PERINI
CAPITAL

A Visit From the Ghost of Christmas Past

WHAT THE WORLD WOULD HAVE LOOKED LIKE WITHOUT THE GSEs

Christmas Past

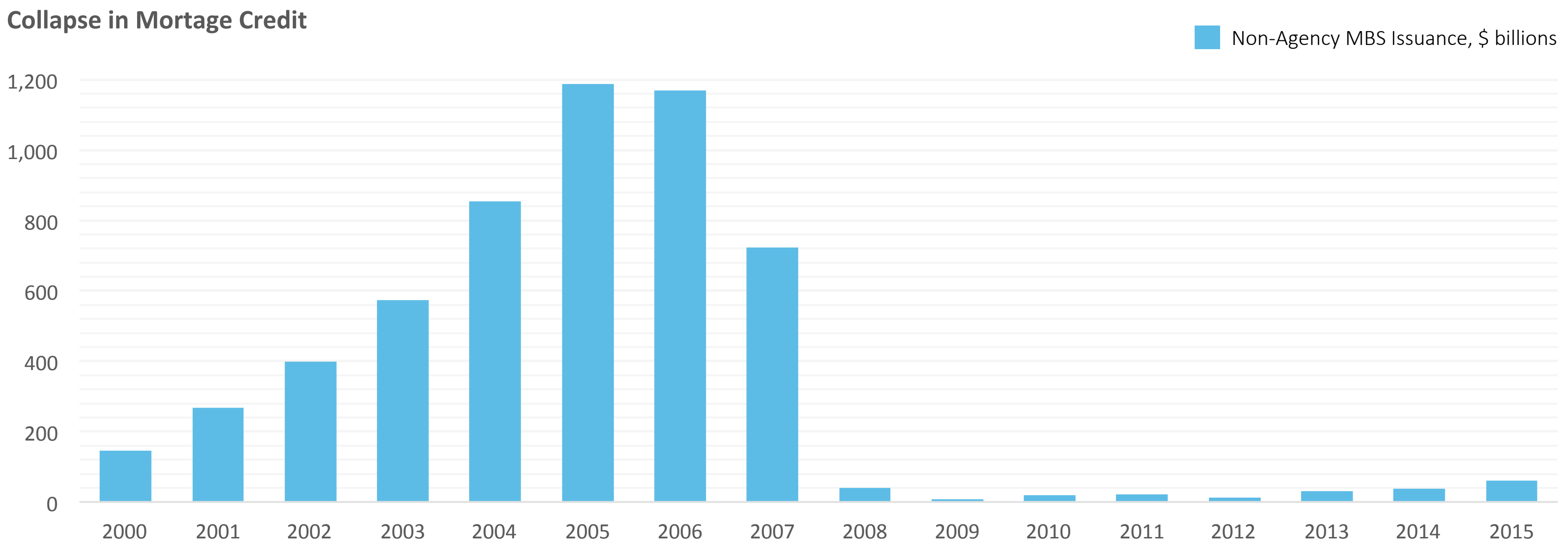
It could have been a lot worse.

Hank Paulson statement during Financial Crisis Inquire Committee (FCIC) interview –

"Fannie and Freddie were 'the only game in town' once the housing market dried up in the Summer of 2007. And by the Spring of 2008, 'the (GSEs) more than anyone, were the engine we needed to get through the problem."

Christmas Past

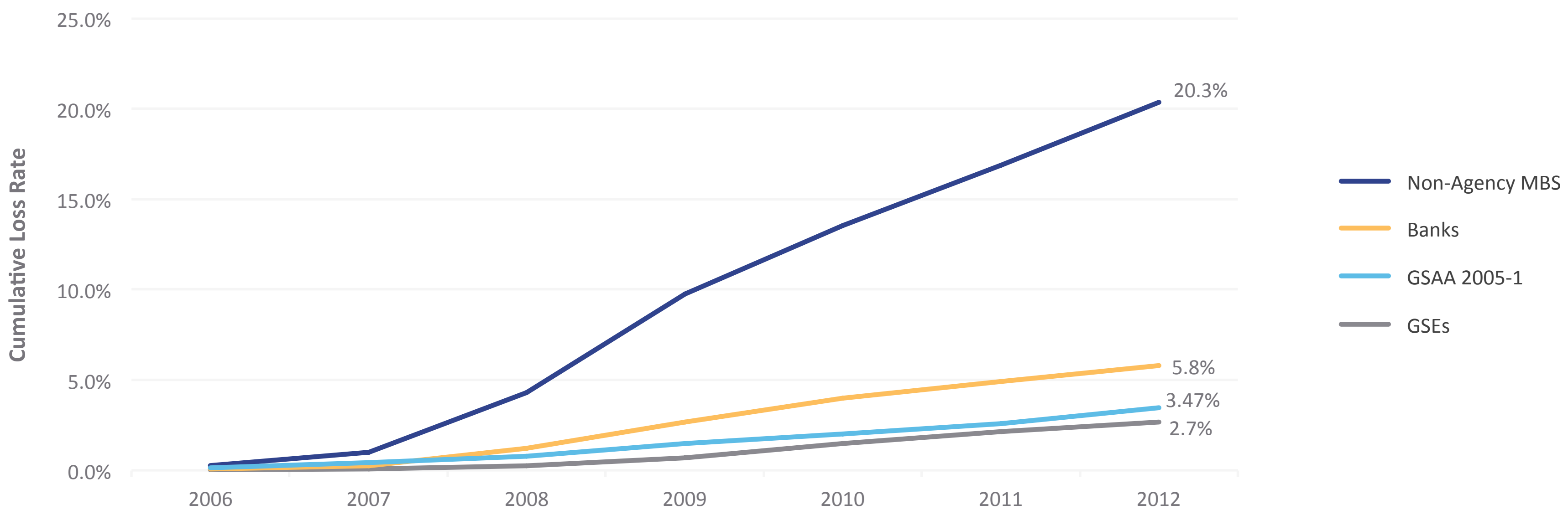
All little Timmy wanted was some private credit in his stocking and all he got was a lump of coal.



Christmas Past

And the marginal provider of mortgage credit was???

Cumulative Realized Losses Based on Debt Outstanding 2007



*Source: Moody's Analytics "Resurrection of RMBS"

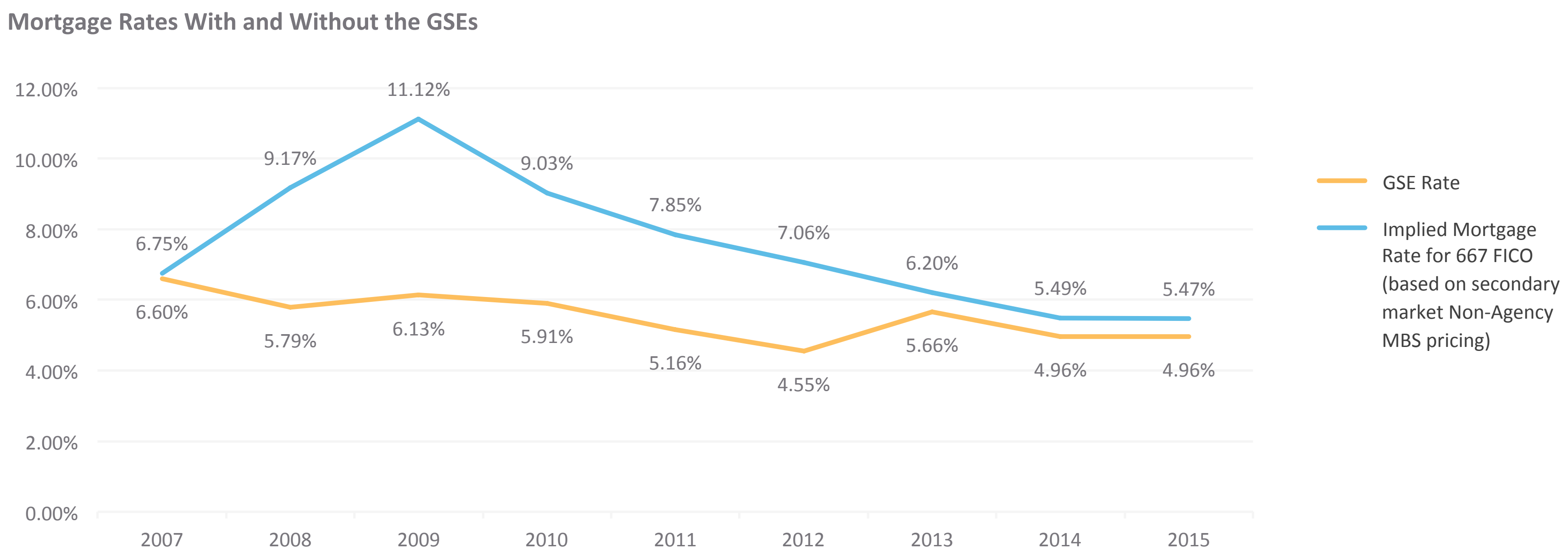
Christmas Past

What Non-Agency MBS pricing tells us about the cost of mortgage credit during the financial crisis: Mortgage credit risk anyone??? Anyone???

Capital Structure of GSAA 2005-1	IDC Price as of Dec 2007	IDC Price as of Dec 2008	IDC Price as of Dec 2009	IDC Price as of Dec 2010	IDC Price as of Dec 2011	IDC Price as of Dec 2012	IDC Price as of Dec 2013
AV1 – Senior Bond	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off
AV2 – Senior Bond	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off	Paid Off
AF2 – Senior Bond	99.31	90.78	94.59	100.84	Paid Off	Paid Off	Paid Off
AF3 – Senior Bond	98.97	65.28	78.59	86.88	99.47	100.00	Paid Off
AF4 – Senior Bond	97.22	95.91	75.41	86.91	94.28	96.38	104.31
AF5 – Senior Bond	99.50	78.59	77.31	94.31	99.03	100.13	101.72
M1 – Subordinate Bond	94.91	32.84	32.13	46.56	58.09	92.00	101.41
M2 – Subordinate Bond	87.22	15.47	23.72	40.25	46.38	61.28	85.66
B1 – Subordinate Bond	97.19	11.81	17.81	33.94	35.47	40.91	78.22
B2 – Subordinate Bond	81.06	10.56	9.31	25.38	28.66	24.00	31.50
B3 – Subordinate Bond	91.44	8.75	6.59	26.03	15.22	6.72	5.56
Market Value of Mortgages	**95.63**	**74.16**	**68.30**	**76.99**	**81.32**	**84.89**	**93.39**
Implied Cost of Mortgage Credit	**6.75%**	**9.17%**	**11.12%**	**9.03%**	**7.85%**	**7.06%**	**6.20%**

Christmas Past

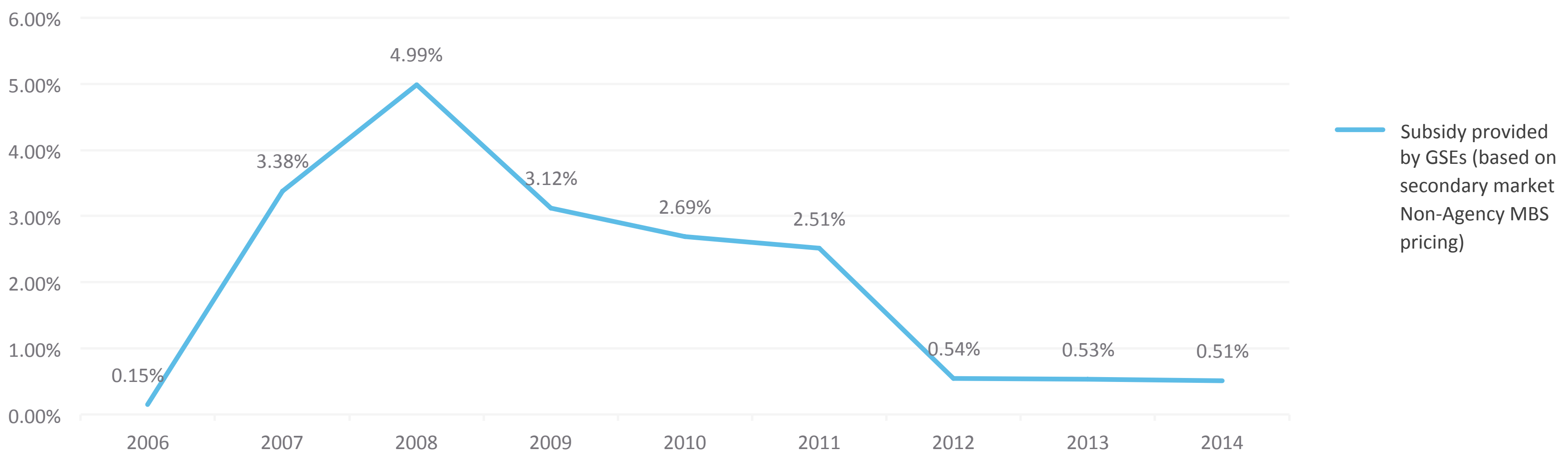
That ghost is pretty scary.



Christmas Past

Countercyclical: Moving in the opposite direction of the overall economic cycle; rising when the economy is weakening, and falling when the economy is strengthening.

Subsidy Provided by the GSEs:
Cost of Mortgage Credit Without GSEs Minus GSE Rate



Christmas Past:

The Emperor's New Clothes Part I: CDOs

Year	Total Issued ($, billions)	Realized and Expected Losses	Total Losses as % Issued
1999	304	60	20%
2000	6,991	1,847	26%
2001	14,891	3,132	21%
2002	16,456	3,604	22%
2003	25,431	7,481	29%
2004	58,513	25,822	44%
2005	110,052	61,627	56%
2006	231,711	167,402	72%
2007	176,759	148,836	84%
Total	641,108	419,811	65%

*Federal Reserve Bank of Philadelphia. Working Paper No. 11-30/R "Collateral Damage: Sizing and Assessing the Subprime CDO Crisis

Christmas Past

The Emperor's New Clothes Part I: CDOs

Rating	Stated Credit Enhancement	Actual Credit Enhancement
AAA	36.00%	4.50%
AAA	19.00%	4.29%
AA	12.85%	4.21%
A	10.24%	4.18%
BBB	4.00%	4.10%
Equity	0.00%	4.05%

- Collateral of a CDO: CMLTI 2006-NC2 M9 had 4.05% credit support 1.25% thickness.
- The only source of additional credit support available to the CDO investors was from tranching (slicing) the credit thickness of the M9 which was 1.25%.
- The AAA "Super Senior" investor was told by the Rating Agencies they had 36% credit support when in reality they had the credit support of the M9, 4.05%, plus 36% of 1.25% or 0.45% for a whopping grand total of 4.50%

Christmas Past

The Emperor's New Clothes Part I: CDOs

Distribution of write-downs by original Rating

Issue Year	Senior AAA	Junior AAA	AA	A	BBB	BB and B	Not Rated
1999-2000	4%	10%	88%	66%	93%	67%	82%
2001	6%	9%	64%	11%	74%	81%	91%
2002	13%	20%	64%	65%	78%	91%	78%
2003	16%	44%	61%	63%	64%	93%	93%
2004	26%	71%	84%	95%	84%	99%	97%
2005	44%	83%	94%	94%	93%	97%	99%
2006	67%	94%	99%	97%	96%	97%	99%
2007	76%	93%	98%	99%	98%	96%	99%

NOTE: This table summarizes the distribution of tranche write-downs by original rating/seniority and issue year. Sourced: Intex, Bloomberg, RBS (2011).
*Federal Reserve Bank of Philadelphia. Working Paper No. 11-30/R "Collateral Damage: Sizing and Assessing the Subprime CDO Crisis

Christmas Past

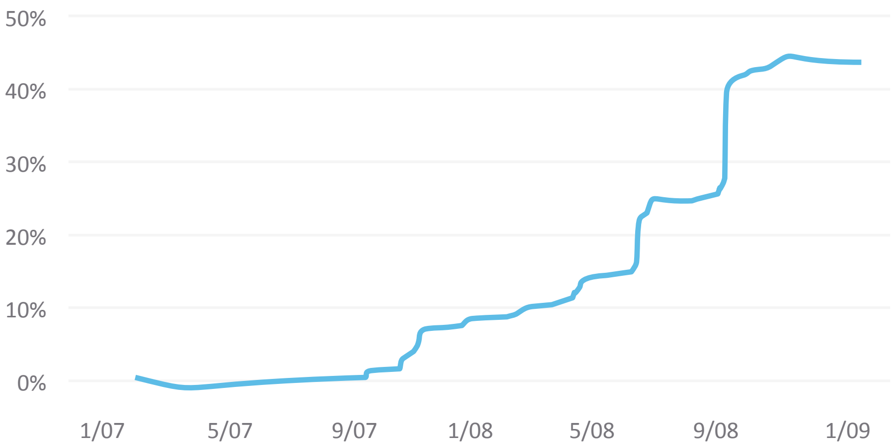
Worse than the "naughty list" is the "forced deleveraging list".

Leverage [1]

[1] Calculated as total assets divided by equity.

U.S. Broker Dealer Leverage: Shin, BIS "The bank/capital markets nexus goes global".

The Repo-Haircut Index



G Gorton and A Metrick, "Securitized banking and the run on the repo", Journal of Financial Economics, vol 104, no 3, June 2012. The repo-haircut index is the equally-weighted average haircut for all nine asset classes: BB+/A Corporates, AA-AAA Corporates, A-AAA ABS Auto, AA-AAA ABS-RMBS/CMBS, AA ABS-RMBS/CMBS, Unpriced ABS/MBS/All Sup-Prime, AA-AAA CLO, AA-AAA CDO, Unpriced CLO/CDO

Christmas Past

Government sponsored execution vs. government sponsored enterprises.

Company	Amount borrowed under authority of Section 13(3) of the Federal Reserve Act or from PSPA (GSE bailout)	Amount paid back	Amount still outstanding	Weighted average interest rate	Equity give-up or warrants required to access lending facility	Beginning of lending or “assistance”	Ending of lending or “assistance”
Goldman, Sach & Co.	$589 billion	$589 billion	$0	2.12%	None	March 2008	February 2010
Morgan Stanley & Co.	$1.912 trillion	$1.912 trillion	$0	0.75%	None	March 2008	February 2010
Citigroup Incorporated	$2.020 trillion	$2.020 trillion	$0	1.02%	None	March 2008	February 2010
Fannie Mae	$116 billion	$147 billion	$116 billion	10.00%	79%	September 2008	Ongoing
Freddie Mac	$72 billion	$98 billion	$72 billion	10.00%	79%	September 2008	Ongoing

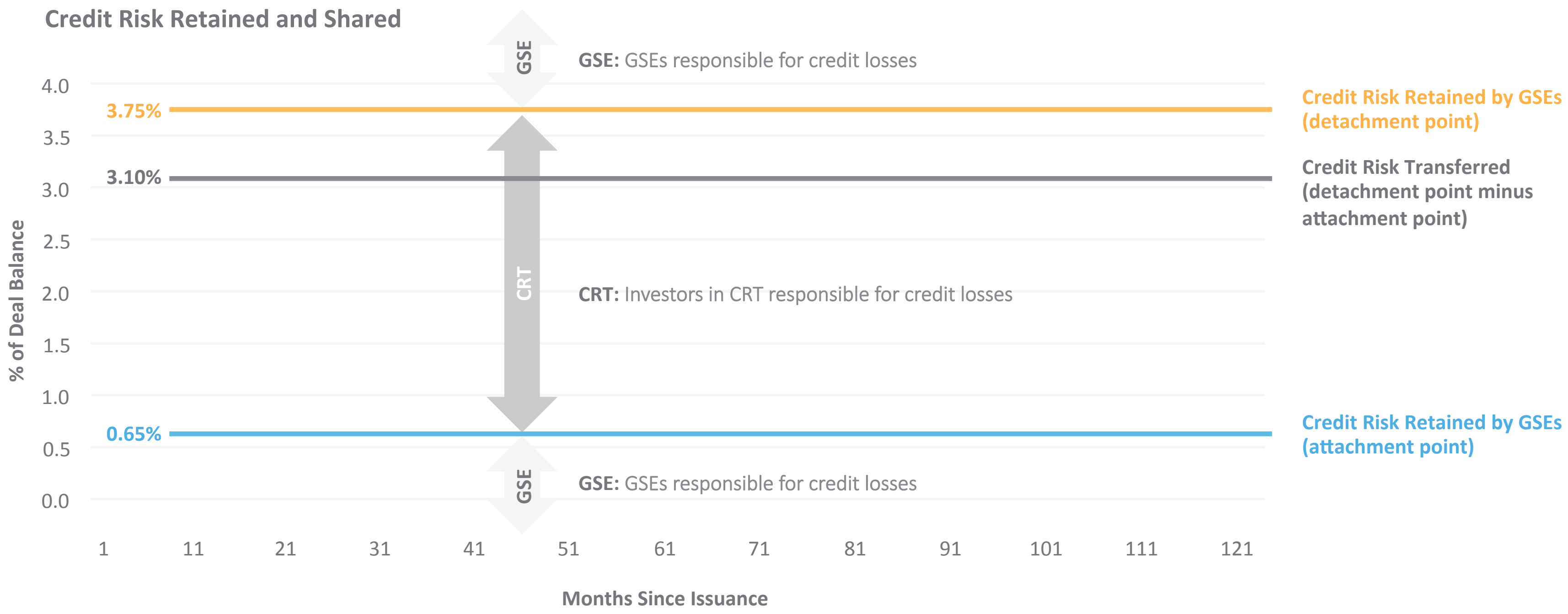
Christmas Present

Credit Risk Transfers: FHFA August 2015: “Overview of Fannie Mae and Freddie Mac Credit Risk Transfer Transactions”

Credit risk transferred is the percentage defined as the difference between the attach and detach points. For example, if the attach point is one percent (100 basis points), the Enterprise is responsible for credit losses up to one percent of the UPB of the loan pool. If the detach point is three percent, the Enterprise is responsible for credit losses above three percent of the UPB of the loan pool.

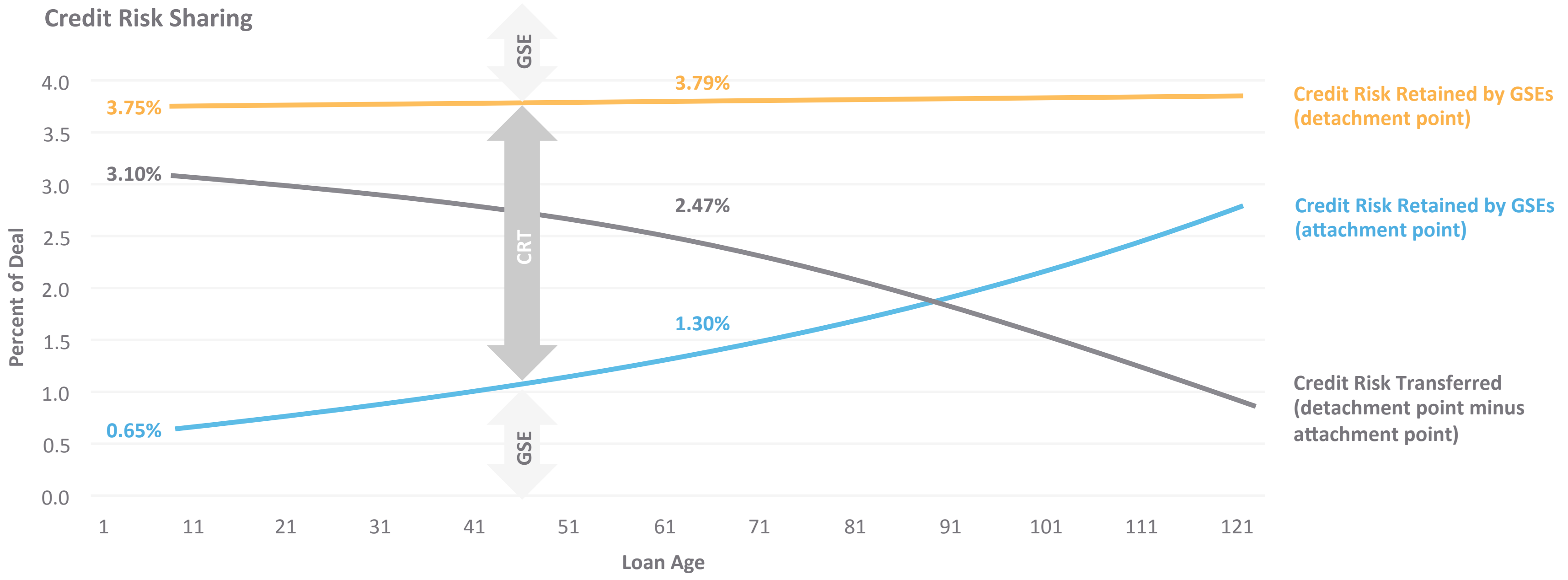
Christmas Present

CRT 2014-CO3 2M2: Attach 65bps / Detach 375bps: Credit Risk Transferred: 375-65=3.10bps



Christmas Present

The Emperor's New Clothes Part 2: CRT Someone is not sharing!
INTEX's projected attachment and detachment points.



New Worth Sweep

One of two things:

1) **Lawless Act:** Largest exportation of private property in US History
2) **Massive Incompetence:** Death spiral argument in court

CONCLUSION:
Anyone associated with the Net Worth Sweep at Treasury, FHFA or within the Obama Administration should not be involved in the housing reform debate because they have exhibited one of two things: A) complete disregard for the rule of law or B) massive incompetence.

Happy Holidays

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