CASH FLOW TESTING CHALLENGES AT YEAR END 2008

ROUND TABLE DISCUSSION

NFCA ACTUARIES SECTION

MID-YEAR MEETING

JUNE 4-5, 2009

YIELD CURVES & THE NEW YORK 7

- **Did historically low yield curves negatively impact cash flow testing and result in unnecessary increases in reserves?**
- **For year end 2008, was the New York 7 scenarios a valid tool for estimating future interest rates?**
  - **Are down scenarios meaningful when rates are already at historical lows?**
  - **Is it appropriate to project a negative yield rate, or should rates be capped at an absolute floor?**

NEW YORK 7

• Level	Level rates during projection period
• Rising	Rates rise by 0.5% per year for the next 10 years
• Cap	Rates rise by 1% per year for 5 years, then drop by 1% per year for 5 years
• +300 bps	Rates increase by 3.00% in the first year and stay at that level
• Falling	Rates drop by 0.5% per year for the next 10 years
• Cup	Rates drop by 1% per year for 5 years, then rise by 1% per year for 5 years
• -300 bps	Rates decrease by 3.00% in the first year and stay at that level

All of the deterministic scenarios have implicit downward movement limitations of one-half of the initial 5-Year Treasury rate.

YIELD CURVES

	12/31/07	9/30/08	12/31/08	3/31/09	5/29/09
1-YR	3.34%	1.78%	0.37%	0.57%	0.48%
3-YR	3.07%	2.28%	1.00%	1.15%	1.52%
5-YR	3.45%	2.98%	1.55%	1.67%	2.46%
10-YR	4.04%	3.85%	2.25%	2.71%	3.67%
20-YR	4.50%	4.43%	3.05%	3.61%	4.52%
30-YR	4.45%	4.31%	2.58%	3.56%	4.54%

NEW YORK 7 - INTEREST SCENARIOS
1-YEAR TREASURIES
9/30/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	1.78	1.78	1.78
2009	1.28	0.78	0.29
2013	0.29	0.29	0.29
2018	0.29	1.78	0.29
2023	0.29	1.78	0.29
2028	0.29	1.78	0.29

NEW YORK 7 - INTEREST SCENARIOS
5-YEAR TREASURIES
9/30/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	2.98	2.98	2.98
2009	2.48	1.98	1.49
2013	1.49	1.49	1.49
2018	1.49	2.98	1.49
2023	1.49	2.98	1.49
2028	1.49	2.98	1.49

NEW YORK 7 - INTEREST SCENARIOS
10-YEAR TREASURIES
9/30/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	3.85	3.85	3.85
2009	3.35	2.85	2.36
2013	2.36	2.36	2.36
2018	2.36	3.85	2.36
2023	2.36	3.85	2.36
2028	2.36	3.85	2.36

NEW YORK 7 - INTEREST SCENARIOS
1-YEAR TREASURIES
12/31/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	0.37	0.37	0.37
2009	-0.13	-0.41	-0.41
2013	-0.41	-0.41	-0.41
2018	-0.41	0.37	-0.41
2023	-0.41	0.37	-0.41
2028	-0.41	0.37	-0.41

NEW YORK 7 - INTEREST SCENARIOS
5-YEAR TREASURIES
12/31/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	1.55	1.55	1.55
2009	1.05	0.78	0.78
2013	0.78	0.78	0.78
2018	0.78	1.55	0.78
2023	0.78	1.55	0.78
2028	0.78	1.55	0.78

NEW YORK 7 - INTEREST SCENARIOS
10-YEAR TREASURIES
12/31/2008 YIELD CURVE

YEAR	FALLING	CUP	-300
2008	2.25	2.25	2.25
2009	1.75	1.48	1.48
2013	1.48	1.48	1.48
2018	1.48	2.25	1.48
2023	1.48	2.25	1.48
2028	1.48	2.25	1.48

REINVESTMENT STRATEGY

- **Is the “answer” to cash flow testing with historically low yield curves a simple shift in reinvestment assumptions?**
  - **Is it OK to focus just on what you believe future corporate bond rates will yield, and adjust the margins over treasury yields to fit your future expectations?**

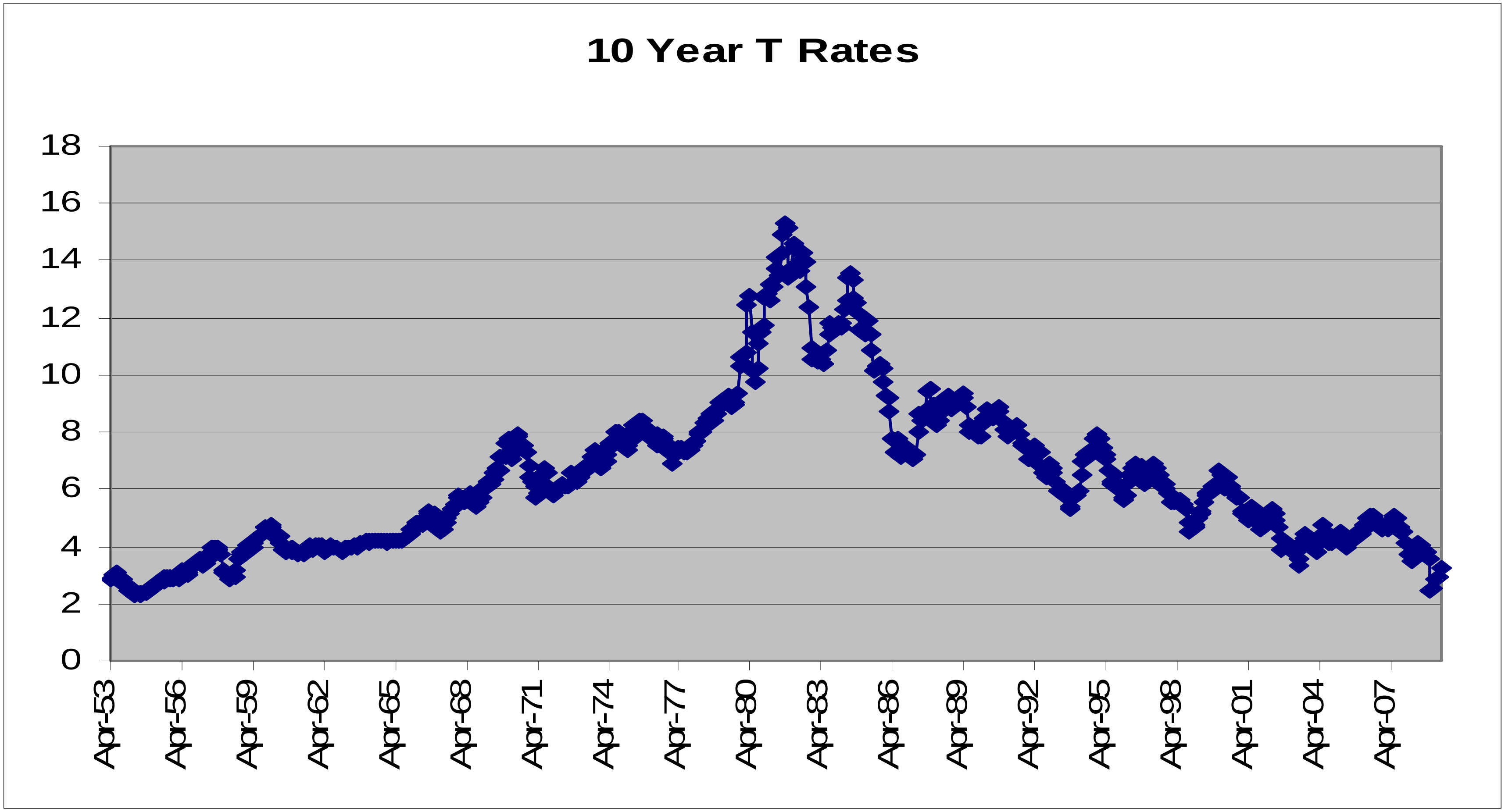
SAMPLE BOND PORTFOLIO

Cusip -Issuer	Coupon	Maturity	Purchase Price	Current Price	Book Yield	Rating	Dur	CDS Def Prob
713448BJ - Pepsico	7.900%	11/1/18	$104.89	$124.61	7.15%	AA	6.23	0.1512%
637432LR – Ntl Rural Util	10.625%	11/1/18	$102.90	$121.94	9.90%	A+	6.00	0.2879%
00206RAP – AT&T	6.700%	11/15/13	$100.70	$109.20	6.53%	A	4.03	0.1962%
31331FBB - Fedex	7.900%	1/15/20	$102.20	$104.02	7.48%	BBB+	5.19	0.2071%
565849AH – Marathon Oil	7.500%	2/15/19	$101.39	$99.20	7.30%	BBB+	6.78	0.4098%
485134BL – KC P&L	7.150%	4/1/19	$100.80	$102.20	7.04%	A-	7.13	0.3869%
091797AP – Black Decker	8.950%	4/15/14	$100.85	$102.05	8.74%	BBB	4.00	0.1789%
88732JAR – Time Warner	7.500%	4/1/14	$100.36	$106.05	7.41%	BBB	4.13	0.1849%

NY7 VERSUS 100 SCENARIOS

- Given a low yield curve scenario, what is the best approach for projecting the yield curve?
  - New York 7?
  - NY7 Plus Additional Deterministic Scenario(s)
  - 100 Scenarios?
    - Completely Random
    - Random with high and low limits
    - Mean Reversion assumption
  - What is normal, and what time period do you assume before arriving at a normal yield?

HISTORICAL TREASURY RATES



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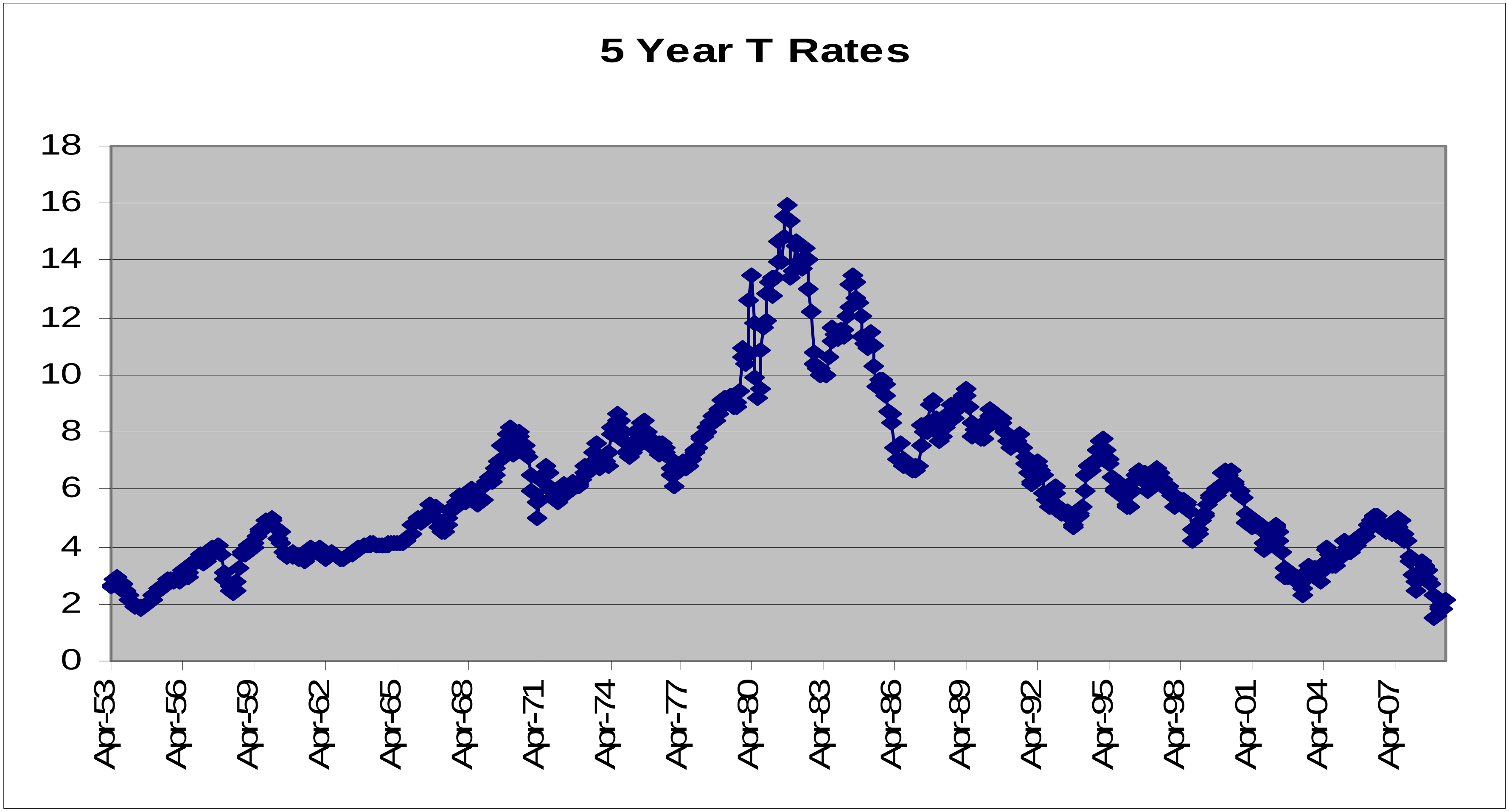

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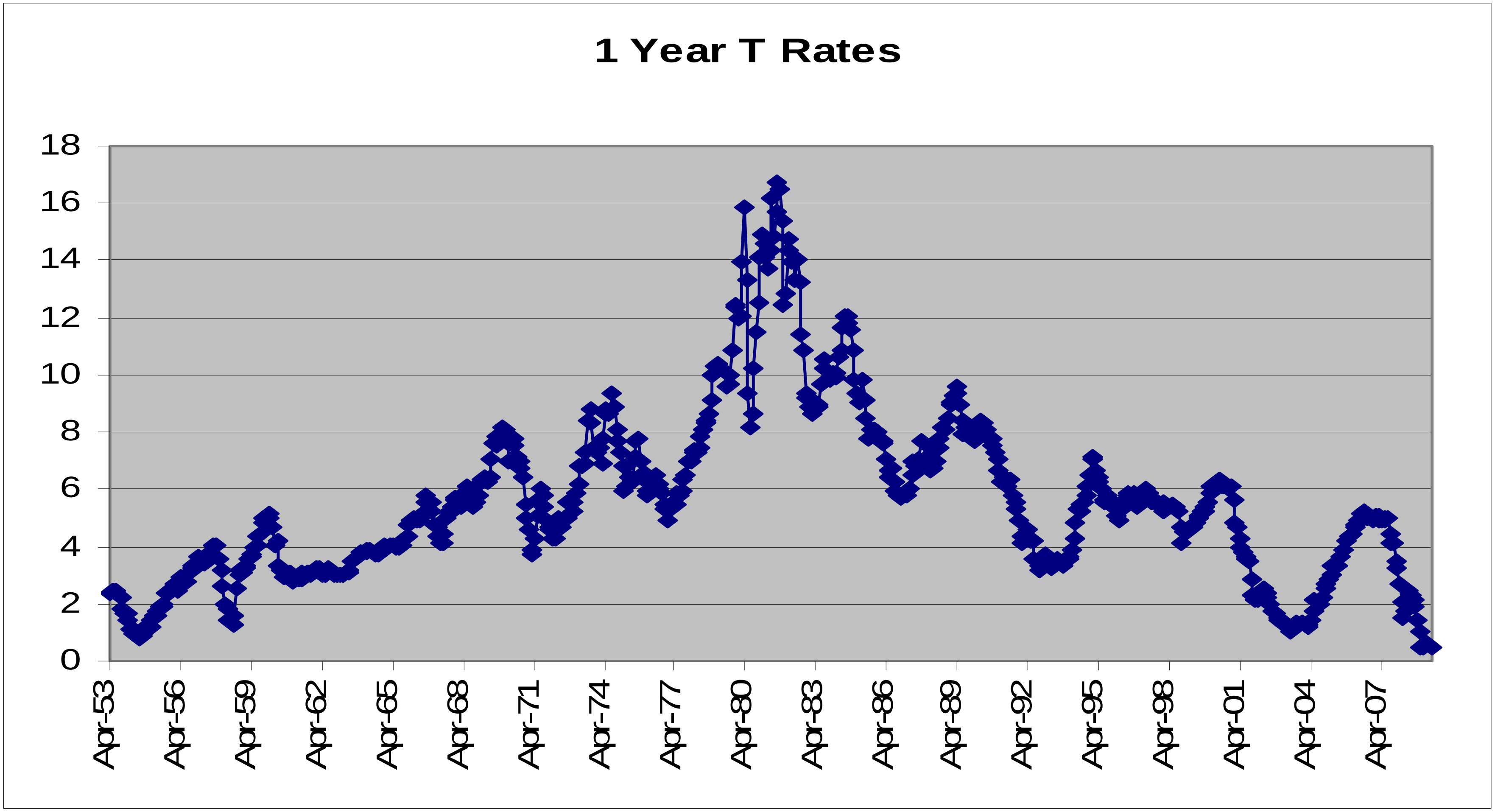

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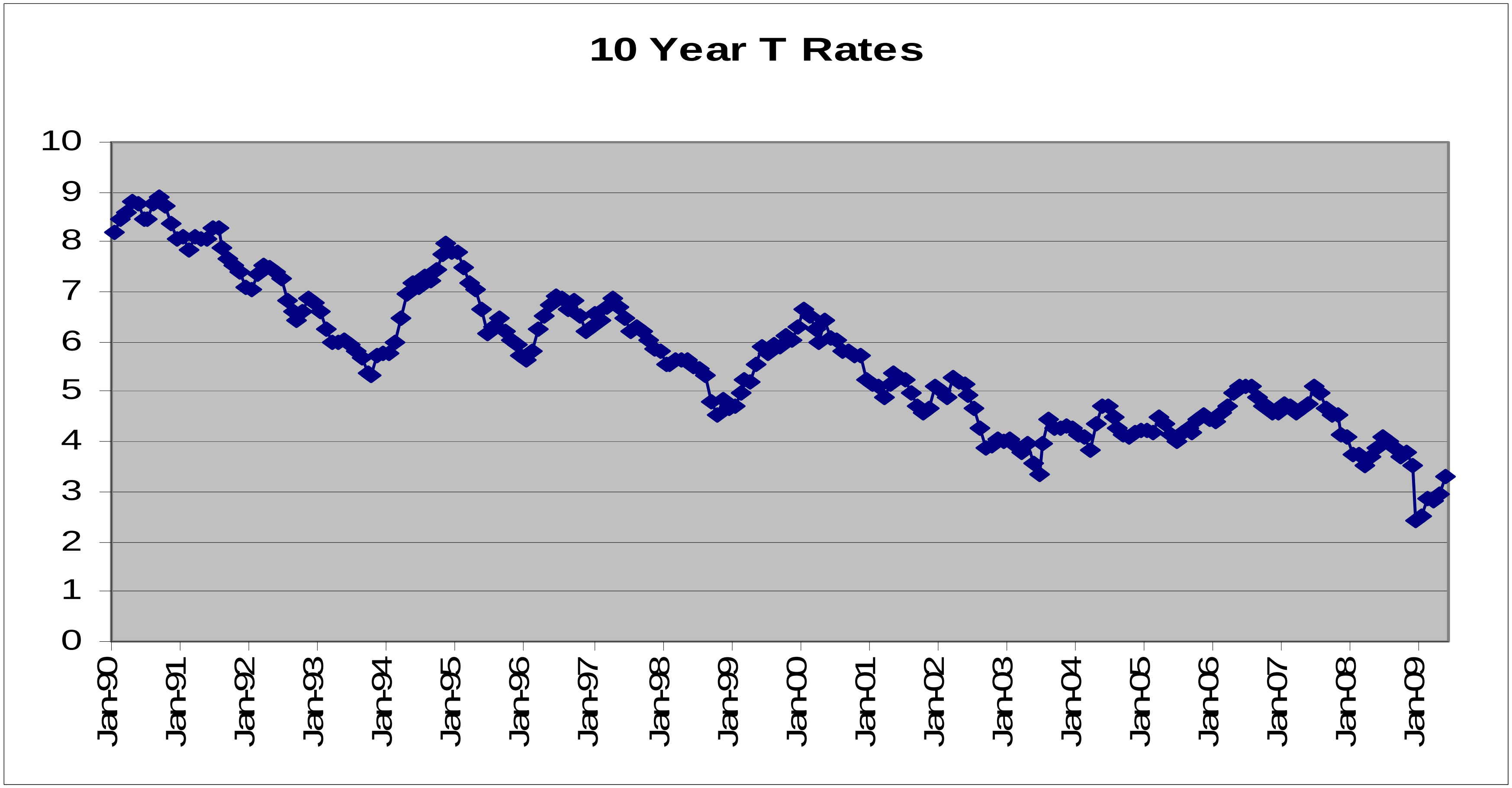

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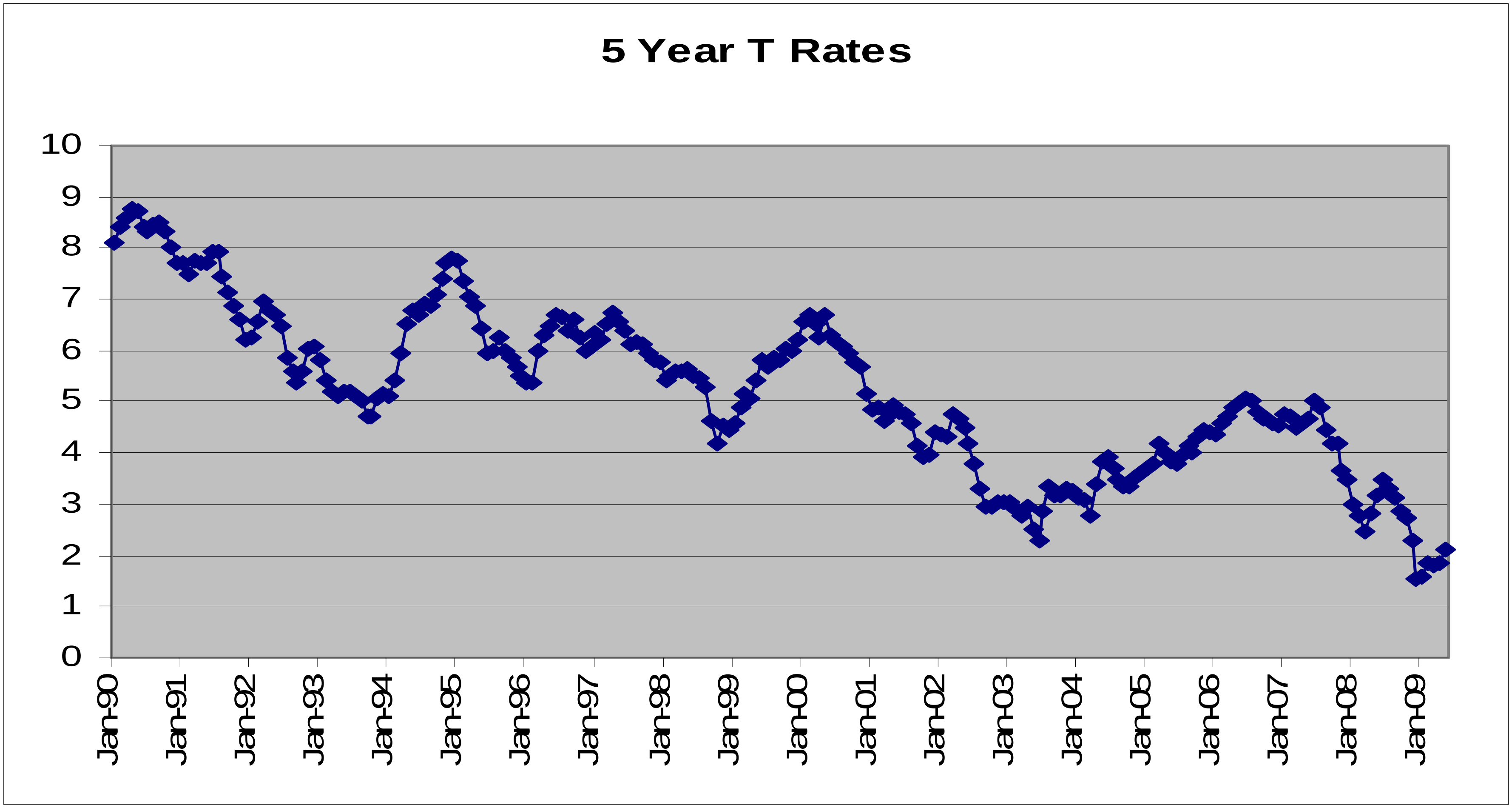

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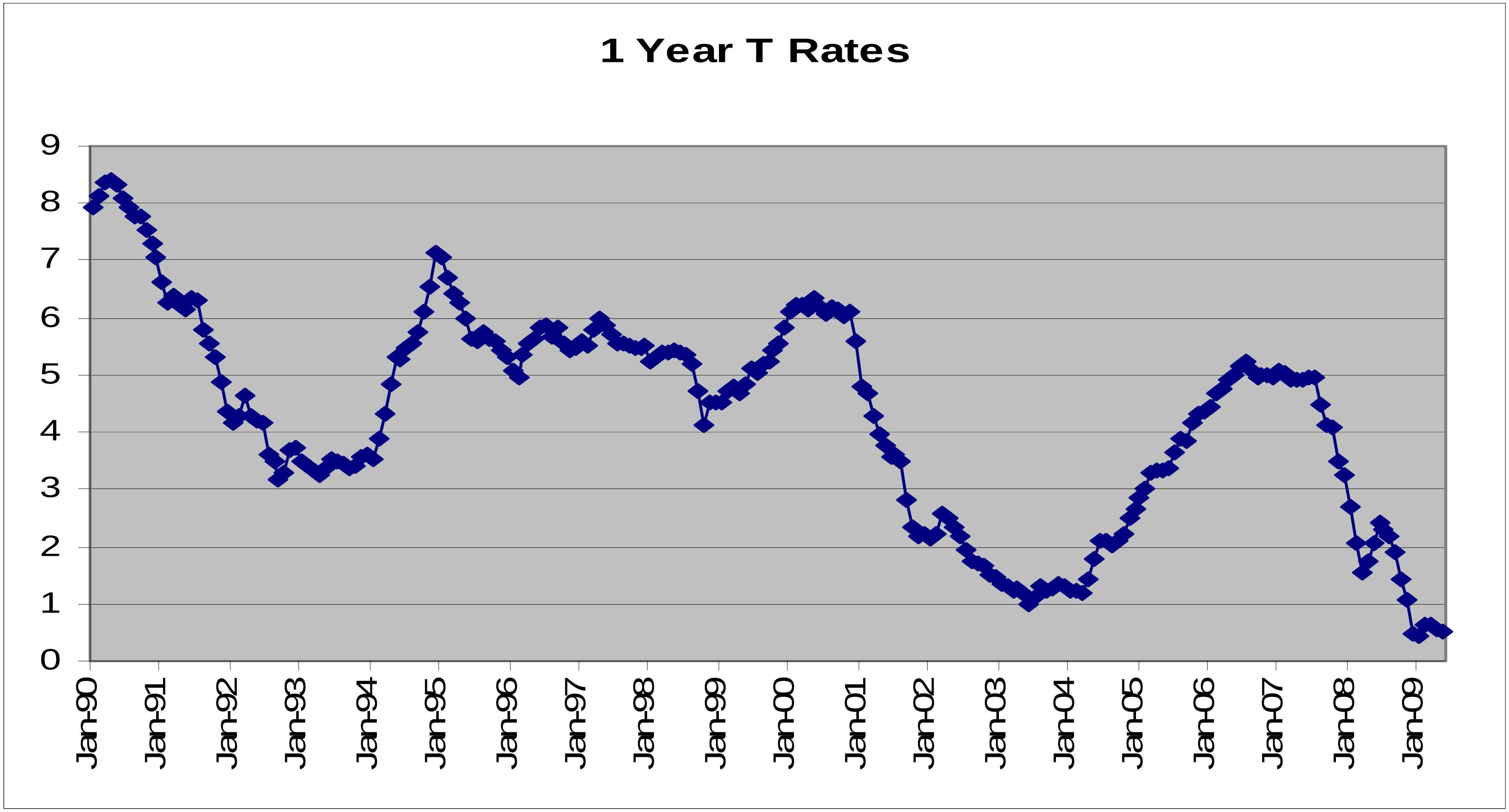

ASSET DEFAULTS

- How was cash flow testing impacted by anticipated defaults in current asset holdings?
  - No change in assumption?
  - Increased incidence of defaults in the future?
  - Short term impact or increased probability in all future years?

OTHER ASSUMPTIONS

- How were other assumptions impacted?
  - Premium suspension rates (Flex products)
  - Persistency (flight from variable plans?)
  - Policy loan utilization (cash needs)
  - Credited rates & Spreads
  - Dividend adjustments

OTHER THOUGHTS

- ?