

Works of Friction?

Originator-Sponsor Affiliation and Losses on Mortgage Backed Securities

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The Originate to Distribute “Puzzle”

“ Old-fashioned mortgage lending is like a marriage: both the bank and the borrower have an incentive to make things work. Securitization, at least in this market, was more orgiastic, involving lots of participates in fleeting relationships.” The Economist, May 15, 2008.

The Originate to Distribute “Puzzle”

The “Originate to Distribute” model and lax lending:

- Originators incentives to screen and monitor are lower because they have too little “skin in the game”.
- Pool sponsors and ultimately investors systematically misunderstood or ignored how securitization affects incentives and the risk of the underlying mortgages....leading to little or no lemons discount.

Issues Addressed

- Does the performance of RMBSs vary with the severity of agency problems or the degree of vertical integration in the securitization process?
- Did deal pricing (yields) and structure (the amount of subordination) reflect differences in the severity of agency problems?

Proposals for reform focus on...

1. Skin in the game issue
 - Require originators to retain a material economic interest in the securitized assets (5% or 10%).
 - Prohibit an originator from directly or indirectly hedging or otherwise transferring the credit risk such originator is required to retain under the regulation
2. Better and standardized disclosure of securitized products

The Basic Idea

- There are a number of key players in the securitization process
 - Originator
 - Sponsor
 - Underwriter
 - Servicer
 - Trustee

Who Retains Loss Exposure?

- Originator: Loans are sold into the pool with out recourse thus the originator's loss exposure is limited to
 - Warehousing risk
 - Reps and Warranties
 - Reputational issues
- Sponsors: retain residual tranches and claims on the XS/OC . Thus sponsors have first loss exposure
- Servicer: The value of servicing rights depend on default rates

We focus on originators' screening incentives

- An originator's incentive to screen ex ante is related to the extent to which he will be exposed to the ex post performance of the loan.
- Some originators have greater exposure than others:
 - **Originators affiliated with the sponsor**
 - the sponsor often holds the SPV equity (residual claimant of the mortgage pool)
 - reputational concerns
 - sole originators and typically also sole servicers (see below)
 - **Originators that continue to service the loans after securitization**
 - a considerable portion of income from mortgage lending comes from servicing fees
 - present value of servicing rights increases with the life of the loan
 - **Sole originators**
 - easier to identify as a poor lender by outside observers
 - lack the incentive to free-ride on information generation of other originators

The Degree of Vertical Integration Varies Among RMBSs

- MBSs vary considerably in terms of the number of originators and whether the originator, sponsor and servicer are affiliated
 - CWALT 2007-24: Subsidiaries of Countrywide Financial served as originator, servicer and sponsor of the MBS. We call this an “Affiliated” deal. (51% of sample)
 - CWALT 2006-OC8: Countrywide was the sponsor but one of several originators and servicers of mortgages in the pool. We call this a “Mix” deal. (24% of sample)
 - Bear Sterns Alt-A Trust 2006-4. Bear Sterns is the sponsor with Countrywide and at least 5 other unaffiliated entities originating and servicing the mortgages. We call this an “Unaffiliated” deal (20% of sample)

Implications for pool performance

- Because better screening is likely to be associated with better performance, pools that include loans by originators that have greater incentives to screen are likely to perform better.

Deal type	Expected (relative) performance
Originators are affiliated with the sponsor	+
Originators retain servicing rights	+
Originator concentration	+

Implications for MBS design and pricing

- If investors recognize that some originators screen more carefully than others, investors will require higher yields and greater credit protection when investing in pools originated by lenders with weaker incentives to screen.

Deal type	Expected yield & credit enhancement (relative)
Originators are affiliated with the sponsor	-
Originators retain servicing rights	-
Originator concentration	-

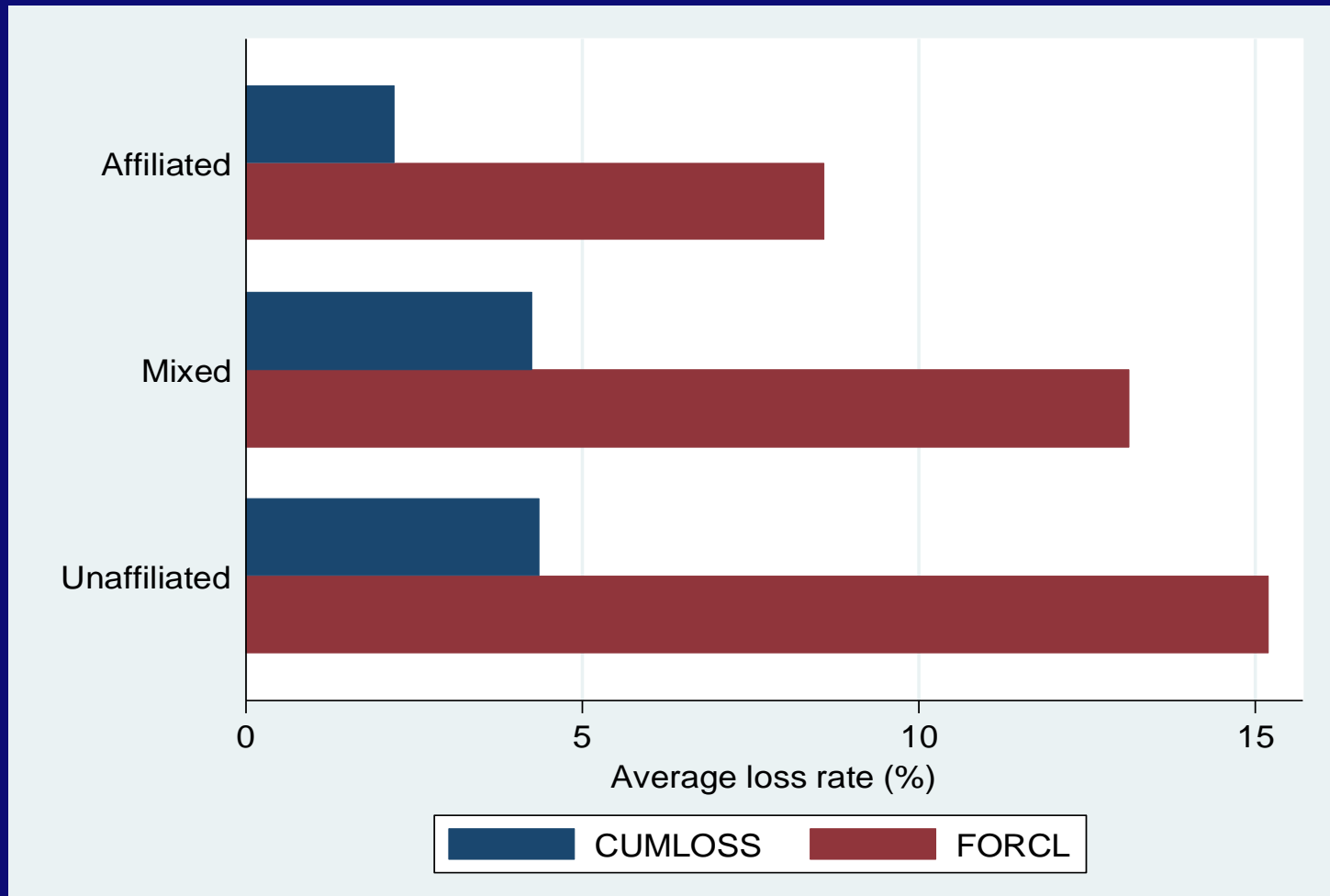
Sample and Data

- Our analysis is a sample of 526 MBS issued against pools of residential Alt-A pools between 2003- 2003.
- Data on deal performance, structure, pricing comes from ABSnet
- We measure ex post performance based on cumulative loss rates and foreclosure rates as of August 2009
- Data on originator, servicer and sponsor identity is hand collected from the offering prospectus

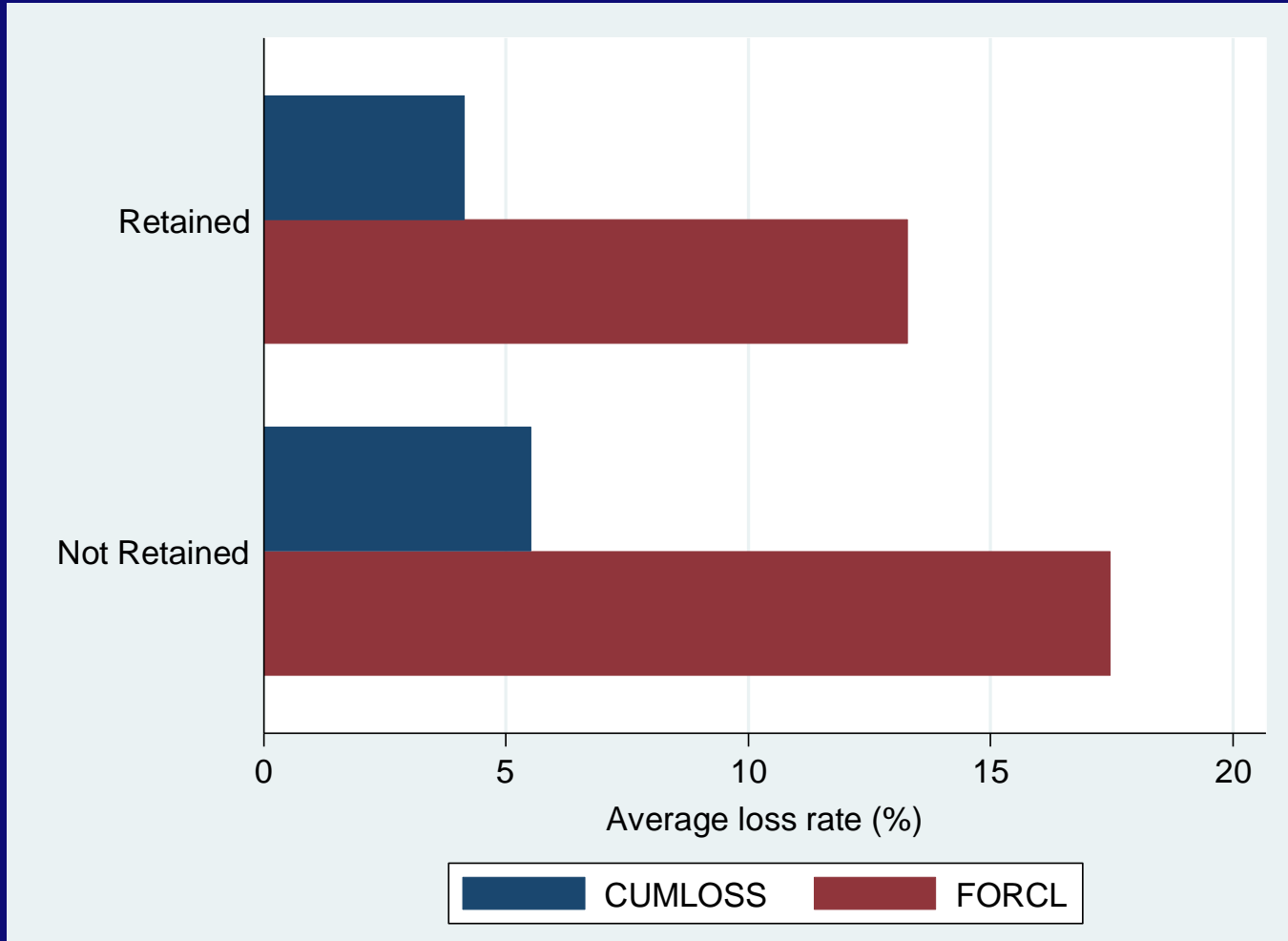
Sample and Data

- Data on mortgage and borrowing characteristics is from ABSnet and Bloomberg
 - Average FICO scores
 - Average loan to Value
 - Loan purpose
 - ARM
 - Mortgage Coupon Rate
 - Negative Amortization mortgages
 - Proportion purchase versus refinance
 - Geographic distribution
 - Proportion Limited doc
 - Proportion owner occupied

Affiliation and loss rates as of August 2009

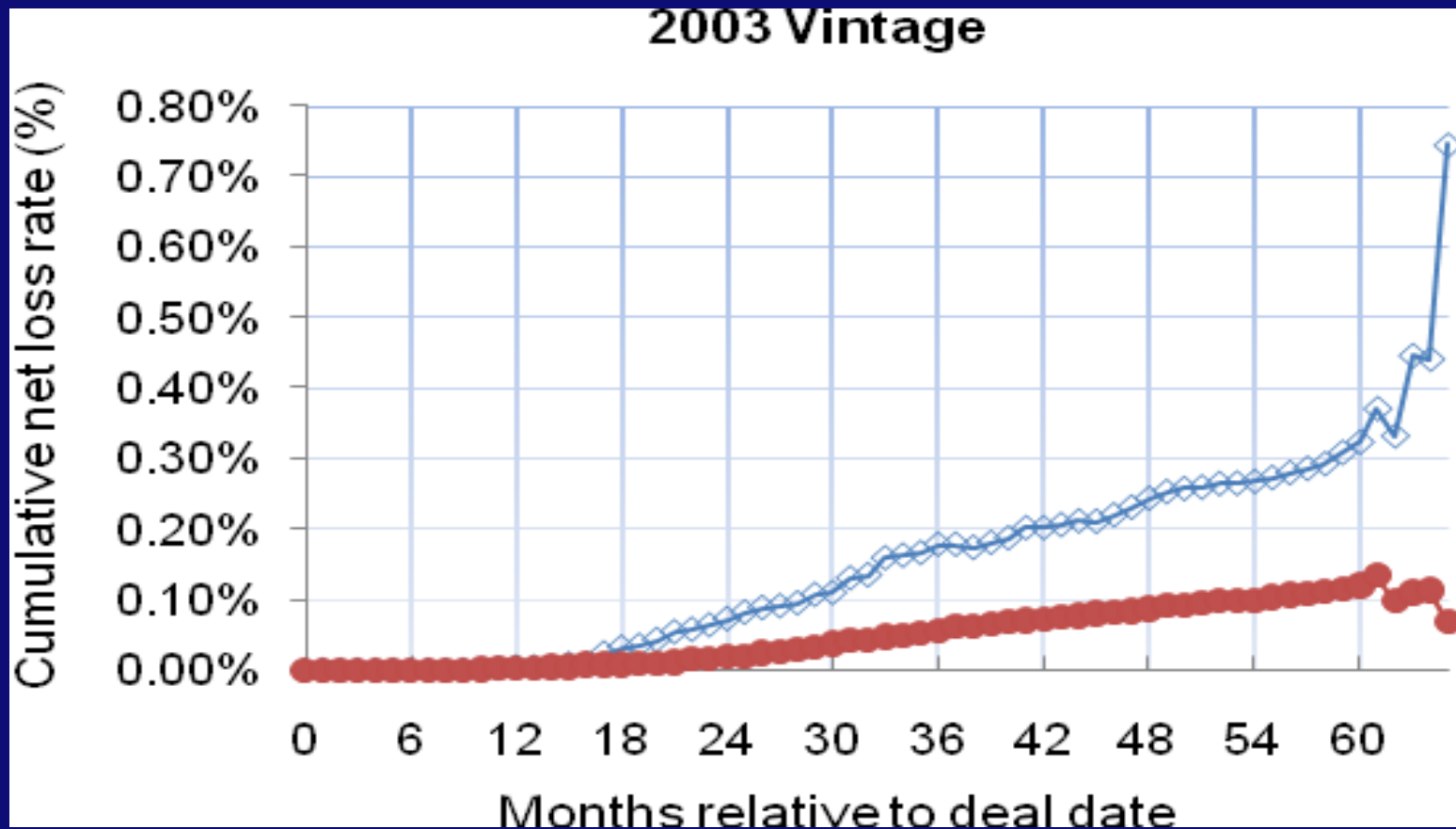


Servicing rights and loss rates as of August 2009

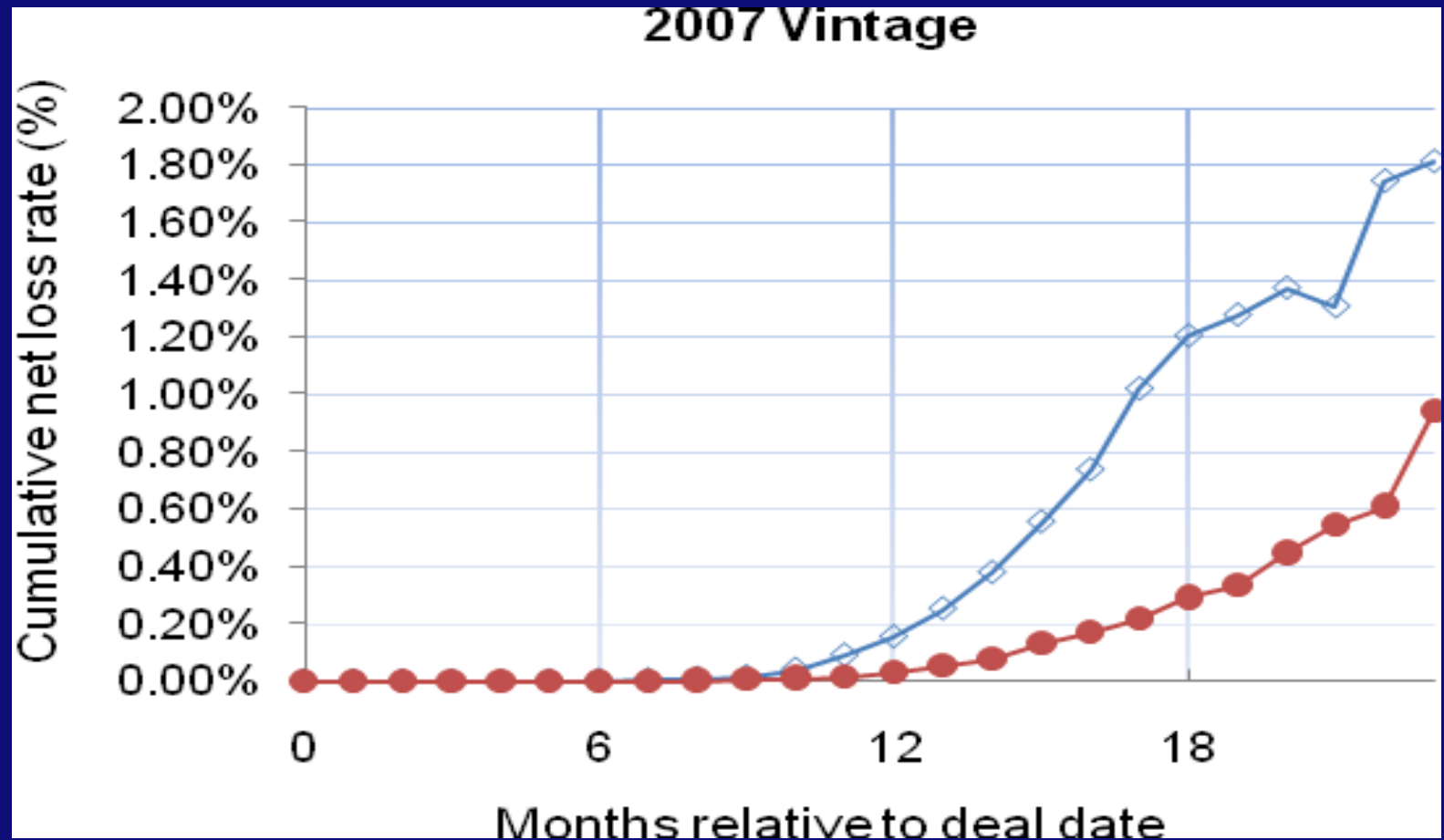


* Affiliated deals are excluded from this analysis because originators retain servicing rights in all affiliated deals.

Performance by Vintage



Performance by Vintage



Summary of Findings

- Unaffiliated deals consist of significantly riskier loans than affiliated deals
- Controlling for risk characteristics associated with the pool (FICO score, changes in house prices, loan to value etc) losses are higher for unaffiliated deals
- Affiliation matters the most in terms of performance the greater the proportion of low doc loans (Where soft information is most important).
- Controlling for mortgage and borrower characteristics deals with greater distance from loss have higher average yields and require greater subordination for AAA securities

Characteristics of affiliated and unaffiliated deals

Variables	All deals		Affiliated deals				Unaffiliated deals	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
WAFICO	710.94	710.20	713.93	***	713.08	***	705.05	706.00
WALTV	73.60	73.55	71.55	***	71.64	***	77.89	75.58
WAC (%)	6.55	6.63	6.47	**	6.56	***	6.70	6.85
ARM (%)	40.60	0.00	22.15	***	0.00	***	56.93	100.00
D_NEGAMO	0.13	-	0.07	***	-		0.32	-
LIMDOC (%)	74.50	76.20	72.88		72.81	***	76.39	84.72
PURCHASE (%)	46.02	45.68	42.72	**	41.93	*	47.80	48.55
FAMILY (%)	63.26	62.71	64.31		63.06		63.17	62.22

The determinants of cumulative net loss rates

Explanatory variables

	(1)	(2)
PCTAFF	-0.652*** (-2.90)	—
D_UNAFF	—	0.759*** (3.15)
D_MIXED	—	0.329 (1.42)
WAFICO	-0.018** (-2.18)	-0.018** (-2.11)
WALTV (%)	0.029 (0.87)	0.028 (0.83)
WAC (%)	3.298*** (10.80)	3.293*** (10.81)
ARM (%)	0.029*** (9.85)	0.029*** (9.41)
D_NEGAMO	20.662*** (9.40)	20.632*** (9.42)
WAC (%) x D_NEGAMO	-3.217*** (-9.75)	-3.211*** (-9.77)
LIMDOC (%)	0.005 (0.53)	0.004 (0.46)
PURCHASE (%)	0.016 (1.23)	0.017 (1.30)
FAMILY (%)	0.008 (0.54)	0.010 (0.67)
HOUSE PRICE CHANGE (%)	-0.060** (-2.49)	-0.062** (-2.58)
Number of observations	474	474
Adjusted R^2	71.0%	71.0%

Deal structure and originator-sponsor affiliation

	YIELD	PCTAAA	D_OC	OCTARGET
Explanatory variables	(1)	(2)	(3)	(4)
PCTAFF	-0.100** (-2.14)	0.651*** (3.46)	-0.926*** (-4.36)	-0.119** (-2.38)
WAFICO	-0.005*** (-2.91)	0.042*** (6.09)	-0.014 (-1.44)	0.004** (2.37)
WALTV (%)	-0.016** (-2.27)	-0.129*** (-4.55)	0.114** (2.19)	0.036*** (4.83)
WAC (%)	0.915*** (14.31)	-0.659** (-2.53)	0.674** (2.00)	0.422*** (6.06)
ARM (%)	-0.000 (-0.38)	-0.014*** (-6.18)	0.007*** (2.58)	0.002*** (2.91)
D_NEGAMO	3.431*** (7.59)	-4.399** (-2.38)	8.454*** (3.66)	3.211*** (6.51)
WAC (%) x D_NEGAMO	-0.458*** (-6.80)	0.347 (1.25)	-1.110*** (-3.14)	-0.455*** (-6.14)
LIMDOC (%)	-0.001 (-0.56)	-0.002 (-0.31)	-0.004 (-0.37)	-0.003 (-1.33)
PURCHASE (%)	0.004 (1.64)	-0.011 (-0.98)	0.032** (2.18)	-0.002 (-0.82)
FAMILY (%)	0.005 (1.43)	-0.040*** (-3.11)	0.007 (0.47)	0.001 (0.38)
HPRUNUP (%)	0.003 (0.37)	-0.099*** (-3.16)	-0.081** (-2.08)	-0.007 (-0.84)
Number of observations	382	477	477	477
Adjusted R ²	76.0%	63.9%	47.5%	43.4%

Conclusions

- Having skin in the game matters in terms of performance
- Investors recognized this ex ante and required higher yields and greater subordination for deals with greater frictions.