



Presentation  
on

# **“The Seven Deadly Sins of Public Investing”**

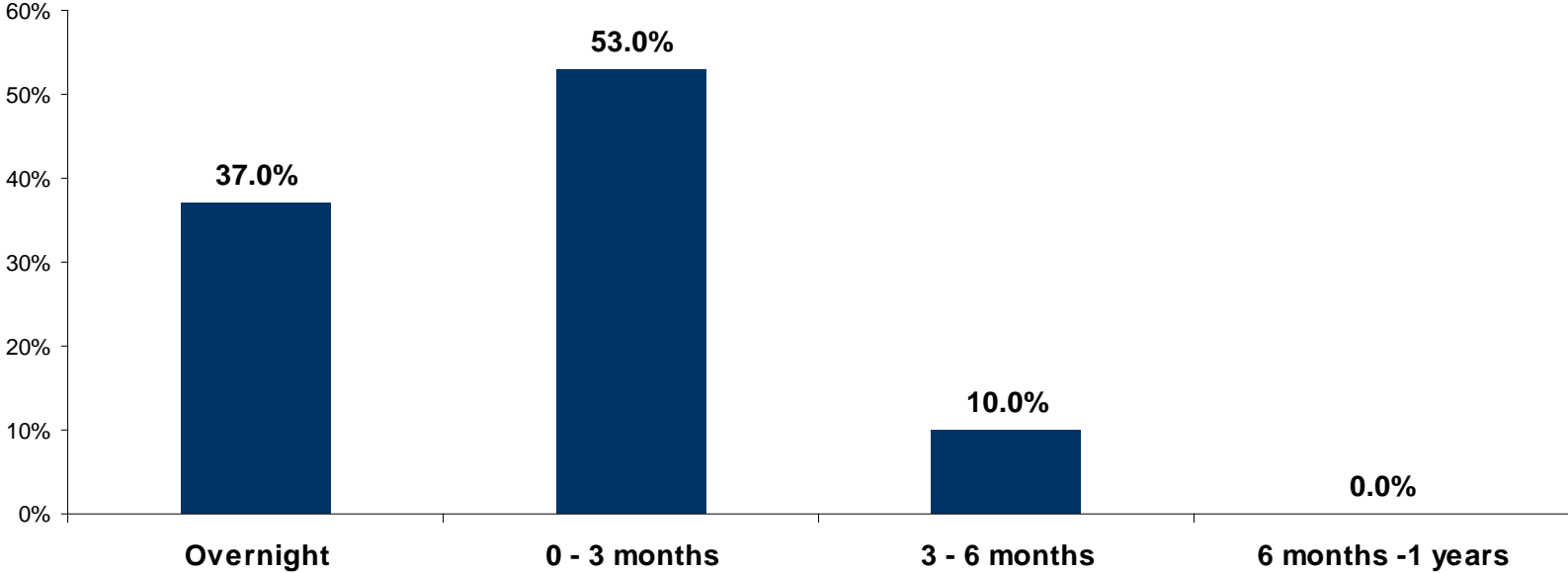
October 14, 2010

By: David Witthohn, Director, CFA, CIPM

# #1 Assuming All Local Government Investment Pools are the Same

# Typical 2a-7 type LGIP

## Maturity Distribution – to final

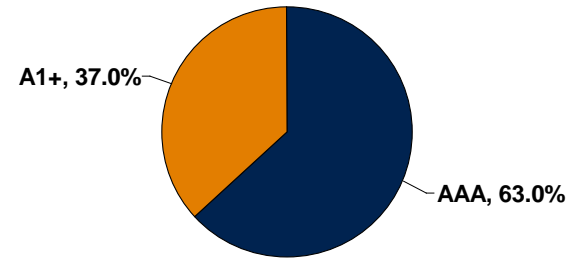
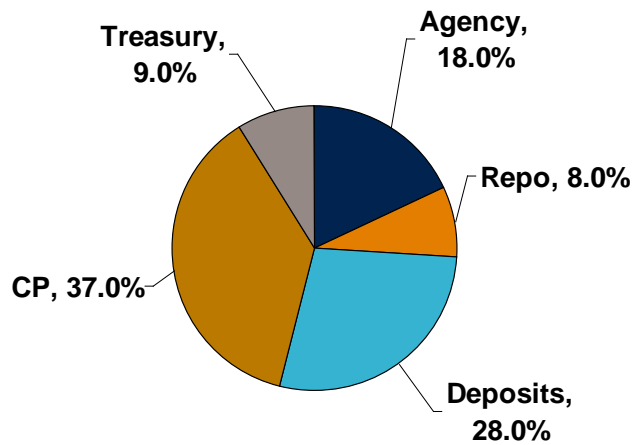


Average Maturity: 39 days

Maximum Maturity: 1 years

# Typical 2a-7 type LGIP

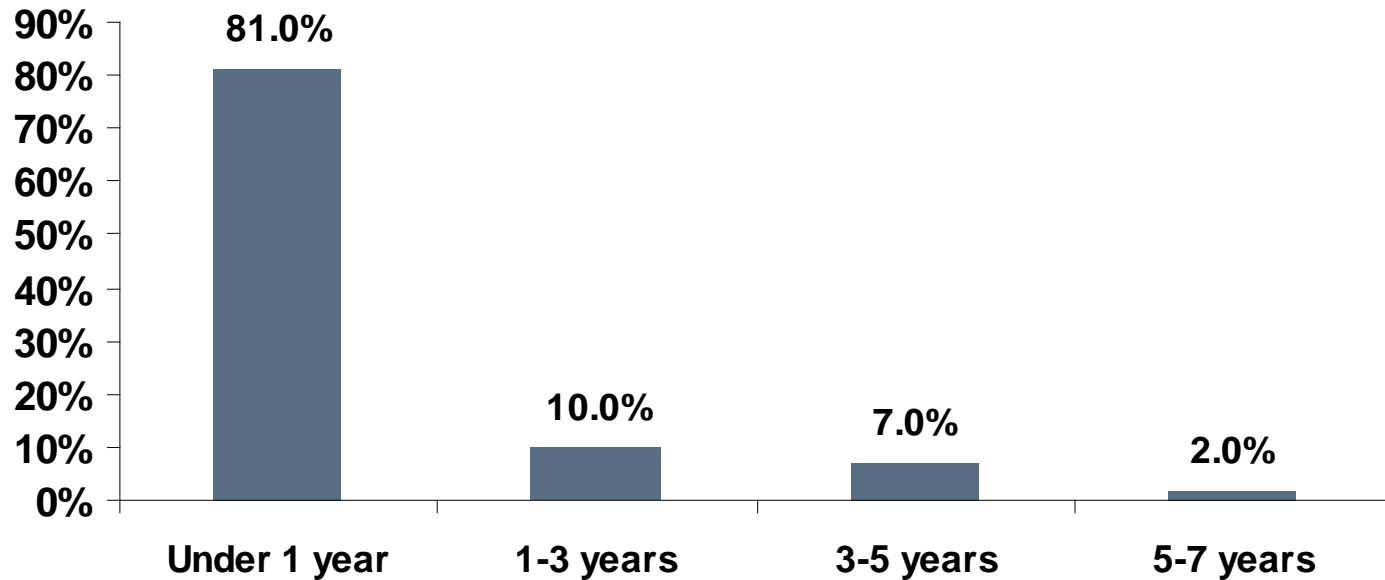
## Securities by Type



Corporate Note Exposure: 0%

Average Rating: AAA

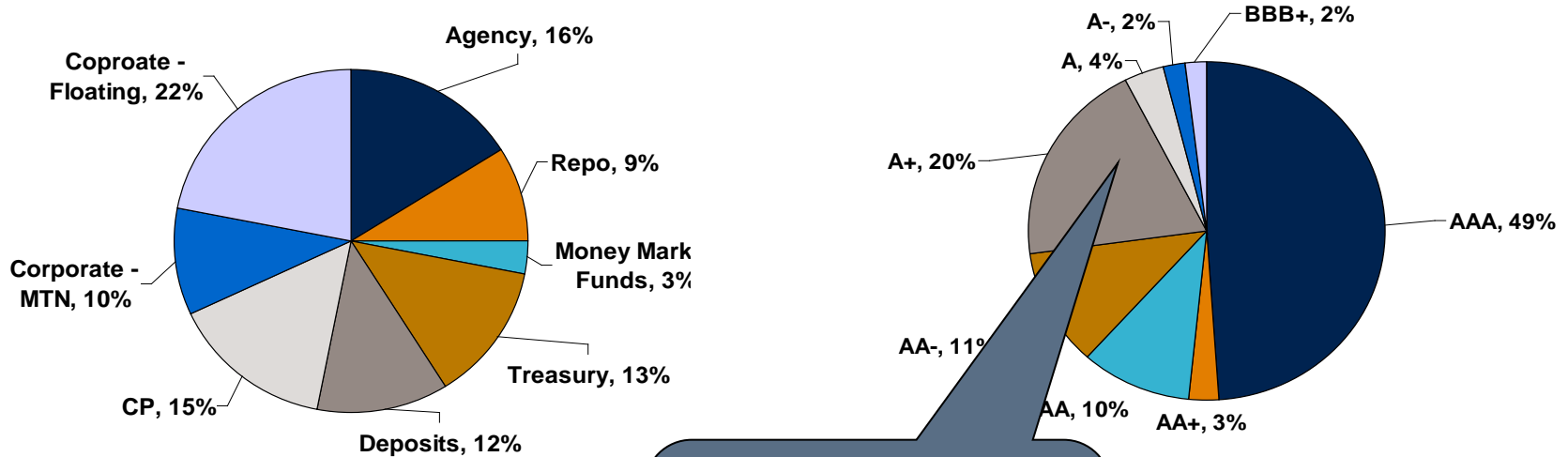
## Maturity Distribution – to final



Average Maturity: 292 days

Maximum Maturity: 7 years

## Securities by Type



\$323.3 million In  
Lehman Brothers  
exposure!  
12% of portfolio!

Corporate Note Exposure: 32%

Average Credit Rating: AA

## SEC 2a-7 Changes - effective May 5, 2010

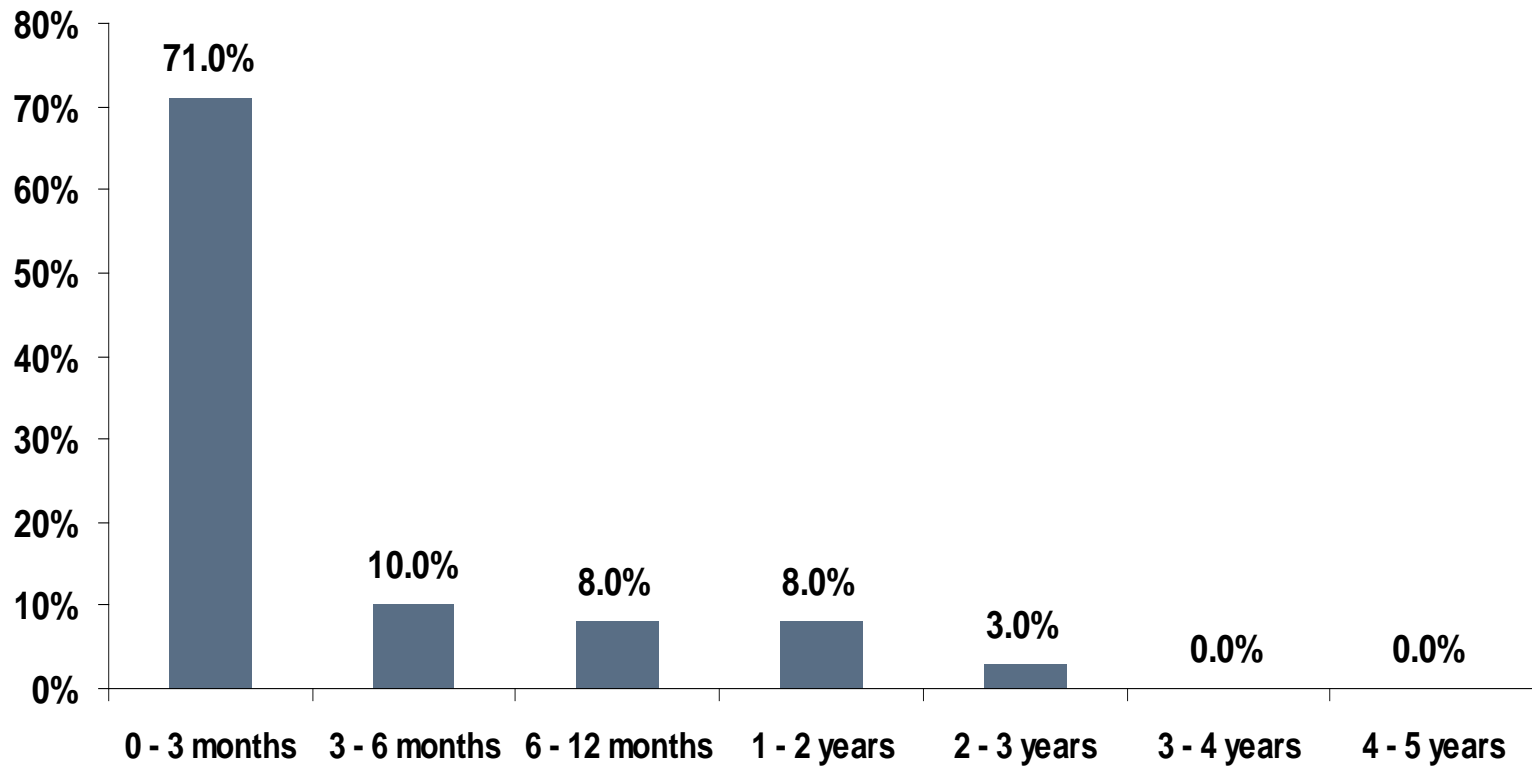
- Weighted Average Maturity (WAM) – reduced from 90 to 60 days
- Second Tier Securities - 45 day maximum maturity, 3% of portfolio
- Liquidity – securities must be available to convert into cash, 10% of portfolio liquid daily, 30% of portfolio weekly
- Illiquid Securities – reduced from 10% to 5% of portfolio

#2 Weighted Average Maturity of the Portfolio is Too Short



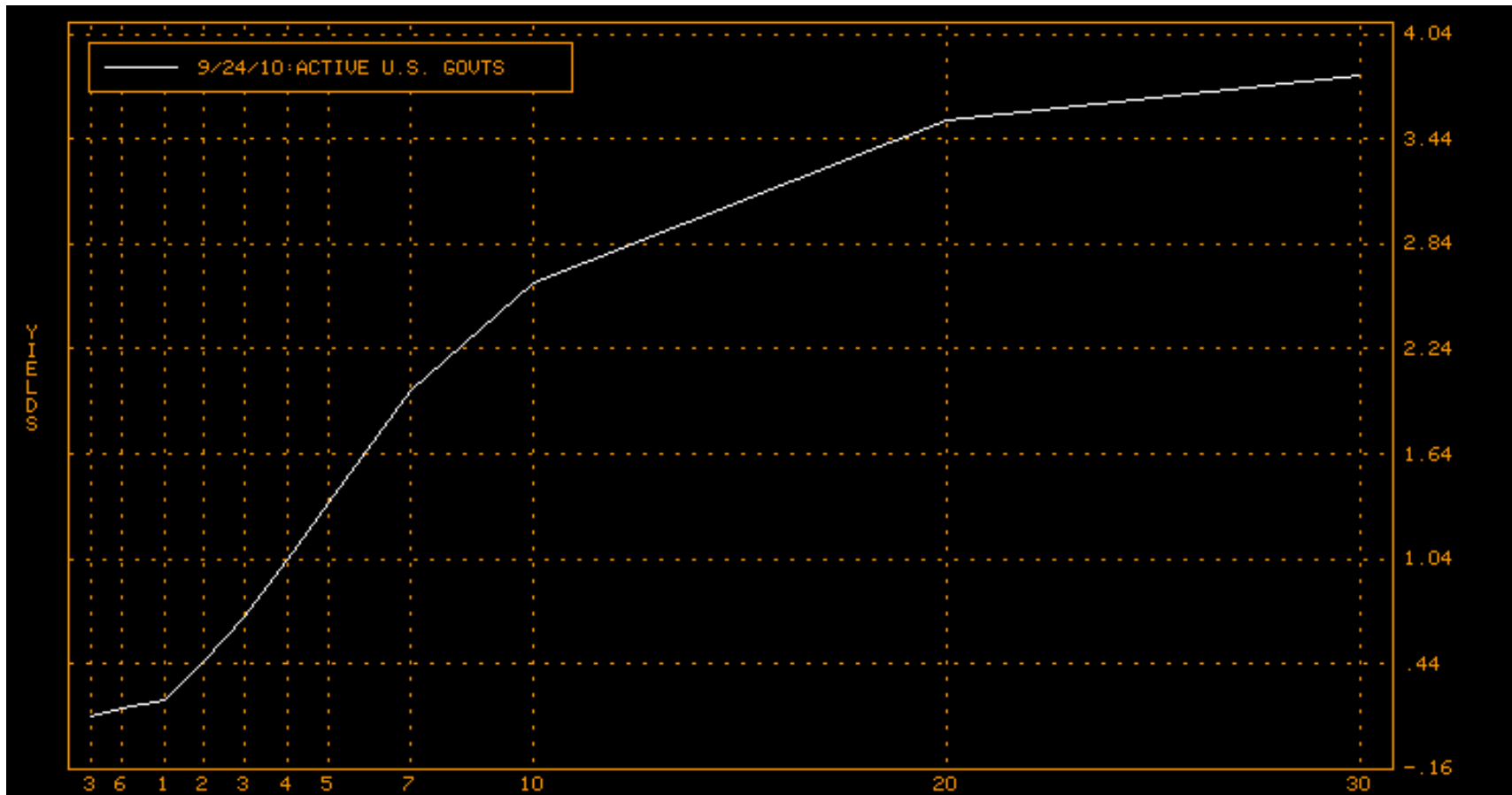
Do you really need most of your funds within the next 24 hours?

### Maturity Distribution – to final



# Target Duration: Risk/Return Tradeoff

Normally, the yield curve provides higher returns for longer maturities, but these incremental increases are much smaller for securities that are more than 2-3 years to maturity.

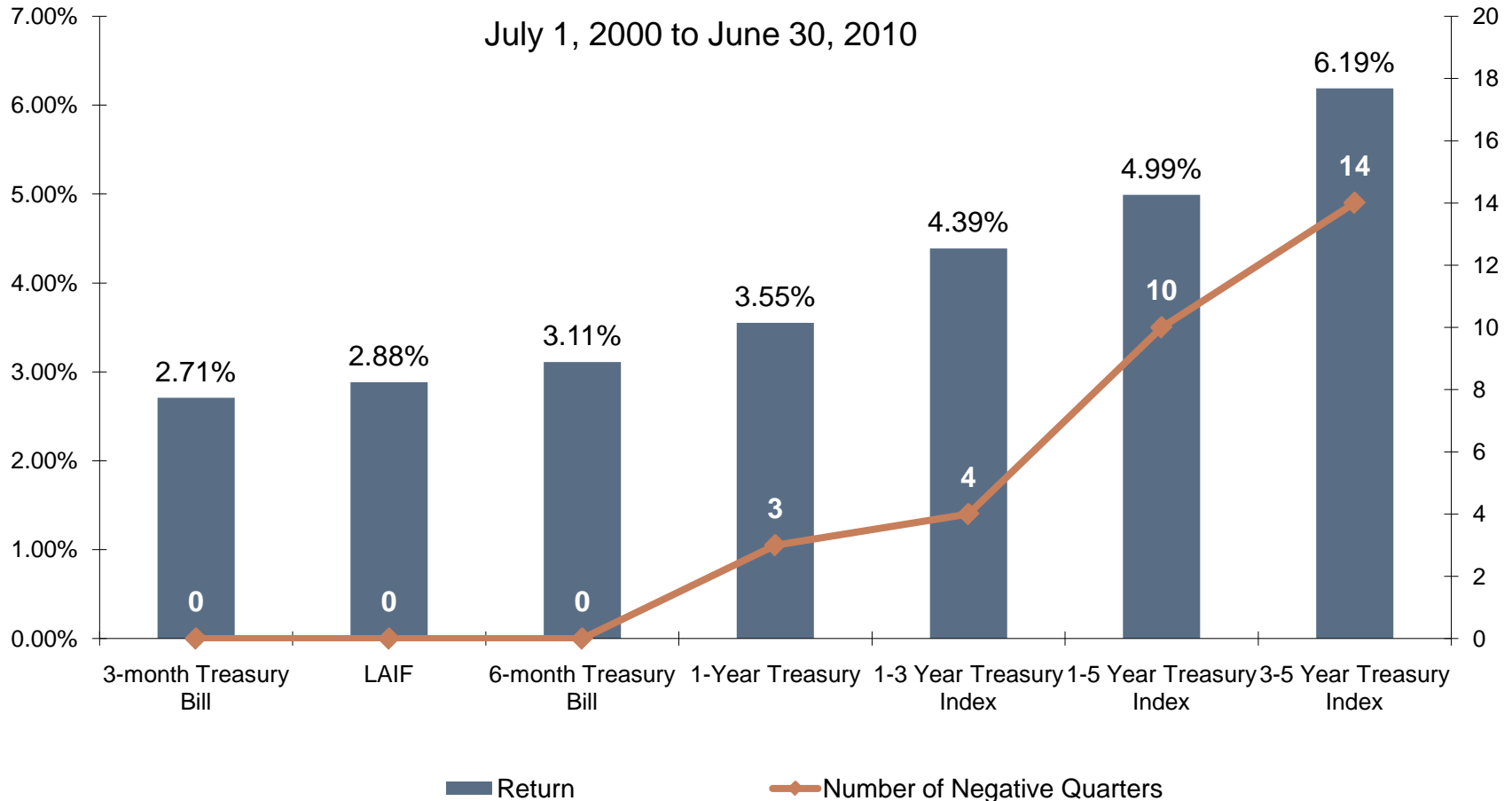


Source: Bloomberg

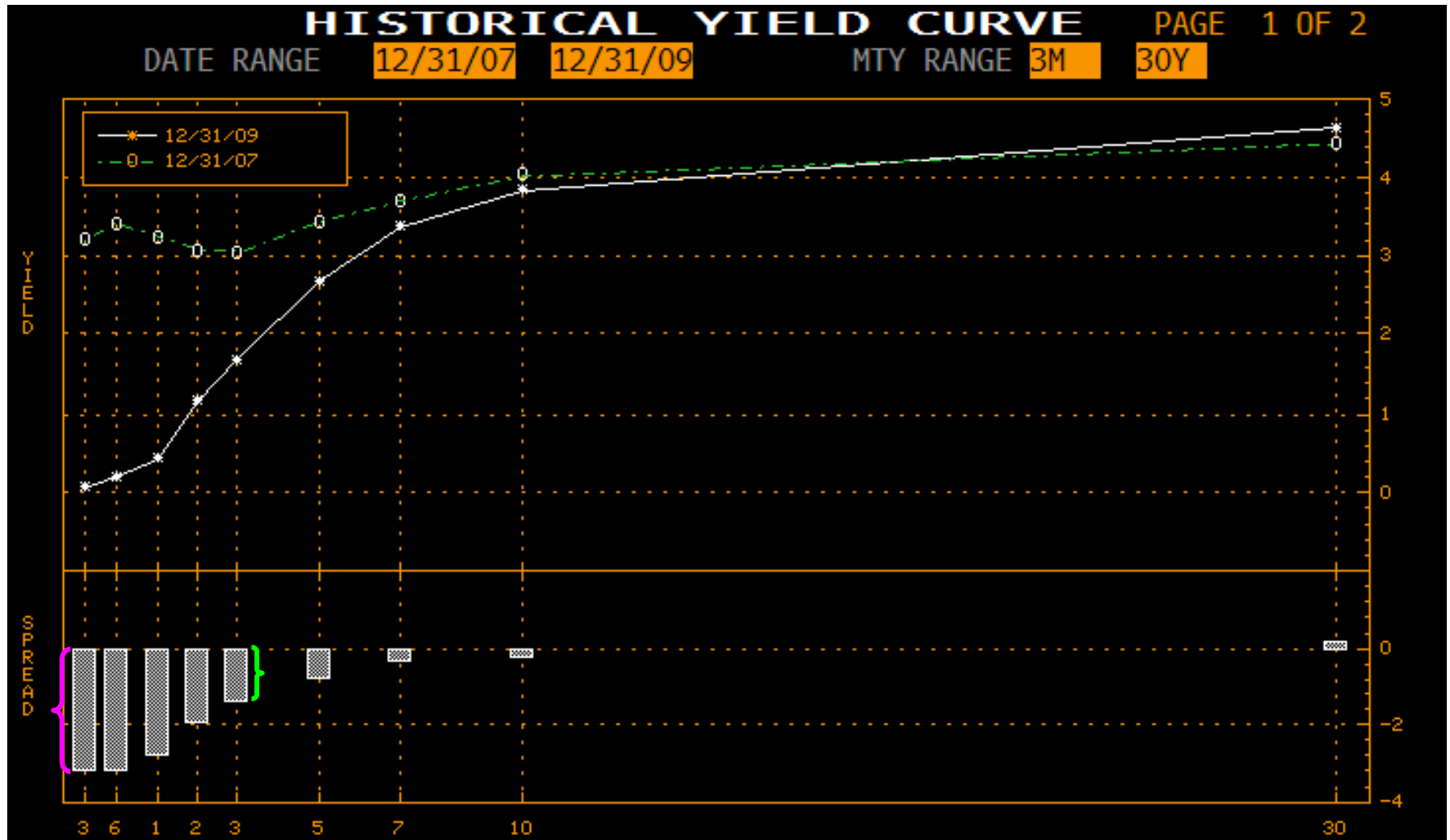
# Analyzing the Risk/Return Tradeoff

## Return vs. Number of Negative Quarters

July 1, 2000 to June 30, 2010



# Reduces Volatility of Returns

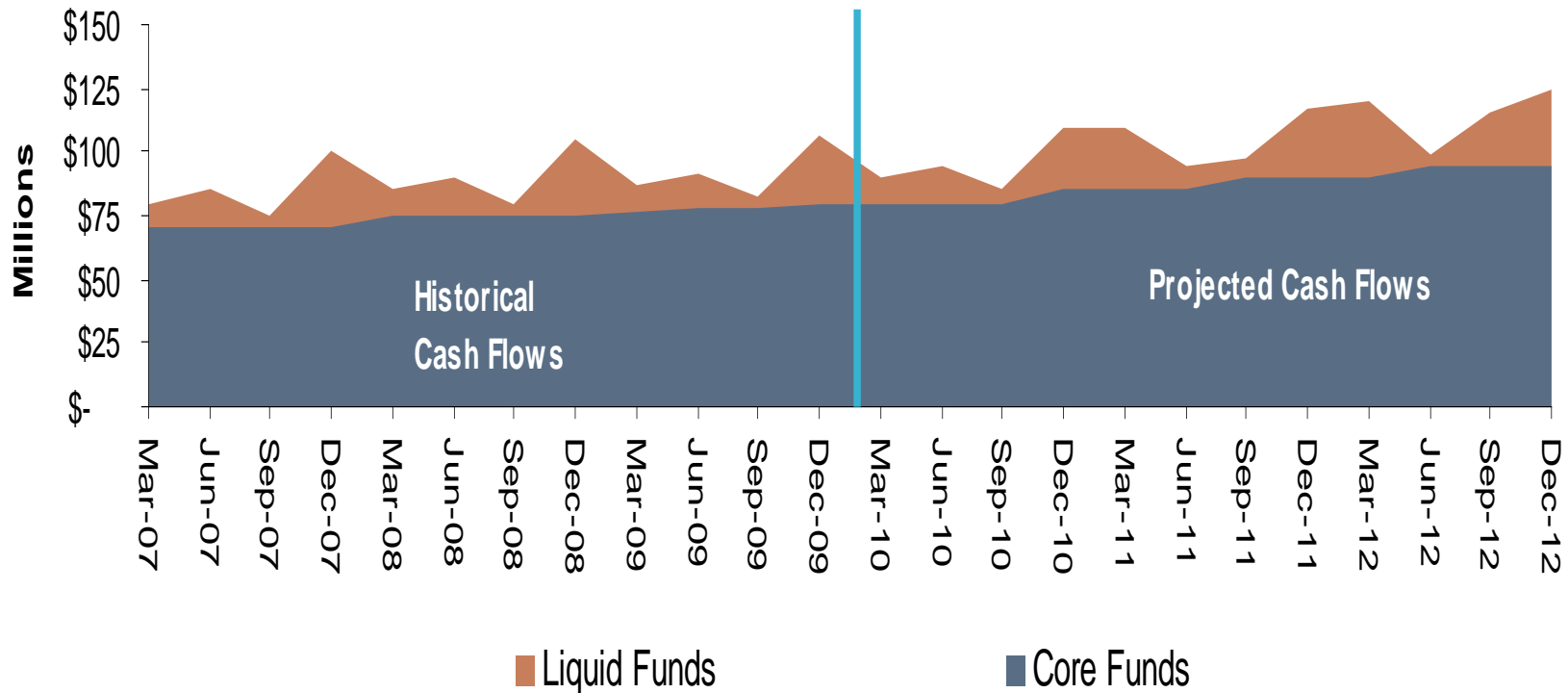


Source: Bloomberg

# Cash Flow Analysis

To determine how much money you have to invest in your core portfolio and for how long, you need to analyze some basic cash flow projections. Here is an illustration of what that could look like.

## Cash Flow Illustration



## #3 Improper Broker Relationships

# Broker Relationships – Do's and Don'ts

## **DO:**

- Use a broker as a source of market information
- Use a broker to generate investment ideas
- Use a broker as a source of economic information

## **Don't:**

- Use a broker as your investment advisor
- Base your portfolio strategy based on purchase recommendations
- Complete non-competitive transactions (always obtain three bids)

# Actual Investment Nightmare

## **Treasurer Purchases on 8/31/07:**

- FHLB 5.70% issued 5/17/07
- maturing on 5/17/12 (5 year)
- callable on 11/17/07 (6 months of call protection)
- 250 bonds @ price of 100 for \$250,000

## **Treasurer Sells on 10/03/07:**

- 250 bonds @ price of 98.438 for \$246,093.75
- portfolio loss is \$3,906.25
- 1.56% for 33 days or 17.28% annual loss
- (adding back the interest reduces the loss)

## **Bond Called on 11/17/07:**

- bond called @ price of 100 44 days later
- no loss if held to call



# Fixed Income Markets

- Negotiated markets – not an organized exchange
- Broker is your counterparty in the negotiation
- Buying power is based on volume and knowledge

## #4 Too Many Securities in a Portfolio

# Portfolio Efficiency

Report Date: 12/31/07

| Issuer / Security | Coupon | Maturity Date | Call Date | Acquisition Cost       | Days to Final | Days to Call | YTM Purchase Y | Wtd. Avg. Maturity to Final | Wtd. Avg. Maturity Call | Weighted Average Yield |
|-------------------|--------|---------------|-----------|------------------------|---------------|--------------|----------------|-----------------------------|-------------------------|------------------------|
| FHLB              | 3.100% | 01/08/08      |           | 1,000,000.00           | 8             |              | 3.100%         | 0.86                        | 0.86                    | 0.334%                 |
| FHLMC             | 4.890% | 02/01/08      |           | 429,959.00             | 32            |              | 5.000%         | 1.48                        | 1.48                    | 0.232%                 |
| FHLB-Called       | 4.570% | 04/29/08      | 01/29/08  | 359,507.00             | 120           | 29           | 5.000%         | 4.65                        | 1.12                    | 0.194%                 |
| FHLB              | 5.000% | 06/27/08      |           | 125,000.00             | 179           |              | 5.000%         | 2.41                        | 2.41                    | 0.067%                 |
| FNMA              | 3.250% | 08/15/08      |           | 371,528.00             | 228           |              | 3.000%         | 9.13                        | 9.13                    | 0.120%                 |
| FHLB-Called       | 4.600% | 08/22/08      | 02/05/08  | 374,415.00             | 235           |              | 4.850%         | 9.49                        | 9.49                    | 0.196%                 |
| FHLB              | 4.010% | 09/17/08      | 03/17/08  | 347,995.00             | 261           |              | 4.860%         | 9.79                        | 9.79                    | 0.182%                 |
| FHLB              | 4.570% | 10/17/08      |           | 349,839.00             | 291           |              | 4.630%         | 10.98                       | 10.98                   | 0.175%                 |
| FHLB              | 4.100% | 11/26/08      | 02/26/08  | 348,218.00             | 331           |              | 4.700%         | 12.43                       | 12.43                   | 0.176%                 |
| FNMA              | 4.550% | 12/01/08      | 06/01/08  | 431,669.00             | 336           | 153          | 4.900%         | 15.64                       | 7.12                    | 0.228%                 |
| FHLB-Called       | 5.000% | 01/02/09      | 01/02/08  | 430,461.00             | 368           | 2            | 4.880%         | 17.08                       | 0.09                    | 0.227%                 |
| FNMA-Called       | 4.100% | 02/13/09      | 02/04/08  | 399,827.00             | 410           | 35           | 4.850%         | 17.68                       | 1.51                    | 0.209%                 |
| FHLB              | 4.000% | 02/23/09      | 02/04/08  | 357,265.00             | 420           | 35           | 4.700%         | 16.18                       | 1.35                    | 0.181%                 |
| FHLB-Called       | 4.660% | 04/13/09      | 01/16/08  | 369,290.00             | 469           | 16           | 4.810%         | 18.68                       | 0.64                    | 0.192%                 |
| FFCB-Called       | 4.300% | 06/09/09      | 01/25/08  | 303,205.00             | 526           | 25           | 4.730%         | 17.20                       | 0.82                    | 0.155%                 |
| FHLB-Called       | 4.550% | 07/14/09      | 01/28/08  | 209,365.00             | 561           | 28           | 4.760%         | 12.67                       | 0.63                    | 0.107%                 |
| FHLB-Called       | 4.520% | 08/26/09      | 01/28/08  | 119,538.00             | 604           | 28           | 4.770%         | 7.79                        | 0.36                    | 0.061%                 |
| FHLMC-Called      | 4.500% | 08/10/09      | 01/10/08  | 349,962.00             | 588           | 10           | 5.150%         | 22.19                       | 0.38                    | 0.194%                 |
| FHLMC-Called      | 4.500% | 08/10/09      | 01/10/08  | 159,982.00             | 588           | 10           | 5.150%         | 10.14                       | 0.17                    | 0.089%                 |
| FHLB              | 4.280% | 09/08/09      | 03/08/08  | 198,486.00             | 617           | 68           | 4.760%         | 13.21                       | 1.46                    | 0.102%                 |
| FNMA-Called       | 4.500% | 09/30/09      | 01/22/08  | 443,103.00             | 639           | 22           | 4.760%         | 30.53                       | 1.05                    | 0.227%                 |
| FHLMC-Called      | 4.130% | 10/09/09      | 01/30/08  | 291,661.00             | 648           | 30           | 4.800%         | 20.38                       | 0.94                    | 0.151%                 |
| FFCB-Called       | 4.500% | 11/13/09      | 02/01/08  | 1,404,513.00           | 683           | 32           | 4.320%         | 103.44                      | 4.85                    | 0.654%                 |
| FFCB-Called       | 4.300% | 11/18/09      | 02/01/08  | 98,985.00              | 688           | 32           | 4.880%         | 7.34                        | 0.34                    | 0.052%                 |
| <b>Totals</b>     |        |               |           | <b>\$ 9,273,773.00</b> |               |              |                | <b>391.37</b>               | <b>79.41</b>            | <b>4.507%</b>          |

# Portfolio Efficiency

- **Round Lots** of \$1 million are priced the best
- **Odd Lots** smaller than \$1 million are priced less attractively
- **Fewer Transactions** keeps costs low as brokers are paid on a per transaction basis
- **Safekeeping Costs** partially based on the number of transactions
- **Internal Costs** increase with the time it takes to complete each transaction, complete accounting work, and verify the safekeeping

## #5 Too Many Callable Securities?

# How Many Callables is Too Many?

Report Date: 12/31/07

| Issuer / Security | Coupon | Maturity Date | Call Date | Acquisition Cost | Days to Final | Days to Call | YTM Purchase Y | Wtd. Avg.         | Wtd. Avg.     | Weighted      |
|-------------------|--------|---------------|-----------|------------------|---------------|--------------|----------------|-------------------|---------------|---------------|
|                   |        |               |           |                  |               |              |                | Maturity to Final | Maturity Call | Average Yield |
| FHLB              | 3.100% | 01/08/08      |           | 1,000,000.00     | 8             |              | 3.100%         | 0.86              | 0.86          | 0.334%        |
| FHLMC             | 4.890% | 02/01/08      |           | 429,959.00       | 32            |              | 5.000%         | 1.48              | 1.48          | 0.232%        |
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Totals \$ 9,273,773.00 **391.37** **79.41** 4.507%

# How Many Callables is Too Many?

| 06/30/10<br>Issuer /<br>Security | Coupon | Maturity<br>Date | Call Date<br>(if any) | Acquisition<br>Cost     | % of<br>Portfolio | Days to<br>Final | Days to<br>Call | YTM<br>(Purchase Y) | Final<br>Wtd. Avg.<br>Maturity | Effective<br>Wtd. Avg.<br>Maturity | Weighted<br>Average<br>Yield |
|----------------------------------|--------|------------------|-----------------------|-------------------------|-------------------|------------------|-----------------|---------------------|--------------------------------|------------------------------------|------------------------------|
| FNMA POOL                        | 5.000% | 11/01/10         |                       | \$ 1,438,167.80         | 2.68%             | 124              |                 | 0.308%              | 3.33                           | 3.33                               | 0.008%                       |
| FNMA POOL                        | 4.000% | 12/01/10         |                       | \$ 1,326,607.49         | 2.48%             | 154              |                 | 0.164%              | 3.81                           | 3.81                               | 0.004%                       |
| FNMA POOL                        | 4.500% | 01/01/11         |                       | \$ 1,630,747.40         | 2.30%             | 185              |                 | 0.412%              | 4.25                           | 4.25                               | 0.009%                       |
| FNMA POOL                        | 4.000% | 06/01/11         |                       | \$ 2,077,436.49         | 3.88%             | 336              |                 | 0.667%              | 13.02                          | 13.02                              | 0.026%                       |
| FNMA                             | 2.000% | 08/12/13         | 08/12/10              | \$ 997,500.00           | 1.86%             | 1139             | 43              | 2.074%              | 21.20                          | 0.80                               | 0.039%                       |
| FHLB                             | 1.000% | 05/26/15         | 11/26/10              | \$ 1,000,000.00         | 1.87%             | 1791             | 149             | 1.000%              | 33.42                          | 2.78                               | 0.019%                       |
| FNMA                             | 2.000% | 12/30/15         | 12/30/10              | \$ 1,000,000.00         | 1.87%             | 2009             | 183             | 2.000%              | 37.48                          | 3.41                               | 0.037%                       |
| FNMA                             | 4.100% | 07/01/16         | 07/01/10              | \$ 1,012,434.23         | 1.89%             | 2193             | 1               | 3.889%              | 41.43                          | 0.02                               | 0.073%                       |
| FNMA                             | 2.530% | 05/04/17         | 08/04/10              | \$ 1,000,000.00         | 1.87%             | 2500             | 35              | 2.530%              | 46.65                          | 0.65                               | 0.047%                       |
| FHLMC                            | 3.100% | 05/19/17         |                       | \$ 1,000,000.00         | 1.87%             | 2515             |                 | 3.100%              | 46.93                          | 46.93                              | 0.058%                       |
| FNMA                             | 2.000% | 11/27/17         |                       | \$ 1,000,000.00         | 1.87%             | 2707             |                 | 2.000%              | 50.51                          | 50.51                              | 0.037%                       |
| FNMA                             | 2.000% | 12/18/17         | 09/18/10              | \$ 747,000.00           | 1.39%             | 2728             | 80              | 2.000%              | 38.02                          | 1.12                               | 0.028%                       |
| FNMA                             | 3.000% | 01/29/18         | 07/29/10              | \$ 1,000,000.00         | 1.87%             | 2770             | 29              | 3.000%              | 51.68                          | 0.54                               | 0.056%                       |
| FNMA                             | 3.000% | 02/12/18         | 08/12/10              | \$ 1,000,000.00         | 1.87%             | 2784             | 43              | 3.000%              | 51.95                          | 0.80                               | 0.056%                       |
| FHLB                             | 2.500% | 12/23/19         | 09/23/10              | \$ 1,000,000.00         | 1.87%             | 3463             | 85              | 2.500%              | 64.61                          | 1.59                               | 0.047%                       |
| FNMA                             | 2.000% | 02/24/20         | 02/24/11              | \$ 1,000,000.00         | 1.87%             | 3526             | 239             | 2.000%              | 65.79                          | 4.46                               | 0.037%                       |
| FNMA                             | 3.000% | 05/19/20         | 11/19/10              | \$ 1,000,000.00         | 1.87%             | 3611             | 142             | 3.000%              | 67.38                          | 2.65                               | 0.056%                       |
| FNMA                             | 2.000% | 06/16/20         | 06/16/11              | \$ 1,000,000.00         | 1.87%             | 3639             | 351             | 2.000%              | 67.90                          | 6.55                               | 0.037%                       |
| FHLMC POOL                       | 6.000% | 09/01/21         |                       | \$ 1,313,080.36         | 2.45%             | 4081             |                 | 4.945%              | 99.98                          | 99.98                              | 0.121%                       |
| FHLMC                            | 4.000% | 02/25/22         | 08/25/10              | \$ 1,000,000.00         | 1.87%             | 4258             | 56              | 4.000%              | 79.45                          | 1.04                               | 0.075%                       |
| FNMA                             | 4.000% | 05/28/24         | 08/28/10              | \$ 965,000.00           | 1.80%             | 5081             | 59              | 4.320%              | 91.49                          | 1.06                               | 0.078%                       |
| FNMA                             | 5.125% | 08/19/24         |                       | \$ 478,514.06           | 0.89%             | 5164             |                 | 4.848%              | 46.11                          | 46.11                              | 0.043%                       |
| FNMA                             | 3.000% | 09/30/24         | 09/30/10              | \$ 1,000,000.00         | 1.87%             | 5206             | 92              | 3.000%              | 97.14                          | 1.72                               | 0.056%                       |
| FHLMC                            | 3.000% | 02/02/25         | 08/12/10              | \$ 1,000,000.00         | 1.87%             | 5331             | 43              | 3.000%              | 99.47                          | 0.80                               | 0.056%                       |
| CD                               |        | 12/28/10         |                       | \$ 14,000,000.00        | 26.12%            | 181              |                 | 2.650%              | 47.28                          | 47.28                              | 0.692%                       |
| Money Market                     |        | 07/01/10         |                       | \$ 13,594,074.82        | 25.36%            | 1                |                 | 0.210%              | 0.25                           | 0.25                               | 0.053%                       |
| <b>Totals</b>                    |        |                  |                       | <b>\$ 53,594,961.99</b> | 100.00%           |                  |                 |                     | <b>1271.94</b>                 | <b>346.90</b>                      | <b>1.850%</b>                |

## #6 Using Credit Without the Ability to Analyze Credit

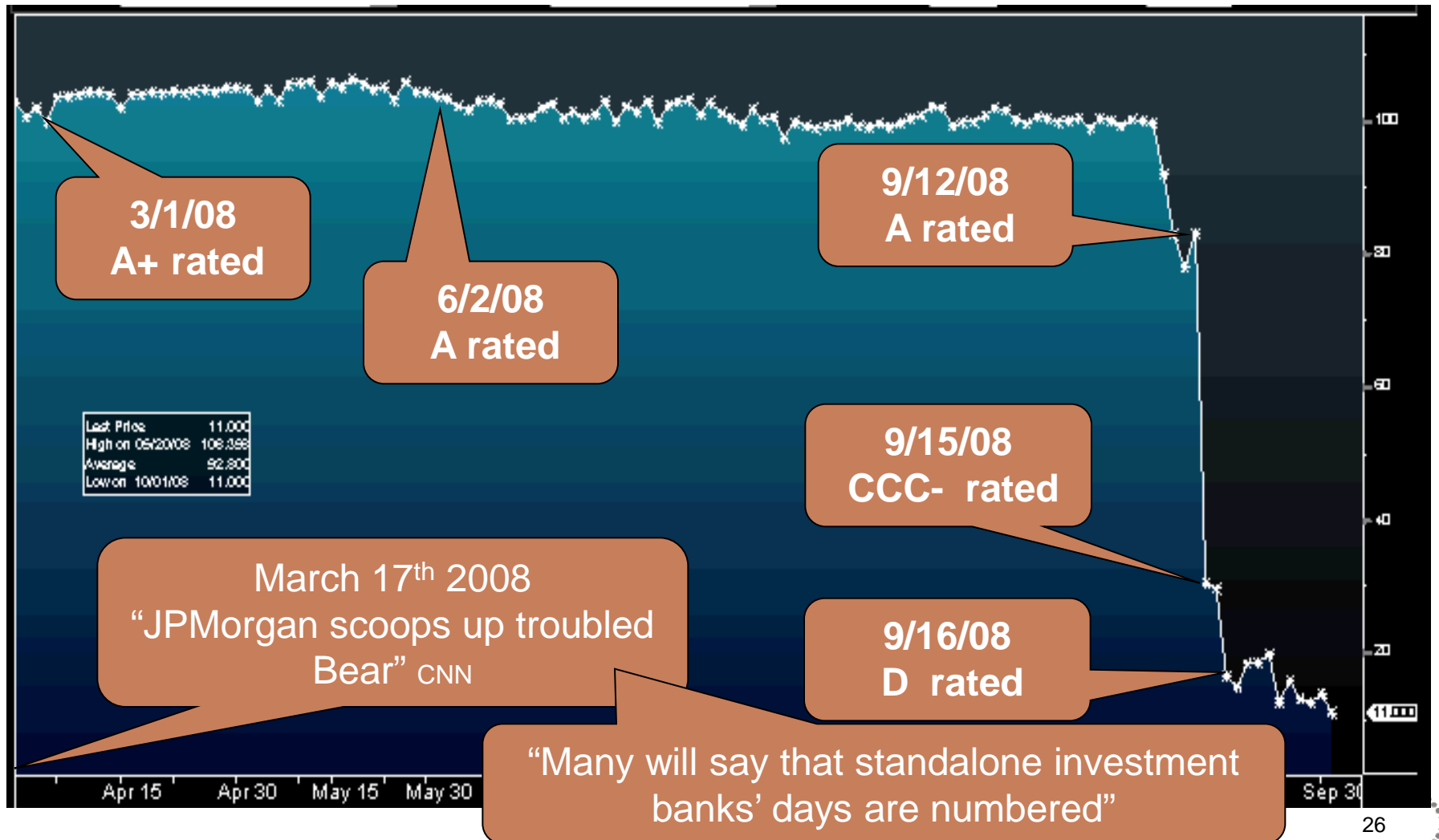


# Credit Exposure – Are you a sitting duck?



# Practical Example – credit analysis

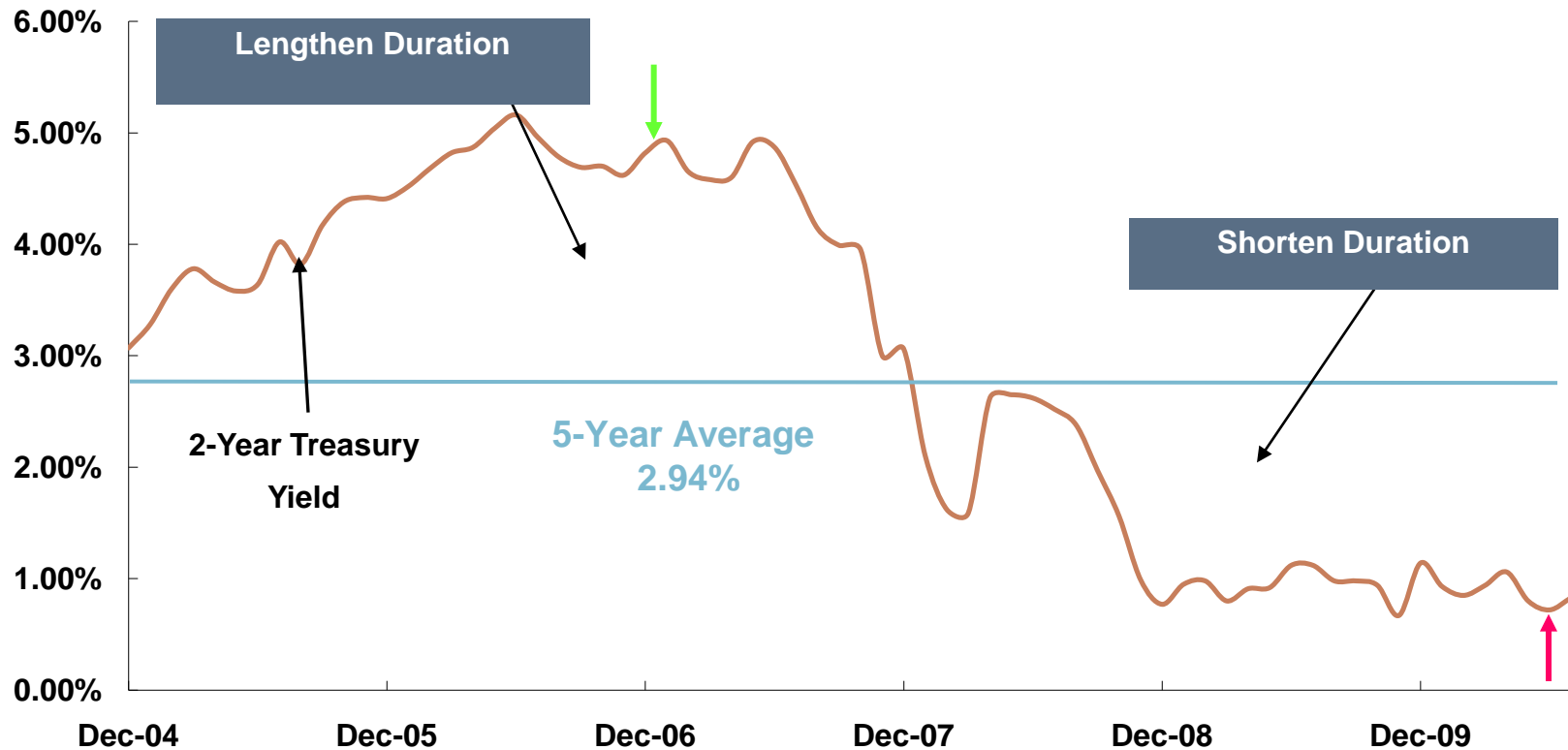
## Lehman Brothers MTN 7 7/8% of August 2010



## #7 Failure to Look Forward

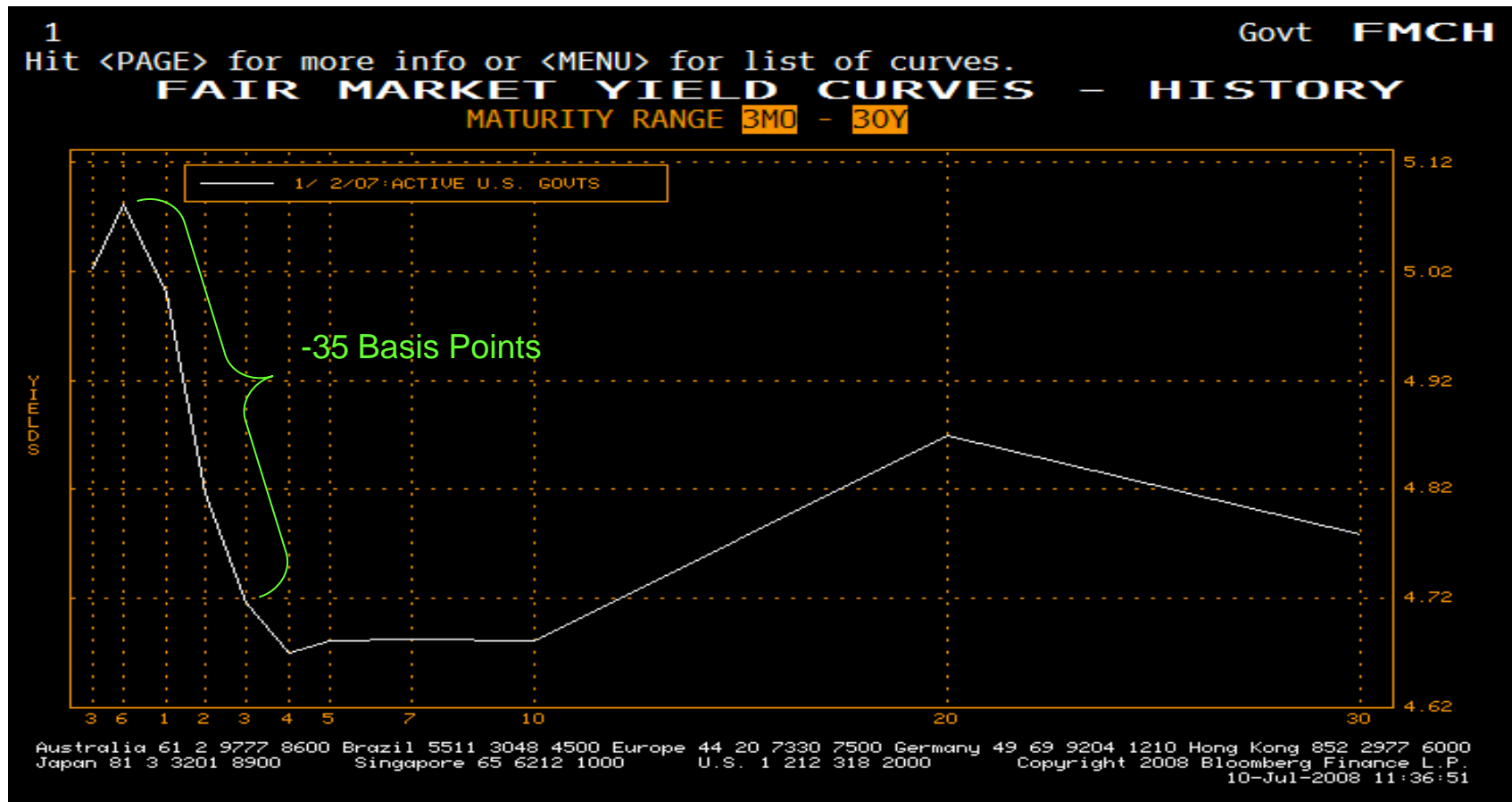
# Duration Management – reversion to the mean

Failure to properly anticipate future market trends is a common issue in setting strategy. The widespread strategy of selecting the highest rate available is usually the root of this problem.



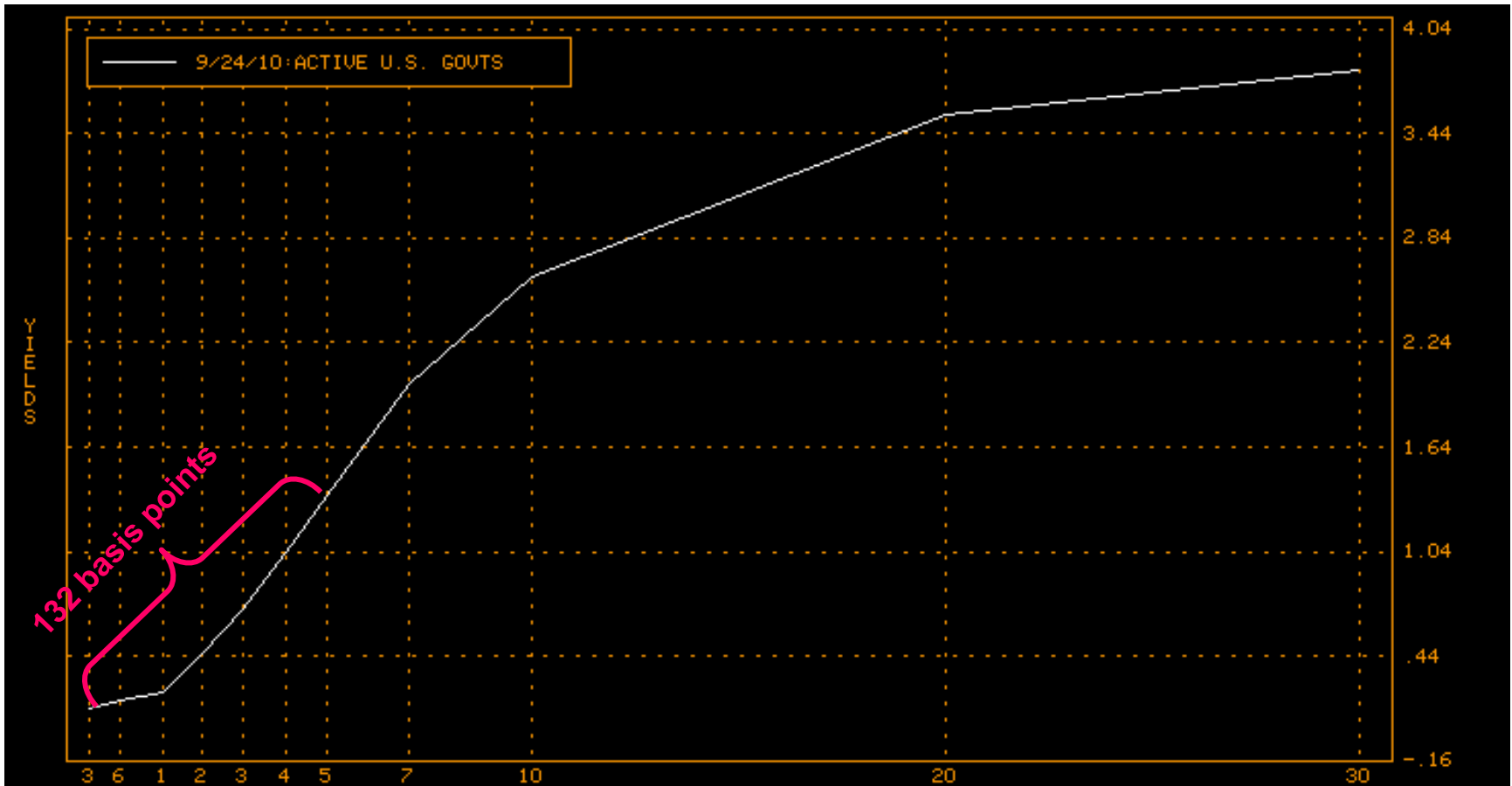
# Yield Curve - top of the interest rate cycle

The curve is inverted, enticing investors to stay short.



# Yield Curve - bottom of the interest rate cycle

The curve is steeply sloped, enticing investors to extend maturities, lower quality or take on extension risk.



# Summary of Seven Deadly Sins

1. Assuming all LGIPs are the same
2. Keeping the portfolio too short
3. Using broker relationships improperly
4. Having too many securities in the portfolio
5. Maintaining too many callable securities in the portfolio
6. Using credit without the ability to analyze credit
7. Basing current strategy on past market trends