North Dakota State Investment Board Update

Reality and The Five Stages of Grieving

Legislative Joint Appropriations Committee Meeting
January 7, 2009
Steve Cochrane, NDRIO

Reality — Let's Start with the Fun Stuff!

Tiger Woods loses GM Buick endorsement deal

THE UNIVERSITY OF UTAH

Utah's basketball attendance is down 16 percent from last season

Reality - Let's Start with the Fun Stuff!

Honda quits Formula 1 Racing

Arena Football League suspends 2009 operations

Let's Start with the Fun Stuff!

Orange Bowl tickets for $11

NFL cuts 14% of workforce

Reality - Let's Start with the Fun Stuff!

NBA cuts 9% of workforce

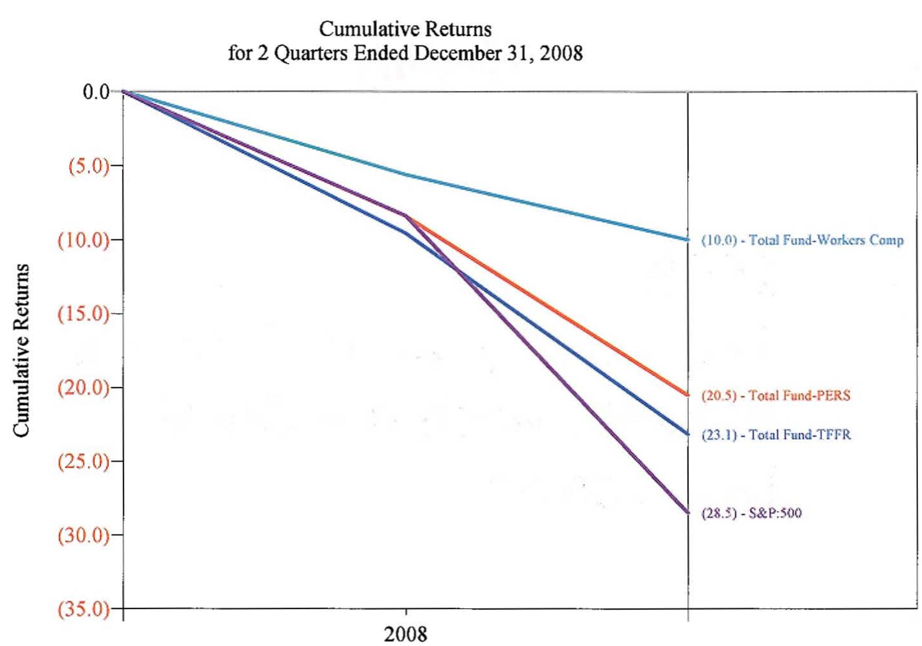
Fly fishing is down 20%

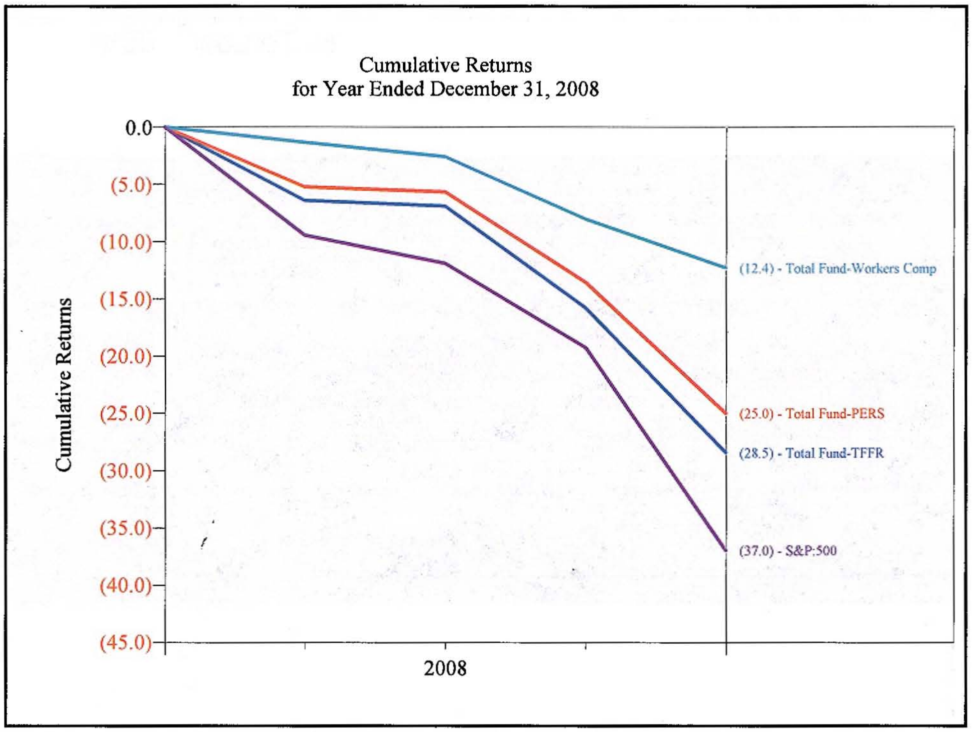
Reality

2008:
The worst year for financial markets since the Great Depression

Reality

Dollar losses 2009 FYTD (estimate thru December 31, 2008):		% Decline
TFFR	$432,761,909	(23.1%)
PERS	$371,147,462	(20.5%)
WSI	$143,618,470	(10.0%)
S&P 500		(28.5%)

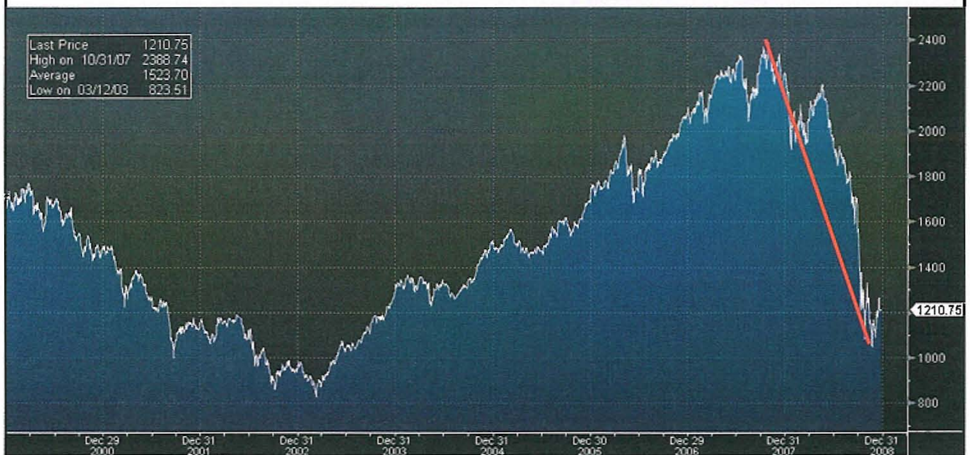



Cumulative Returns
for Year Ended December 31, 2008
Cumulative Returns
0.0
(5.0)
(10.0)
(15.0)
(20.0)
(25.0)
(30.0)
(35.0)
(40.0)
(45.0)
2008
(12.4) - Total Fund-Workers Comp
(25.0) - Total Fund-PERS
(28.5) - Total Fund-TFFR
(37.0) - S&P:500


Hi To Low: -52%
S&P 500
Last Price 872.80
High on 10/09/07 1565.15
Average 1213.46
Low on 11/20/08 752.44
872.80
SPX -- S&P 500 INDEX G-1 Daily 1/14/00 to 12/26/08
Copyright 2008 Bloomberg Finance L.P.
30-Dec-2008 14:45:40

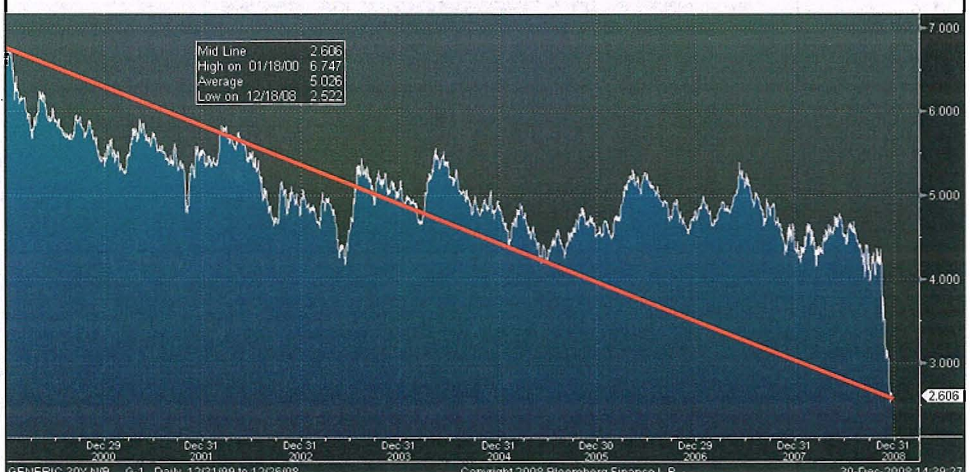
Hi To Low: -65%

EAFE Index



Hi To Low: -63%

30-Year Treasury Yield

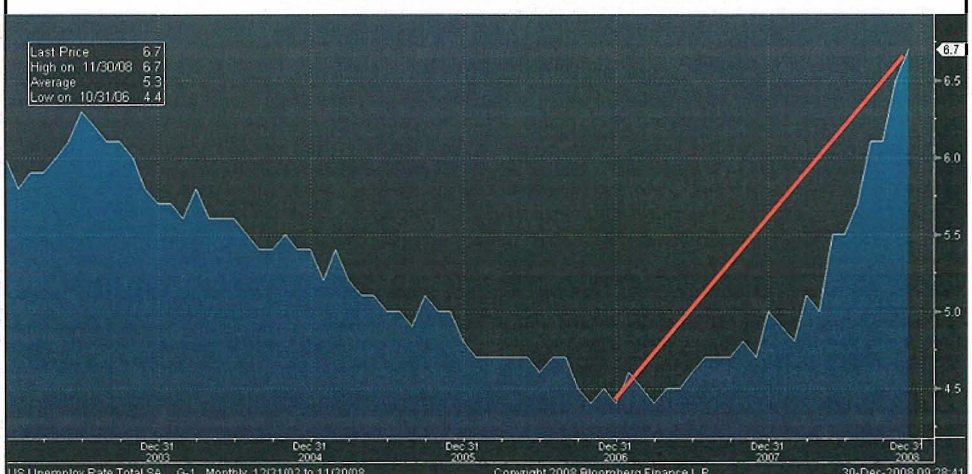


Hi To Low: -100%

T-Bill Yield

Hi To Low: +52%

U.S. Unemployment Rate

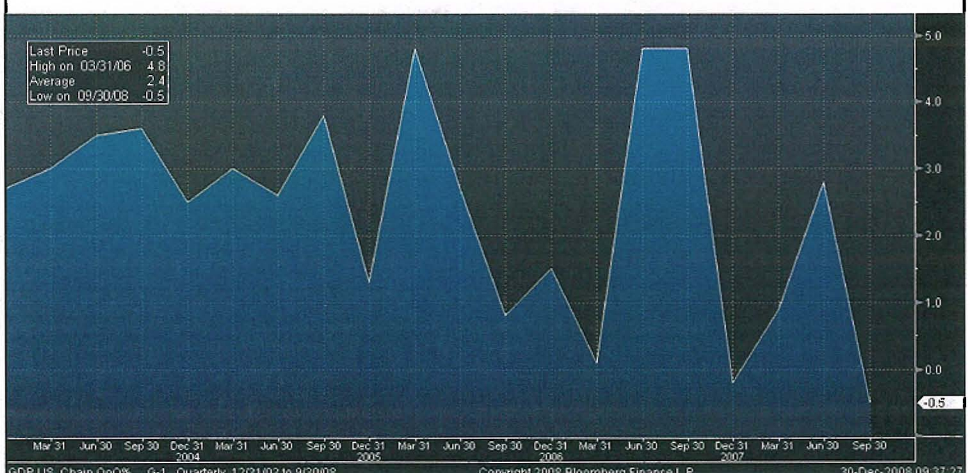


Hi To Low: -66%

Consumer Confidence

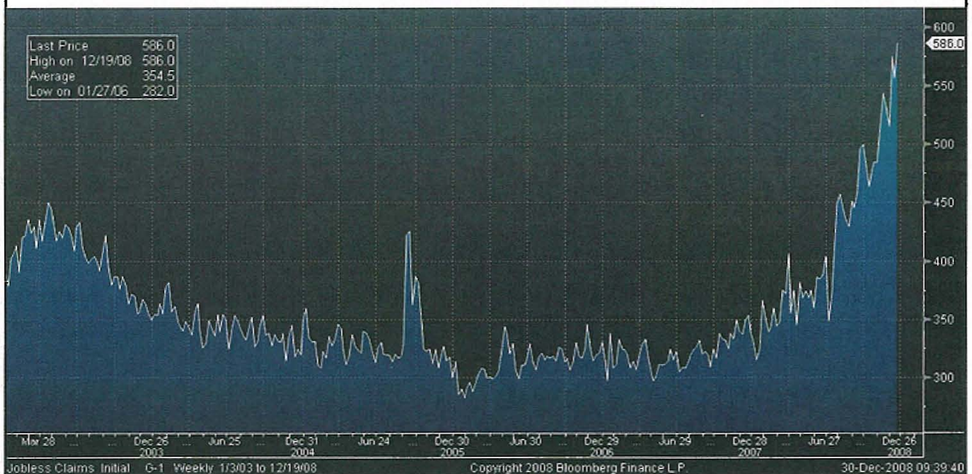
Recession!

Real GDP Growth



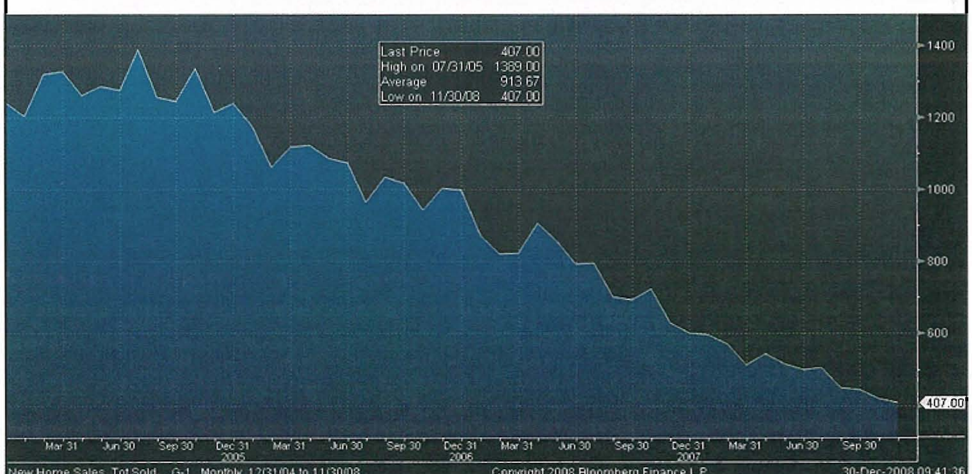
Unemployment Spiking

Initial Jobless Claims



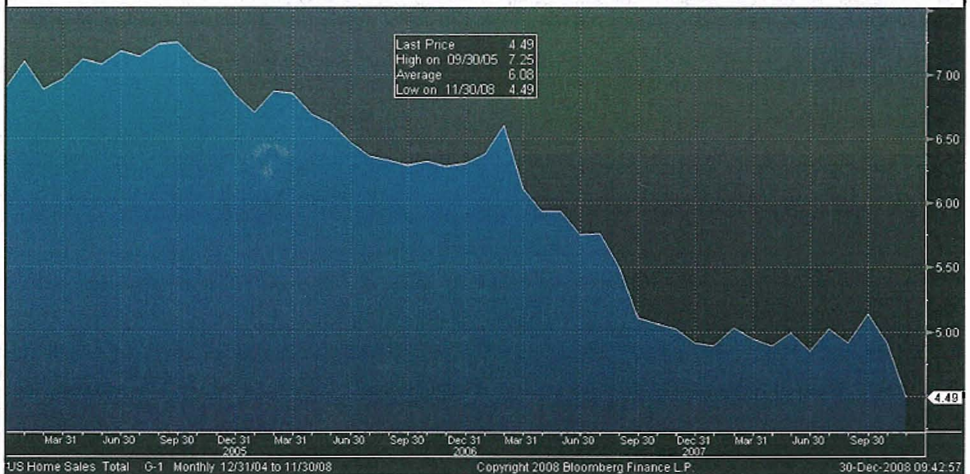
Sales plunge

New Home Sales

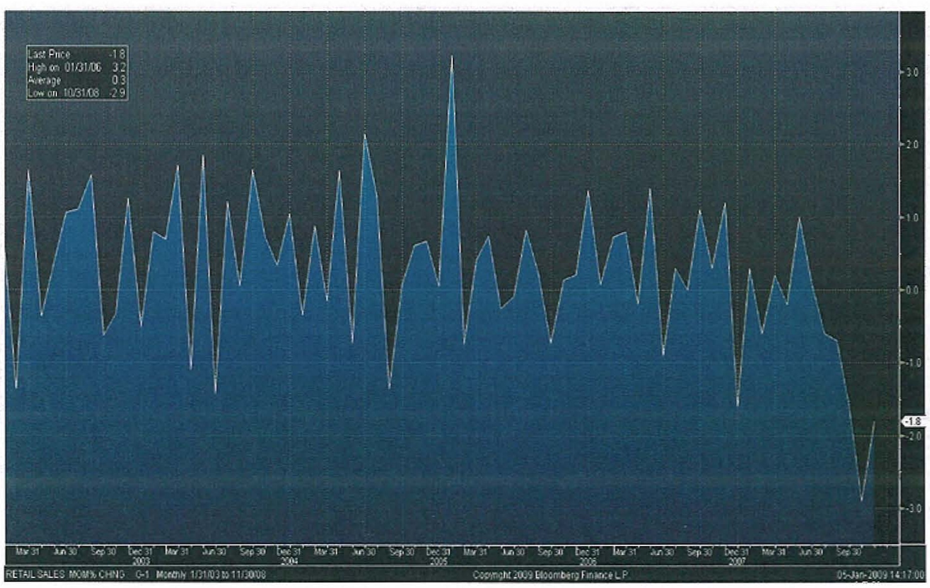


Dismal

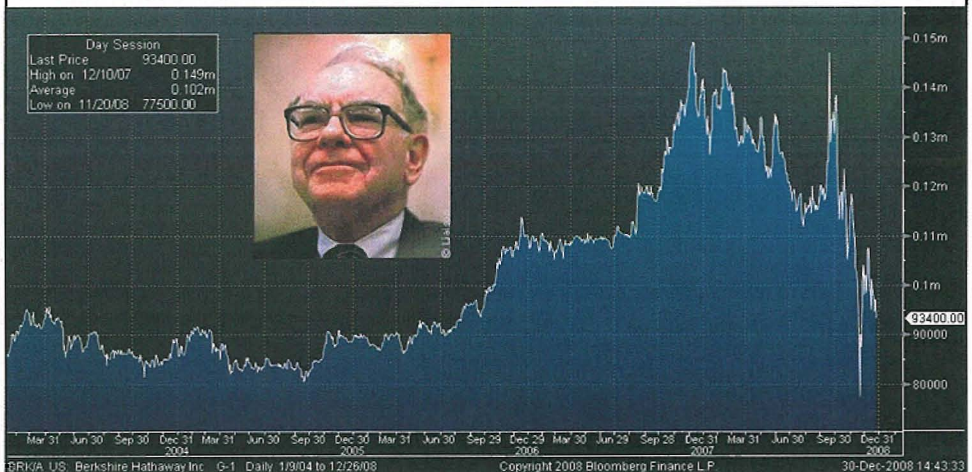
Existing Home Sales



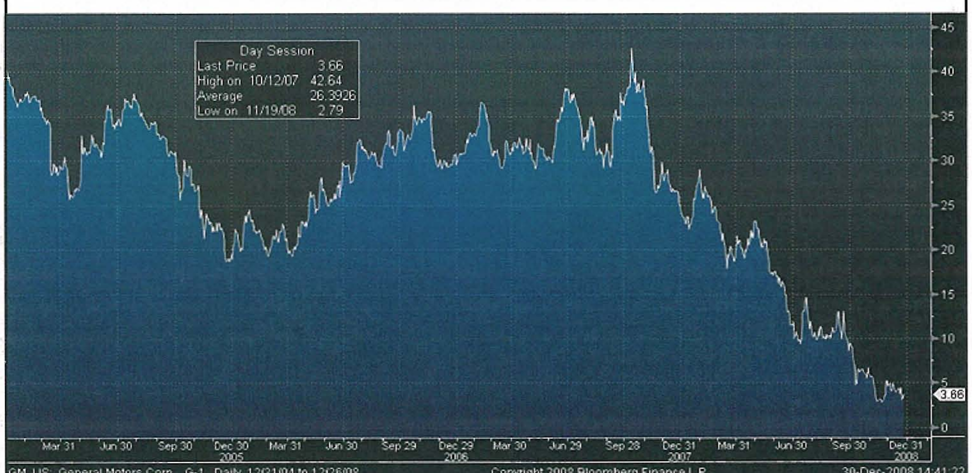
Retail Sales



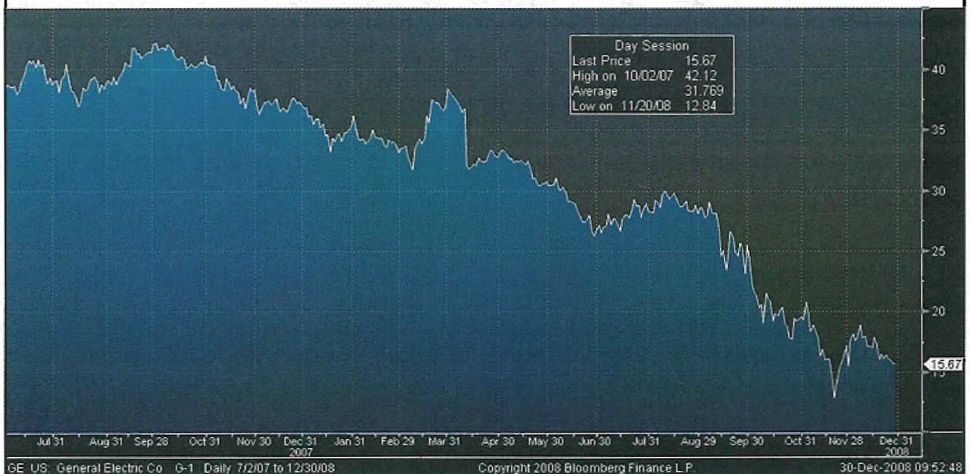
Berkshire Hathaway



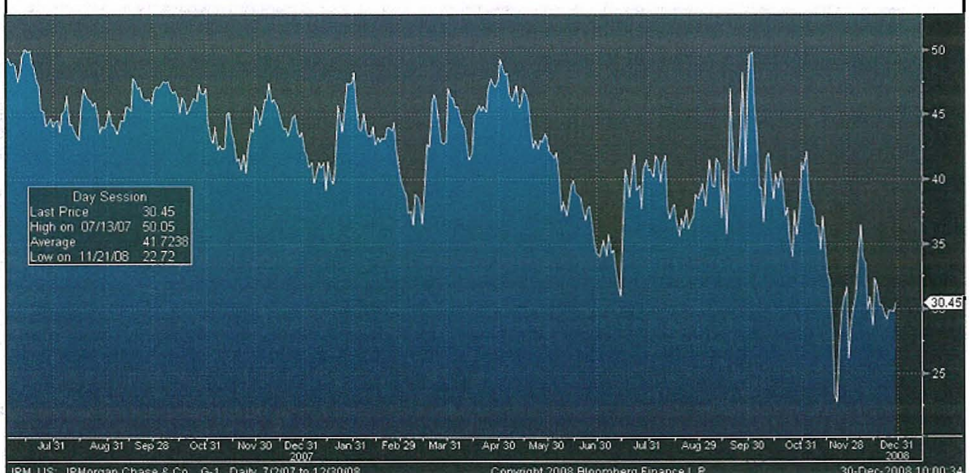
General Motors

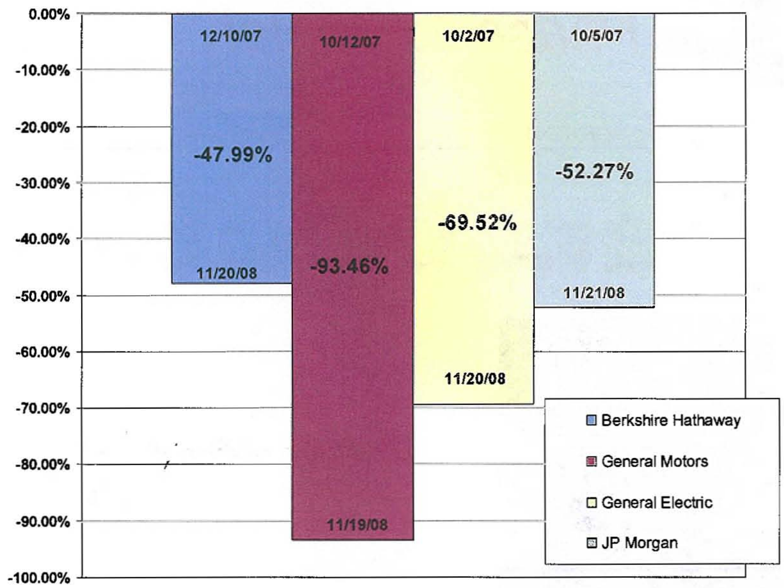


General Electric



JP Morgan





Talk About Volatile!

One-Day Price Change

Jan 1, 2003 - Dec 15, 2008

Measure	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**
>1% or <-1%	129	65	29	30	41	82
>2% or <-2%	68	17	2	0	0	15
>3% or <-3%	40	1	0	0	0	4
>4% or <-4%	27	0	0	0	0	0
>5% or >-5%	15	0	0	0	0	0

Sources: Dimensional Fund Advisors, S&P
Note: Data points are counted in all applicable ranges. For example, the 27 instances in 2008 of return variance between +4 and -4% are also counted in the preceding three rows.

The Five Stages of Grieving

Phase 1: Denial

WELLS CAPITAL MANAGEMENT

Economic and Market Perspective

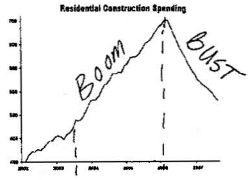
Thanks for taking a Look!!

Economic and Market Perspective

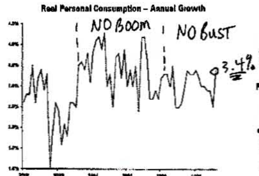
Housing Bust...WITHOUT...Consumption Bust???!

Does the housing bust imply a consumption bust? This was the fear in the summer of 2006 and is still the fear today. Although consumption growth may slow, we do not expect it to collapse. As these charts highlight, since the housing boom in the early part of this decade did not produce a consumption boom, why should the housing bust since the end of 2005 now cause a consumption bust? Since the recovery began, annual real personal consumption growth has rarely been above 3.5 percent nor below 2.5 percent even though housing spending soared until 2005 and has since collapsed. We think housing has broken its traditional link with consumption due to the emergence and subsequent collapse in a new phenomena call MEW (mortgage equity withdrawals). Our view is the MEW cycle temporarily divorced housing from the job market which historically has driven both housing and consumption spending. Once MEW runs its course and the housing industry is reliquefied, housing and consumption are likely to relink again with job creation. In the interim, however, we are experiencing a unique recovery cycle, where a boom-bust housing cycle is not greatly impacting consumption.

Residential Construction Spending



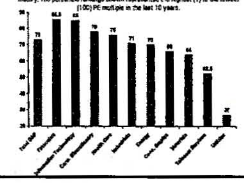
Real Personal Consumption – Annual Growth



Most stocks Pretty Cheap Relative to Last Decade!!?

Percentile Ranking of Median Company Current Price-Earnings Multiple* Compared to Trailing 10 Years (120 Months)
By S&P 500 Economic Sector

*Price-Earnings Multiple (PE) based on forward 1-year IBES mean estimated earnings per share for all companies which had a full 10-year (120 months) trading history. The percentile rankings shown represented the highest (1) to the lowest (100) PE multiple in the last 10 years.



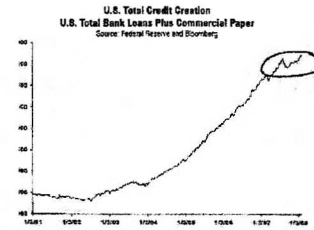
WELLS CAPITAL MANAGEMENT

March 2008

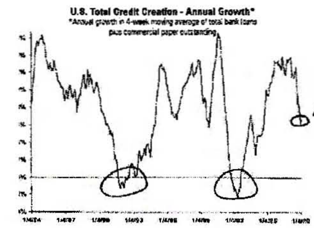
Economic and Market Perspective

Is the Credit Crunch Over???!

Total U.S. credit creation is rising again! Very good news indeed! The pause in total debt growth last summer is probably contributing to the weaker tone of recent reports. The fact that credit creation has subsequently recovered bodes well for the economy perhaps by as early as the second quarter. The annual growth in total economy-wide credit suggests a slowdown but not a recession. Despite the freeze in short-term business credit last summer, overall debt growth has only slowed to about 6 percent and seems to be recovering again. By contrast, in the last two recessions, total credit creation didn't just slow, but actually contracted on an annual basis. As highlighted by the media clips below, the ability to obtain financing may not be as difficult as widely perceived?!??



After A Brief Pause...
... Credit is Expanding Again!!!

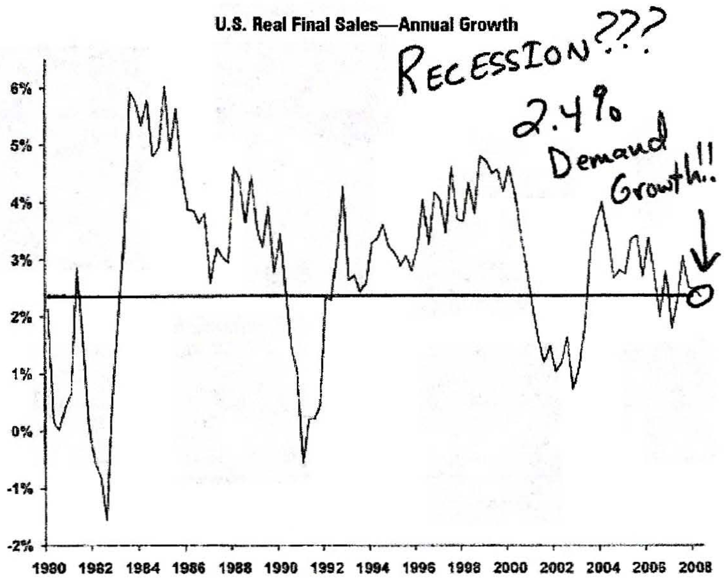


No Recession Here!!!

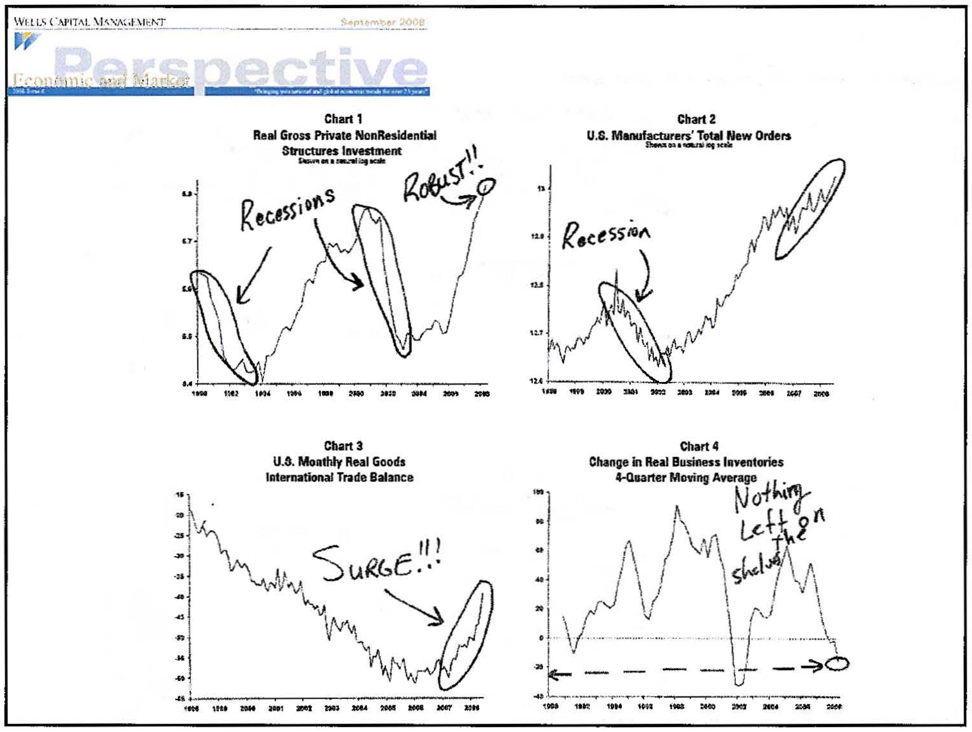
WELLS CAPITAL MANAGEMENT

September 2008

Economic and Market Perspective



RECESSION???
2.4% Demand Growth!!



Phase 2: The Blame Game

ND State Investment Board


Lt. Governor


Treasurer


Insurance Commissioner


Land Commissioner


WSI


PERS


PERS


PERS


TFFR


TFFR


TFFR

The Feds!

U.S. DEPARTMENT OF THE TREASURY

Ginnie Mae

FDIC

U.S. Securities and Exchange Commission MCMXXXIV

FannieMae

Freddie Mac

The Out of Town Experts?

SEI New ways. New answers.®

CALLAN ASSOCIATES

Watson Wyatt Worldwide

GRS Gabriel Roeder Smith & Company Consultants & Actuaries

Madoff With the Money

- New Mexico Educational Retirement Board, Santa Fe
- New Orleans City Employees' Retirement System
- $41 million by the Fairfield (Conn.) Town Retirement Fund. The $233 million plan had 17.6%, or $41 million, invested as of Nov. 30 in the MAXAM Absolute Return Fund, managed by Madoff Investment Securities.

BARCLAYS

- Massachusetts Mutual Life Insurance
- Swiss Reinsurance Co
- Man Group PLC

NYU	$24 million
Yeshiva University	$110 million
Tufts	$20 million

UBS

FORTIS

RBS The Royal Bank of Scotland Make it happen

OppenheimerFunds The Right Way to Invest

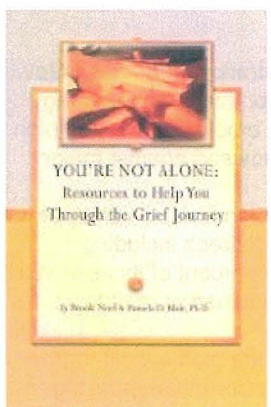
AXA ADVISORS redefining / standards

HSBC The world's local bank

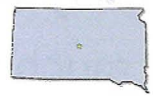
Today's Usual Suspects

- Too much borrowing
- Too much leverage / securitization
- Poor loan quality
- Lax regulation
- Asset pricing bubbles
- Recessionary economic cycle
- Extreme fear and uncertainty
- Credit markets are virtually frozen

Phase 3: Finding Common Ground



Officials say Retirement System still working



Dec 04, 2008 - 04:06:01 CST
By CHET BROKAW
Associated Press Writer

FORT PIERRE, S.D. - The South Dakota Retirement System fund has lost about $1.8 billion, or more than a quarter of its value, since July 1 because of the recession, but it can deal with the problems because it was in good financial shape before the economy went bad, officials said Wednesday.

"This system can weather some difficult times," consultant Paul Schrader said at a joint meeting of a legislative committee and the Retirement System's Board of Trustees.

State Investment Officer Matt Clark said the Retirement System has lost as much as 30 percent since July 1 because of falling stock prices and declining values of real estate and other assets held by the system.

Florida pension fund staying with investment strategy

Florida pension fund will be "staying the course"
Forbes 12.09.08

The State Board of Administration, chaired by Gov. Charlie Crist, approved minor investment strategy changes for Florida's public employee pension plan Tuesday after consultants advised against major revisions.
That's even though the pension fund, which covers state and local government retirees including teachers, has lost nearly 30 percent of its peak value due to the worldwide financial market meltdown. It's now just below $100 billion.
Crist and other officials say the plan is built for the long haul and has fared no worse than most big investors and better than some major Wall Street indicators. "We're staying the course," said Ash Williams, the board's executive director.

In the wake of 31 percent decline, CalPERS keeps focus on long-term

State public worker pension fund takes big hit
San Francisco Chronicle December 8, 2008

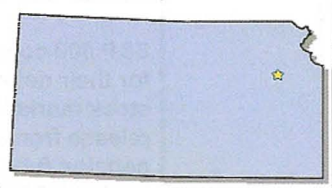
The market downturn has walloped the nation's largest pension fund.
The California Public Employees' Retirement System portfolio has lost 31.1 percent of its value since peaking last fall, a staggering $81.4 billion drop. CalPERS officials say a "rainy day fund" is helping to defray the losses - for now. But if the market slump continues, they will hit up state and local employers for more money. That's a painful prospect as California struggles through a fiscal emergency and municipalities cope with the foreclosure crisis and economic downturn.
The good news for the 1.6 million CalPERS retirees, workers and family members is that their pension benefits are guaranteed.

Kansas Public's assets down 30%

By Timothy Inklebarger

Posted: December 3, 2008, 3:22 PM ET

Kansas Public Employees Retirement System, Topeka, lost almost 30% of its value in just over a year, but benefit payments are safe, according to CIO Robert "Vince" Smith.
The fund is down to $10.1 billion as of Oct. 31 from a high of $14.4 billion on Sept. 30, 2007, Mr. Smith said.
Retirement system officials testified Tuesday before the Kansas Legislature's Joint Committee on Pensions, Investments and Benefits.
"These returns are driven by the downdraft in the equity markets," he said. "We're just in the same boat as everybody else."



Yale Predicts 25% Loss in Endowment
Article published on December 18, 2008

Yale University estimates that its endowment has dropped 25% in the four months to Oct. 31. The school says the endowment is now about $17 billion, down from $22.9 billion on June 30, the end of its last fiscal year. So reports the *New York Times*.

Harvard's endowment fell 22% in the same period and is predicted to drop as much as 30% for the full fiscal year, the *Times* reports.

Yale has been the best performing endowment over the past decade, with Harvard close on its heels. Swensen expanded into alternative investments – a strategy copied by other funds – which brought the endowment 16.3%-average annualized returns. Harvard's average was 13.8%.

S&P 500 plans may see record underfunding

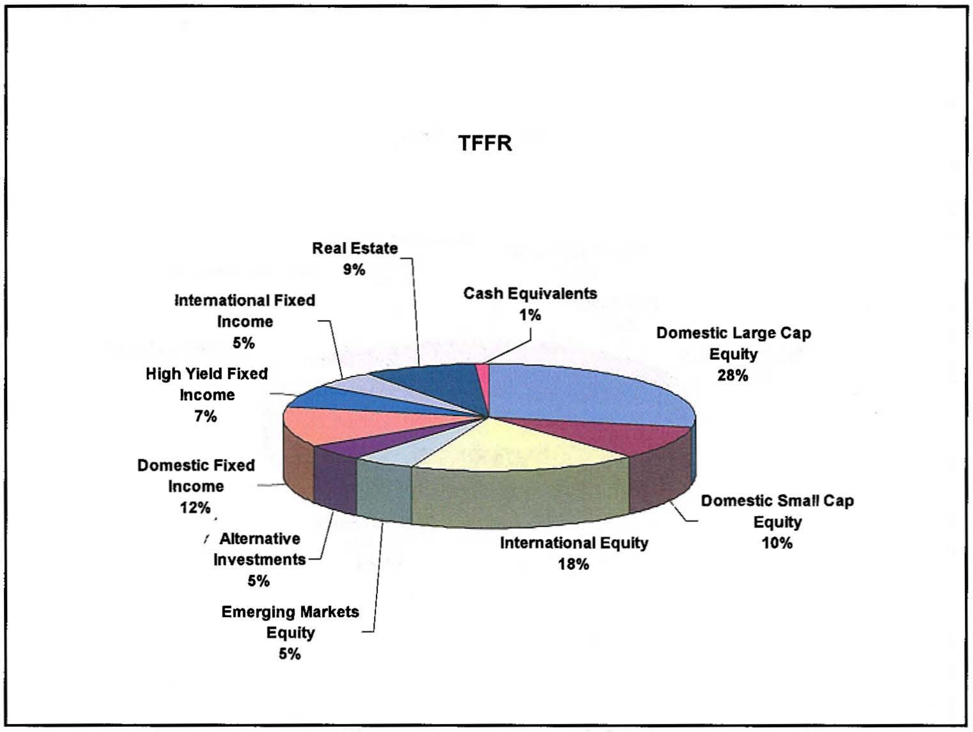
By Jennifer Byrd

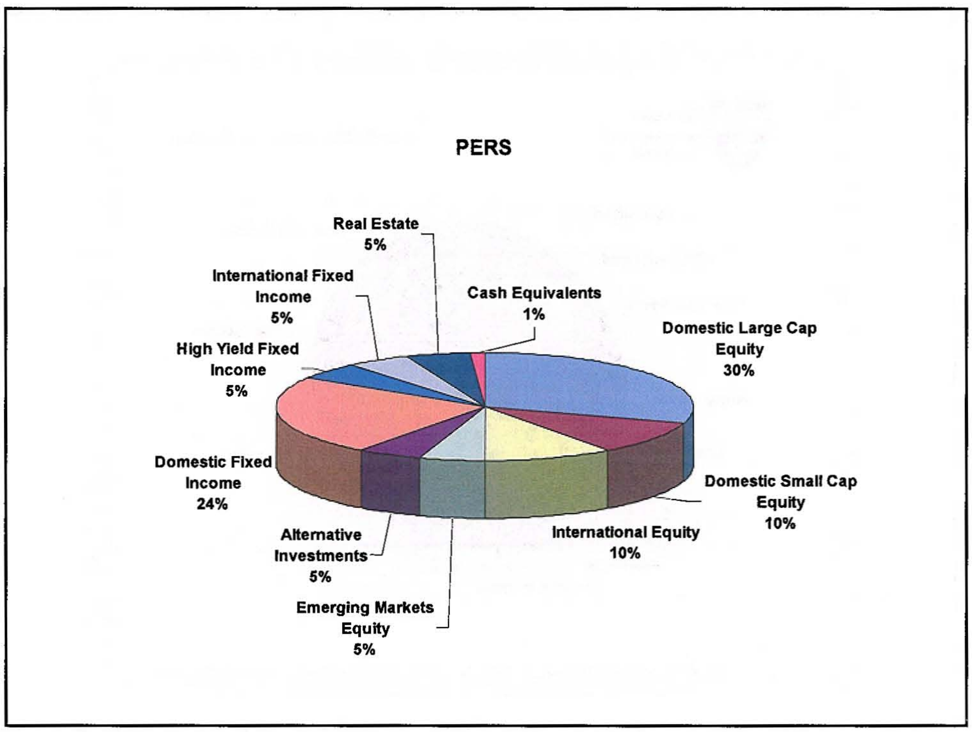
Posted: December 23, 2008, 1:48 PM ET

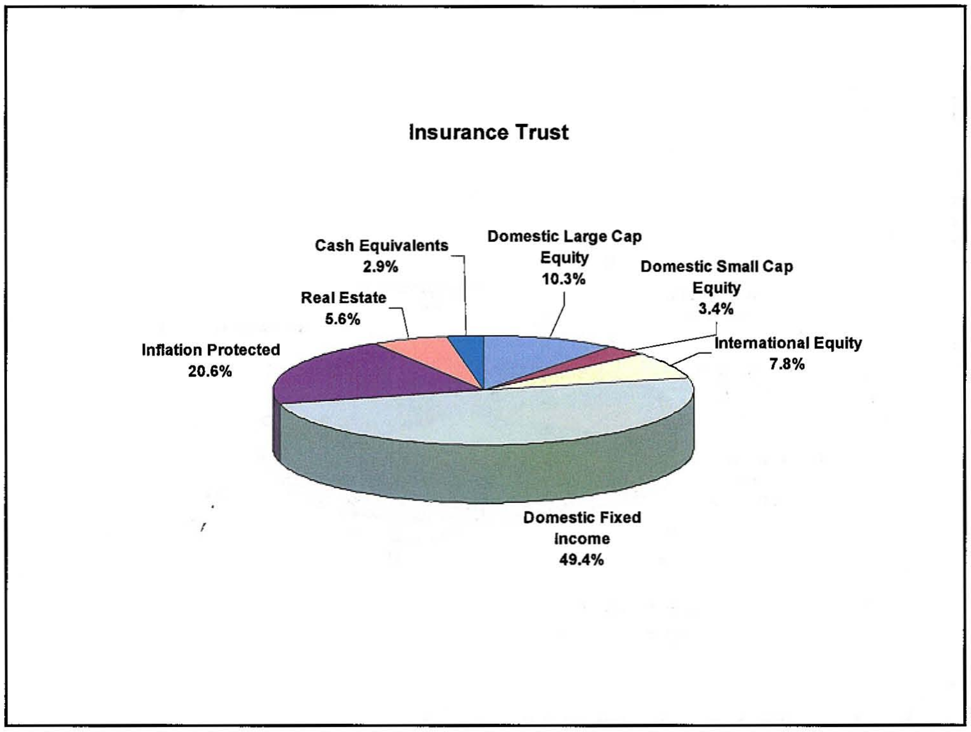
S&P 500 companies could see record underfunding for their defined benefit plans in 2008 because of poor stock market performance, according to a news release from Standard & Poor's. The companies' pension funds will be underfunded on an aggregate basis by $257 billion.

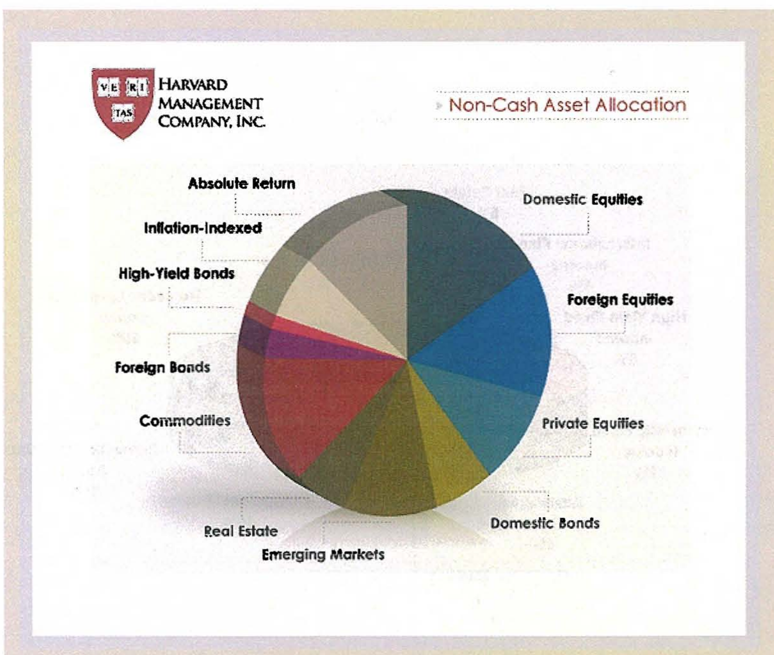
The plans were overfunded by $63.4 billion in 2007, the first surplus year since 2001.

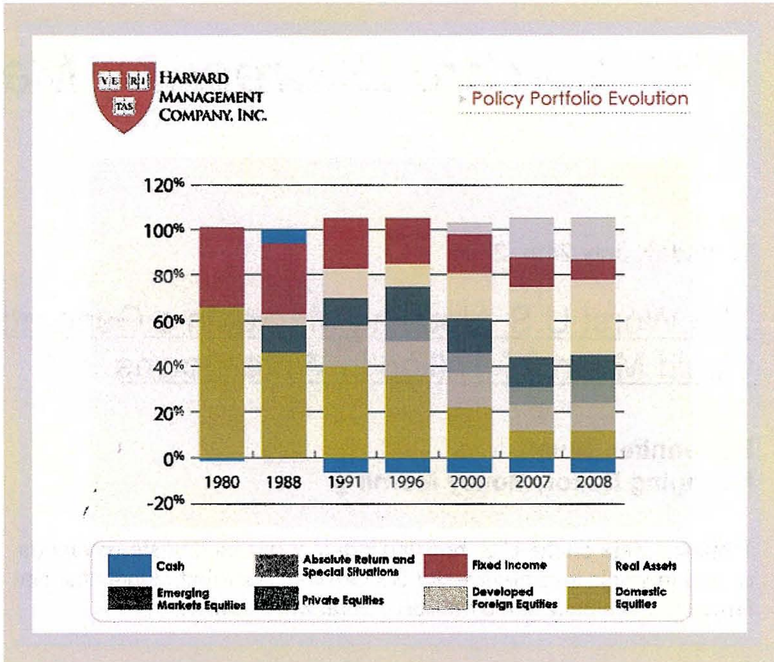
"Massive losses in the equity markets will require companies to either sell assets at their depressed levels, or shore up assets with significant cash infusions," Howard Silverblatt, senior index analyst and author of the research, said in the release.


TFFR
Real Estate 9%
International Fixed Income 5%
High Yield Fixed Income 7%
Domestic Fixed Income 12%
Alternative Investments 5%
Emerging Markets Equity 5%
Cash Equivalents 1%
Domestic Large Cap Equity 28%
Domestic Small Cap Equity 10%
International Equity 18%


PERS
Real Estate 5%
International Fixed Income 5%
High Yield Fixed Income 5%
Domestic Fixed Income 24%
Alternative Investments 5%
Emerging Markets Equity 5%
Cash Equivalents 1%
Domestic Large Cap Equity 30%
Domestic Small Cap Equity 10%
International Equity 10%

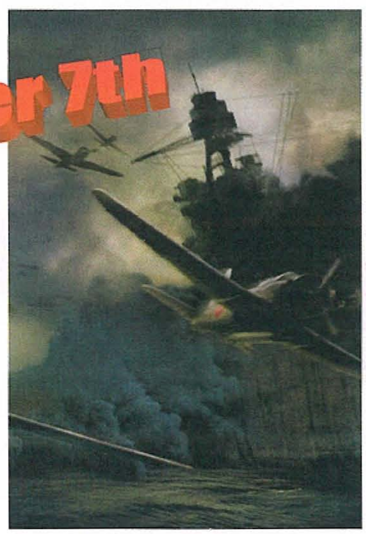

Insurance Trust
Cash Equivalents 2.9%
Domestic Large Cap Equity 10.3%
Domestic Small Cap Equity 3.4%
Real Estate 5.6%
Inflation Protected 20.6%
International Equity 7.8%
Domestic Fixed Income 49.4%


VE RI TAS
HARVARD MANAGEMENT COMPANY, INC.
Non-Cash Asset Allocation
Absolute Return
Inflation-Indexed
High-Yield Bonds
Foreign Bonds
Commodities
Real Estate
Emerging Markets
Domestic Bonds
Private Equities
Foreign Equities
Domestic Equities



Phase 4: Facing the Depression

Remember
December 7th



Bill, You are Depressing Me!

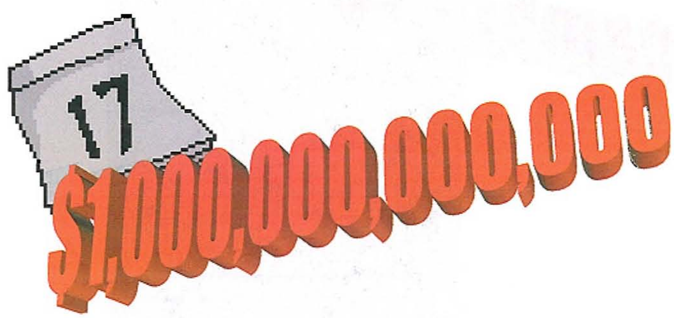
Thursday, July 24th, 2008

The Worst U.S. Housing Market in a Generation Could Mean $1 Trillion in Write-Downs

By Jennifer Yousfi
Managing Editor, Money Morning

Troubling data on the U.S. housing industry released yesterday lends weight to iconic income investor Bill Gross' theory that global financial firms will eventually see $1 trillion in total write-downs.

Remember December 17th?



(That's TRILLION!!!)

World Stocks Down 47%

Bloomberg.com

October 2007

World Equity Market Capitalization $60 Trillion

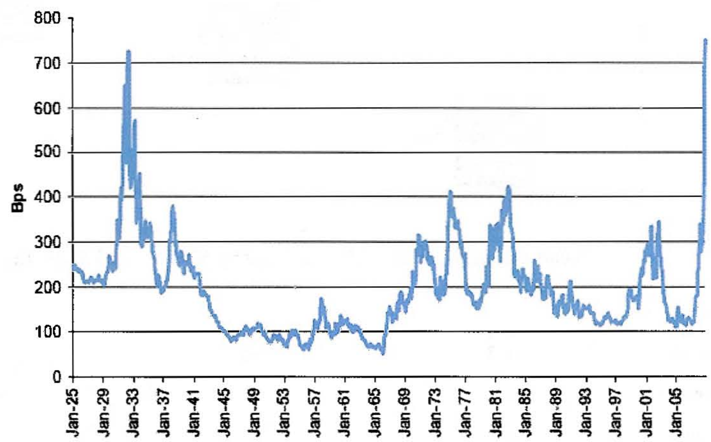
Mid December 2008

World Equity Market Capitalization $32 Trillion

Global Equity Loss $28 Trillion

Great Depression Redux?

- **Corporate credits priced for Depression (as of 11/30/08)**



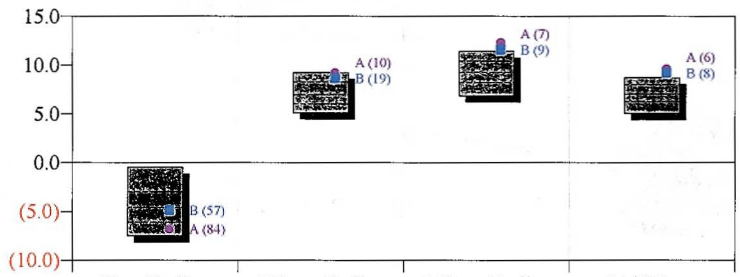
WELLS CAPITAL MANAGEMENT

Sources: Federal Reserve, Bloomberg, Merrill Lynch

Dislocation in the High Yield and Bank Loan Markets – How We Got Here, and the Current Opportunities 2

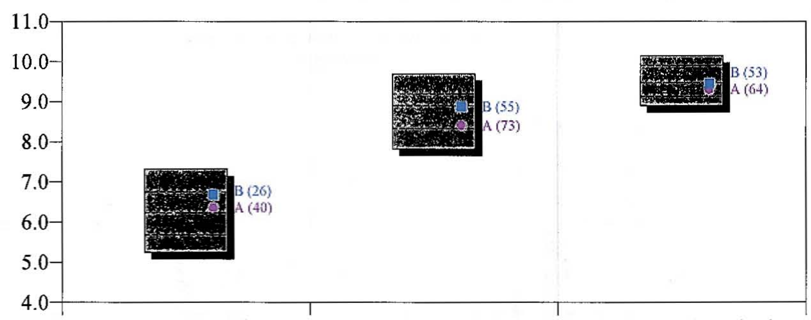
Phase 5: Renewal

Returns
for Various Periods
Group: CAI Public Fund Sponsor Database



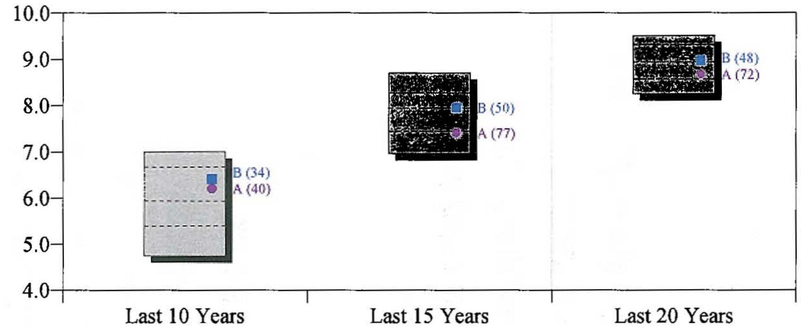
	Year Ending 6/30/08	3 Years Ending 6/30/08	5 Years Ending 6/30/08	5 1/4 Years Ending 9/30/08
10th Percentile	(0.46)	9.25	11.45	8.72
25th Percentile	(2.99)	8.28	10.40	7.99
Median	(4.59)	6.96	9.26	7.05
75th Percentile	(6.09)	6.01	8.21	6.25
90th Percentile	(7.51)	5.11	6.86	5.05
Member Count	114	106	104	99
TFFR Total Fund-Gross ● A	(6.80)	9.19	12.28	9.58
PERS Total Fund-Gross ■ B	(4.88)	8.61	11.55	9.17

Returns
for Periods Ended June 30, 2008
Group: CAI Public Fund Sponsor Database



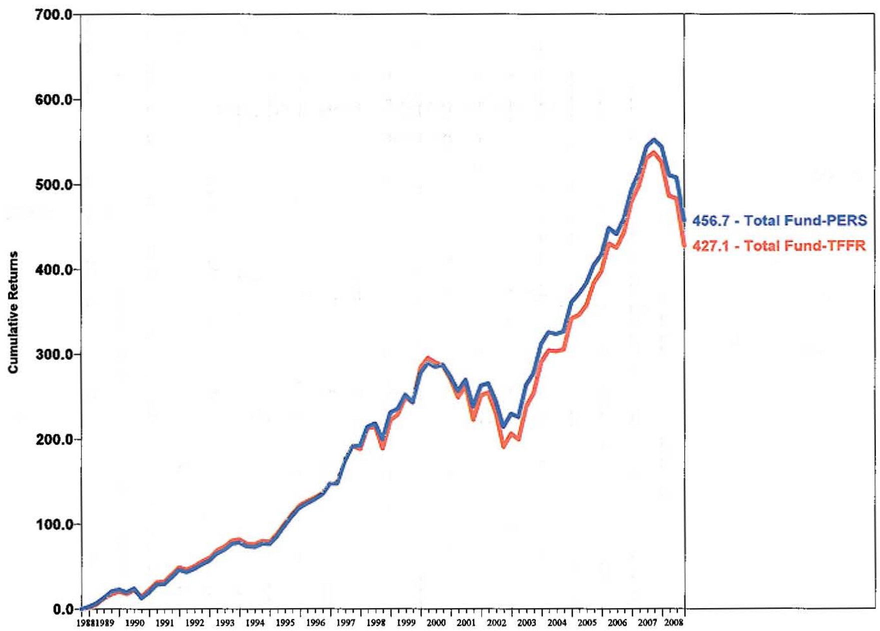
	10 Years Ending 6/30/08	15 Years Ending 6/30/08	20 Years Ending 6/30/08
10th Percentile	7.32	9.70	10.15
25th Percentile	6.75	9.20	9.90
Median	6.23	8.90	9.47
75th Percentile	5.67	8.34	9.13
90th Percentile	5.25	7.82	8.90
Member Count	84	70	40
Total Fund-TFFR ● A	6.36	8.41	9.32
Total Fund-PERS ■ B	6.69	8.87	9.45

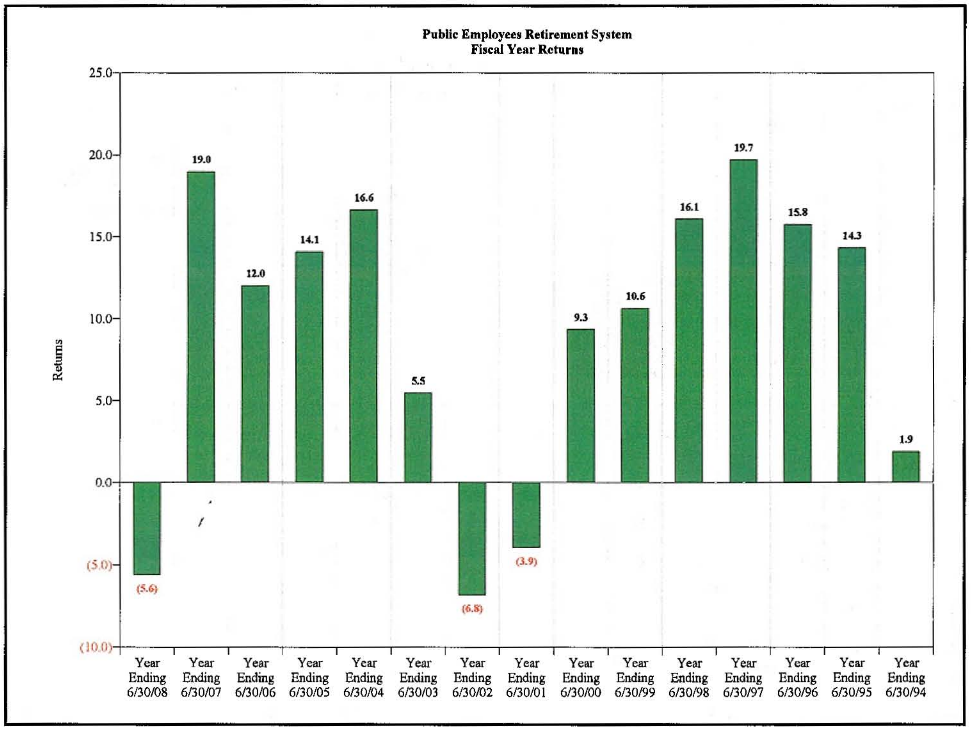
Returns
for Periods Ended September 30, 2008
Group: CAI Public Fund Sponsor Database

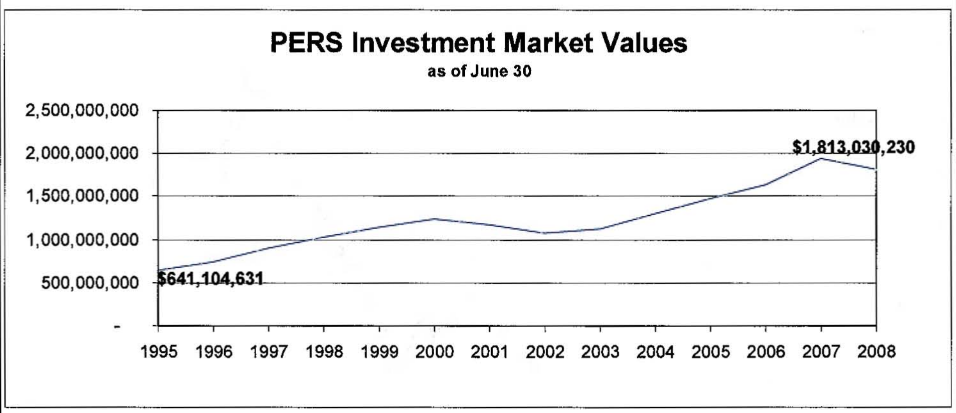


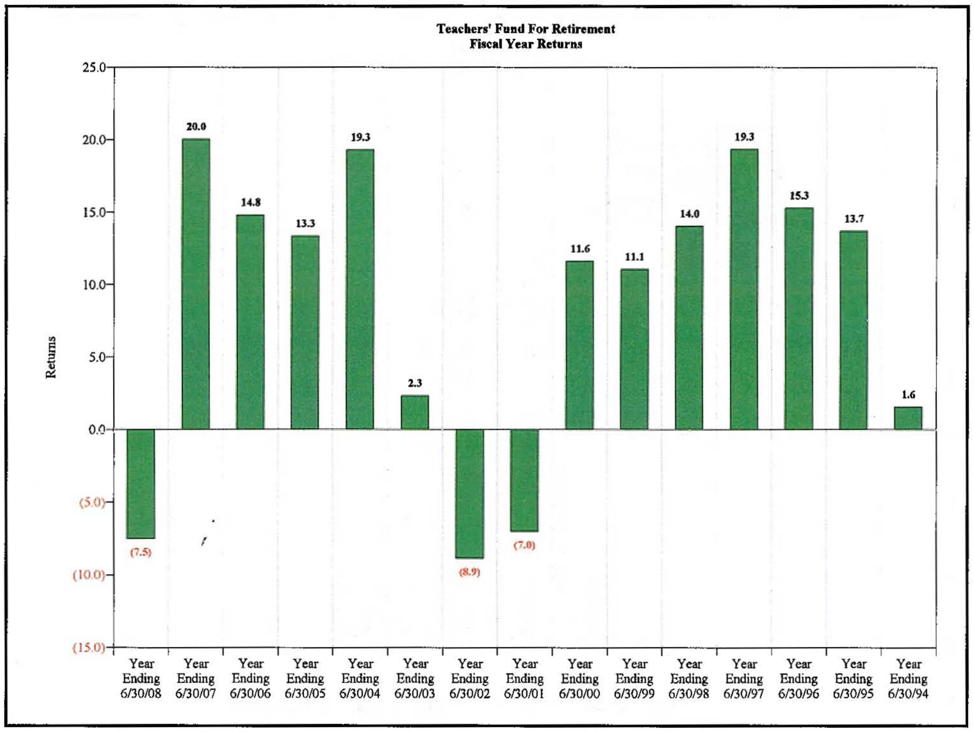
		Last 10 Years	Last 15 Years	Last 20 Years
10th Percentile		6.99	8.70	9.51
25th Percentile		6.67	8.27	9.32
Median		5.93	7.95	8.94
75th Percentile		5.39	7.45	8.57
90th Percentile		4.73	6.96	8.25
Member Count		82	72	41
Total Fund-TFFR	● A	6.20	7.40	8.67
Total Fund-PERS	■ B	6.41	7.95	8.96

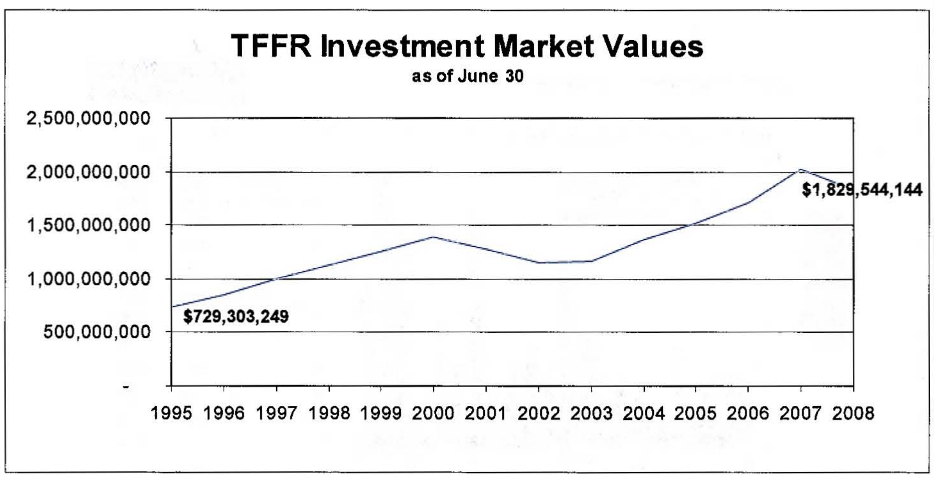
Cumulative Returns
for 20 Years Ended September 30, 2008



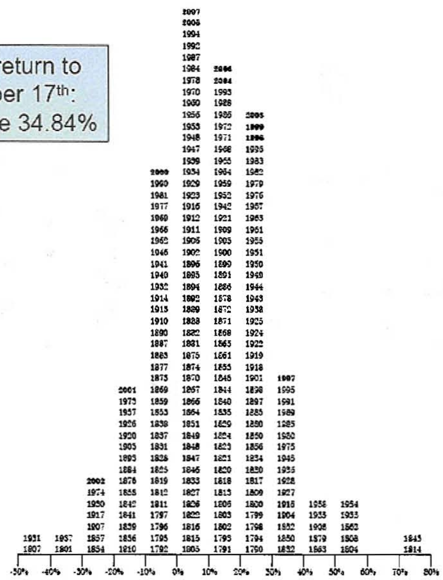

Public Employees Retirement System
Fiscal Year Returns
Returns
25.0
20.0
15.0
10.0
5.0
0.0
(5.0)
(10.0)
(5.6)
19.0
12.0
14.1
16.6
5.5
(6.8)
(3.9)
9.3
10.6
16.1
19.7
15.8
14.3
1.9
Year Ending 6/30/08
Year Ending 6/30/07
Year Ending 6/30/06
Year Ending 6/30/05
Year Ending 6/30/04
Year Ending 6/30/03
Year Ending 6/30/02
Year Ending 6/30/01
Year Ending 6/30/00
Year Ending 6/30/99
Year Ending 6/30/98
Year Ending 6/30/97
Year Ending 6/30/96
Year Ending 6/30/95
Year Ending 6/30/94


PERS Investment Market Values
as of June 30
2,500,000,000
2,000,000,000
1,500,000,000
1,000,000,000
500,000,000
-
$1,813,030,230
$641,104,631
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008


Teachers' Fund For Retirement
Fiscal Year Returns
Returns
25.0
20.0
15.0
10.0
5.0
0.0
(5.0)
(10.0)
(15.0)
(7.5)
20.0
14.8
13.3
19.3
2.3
(8.9)
(7.0)
11.6
11.1
14.0
19.3
15.3
13.7
1.6
Year Ending 6/30/08
Year Ending 6/30/07
Year Ending 6/30/06
Year Ending 6/30/05
Year Ending 6/30/04
Year Ending 6/30/03
Year Ending 6/30/02
Year Ending 6/30/01
Year Ending 6/30/00
Year Ending 6/30/99
Year Ending 6/30/98
Year Ending 6/30/97
Year Ending 6/30/96
Year Ending 6/30/95
Year Ending 6/30/94


TFFR Investment Market Values
as of June 30
2,500,000,000
2,000,000,000
1,500,000,000
1,000,000,000
500,000,000
-
$1,829,544,144
$729,303,249
1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

28th Annual National Conference
2007 Performance in Perspective - History of the U.S. Stock Market
217 Years of Returns



2008 return to October 17th: Negative 34.84%

Source: Ibotson, Roger G., Investment Markets (Updated)

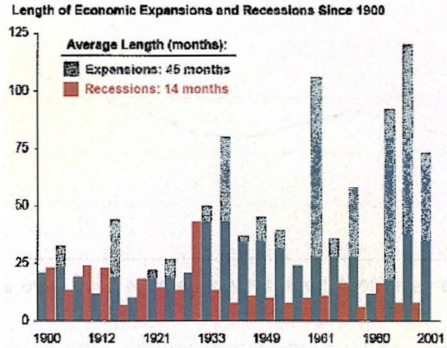
A view to past recessions and market performance

Economic Expansions and Recessions

Market Insight

Economy

Length of Economic Expansions and Recessions Since 1900



Recessions and Market Returns

Year	Length (months)	Return During Recession	Return 6-mo's After
1948	11	3.9%	12.2%
1953	10	18.3%	16.4%
1957	8	-7.6%	20.4%
1960	10	11.6%	9.0%
1969	11	-7.5%	20.6%
1973	16	-17.9%	1.1%
1980	6	8.1%	8.2%
1981	16	7.0%	18.9%
1990	8	3.4%	4.0%
2001	8	-4.7%	-4.5%
AVG	10	1.4%	10.6%

Source: NBER, Standard & Poor's, JPMorgan Asset Management.

(Left chart) Data for length of economic expansions and recessions obtained from the National Bureau of Economic Research (NBER). This data can be found at www.nber.org/cycles/ and reflects data through December 2007.

(Right chart) Data computed using the S&P 500 Index price return (does not include dividends). Dates used are based on NBER dates for the beginning and end of recession periods. Dates shown reflect the year in which each respective recession began. Returns are calculated based on the average monthly S&P 500 Index value as recessions do not begin or end on a specified day.

JPMorgan Asset Management

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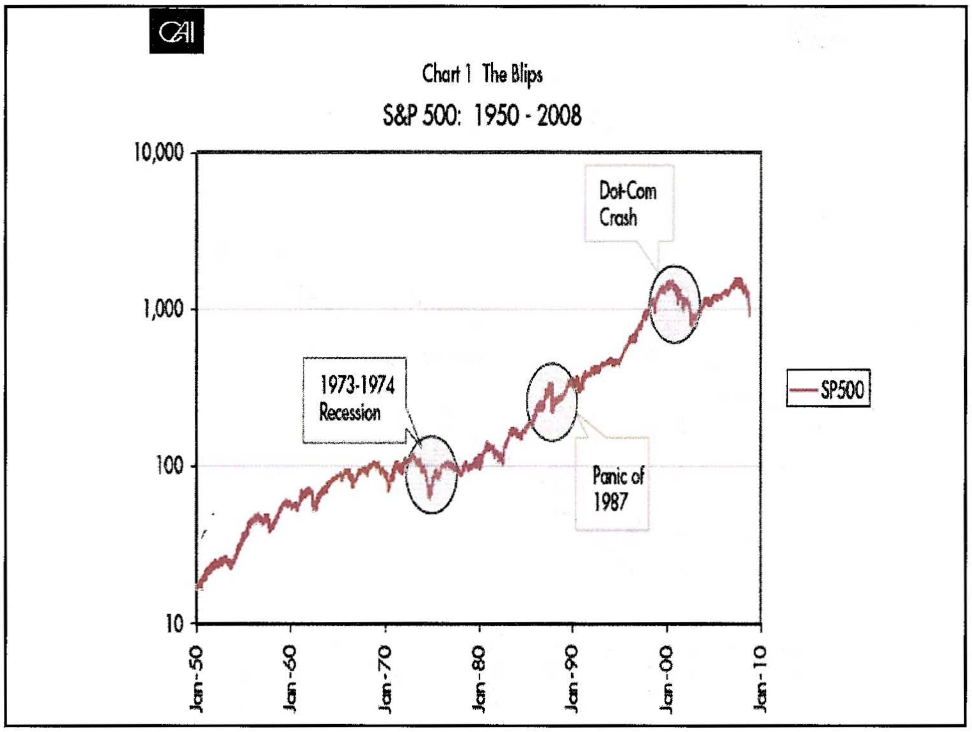
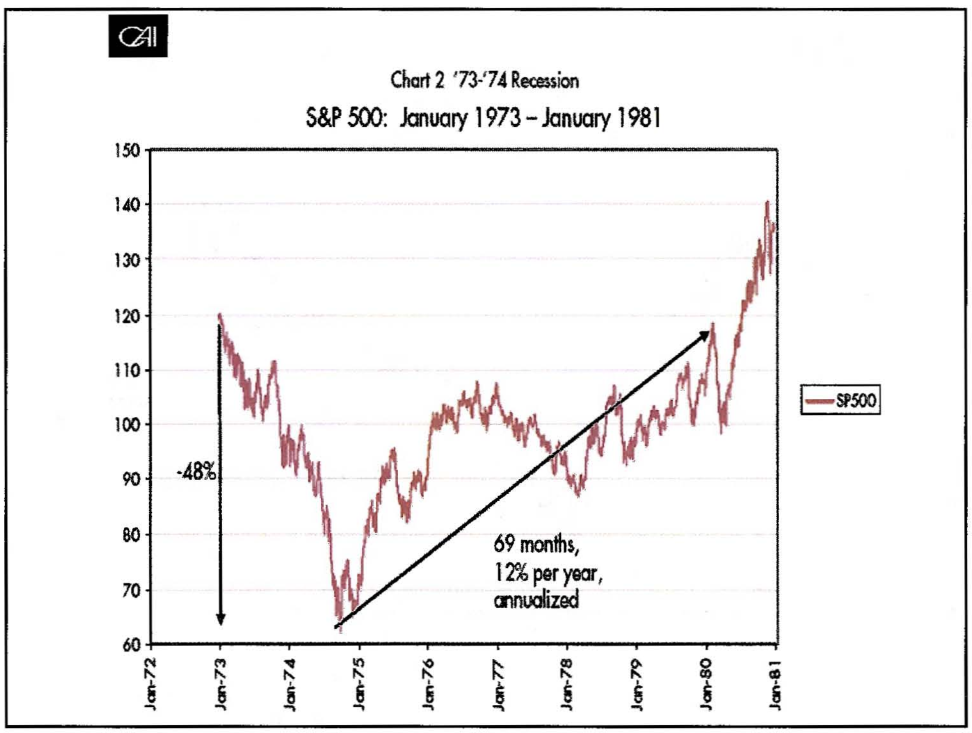
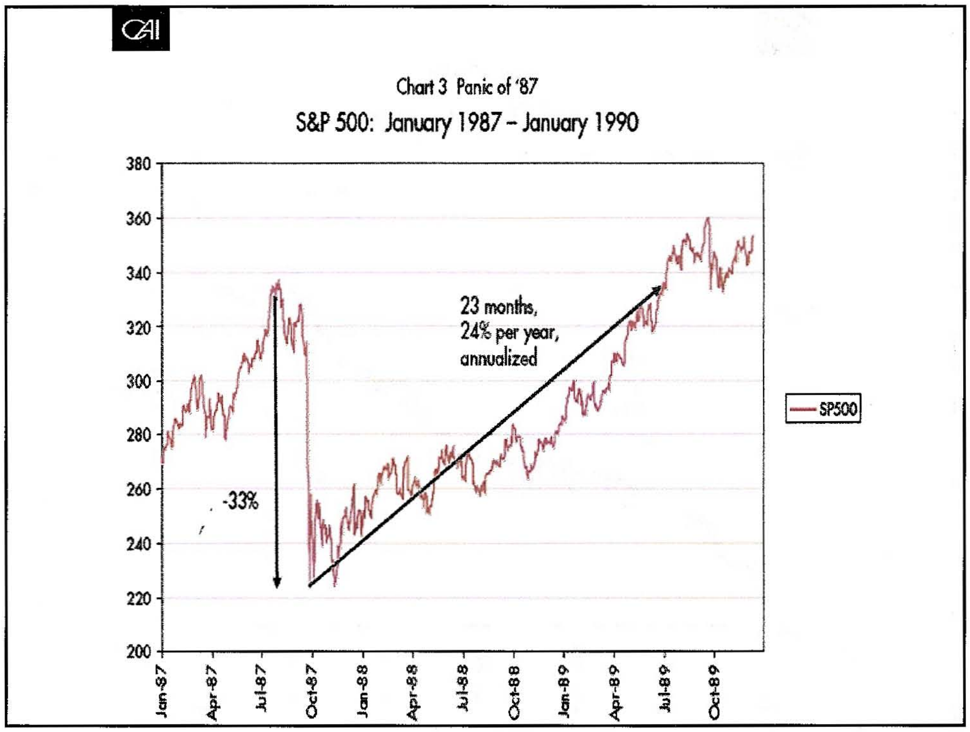
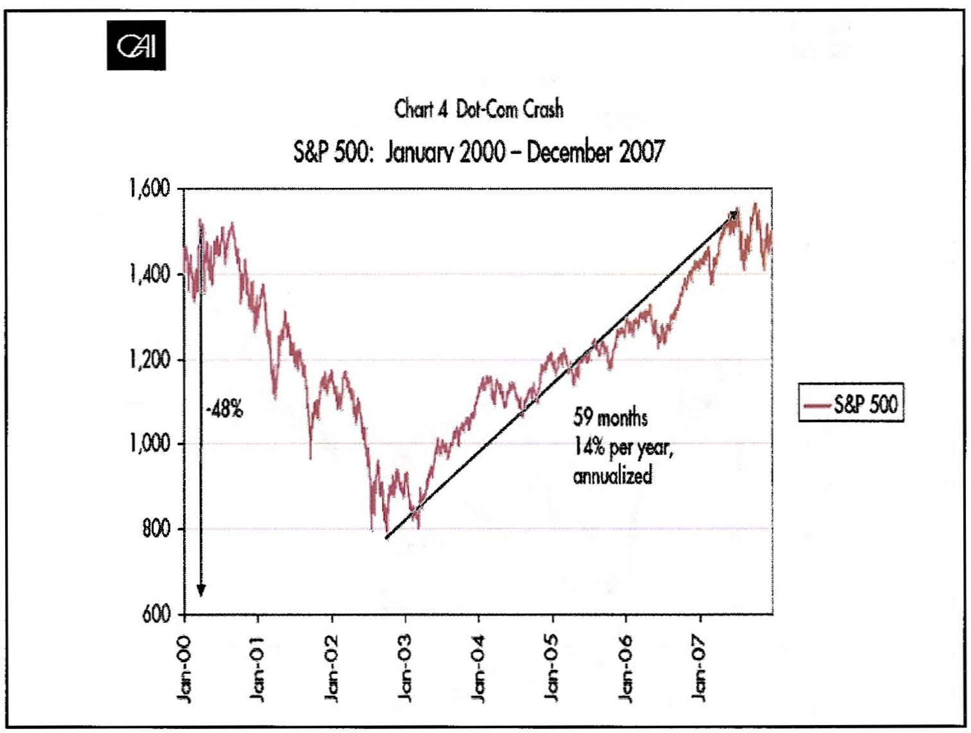

CAI
Chart 1 The Blips
S&P 500: 1950 - 2008
10,000
1,000
100
10
Dot-Com Crash
1973-1974 Recession
Panic of 1987
SP500
Jan-50
Jan-60
Jan-70
Jan-80
Jan-90
Jan-00
Jan-10


CAI
Chart 2 '73-'74 Recession
S&P 500: January 1973 – January 1981
150
140
130
120
110
100
90
80
70
60
-48%
69 months,
12% per year,
annualized
SP500
Jan-72
Jan-73
Jan-74
Jan-75
Jan-76
Jan-77
Jan-78
Jan-79
Jan-80
Jan-81


CAI
Chart 3 Panic of '87
S&P 500: January 1987 – January 1990
380
360
340
320
300
280
260
240
220
200
Jan-87
Apr-87
Jul-87
Oct-87
Jan-88
Apr-88
Jul-88
Oct-88
Jan-89
Apr-89
Jul-89
Oct-89
-33%
23 months, 24% per year, annualized
SP500


CAI
Chart 4 Dot-Com Crash
S&P 500: January 2000 – December 2007
1,600
1,400
1,200
1,000
800
600
Jan-00
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
-48%
59 months 14% per year, annualized
S&P 500