-13-1949	36.4	19.3	13.6	-29.6	22.8	5.9	-74.1	16.0	9.7	-39.5
Jan-05-1953	Sep-14-1953	8.3	26.7	22.7	-14.8	11.1	9.2	-17.3	12.9	11.7	-9.4
Aug-02-1956	Oct-22-1957	14.6	49.7	39.0	-21.6	14.3	12.2	-14.6	18.9	14.1	-25.0
Dec-12-1961	Jun-26-1962	6.4	72.6	52.3	-28.0	22.4	15.8	-29.4	21.9	16.8	-23.0
Feb-09-1966	Oct-07-1966	7.9	94.1	73.2	-22.2	17.4	13.9	-20.1	24.1	19.2	-20.4
Nov-29-1968	May-26-1970	17.8	108.4	69.3	-36.1	18.8	13.9	-26.3	22.2	14.0	-37.0
Jan-11-1973	Oct-03-1974	20.7	120.2	62.3	-48.2	18.4	7.0	-62.1	18.6	8.7	-53.4
Sep-21-1976	Mar-06-1978	17.4	107.8	86.9	-19.4	11.0	8.0	-27.7	11.8	9.0	-23.4
Nov-28-1980	Aug-12-1982	20.4	140.5	102.4	-27.1	9.5	7.9	-16.7	9.7	6.6	-31.2
Aug-25-1987	Dec-04-1987	3.3	336.8	223.9	-33.5	20.8	13.2	-36.7	18.3	13.6	-25.8
Jul-16-1990	Oct-11-1990	2.9	369.0	295.5	-19.9	16.4	14.1	-14.0	17.7	15.3	-13.8
Jul-17-1998	Aug-31-1998	1.5	1,186.8	957.3	-19.3	28.3	24.6	-13.3	38.3	35.4	-7.4
Mar-24-2000	Oct-09-2002	30.5	1,527.5	776.8	-49.1	29.4	26.9	-8.6	43.2	22.4	-48.3
Oct-09-2007	**Oct-27-2008**	**12.6**	**1,565.2**	**848.9**	**-45.8**	**18.1**	**17.5**	**-3.6**	**26.7**	**14.2**	**-47.0**
Average		16.2			-35.2	17.9	13.2	-25.5	21.8	14.0	-34.0
Median		14.6			-29.6	18.1	13.2	-20.1	18.9	13.6	-31.2
Post-1950 Average		12.6			-29.6	18.1	14.1	-22.4	21.9	15.5	-28.1
Post-1950 Median		12.6			-27.1	18.1	13.9	-17.3	18.9	14.1	-25.0
Post-1950 ex 1998–2008 Avg		12.0			-27.1	16.0	11.5	-26.5	17.6	12.9	-26.2
Post-1950 ex 1998–2008 Median		11.4			-24.6	16.9	12.7	-23.2	18.5	13.8	-24.2

Sources: Global Financial Data, Inc., Ned Davis Research, Inc., Robert J. Shiller, Standard & Poor's, and Thomson Datastream.

Notes: A bear market is defined as an approximately 20% decline from peak to trough. The Shiller price-earnings (P/E) ratio is the real normalized P/E ratio based on the average of ten-year real reported earnings per share. The period occuring in 2008 is bolded and represents the most recent low.

Table P

S&P 500 PEAK-TO-TROUGH RECOVERY

Months to Decline and Recovery Through Price Only
1926–2007

Peak	Trough	Decline (%)	Months	Recovered	Trough to Recovery (%)	Months
Aug 31, 1929 31.71	Jun 30, 1932 4.43	-86.02	34	Sep 30, 1954	629.07	269
Jul 31, 1956 49.40	Dec 31, 1957 39.99	-19.04	17	Sep 30, 1958	25.18	9
Dec 31, 1961 71.55	Jun 30, 1962 54.75	-23.48	6	Aug 31, 1963	32.42	14
Jan 31, 1966 92.88	Sep 30, 1966 76.56	-17.57	8	Apr 30, 1967	22.79	7
Nov 30, 1968 108.37	Jun 30, 1970 72.72	-32.90	19	May 31, 1972	50.84	23
Dec 31, 1972 118.05	Sep 30, 1974 63.54	-46.18	21	Jul 31, 1980	91.49	70
Nov 30, 1980 140.52	Jul 31, 1982 107.09	-23.79	20	Dec 31, 1982	31.33	5
Aug 31, 1987 329.80	Nov 30, 1987 230.30	-30.17	3	Jul 31, 1989	50.27	20
Aug 31, 2000 1,517.68	Sep 30, 2002 815.28	-46.28	25	May 31, 2007	87.74	56

Sources: Global Financial Data, Inc. and Ned Davis Research, Inc.

Notes: Analysis based on monthly index price levels. Graph represents the duration (in months) of peak-to-trough declines and trough-to-recovery advances. Declines represent downturns of approximately 20% or more from a new market peak. Recoveries represent the return to the previous peak index level.

* The recovery from June 1932 to September 1954 has been capped for scale purposes.

Table Q

S&P 500 PEAK-TO-TROUGH RECOVERY

Months to Decline and Recovery With Reinvested Dividends
1926–2007

| Peak	Trough	Decline (%)	Months	Recovered	Trough to Recovery (%)	Months
Aug 31, 1929 2.24	Jun 30, 1932 0.37	-83.66	34	Feb 28, 1945	527.31	153
May 31, 1946 3.24	Nov 30, 1946 2.53	-21.84	6	Oct 31, 1949	29.34	35
Jul 31, 1957 14.79	Dec 31, 1957 12.57	-15.05	5	Jul 31, 1958	20.80	7
Dec 31, 1961 25.69	Jun 30, 1962 19.97	-22.25	6	Apr 30, 1963	31.18	10
Jan 31, 1966 37.86	Sep 30, 1966 31.91	-15.71	8	Mar 31, 1967	19.86	6
Nov 30, 1968 48.38	Jun 30, 1970 34.26	-29.19	19	Mar 31, 1971	41.60	9
Dec 31, 1972 60.15	Sep 30, 1974 34.50	-42.64	21	Jun 30, 1976	76.82	21
Nov 30, 1980 102.88	Jul 31, 1982 85.89	-16.52	20	Oct 31, 1982	26.61	3
Aug 31, 1987 326.07	Nov 30, 1987 229.61	-29.58	3	May 31, 1989	47.07	18
Mar 31, 2000 2,067.75	Sep 30, 2002 1,163.04	-43.75	30	Oct 31, 2006	81.91	49

Sources: Global Financial Data, Inc. and Ned Davis Research, Inc.

Notes: Analysis based on monthly index total return levels. Graph represents the duration (in months) of peak-to-trough declines and trough-to-recovery advances. Declines represent price level declines of approximately 20% or more from a new market peak. Recoveries represent the return to the previous peak index level based on total returns (reinvestment of dividends).

Table R

RELATIVE REAL RETURNS OF S&P 500 VERSUS TREASURIES AND T-BILLS

1910–2008

Rolling Three-Year AACR

Rolling Five-Year AACR

Rolling Ten-Year AACR
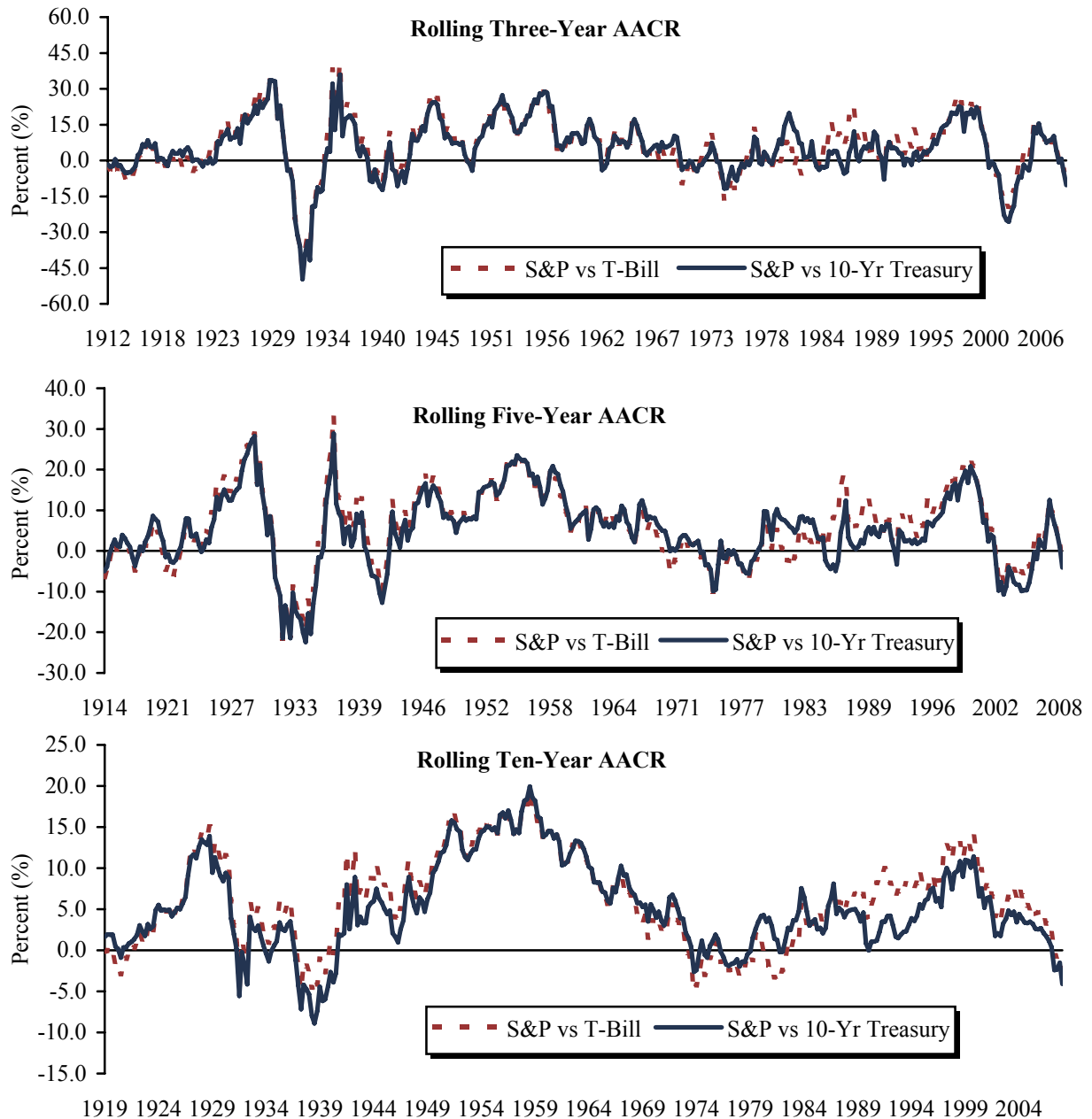
Sources: Federal Reserve, Global Financial Data, Inc., Merrill Lynch & Co, Standard & Poor's, Thomson Datastream, and U.S. Department of Labor - Bureau of Labor Statistics.

Notes: Graphs show rolling real total returns of the S&P 500 less ten-year Treasury and three-month T-bill real total returns. S&P 500 returns are from Global Financial Data, Inc., prior to 1969, and are from Thomson Datastream for 1969–present. Ten-year Treasury returns are from Global Financial Data, Inc., prior to 1970, and are from Merrill Lynch for 1970–present. Three-month T-bill returns are from Global Financial Data, Inc., prior to 1988, and are from Merrill Lynch for 1988–present. Data for 2008 are through October 31.