

Summary

- We investigate the impact of mutual funds herding on corporate debt issuance.
- We find firms are more likely to issue new bonds at the time of high levels of herding in their existing bonds. The firm's tendency to opt for bonds over loans increases with the level of herding.
- The impact of herding is concentrated on buy-herding rather than sell-herding, among firms with greater information asymmetry, and for times when the bond market is opaque.
- Herded firms tend to benefit to issue with lower yields, and these bonds exhibit enhanced price informativeness.
- Our results are robust to a matching and an instrumental variable approach to address potential endogeneity issues.
- Our findings are consistent with the positive view of herding that enhancing information environment.

Research Question

- Does institutional herding affect the firm's debt issuance decisions?
- If so, whether buy or sell herding affect?
- What is the potential channel?

Motivation

- Motivation and price impact of herding
 - fundamental or imitation?
 - price discovery or excess price volatility?
- Information efficiency affect firms debt decision
- Lack of evidence on how herding affects debt decisions

Hypothesis

- (H.1a) Firms are more (less) likely to issue new bonds at the time of high (low) MFs herding.
- (H.1b) Upon issuance, firms tend to opt for bonds (bank loans) over bank loans (bonds).
- (H2) The impact of herding is concentrated on buy-herding rather than sell-herding.
- (H3) The impact is more pronounced for firms with greater information asymmetry and for times when the bond market is opaque.

Data

- Thomson Reuters Lipper eMAXX: US Bond mutual funds holding data
- FISD and Thomson Reuters DealScan : corporate bonds issuance; Bank Loan (term loan and line of credit)
- Compustat and CRSP dataset
- Sample: 47,267 firm-quarter observations from 1998Q2 to 2018Q1

Herding Measure (HM): Lakonishok et al. (1992)

- $HM_{i,t} = |p_{i,t} - E[p_{i,t}] - E[p_{i,t} - E[p_{i,t}]]|$ (1)
- Where $p_{i,t} = \frac{\text{Num.of Buy}_{i,t}}{\text{Num.of Buy}_{i,t} + \text{Num.of Sell}_{i,t}}$ (2)
- $E[p_{i,t}]$ is the cross-sectional average of $p_{i,t}$ in quarter t
- A disproportionate number of institutions buying (selling) certain security in excess of the market-wide buying (selling) intensity
- $BHM_{i,t} = HM_{i,t} |p_{i,t} > E[p_{i,t}]$
- $SHM_{i,t} = HM_{i,t} |p_{i,t} < E[p_{i,t}]$

Empirical Result

1. Does herding affect the firm's debt issuance decisions?

➤ Baseline results

Dependent Var:	D(BondIssuance)				D(Bank Loan/Bond Choice)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
D(Herd)	1.711*** (3.96)				-4.094*** (-2.78)			
D(Buy Herd)		1.348*** (4.61)		2.194*** (4.76)		-3.946*** (-3.34)		-5.489*** (-3.44)
D(Sell Herd)			-0.464 (-1.61)	1.174*** (2.60)			1.406 (1.17)	-2.389 (-1.47)
Observations	46,105	46,105	46,105	46,105	7,676	7,676	7,676	7,676
Pseudo R-square	.147	.147	.146	.147	.203	.203	.202	.203
Quarter-Firm FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

➤ Baseline results using continuous herding measure

Dependent Var:	D(BondIssuance)			D(Bank Loan/Bond Choice)		
	(1)	(2)	(3)	(4)	(5)	(6)
HM	3.628*** (2.31)			-9.400* (-1.90)		
BHM		11.837*** (4.29)			-20.130** (-2.33)	
SHM			-1.776 (-0.69)			8.043 (1.04)
Observations	22,726	9,732	9,998	4,705	2,004	2,036
Pseudo R-square	.107	.120	.128	.172	.183	.240
Quarter-Firm FEs	Yes	Yes	Yes	Yes	Yes	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes

➤ Instrumental Variable (IV)

- Repetitional herding: Young Fund managers imitate others => avoid the performance deviations (Jiang and Verardo, 2018)
- IV: $NumInexperience$ as the number of mutual funds owners whose managers are in the lowest experience group

Dependent Variables	FirstStage		SecondStage	
	D(Herd) (1)	D(BondIssuance) (2)	D(Herd) (3)	D(Bank/Bond Choice) (4)
$NumInexperience$.006*** (6.73)		.004*** (5.43)	
$D(\widehat{Herd})$.353*** (3.774)		-.448** (-2.091)
Industry-Quarter FEs	Yes	Yes	Yes	Yes
R-square	0.434	0.035	0.562	0.086
Observations	30,859	30,859	6,512	6,512
First Stage F-Test	45.350		29.480	
Under Identification		23.643		20.568
Week Identification		336.759		51.238

Empirical Result

2. Potential Channels

➤ Information Uncertainty

Dependent Var:	D(BondIssuance)			
	Excess RetVol	NumAnalyst	AFError	BeforeTRACE
D(Buy Herd)	1.449*** (4.92)	-4.021*** (6.74)	.903*** (2.77)	.502* (1.64)
D(Buy Herd)#Inf.Asy	1.212*** (4.08)	-.228*** (-6.23)	1.025*** (3.26)	5.624*** (7.23)
Inf.Asy	-.568** (-2.24)	.169*** (4.23)	-.717*** (-2.90)	-3.382* (-1.84)
Observations	46,105	40,168	39,024	46,105
Pseudo R-square	.148	.143	.142	.149

Dependent Var:	D(Bank Loan/Bond Choice)			
	Excess RetVol	NumAnalyst	AFError	BeforeTRACE
D(Buy Herd)	-4.251*** (-3.58)	-10.448*** (-4.60)	-1.740 (-1.39)	-1.506 (-1.19)
D(Buy Herd)#Inf.Asy	-3.089** (-2.16)	.674*** (4.68)	-4.216*** (-3.26)	-16.812*** (-4.83)
Inf.Asy	1.495 (1.60)	-6.02*** (-3.78)	2.674*** (2.76)	75.683*** (4.71)
Observations	7,676	6,996	6,836	7,676
Pseudo R-square	.204	.198	.197	.206

➤ Demand Channel (Ruled out)

Dependent Var:	All			Non Roll-Over		
	(1)	(2)	(3)	(4)	(5)	(6)
D(MF Participates)						
D(Herd)	-0.323*** (-2.82)			-0.433*** (-3.96)		
D(Buy Herd)		-0.258*** (-2.72)			-0.234*** (-2.95)	
D(Sell Herd)			0.143 (1.27)			0.029 (.31)
Observations	6,100,438	6,100,438	6,100,438	4,517,570	4,517,570	4,517,570
Adjust R-squared	0.093	0.092	0.092	0.088	0.087	0.087

3. Offering yield spread and price informativeness

Dependent Var:	Offering Yield Spread (%)			Bond Price Informativeness		
	(1)	(2)	(3)	(4)	(5)	(6)
D(Herd)	-.250*** (-3.34)			-.060 (-.51)		
D(Buy Herd)		-.108** (-2.27)			-.119** (-2.12)	
D(Sell Herd)			-.030 (-.80)			.091 (.161)
Observations	4,022	4,022	4,022	22,078	22,078	22,078
Adj R-square	0.774	0.773	0.771	0.352	0.352	0.352

Conclusion

We find that firms are more likely to issue new bonds after mutual funds herding and upon issuance, firms opt for bonds over bank loans. This effect is concentrated in buy herding side rather than sell herding. Consistent with the positive view of herding that enhancing information environment, we also find that the effect of herding on debt issuance decisions are more pronounced for firms with greater information asymmetry. Moreover, firms enjoy lower offering yield spread and bond prices are more informativeness following to mutual fund herding.

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