

Fixed Income Markets Then and Now

September 8, 2014

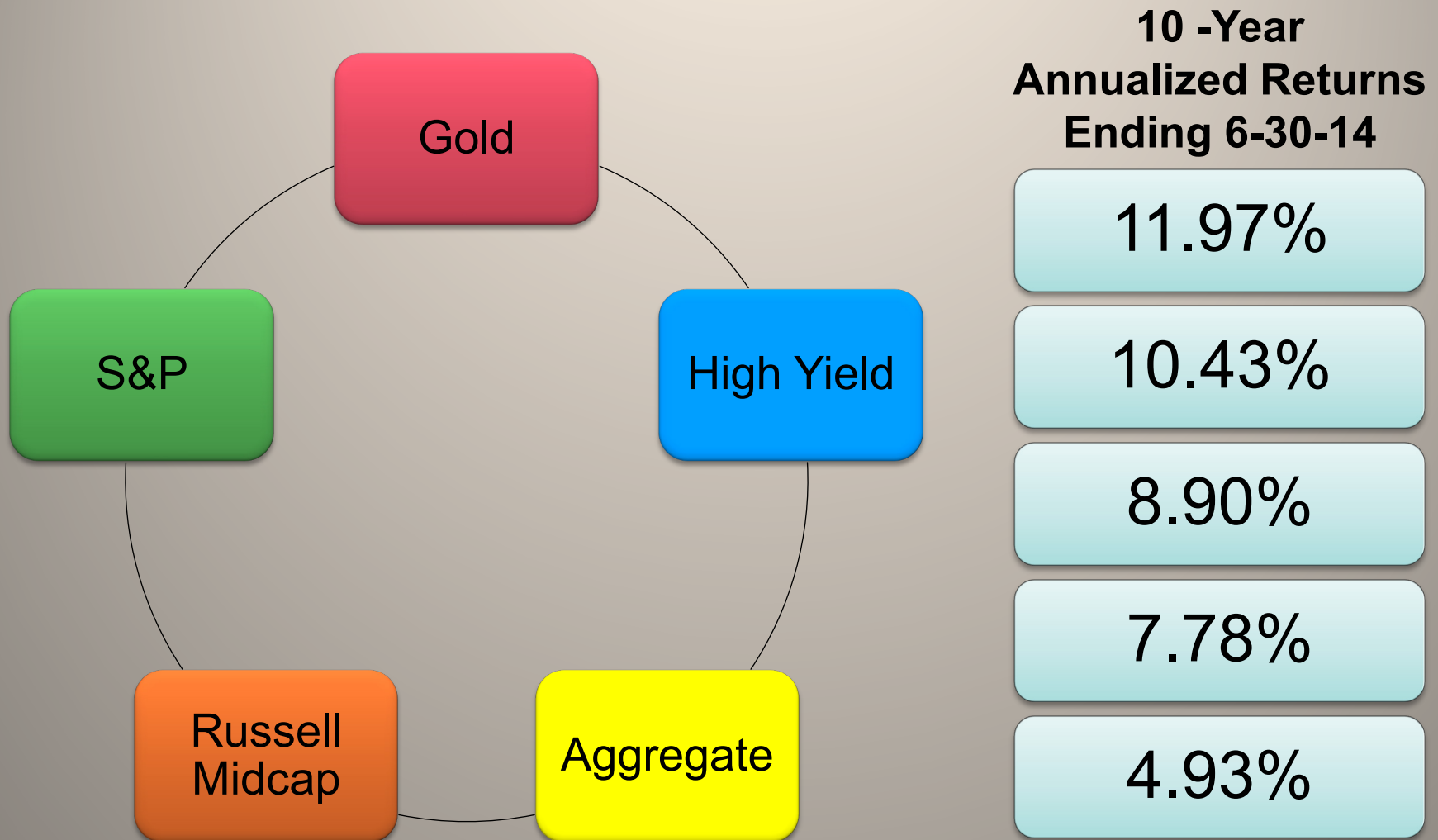


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Managing Partner***

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Question: 2014



Answer: 2014

INDEX

10 -Year Annualized Returns Ending 6-30-14

Gold

11.97%

Russell Midcap

10.43%

High Yield

8.90%

S&P

7.78%

Aggregate

4.93%

Why is Return not enough?

- Return doesn't account for the risk.
- Investors must be compensated for risk.
- We should measure returns on a risk adjusted basis.

Sharpe Ratio

- Developed by Nobel laureate William F. Sharpe.
- Calculated by subtracting the Risk Free Return from the Investment Return and dividing the difference by the Volatility of the Investment.

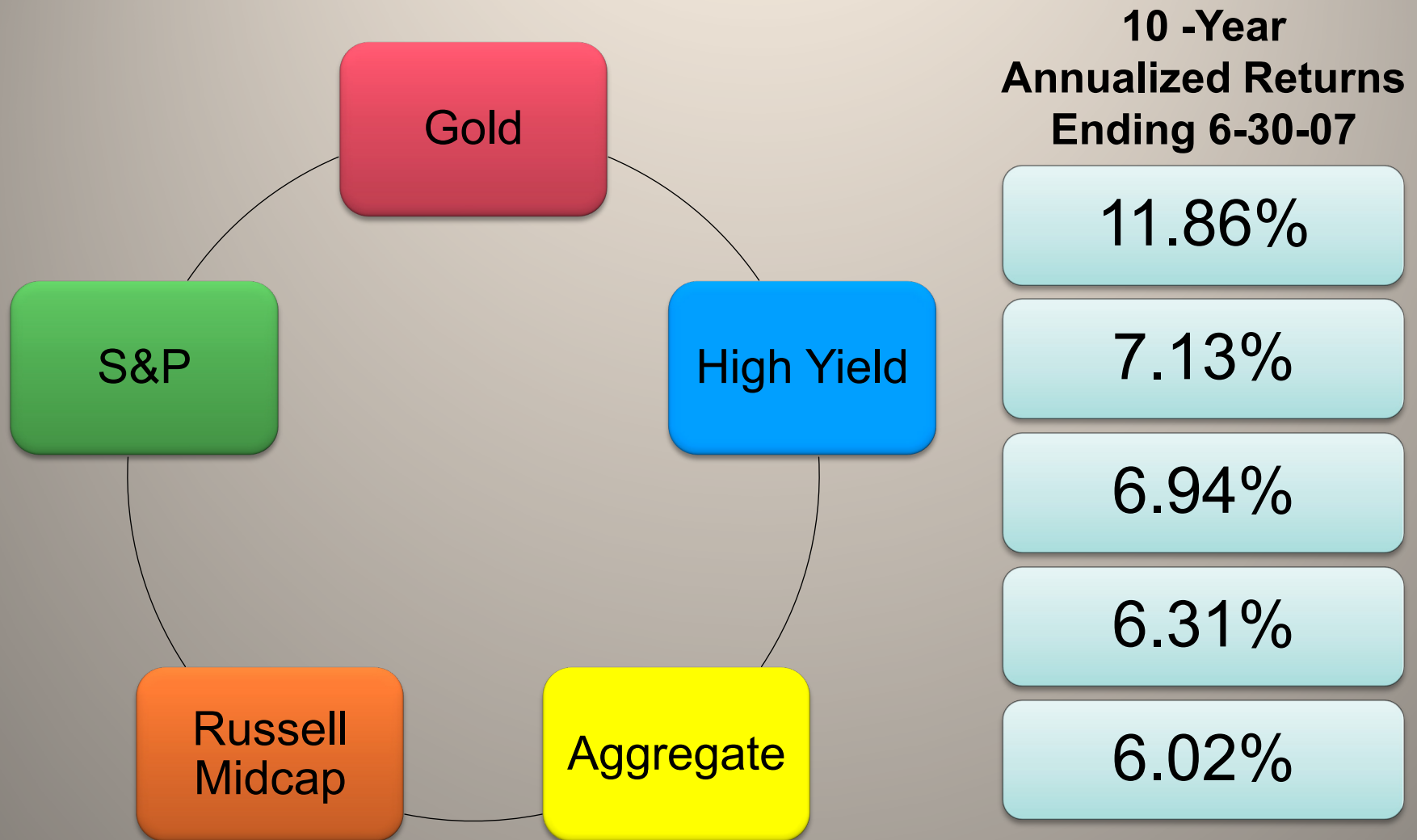
$$\text{Sharpe Ratio} = \frac{R - R_f}{\sigma}$$

- A higher Sharpe ratio equates to better risk-adjusted performance.

Reality: 2014

INDEX	10 -Year Annualized Returns Ending 6-30-14	10 -Year Sharpe Ratio Ending 6-30-14
Gold	11.97%	1.04
Russell Midcap	10.43%	0.71
High Yield	8.90%	0.54
S&P	7.78%	0.50
Aggregate	4.93%	0.42

Question: 2007



Answer: 2007

INDEX

10 -Year Annualized Returns Ending 6-30-07

Russell Midcap

11.86%

S&P

7.13%

Gold

6.94%

High Yield

6.31%

Aggregate

6.02%

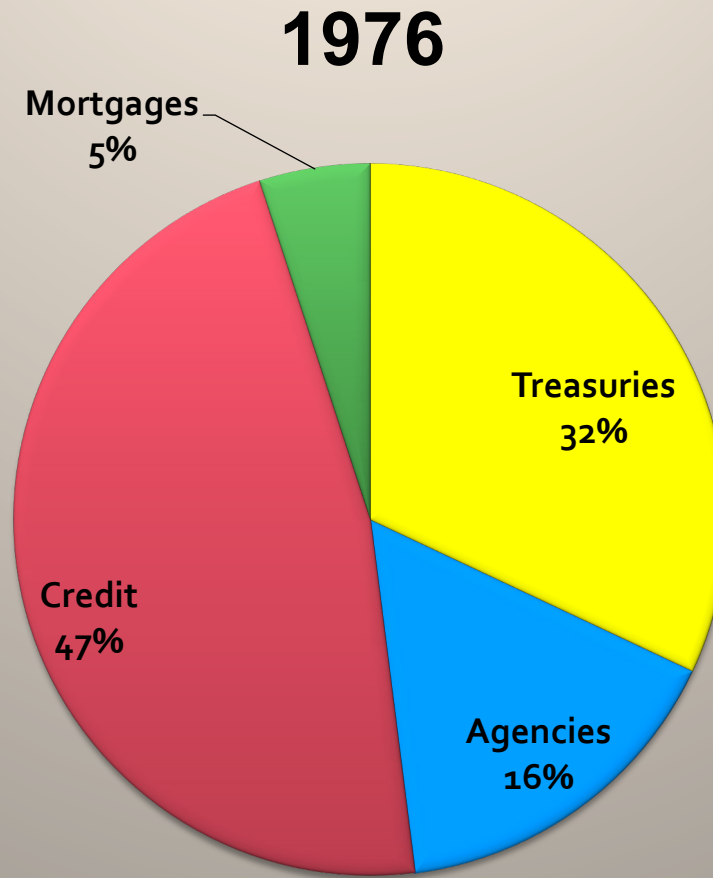
Reality: 2007

INDEX	10 -Year Annualized Returns Ending 6-30-07	10 -Year Sharpe Ratio Ending 6-30-07
Russell Midcap	11.86%	0.66
S&P	7.13%	0.51
Gold	6.94%	0.37
High Yield	6.31%	0.23
Aggregate	6.02%	0.23

Sharpe Ratio 2014 - vs- 2007

INDEX	10 -Year Sharpe Ratio Ending 6-30-14	10 -Year Sharpe Ratio Ending 6-30-07
Aggregate	1.04	0.66
High Yield	0.71	0.51
Gold	0.54	0.37
Russell Midcap	0.50	0.23
S&P	0.42	0.23

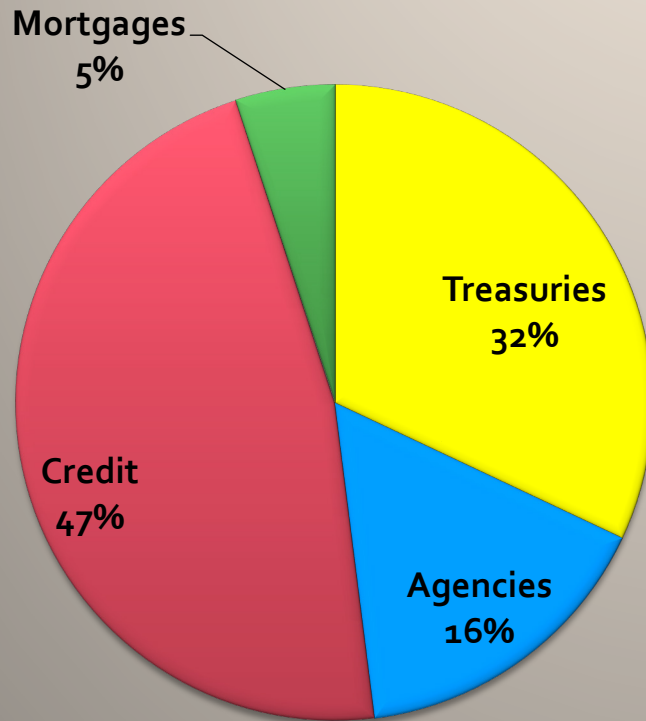
Barclays Capital Aggregate Index



\$456 Billion

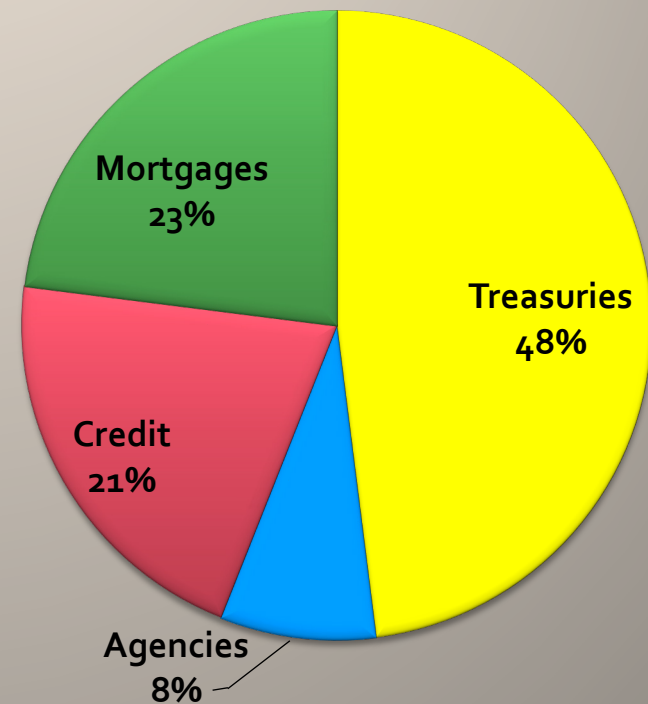
Barclays Capital Aggregate Index

1976



\$456 Billion

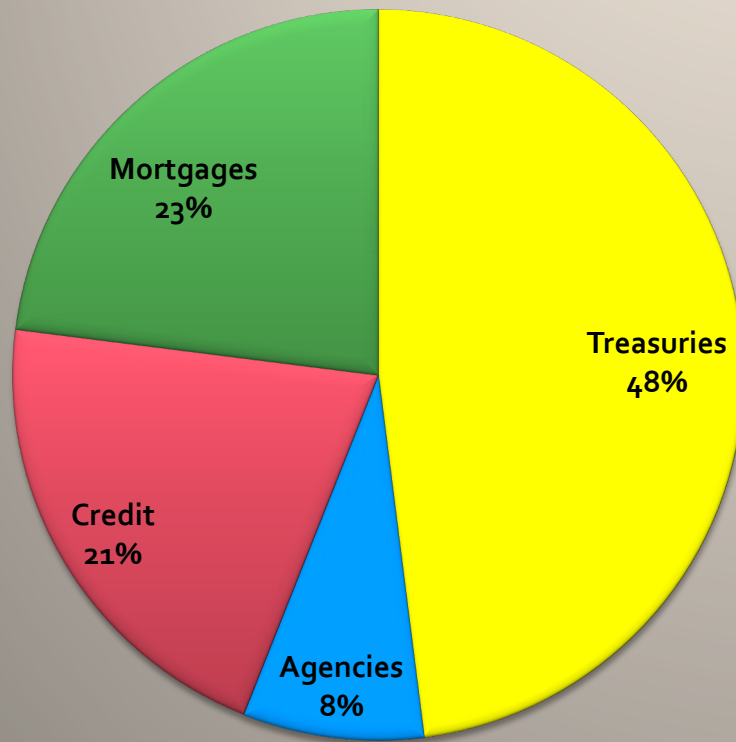
1986



\$2.1 Trillion

Barclays Capital Aggregate Index

1986

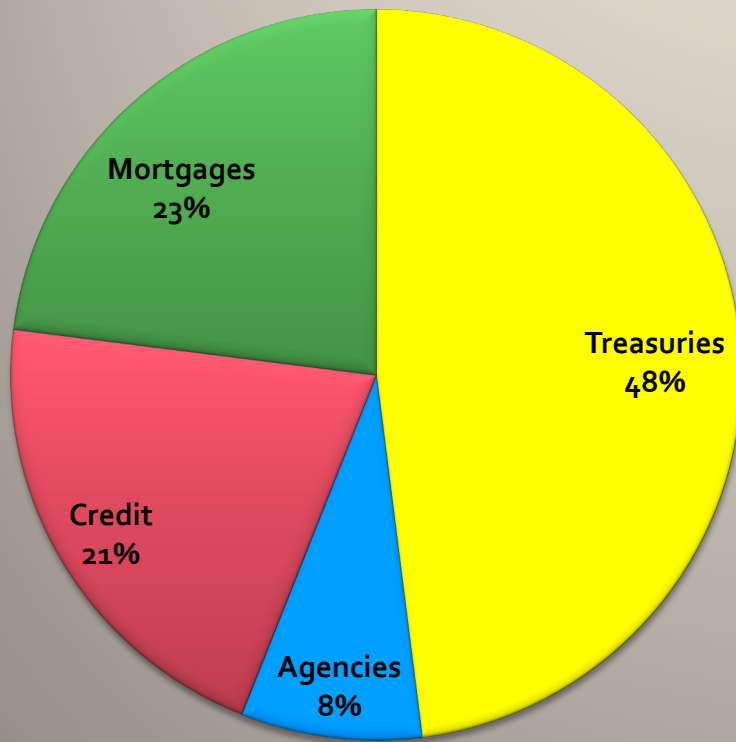


CMO's invented

- MBS along the yield curve
- Floating rate tranches
- PAC's

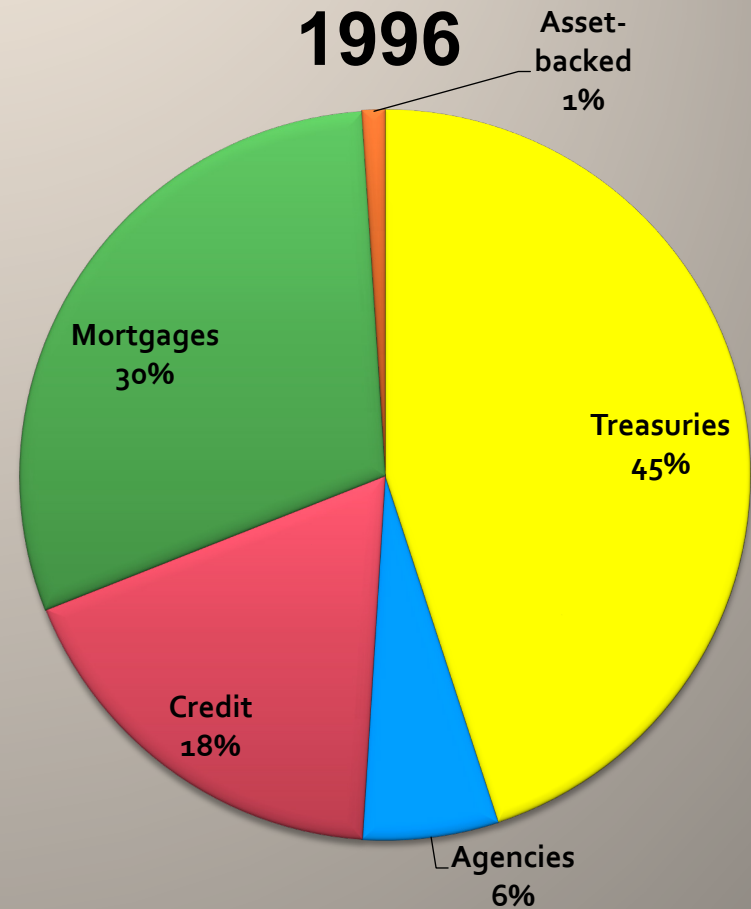
Barclays Capital Aggregate Index

1986



\$2.1 Trillion

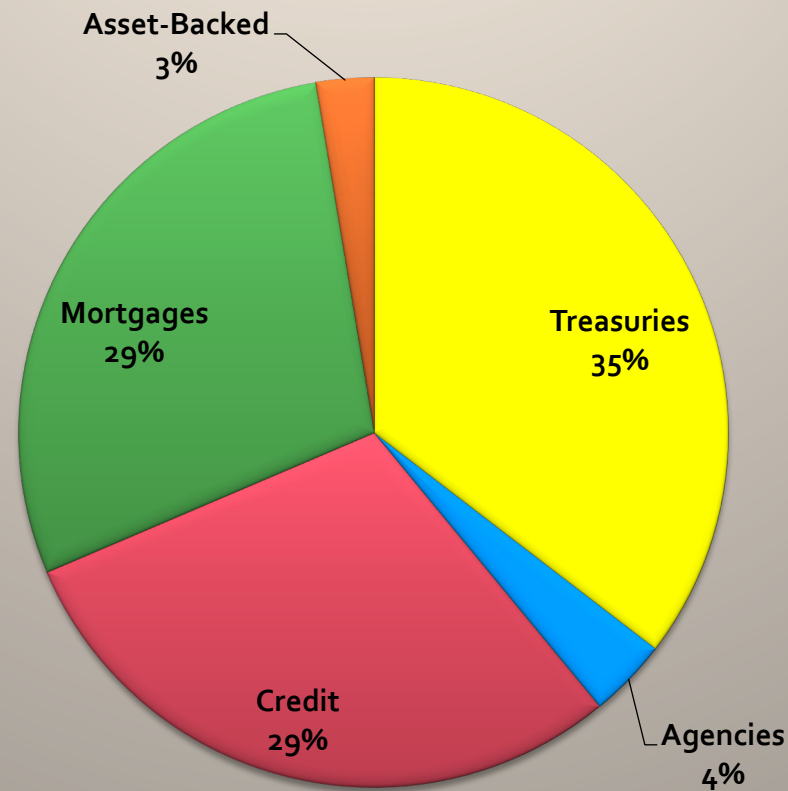
1996



\$4.7 Trillion

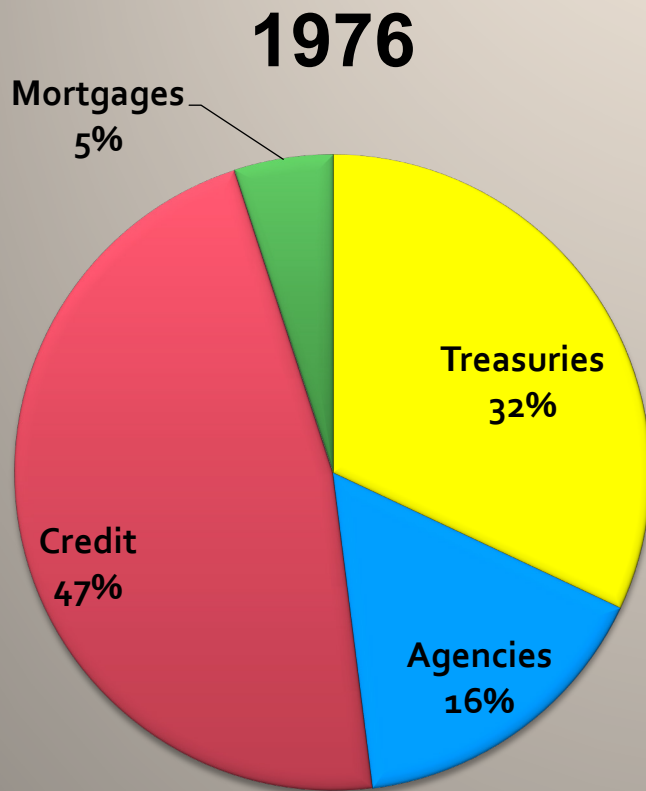
Barclays Capital Aggregate Index

NOW

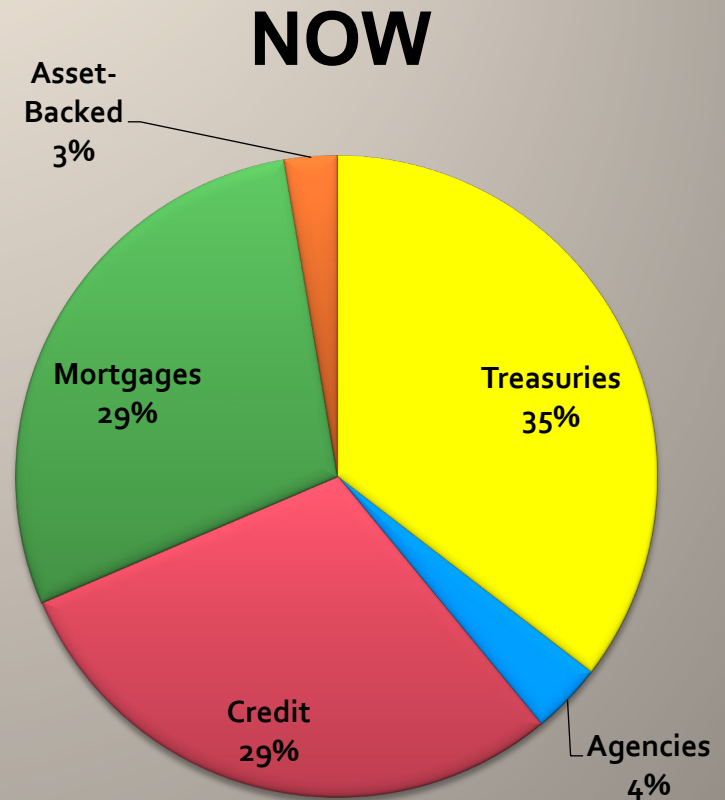


\$17.1 Trillion

Barclays Capital Aggregate Index

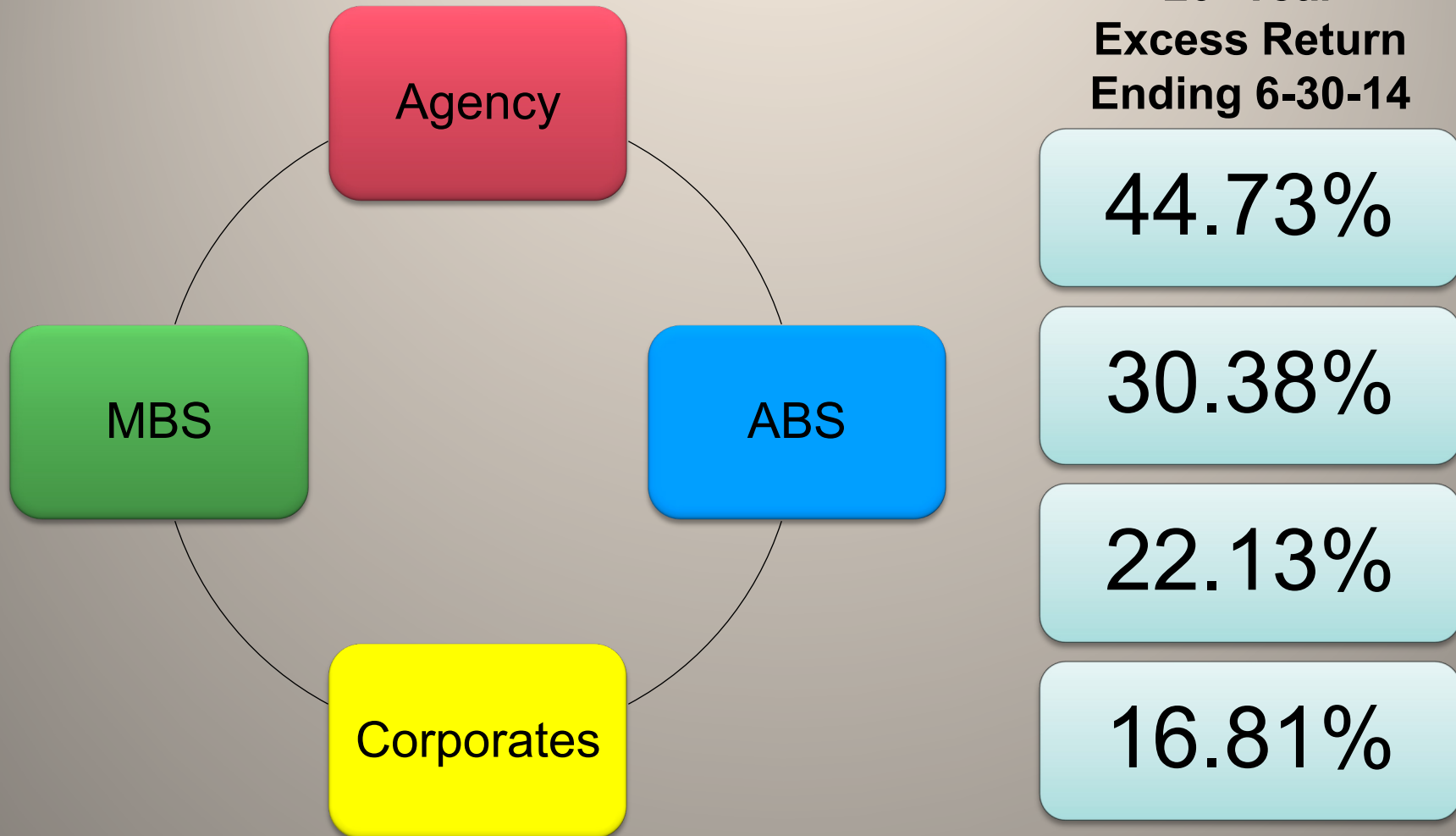


\$456 Billion



\$17.1 Trillion

Question: 2014



Answer: 2014

INDEX

20 -Year
Excess Return
Ending 6-30-14

Corporates

44.73%

MBS

30.38%

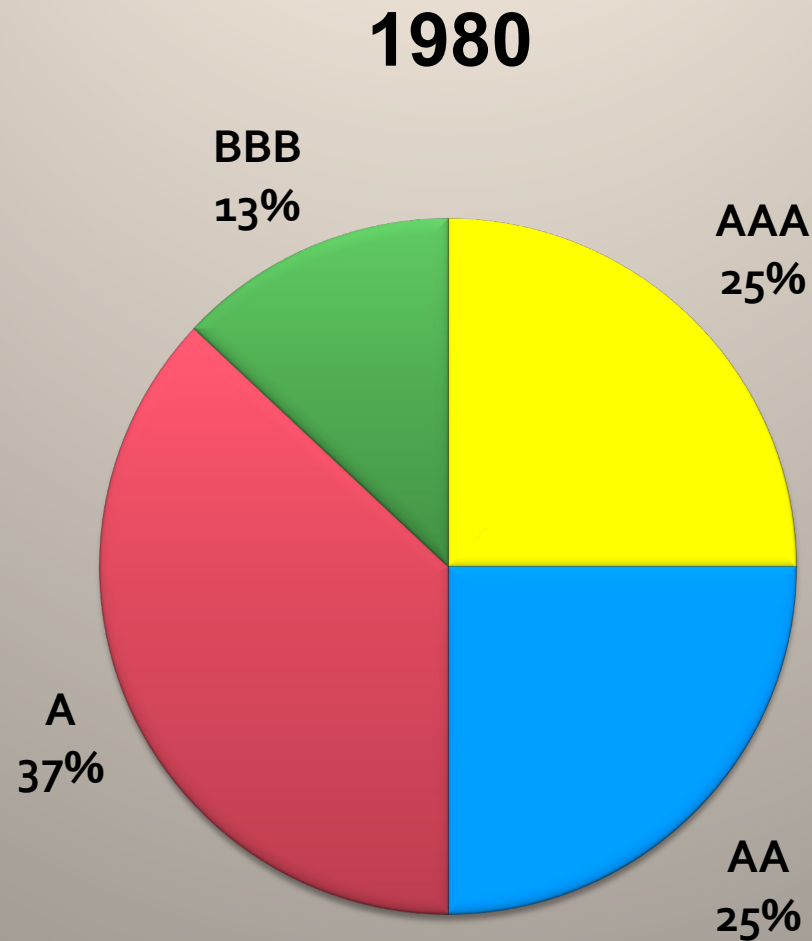
Agency

22.13%

ABS

16.81%

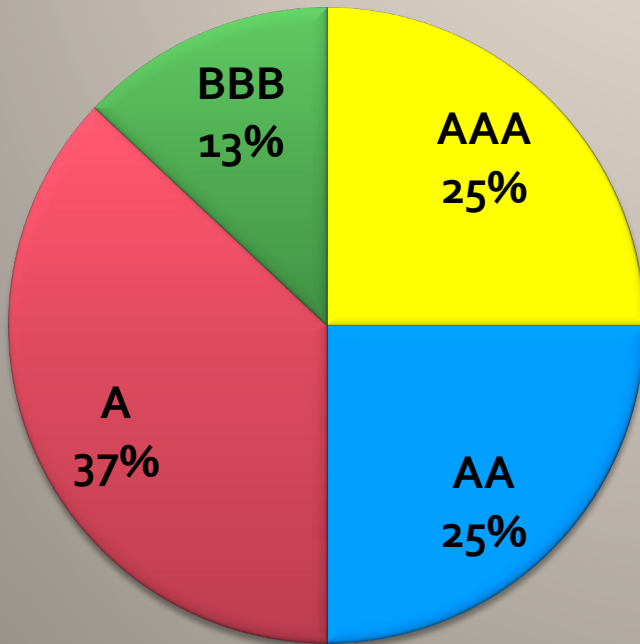
Corporate Credit Quality Distribution



\$178 Billion

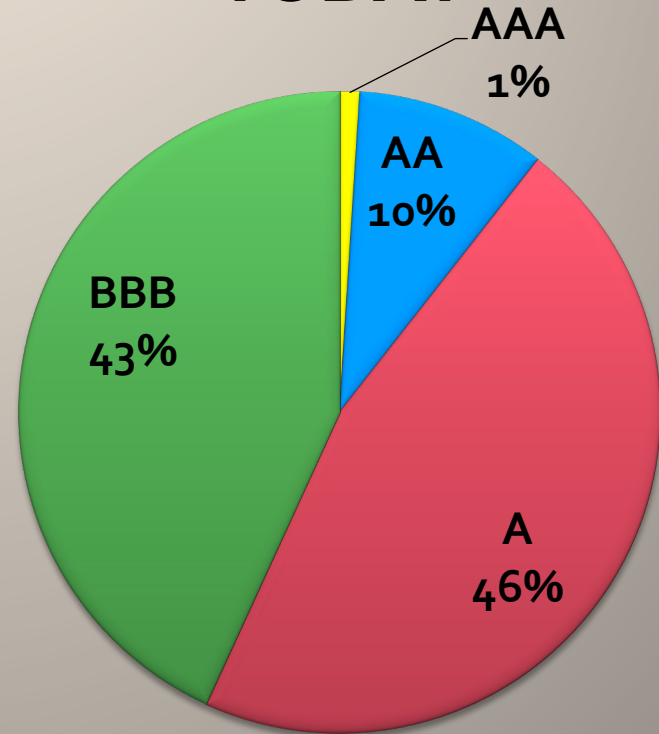
Corporate Credit Quality Distribution

1980



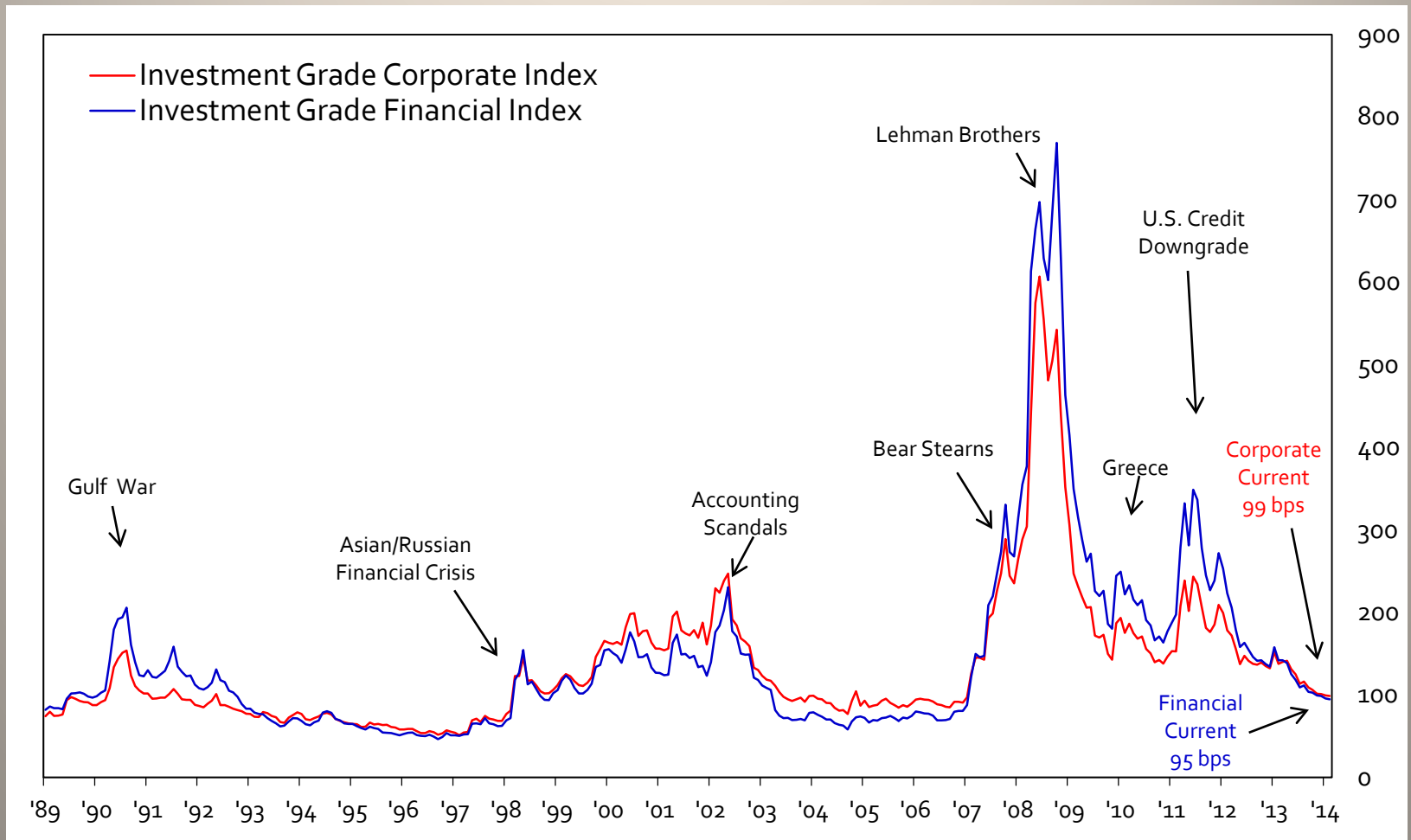
\$178 Billion

TODAY



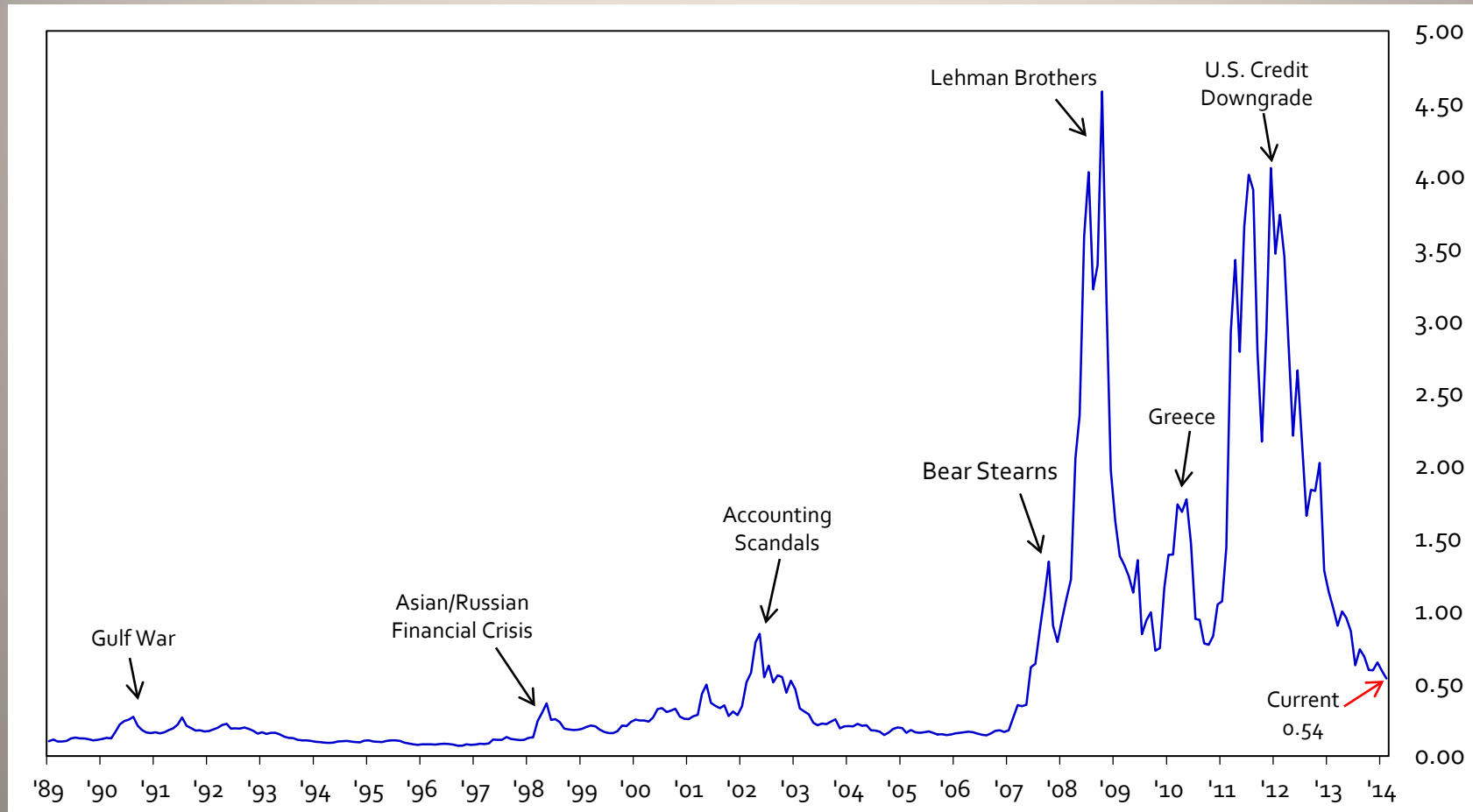
\$4.0 Trillion

Average Option Adjusted Spreads (OAS)



Financial Corporate Bonds Spreads Ratio

(OAS Spread / 5 yr Treasury yield)



Market Developments

➤ **Electronic Trading**

➤ **TRACE Data**

TRACE Example

AAPL 3.45 05/0 ↑102.456 -1.09 76.7 bp
 At 16:2 Vol 7.6M Op 102.51 Hi 104.65 Lo 102.40 Yld 3.154

AAPL 3.45 05/06/ 1) Actions Page Trade/Quote Re

95 Buy 96 Sell 97 Settings

Trade Recap Quote Recap

From 06/30/14 07:00:00 Min Size 250 Source TRAC RPS All

To 07/31/14 16:30:00 Price Range -

Date	Time	Size(M)	Price	Yield	RP	Sprr	Benchmark	CC	Trd D	Trd Tim	Act	Ind
07/31	14:36:0	565	↓100.706	3.364	S	79.8	T 2 ½ 05/15		07/31	14:36:0		
07/31	14:02:0	500	↓100.764	3.357	S	79.8	T 2 ½ 05/15		07/31	14:01:4		
07/31	12:20:4	1500	↑100.706	3.364	S	81.0	T 2 ½ 05/15		07/31	12:12:3		
07/31	11:59:2	1000	↓100.699	3.365	D	81.3	T 2 ½ 05/15		07/31	11:59:2		
07/31	11:58:4	1000	↓100.793	3.354	D	80.3	T 2 ½ 05/15		07/31	11:56:1		
07/31	10:57:3	5000+ e	100.731	3.361	D	81.3	T 2 ½ 05/15		07/31	10:57:3		
07/31	10:57:3	393	↑100.731	3.361	D	81.3	T 2 ½ 05/15		07/31	10:57:3		
07/31	10:49:1	5000+ e	↑100.699	3.365	D	81.7	T 2 ½ 05/15		07/31	10:49:1		
07/31	10:20:0	1000	↓100.508	3.388	D	82.6	T 2 ½ 05/15		07/31	10:19:3		
07/31	10:19:4	1000	↑100.540	3.384	D	82.2	T 2 ½ 05/15		07/31	10:19:0		
07/31	10:01:0	500	↓100.519	3.387	D	82.4	T 2 ½ 05/15		07/31	09:59:0		
07/31	09:59:3	500	↓100.582	3.379	D	81.7	T 2 ½ 05/15		07/31	09:58:1		
07/31	09:45:5	5000+ e	↑100.632	3.373	S	79.8	T 2 ½ 05/15		07/31	09:45:5		
07/31	09:44:5	5000+ e	↓100.483	3.391	B	81.8	T 2 ½ 05/15		07/31	09:44:5		
07/31	09:28:2	5000+ e	↑100.549	3.383	S	80.6	T 2 ½ 05/15		07/31	09:28:2		
07/31	09:19:0	4000	↓100.508	3.388	B	80.4	T 2 ½ 05/15		07/31	09:16:5		
07/31	08:59:5	2500	↑100.532	3.385	S	80.6	T 2 ½ 05/15		07/31	08:57:0		
07/31	08:46:3	5000+ e	100.483	3.391	S	81.4	T 2 ½ 05/15		07/31	08:44:3		
07/31	08:11:4	2000	↑100.483	3.391	S	80.5	T 2 ½ 05/15		07/31	08:11:4		
07/31	08:10:0	3000	↓100.392	3.402	S	81.4	T 2 ½ 05/15		07/31	08:10:0		

Zoom - 0 + 10

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