



The Seven Deadly Sins of Public Investing

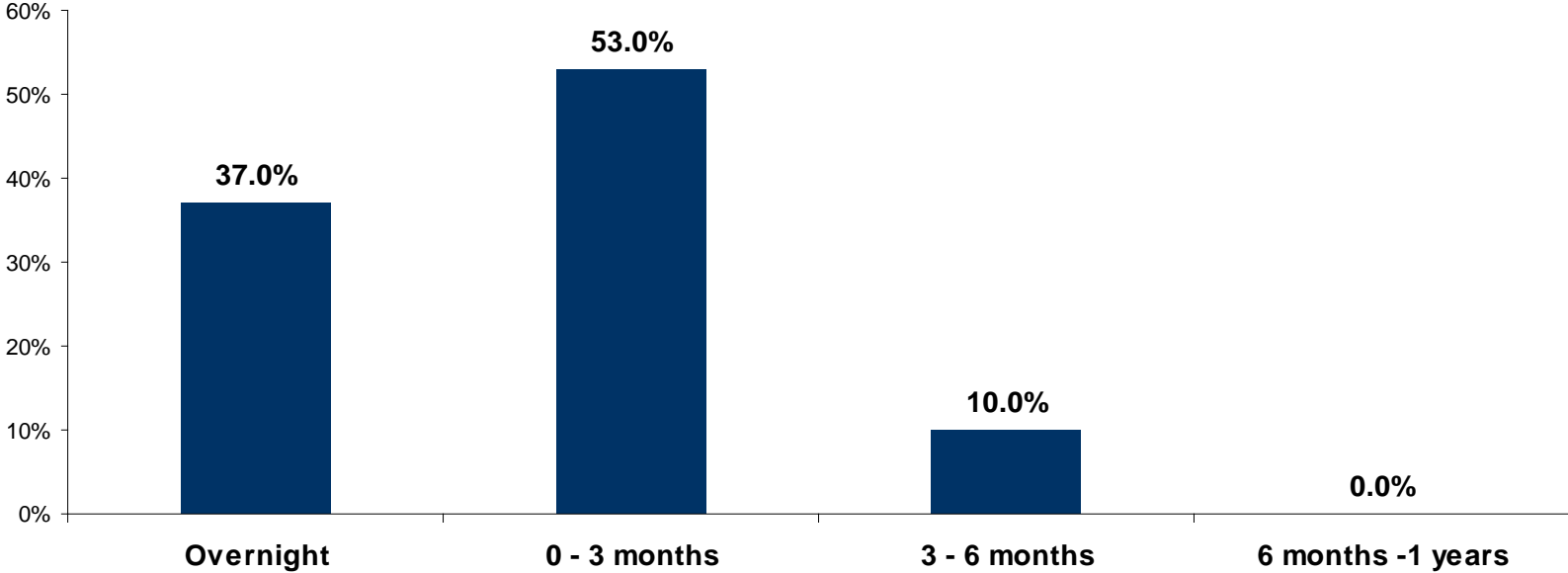
March 31, 2011

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

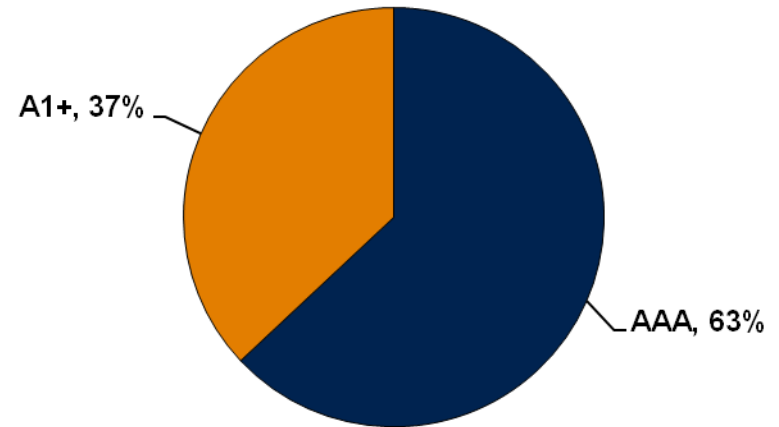
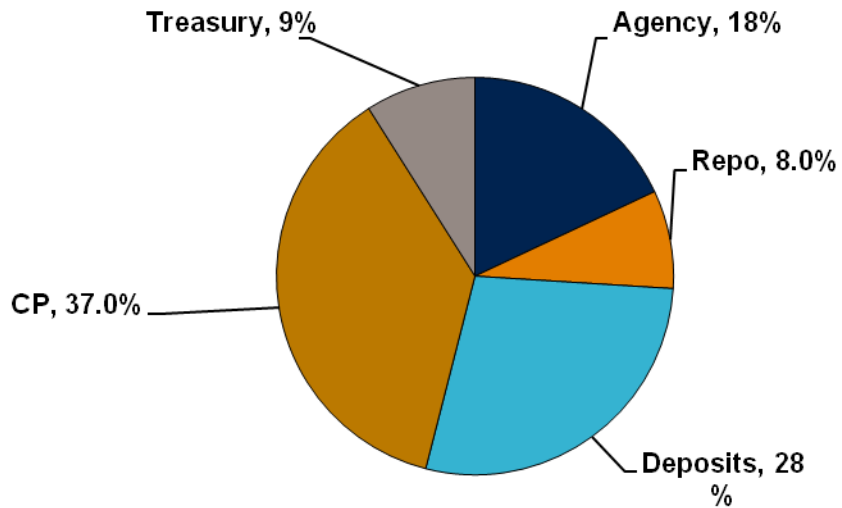


Average Maturity: 39 days

Maximum Maturity: 1 years

Typical 2a-7 type LGIP

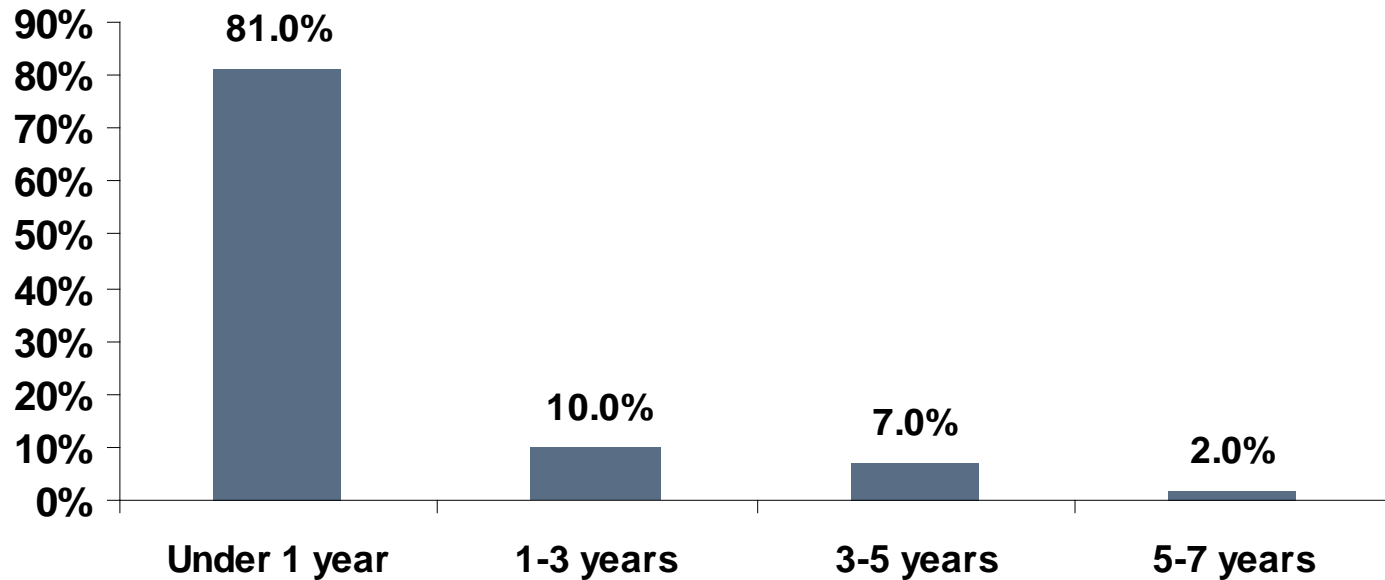
Securities by Type



Corporate Note Exposure: 0%

Average Rating: AAA

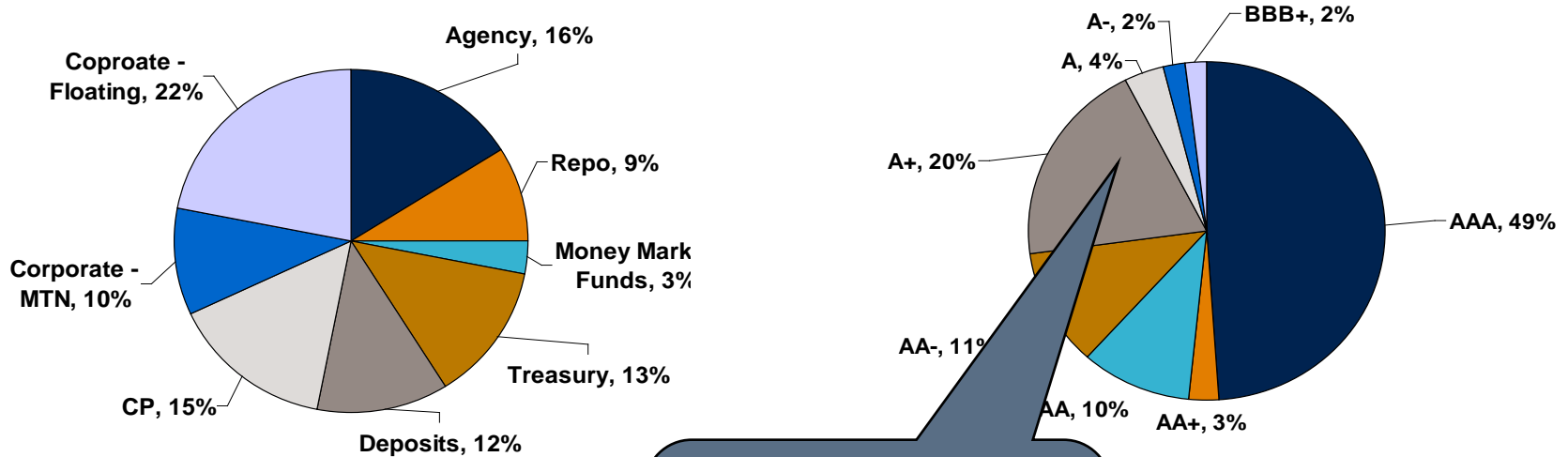
Maturity Distribution – to final



Average Maturity: 292 days

Maximum Maturity: 7 years

Securities by Type



\$155 million In
Lehman Brothers
exposure!
6% of portfolio!

Corporate Note Exposure: 32%

Average Credit Rating: AA

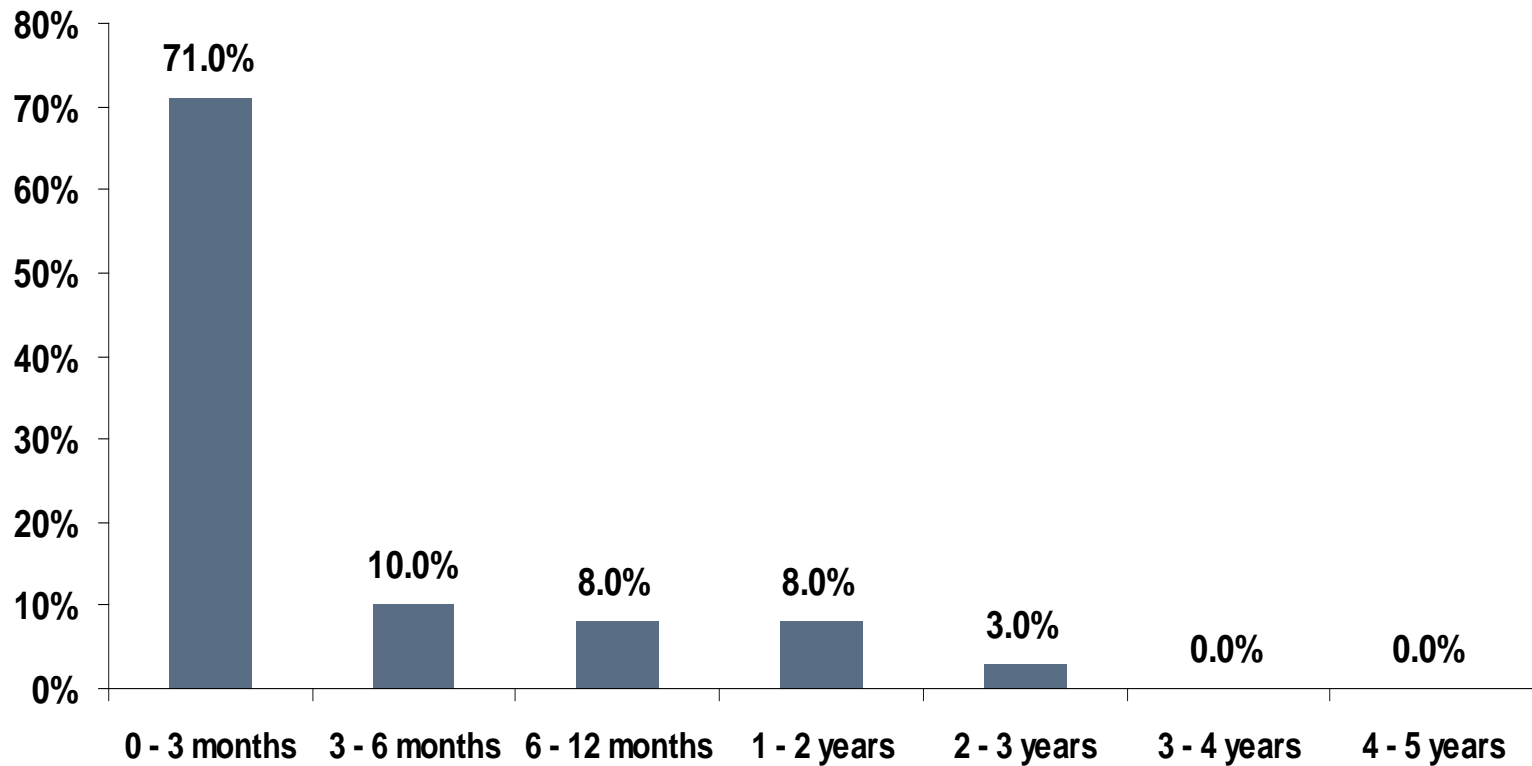
SEC 2a-7 Changes - effective May 5, 2010

- 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

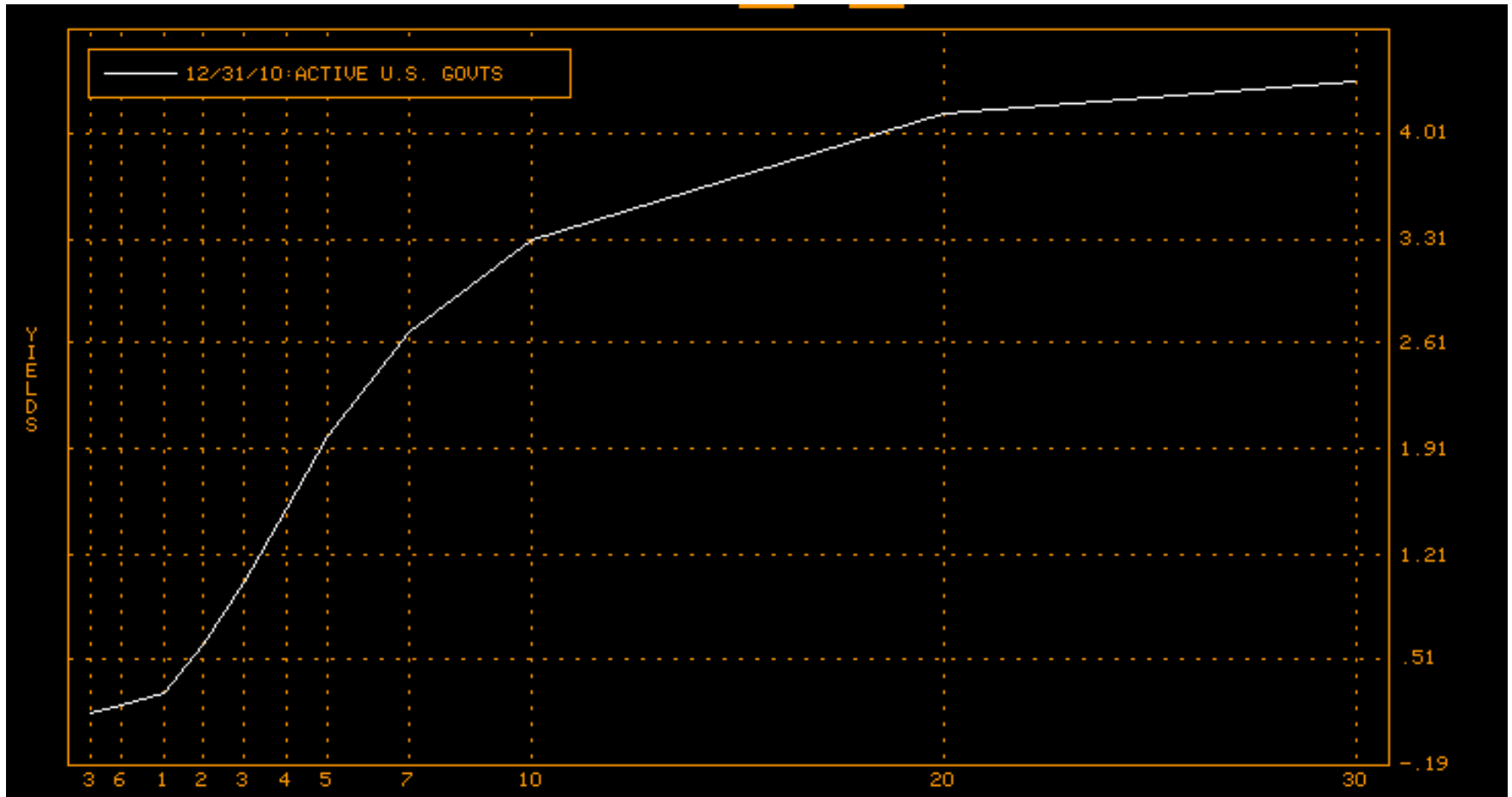
Do you really need most of your funds within the next 24 hours?

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.

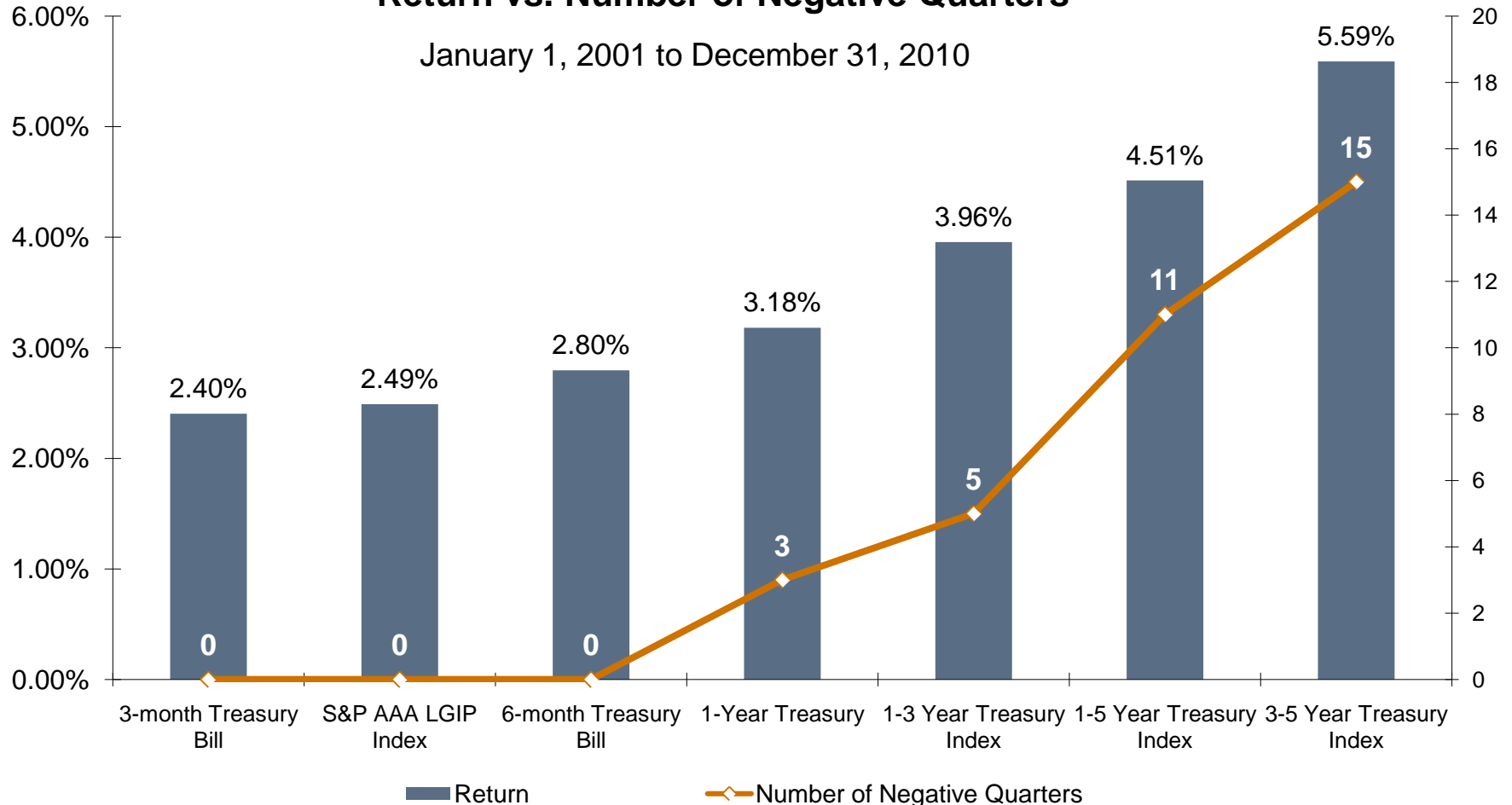


Source: Bloomberg

Analyzing the Risk/Return Tradeoff

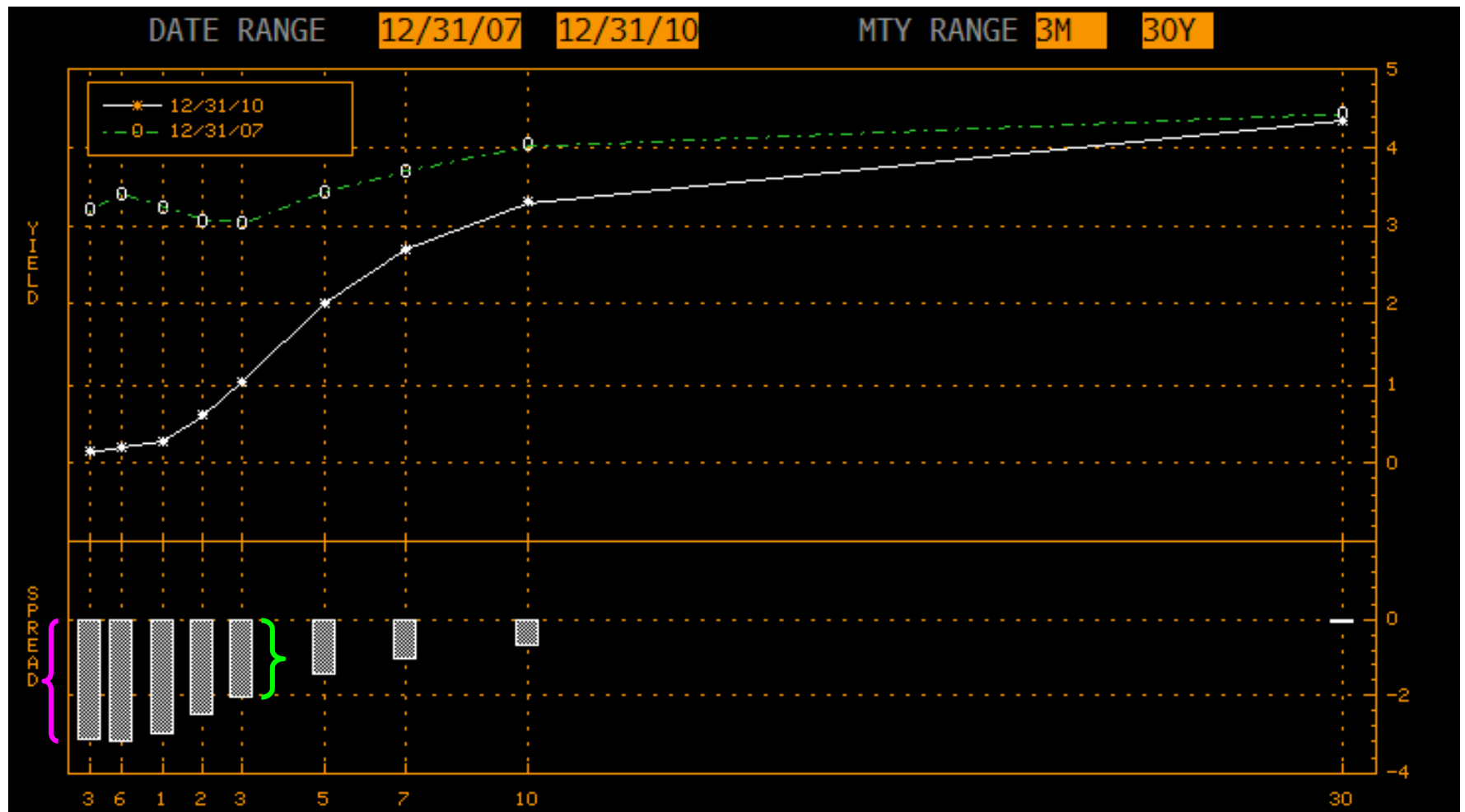
Return vs. Number of Negative Quarters

January 1, 2001 to December 31, 2010



Source: Bloomberg, using Merrill Lynch indexes to represent the corresponding Treasury

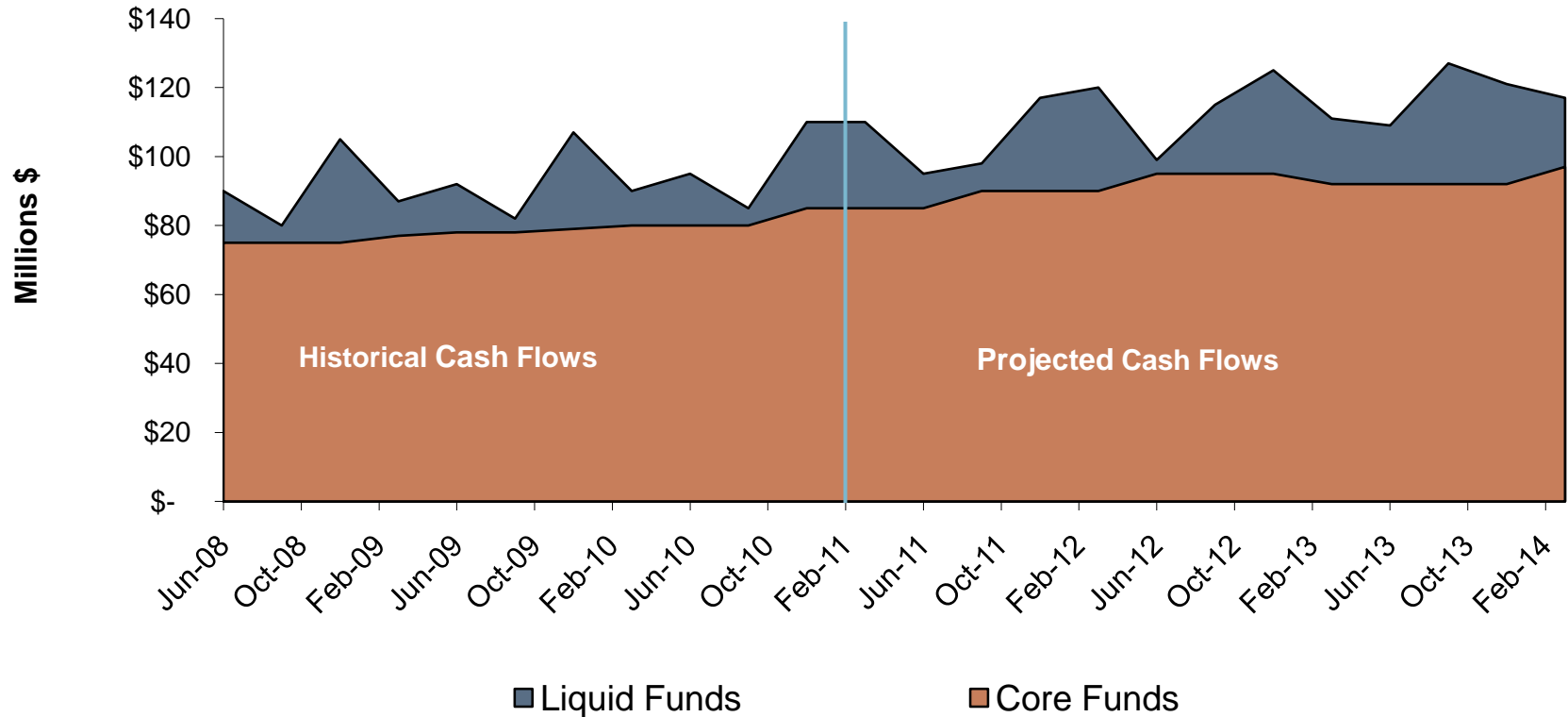
Reduces Volatility of Returns



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

Fiduciary Duty

Fiduciary Duty is very different between investment advisors and brokers. Currently congress is thinking of making the standards the same and the brokerage community is fighting those changes.

- **Brokers** - brokers are regulated by the Financial Industry Regulatory Authority Inc. under standards that require them to make suitable recommendations to their clients.
- **Investment Advisors** - are regulated by the Securities and Exchange Commission and state securities regulators, are held to a fiduciary standard that requires them to put their client's interests above their own

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

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)

#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%

Totals \$ 9,273,773.00 391.37 79.41 4.507%

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
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Totals \$ 9,273,773.00 **391.37** **79.41** 4.507%

How Many Callables is Too Many?

06/30/10 Issuer / Security	Coupon	Maturity Date	Call Date (if any)	Acquisition Cost	% of Portfolio	Days to Final	Days to Call	YTM (Purchase Y)	Final Wtd. Avg. Maturity	Effective Wtd. Avg. Maturity	Weighted Average 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%
Totals				\$ 53,594,961.99	100.00%				1271.94	346.90	1.850%

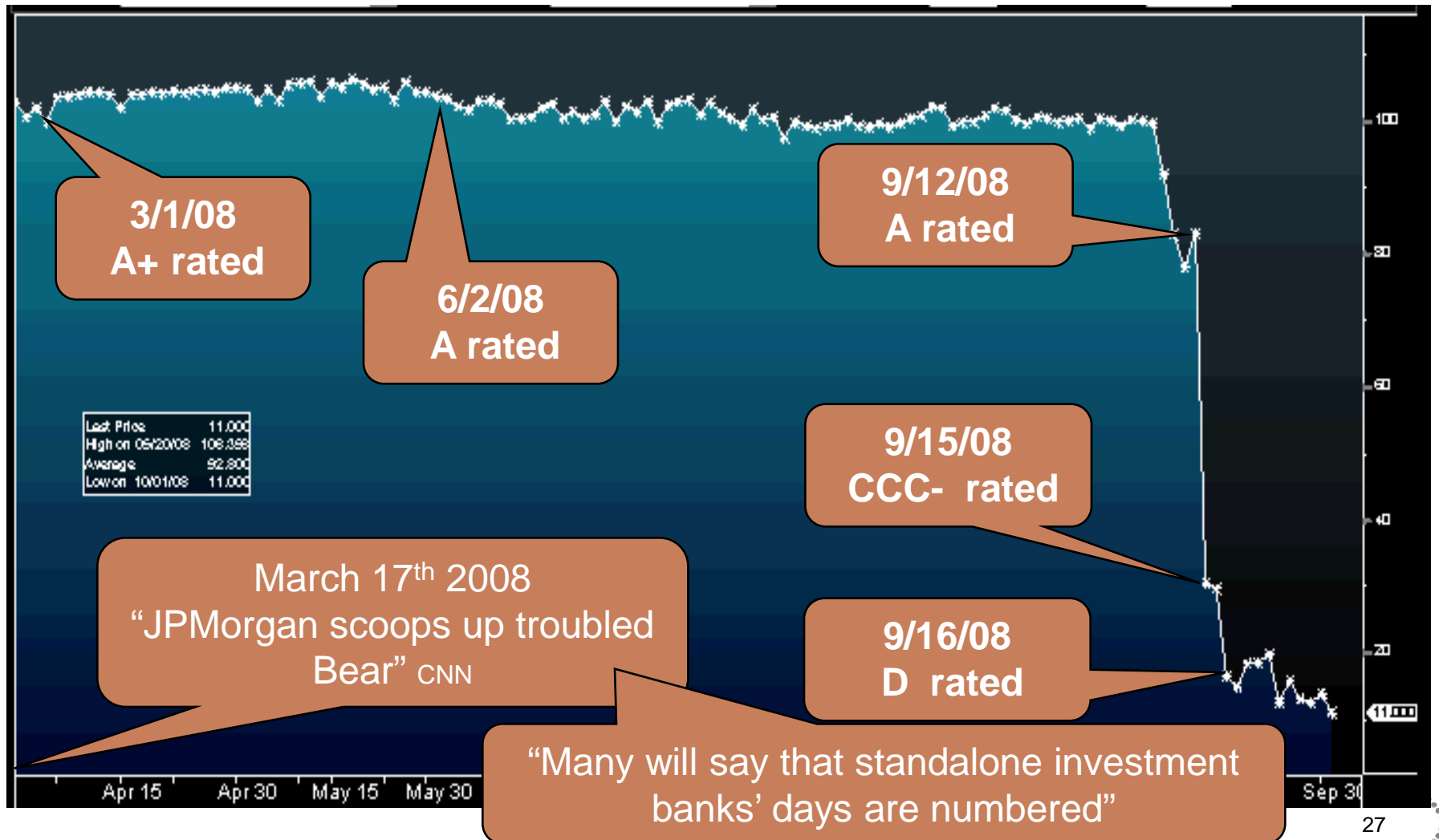
#6 Using Credit Without the Ability to Analyze Credit

Credit Exposure – Are you a sitting duck?



Practical Example – credit analysis

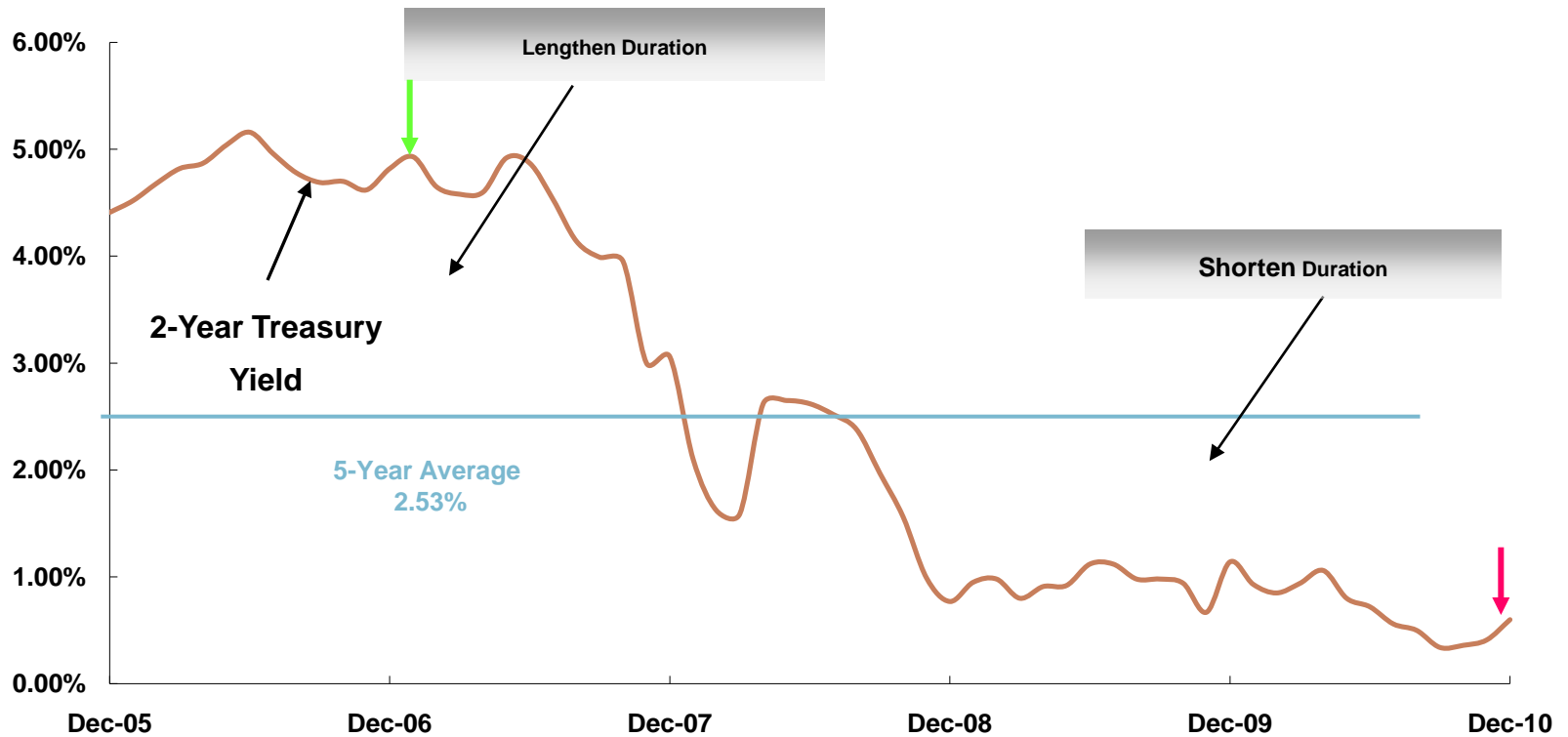
Lehman Brothers MTN 7 7/8% of August 2010



#7 Failure to Look Forward

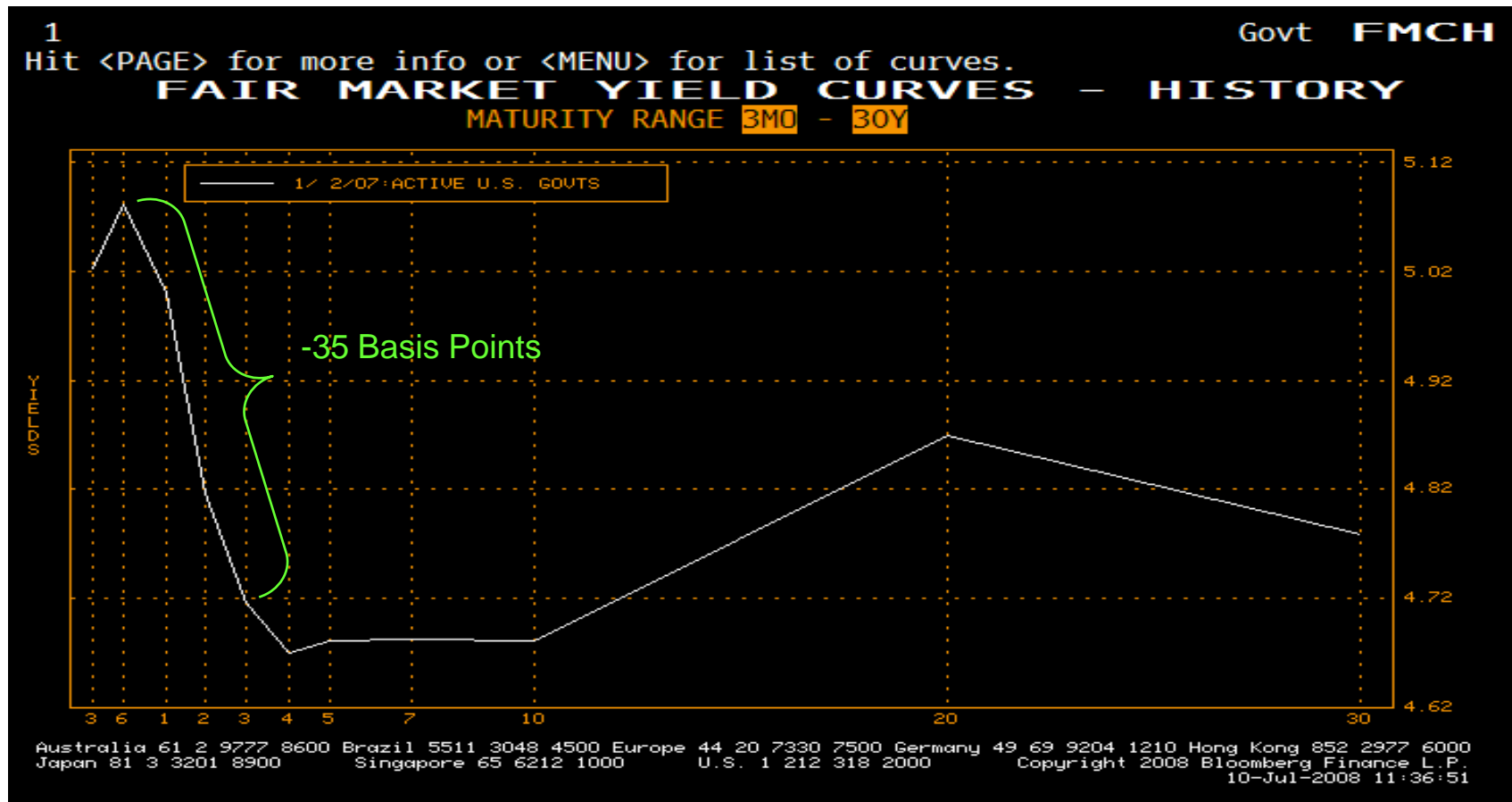
Duration Management – reversion to the mean

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.



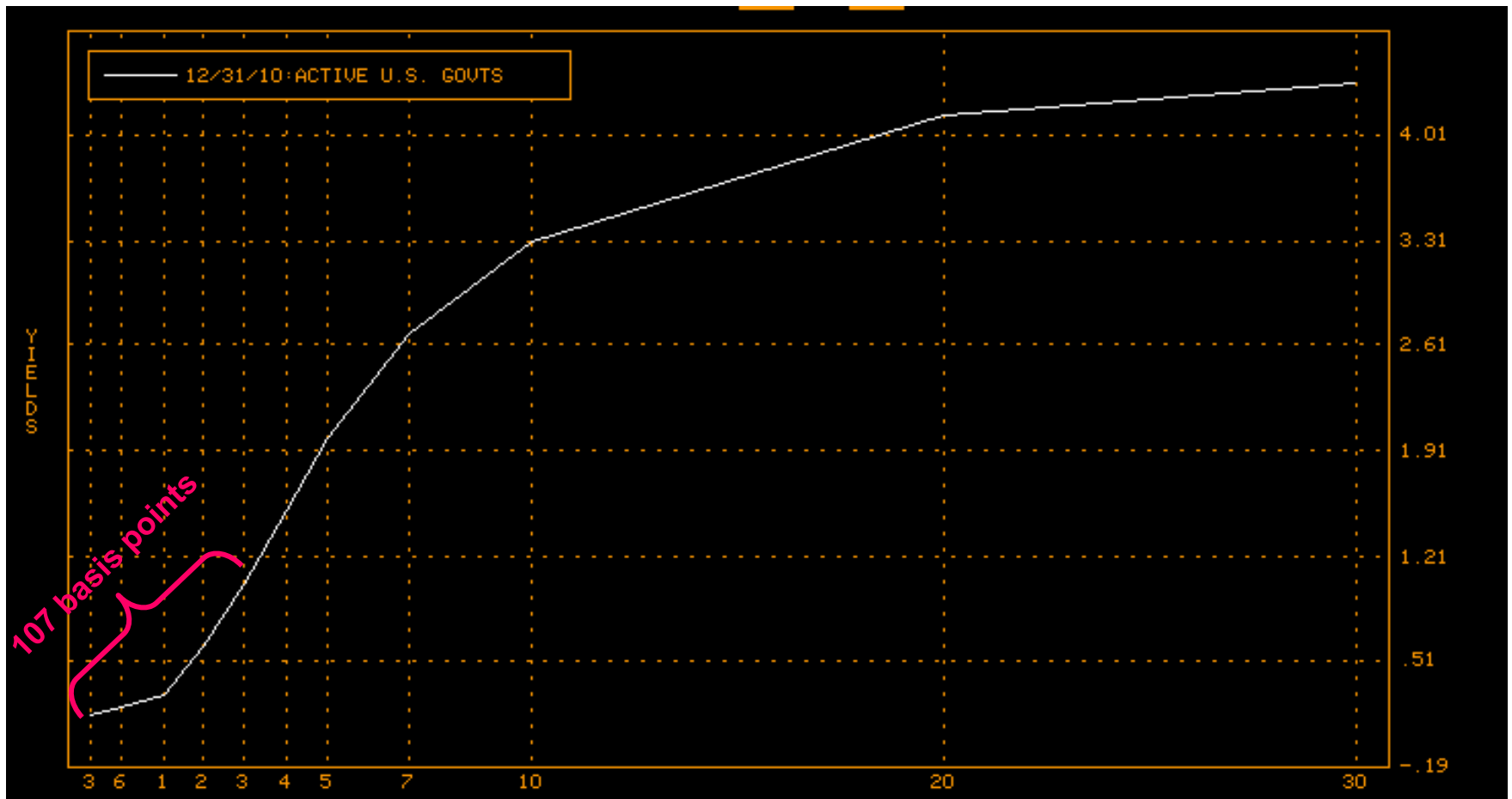
Yield Curve - top of the interest rate cycle

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