

Discussion of 'Where's the smoking gun?'

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The importance of lending standards....

Lots of blame for the crisis placed on 'originate-to-distribute' models of banking

Reduction in incentives to contain risk when originator is ultimately divorced from the consequences of making a bad loan

In line with Gorton: '*The Subprime Panic*' where originators maintain significant interests in a loan even if it has been sold

'Originate-to-distribute' was around for a long time before 'subprime'

Micro-level data on characteristics of *granted* loans

Some clarity - 'Lending-standards' are multi-faceted - decrease in one area with an increase in an other does not imply an overall decline in standards

Mortgage characteristics are an *outcome* of lending standards: address the endogeneity problem of using LTV and interest rates - riskier borrowers prefer higher LTV and interest rates.....

Findings

Evidence that underwriters compensated for declines in some areas of lending standards (documentation, LTV) with increases in others e.g. FICO scores (to return to later) - limitation in that cannot measure if it is enough - but at least in the 'prudent' direction

On *average* loans underwritten in 2006 would have outperformed those originated in 2001 or 2002 - but given the nature of securitisation - i.e. breaking up into tranches it would be interesting to include other parts of the distribution - e.g did the toxic waste get more toxic?

Borrower's choice.....

Ex-ante indistinguishable borrowers choose from a menu of contracts: product type, LTV and interest rate on the loan (third choice is effectively redundant).....

.....but borrowers have an *additional* choice: NOT to take a mortgage on the terms being offered

FICO: < 620											FICO: 620-659												
Calendar Year Ending												Calendar Year Ending											
Vintage	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	June-2008	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	June-2008	
1998	3.7%	10.6%	16.5%	22.0%	26.2%	30.3%	34.8%	39.4%	44.7%	49.3%	51.4%	1.5%	5.3%	9.2%	13.0%	16.2%	19.3%	23.0%	26.5%	29.7%	32.9%	35.6%	
1999		4.0%	11.4%	18.6%	24.6%	30.1%	35.4%	40.9%	45.3%	50.0%	52.1%		1.4%	5.4%	10.0%	14.3%	18.5%	22.6%	27.2%	30.4%	34.0%	36.1%	
2000			5.8%	15.3%	23.2%	31.2%	37.9%	44.1%	49.5%	54.8%	57.2%			1.8%	6.7%	12.5%	18.6%	24.2%	29.6%	34.1%	38.2%	41.3%	
2001				4.9%	14.3%	24.3%	33.5%	41.8%	48.2%	53.8%	56.4%				2.0%	7.0%	14.3%	21.7%	28.5%	33.9%	38.5%	41.9%	
2002					4.2%	14.2%	25.1%	36.1%	43.9%	50.7%	53.3%					1.9%	7.8%	15.3%	23.6%	30.3%	35.8%	38.4%	
2003						3.7%	12.6%	23.7%	33.3%	41.0%	43.6%						1.7%	6.7%	14.0%	20.7%	26.9%	29.0%	
2004							4.9%	15.9%	28.7%	42.0%	46.1%							2.3%	8.5%	18.5%	30.4%	34.2%	
2005								7.0%	22.4%	44.2%	51.8%								4.0%	15.8%	38.9%	46.5%	
2006									12.0%	38.9%	49.8%									9.7%	35.0%	48.0%	
2007										15.6%	29.7%										11.8%	25.4%	

FICO: 660-719											FICO: >= 720												
Calendar Year Ending												Calendar Year Ending											
Vintage	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	June-2008	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	June-2008	
1998	0.9%	3.5%	6.0%	8.4%	10.8%	13.0%	15.3%	17.6%	20.0%	22.5%	24.2%	0.5%	1.6%	2.6%	3.4%	4.2%	5.3%	6.4%	7.9%	9.4%	11.9%	-	
1999		0.8%	2.9%	5.9%	9.1%	12.4%	15.6%	19.0%	21.4%	24.7%	26.0%		0.7%	1.7%	3.1%	4.3%	5.8%	7.9%	10.1%	12.0%	13.1%	-	
2000			1.2%	4.5%	8.2%	12.1%	16.4%	21.2%	24.7%	28.5%	30.8%			0.9%	3.0%	5.5%	7.8%	10.2%	12.7%	15.1%	17.8%	18.7%	
2001				1.2%	4.3%	9.0%	13.6%	18.5%	22.5%	26.1%	27.8%				1.1%	2.6%	4.9%	7.2%	9.0%	10.4%	12.1%	12.3%	
2002					1.2%	4.9%	9.6%	14.8%	18.7%	22.8%	23.9%					1.0%	2.9%	5.1%	7.1%	9.1%	11.4%	11.6%	
2003						1.1%	4.0%	8.1%	11.8%	15.6%	17.0%						0.8%	2.2%	4.2%	5.8%	7.3%	7.9%	
2004							1.4%	5.4%	12.3%	21.1%	23.5%							1.2%	3.5%	7.1%	11.1%	12.0%	
2005								2.6%	10.8%	32.5%	39.9%								2.2%	7.6%	23.1%	26.9%	
2006									7.4%	29.8%	44.4%									6.7%	23.1%	33.9%	
2007										10.4%	22.2%										9.2%	17.3%	

Figure: Table 12

FICO?

FICO: 620-659											
Calendar Year Ending											
Vintage	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	June-2008
1998	1.5%	5.3%	9.2%	13.0%	16.2%	19.3%	23.0%	26.5%	29.7%	32.9%	35.6%
1999		1.4%	5.4%	10.0%	14.3%	18.5%	22.6%	27.2%	30.4%	34.0%	36.1%
2000			1.8%	6.7%	12.5%	18.6%	24.2%	29.6%	34.1%	38.2%	41.3%
2001				2.0%	7.0%	14.3%	21.7%	28.5%	33.9%	38.5%	41.9%
2002					1.9%	7.8%	15.3%	23.6%	30.3%	35.8%	38.4%
2003						1.7%	6.7%	14.0%	20.7%	26.9%	29.0%
2004							2.3%	8.5%	18.5%	30.4%	34.2%
2005								4.0%	15.8%	38.9%	46.5%
2006									9.7%	35.0%	48.0%
2007										11.8%	25.4%

Figure: Table 12, focusing on FICO 620-659

Each diagonal should be roughly constant but look what happens in 2004 onwards.....

Can the market really have expanded so rapidly without some decline in 'standards?'

Vintage	FRM	ARM2	ARM3	Other	Total Number
1998	51.34	26.55	4.52	17.59	252945
1999	38.87	29.35	19.21	12.57	369373
2000	32.58	43.29	14.78	9.35	399342
2001	31.69	48.69	12.44	7.17	498462
2002	28.36	54.85	12.63	4.16	755233
2003	33.57	52.60	11.38	2.45	1265536
2004	23.81	59.74	14.65	1.80	1921557
2005	18.69	65.43	13.24	2.64	2258155
2006	19.95	62.54	10.9	6.61	1766939
2007	27.55	50.64	10.32	11.49	315921
Total Number	2519608	5561509	1248407	473939	9803463

Figure: Evolution of the subprime market