When the Spare Tyre Goes Flat: Monetary Policy Transmission through Non-Banks

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Research Question

- The bank lending channel is well understood as a key amplifier of monetary policy.
- Yet a large and growing share of credit intermediation now occurs outside banks (IMF, 2023; FSB, 2024; ESRB, 2025).
- While monetary policy may "get in all the cracks," its strength of transmission could depend on the cracks it enters — especially intermediaries' funding structure, regulation, and liability duration
- **Research question:** Does monetary policy transmit through non-bank lenders in the same way as through banks?
- We study this question using the Irish Credit Register comprising all term-loans issued in Ireland by banks and non-banks during 2022-2024
- We show that non-banks transmit monetary tightening more strongly than banks.

Motivation

- Monetary transmission may depend critically on intermediaries' funding models and regulatory constraints.
- Banks are tightly regulated, but fund themselves partly through stable, rate-insensitive deposits, which shield net interest margins during tightening.
- Non-bank lenders are less regulated, but rely more on wholesale funding, exposing them to faster repricing.
- This creates theoretical ambiguity: non-banks may cushion transmission when banks are regulation-constrained, or amplify it when funding-cost pressures dominate.
- Liability duration matters: short-term wholesale funding exposes non-banks to policy-rate changes, while long-term funding provides temporary insulation.

Data and Institutional Settings

- Active non-bank sector in Ireland coupled with detailed loan level data offer a unique setting to study the differential response to monetary policy between banks and non-banks.
- The Central Credit Register: monthly loan-level data on all credit contracts above €500 originated by banks and non-bank lenders.
- The sample size is around 3 million newly originated (secured and non-secured) term loans from 2022–2024, across various household and non-household segments.
- The data include 335 lenders: 219 banks (retail and wholesale banks and credit unions) and 116 non-bank lenders (retail credit firms and specialised finance providers); non-banks account for about 20% of new lending.
- Orbis: balance sheets for the most active non-bank lenders, covering 99.5% of non-bank lending in our sample.

Preview of Main Results

- NBL rates respond more: 1 p.p. policy tightening raises NBL loan rates by 15–17 bps more than bank rates.
- Loan size and maturity adjust little on the intensive margin.
- The main adjustment is on the extensive margin: NBL originations fall relative to banks by about 6% in volume and 9% in loan counts.
- Firms partly switch to banks, but substitution is incomplete.
- Mechanism: short-term wholesale funding amplifies pass-through; long-term liabilities provide insulation.
- Real effects: NBL-exposed firms contract more in assets, fixed assets, and liabilities.

Related Literature: Banks vs Non-Bank Lenders

- **Prevailing view: NBLs as a "spare tyre".** When banks contract, non-banks expand credit relative to banks during tightening cycles, due to:
  - banks' capital requirements (Bednarek et al., 2025; Elliott et al., 2025);
  - NBLs' low leverage (Banerjee and Serena, 2024);
  - counter-cyclical servicing assets on securitised products (Agarwal et al., 2023);
  - NBLs' advantage in placing long-term debt (Cucic and Gorea, 2025).
- **But NBLs may also amplify the transmission.** Funding fragility can make shadow lenders contract more sharply than banks (Enkhbold, 2023).
- **Related crisis and credit-cycle evidence challenges the spare-tyre view.** Non-banks retrench more than banks when relationship lending and stable deposits matter (Aldasoro et al., 2025; Fleckenstein et al., 2025).
- **Our contribution:** We provide direct evidence from the universe of term loans in an advanced financial system with substantial non-bank lending, showing that short-term-funded NBLs transmit monetary policy more strongly than banks.

Identification

- **Object:** differential response of non-bank lenders relative to banks as monetary policy tightens.
- **Key idea:** common policy-rate variation combined with within-borrower or narrow demand-cell NBL–bank comparisons identifies relative transmission, net of common aggregate and demand shocks.
- **Small open economy:** Ireland is exposed to euro-area policy, but Irish credit conditions are unlikely to drive ECB rate decisions (Jimenez et al., 2012; Ioannidou et al. 2015).
- **Demand controls:** compare lenders within the same borrower–time or narrow demand cell:
  - borrower–time fixed effects (Khwaja and Mian, 2008);
  - industry–location–size–time fixed effects for firms (Degryse et al., 2019);
  - segment–borrower type–location–time fixed effects for all loans.
- **Estimating variation:** do NBL loan rates and volumes move differently from bank loans when the policy rate rises?
- **Robustness:** results hold under monetary policy shocks identified using high frequency data (Jarocinski and Karadi, 2020) instead of the ECB policy rate.

Loan Level Regression: All Loans

	(1)	(2)	(3)	(4)	(5)
A: Outcome variable: Interest rate					
$D_i(\text{NBL}) \times \text{MPRate}_{t-1}$	0.21***	0.28***	0.17***	0.15***	0.17***
	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)
Observations	3,189,778	3,189,778	3,189,778	3,189,778	3,189,778
R^2	0.57	0.92	0.91	0.97	0.58
B: Outcome variable: Log loan size					
$D_i(\text{NBL}) \times \text{MPRate}_{t-1}$	-0.01**	-0.02***	-0.01**	-0.01**	-0.02***
	(0.003)	(0.01)	(0.005)	(0.005)	(0.004)
Observations	3,189,778	3,189,778	3,189,778	3,189,778	3,189,778
R^2	0.72	0.95	0.95	0.98	0.72
Quarter FE	Y	Y	Y		
Lender FE	Y		Y	Y	Y
Lender-Borr. FE		Y			
Borrower-Year FE			Y		
Borrower-Quarter FE				Y	
Segment-Quarter-Borrowe_Type-County FE					Y
Loan controls	Y	Y	Y	Y	Y

Loan Level Regression: Loans to Firms

	(1)	(2)	(3)	(4)	(5)
A: Outcome variable: Interest rate					
$D_i(\text{NBL}) \times \text{MPRate}_{t-1}$	0.11***	0.20***	0.12***	0.11***	0.13***
	(0.02)	(0.03)	(0.03)	(0.03)	(0.01)
Observations	330,859	330,859	330,859	330,859	209,018
R^2	0.65	0.89	0.91	0.96	0.70
B: Outcome variable: Log loan debt					
$D_i(\text{NBL}) \times \text{MPRate}_{t-1}$	0.00	-0.02**	-0.01***	-0.00**	-0.01***
	(0.00)	(0.006)	(0.003)	(0.002)	(0.004)
Observations	208,823	208,823	208,823	208,823	113,346
R^2	0.30	0.91	0.91	0.97	0.43
Quarter FE	Y	Y	Y		
Lender FE	Y		Y	Y	Y
Lender-Borr. FE		Y			
Firm-Year FE			Y		
Firm-Quarter FE				Y	
Industry-Location-Size-Quarter FE					Y
Loan controls	Y	Y	Y	Y	Y

Extensive Margin – Lender–County Level

	(1)	(2)
Outcome variable, ln(.)	New Loans Volume$_{i,c,t}$	New Loans Number$_{i,c,t}$
D_i(NBL) $\times$ MPRate$_{t-1}$	-0.06***	-0.09***
	(0.01)	(0.02)
Observations	31,840	31,840
R^2	0.55	0.46
County–Quarter FE	Y	Y
Lender–Year FE	Y	Y

Extensive Margin – Credit Availability – Firm Level

	(1)	(2)	(3)	(4)
	$D_{f,t}$(Loan)	$D_{f,t}$(Bank)	$D_{f,t}$(NBL)	$D_{f,j,t}$(Loan)
$MPRate_{t-1}$	-0.005***	0.002***	-0.007***	
	(0.001)	(0.000)	(0.000)	
D_j(NBL)				-0.028***
				(0.001)
D_j(NBL) × $MPRate_{t-1}$				-0.004***
				(0.000)
Constant	0.152***	0.092***	0.064***	0.085***
	(0.001)	(0.001)	(0.001)	(0.000)
Observations	1,503,540	1,503,540	1,503,540	3,007,080
R^2	0.26	0.27	0.32	0.50
Firm-Year FE	Y	Y	Y	N
Firm-Quarter FE	N	N	N	Y

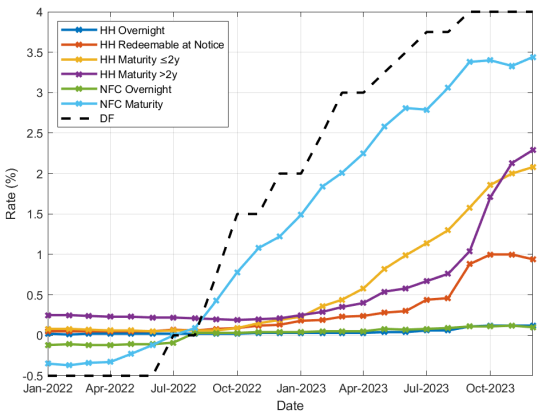
Firms are less likely to obtain credit from NBLs relative to banks as policy tightens.

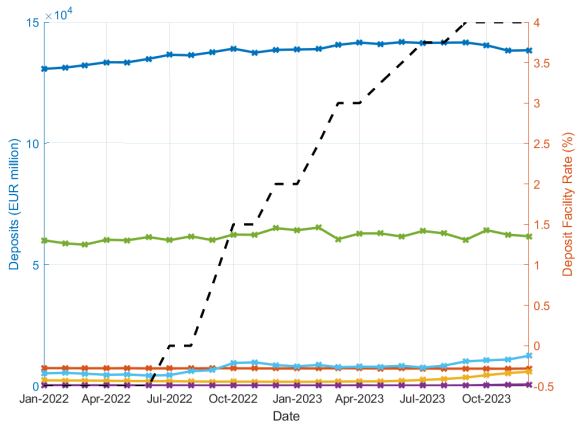
Substitution Between Banks and NBLs

	(1)	(2)	(3)	(4)
Outcome variable: $D_{l,f,t}$(NBL)				
$NBLExposure_{f,2020–21} \times MPRate_{t-1}$	-0.01**	-0.01**	-0.01**	-0.01**
	(0.01)	(0.01)	(0.01)	(0.01)
$NBLExposure_{f,2020–21}$	0.44***			0.50***
	(0.02)			(0.02)
Constant	0.37***	0.48***	0.47***	0.33***
	(0.02)	(0.04)	(0.04)	(0.01)
Observations	233,795	233,795	233,795	152,791
R^2	0.60	0.84	0.89	0.60
Quarter FE	Y	Y	Y	
Firm FE		Y		
Firm-Year FE			Y	
Industry-Location-Size-Quarter FE				Y
Loan controls	Y	Y	Y	Y

As policy tightens, firms partly shift new borrowing from NBLs toward banks.

Banks' deposits stayed stable both by volume and price.



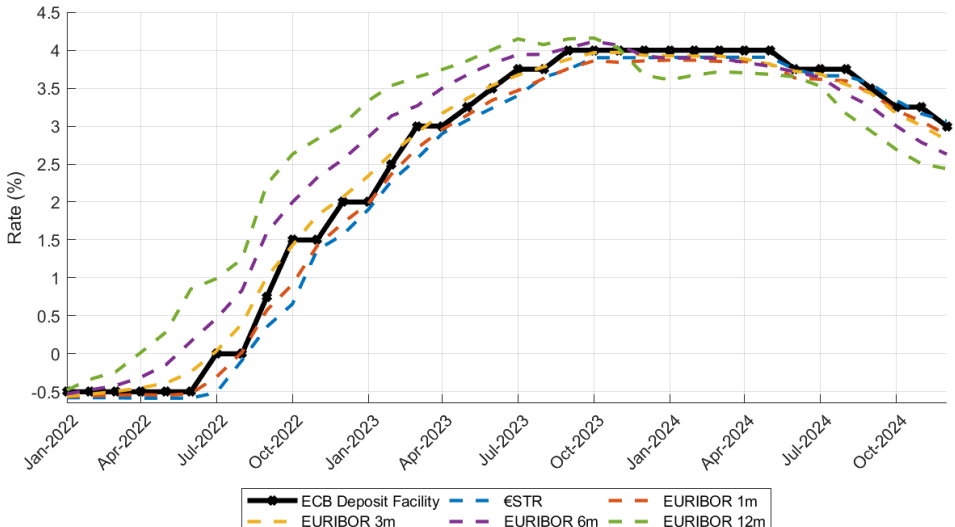


Non-banks are leveraged and funded with short-term debt

	2020	2021	2022	2023
A: Equity / Assets				
Mean	0.49	0.54	0.70	0.73
Median	0.14	0.16	0.17	0.16
Weighted average	0.01	0.03	0.03	0.03
B: Short-term / Total Liabilities				
Mean	0.62	0.68	0.68	0.68
Median	0.52	0.76	0.66	0.62
Weighted average	0.71	0.81	0.81	0.74
Number of Obs.	30	30	30	30

Based on 30 most active NBLs, accounting for $>$ 99% non-bank loans

Short-term market rates traced DF rate closely



Economic Mechanism – NBLs vs Banks

	(1)	(2)	(3)	(4)	(5)
A: Outcome variable: Interest rate					
$D_{i,y-1}(STF) \times MPRate_{t-1}$	0.28***	0.25***	0.23***	0.21***	0.24***
	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)
$D_{i,y-1}(LTF) \times MPRate_{t-1}$	0.11***	0.13***	0.03	0.01	-0.05***
	(0.02)	(0.02)	(0.02)	(0.05)	(0.01)
Observations	3,181,359	3,181,359	3,181,359	3,181,359	3,181,359
R^2	0.56	0.92	0.91	0.97	0.57
B: Outcome variable: Log loan size					
$D_{i,y-1}(STF) \times MPRate_{t-1}$	-0.02***	-0.04***	-0.02***	-0.02***	-0.03***
	(0.00)	(0.02)	(0.01)	(0.01)	(0.00)
$D_{i,y-1}(LTF) \times MPRate_{t-1}$	0.01**	-0.02	-0.00	0.00	-0.01***
	(0.00)	(0.01)	(0.01)	(0.02)	(0.00)
Observations	3,181,359	3,181,359	3,181,359	3,181,359	3,181,359
R^2	0.72	0.95	0.95	0.98	0.72
Quarter FE	Y	Y	Y		
Lender FE	Y		Y	Y	Y
Lender-Borr. FE		Y			
Borrower-Year FE			Y		
Borrower-Quarter FE				Y	
Segment-Quarter-Borrowe_Type-County FE					Y
Loan controls	Y	Y	Y	Y	Y

Economic mechanism – Within NBLs regressions

	(1)	(2)	(3)	(4)	(5)
A: Outcome variable: Interest rate					
$D_{i,y-1}(STF) \times MPRate_{t-1}$	0.10***	0.12***	0.17***	0.15***	0.19***
	(0.02)	(0.04)	(0.03)	(0.05)	(0.01)
Observations	643,178	643,178	643,178	643,178	643,178
R^2	0.60	0.94	0.94	0.98	0.61
B: Outcome variable: Log loan size					
$D_{i,y-1}(STF) \times MPRate_{t-1}$	-0.02***	-0.03**	-0.02**	-0.02**	-0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Observations	643,178	643,178	643,178	643,178	643,178
R^2	0.85	0.97	0.97	0.98	0.85
Quarter FE	Y	Y	Y		
Lender FE	Y		Y	Y	Y
Lender-Borr. FE		Y			
Borrower-Year FE			Y		
Borrower-Quarter FE				Y	
Segment-Quarter-Borrower_Type-County FE					Y
Loan controls	Y	Y	Y	Y	Y

Real Effects

	Total Assets (1)	Fixed Assets (2)	Total Liabilities (3)	ROA (4)	Total Employees (5)
A: NBLExposure$_{b,2020\text{–}21} \geq 0.5$					
$D_f(\text{NBLExp}) \times \text{MPRate}_{t-1}$	-0.56	-1.60^{***}	-0.18	-0.10	-0.16
	(0.29)	(0.30)	(0.23)	(0.10)	(0.16)
Observations	126,910	126,910	126,910	126,910	86,704
R^2	0.90	0.92	0.92	0.79	0.96
B: NBLExposure$_{b,2020\text{–}21} \geq 0.8$					
$D_f(\text{NBLExp}) \times \text{MPRate}_{t-1}$	-0.72^{**}	-1.85^{***}	-0.46^{**}	-0.16^{*}	-0.29^{*}
	(0.31)	(0.31)	(0.22)	(0.10)	(0.16)
Observations	126,910	126,910	126,910	126,910	86,704
R^2	0.90	0.92	0.92	0.79	0.96
C: NBLExposure$_{b,2020\text{–}21} = 1$					
$D_f(\text{NBLExp}) \times \text{MPRate}_{t-1}$	-0.87^{***}	-2.15^{***}	-0.73^{***}	-0.20^{*}	-0.33^{**}
	(0.31)	(0.32)	(0.25)	(0.11)	(0.16)
Observations	126,910	126,910	126,910	126,910	86,704
R^2	0.90	0.92	0.92	0.79	0.96
Year FE	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y
Firm Controls	Y	Y	Y	Y	Y
Industry×MPRate	Y	Y	Y	Y	Y

Conclusion

- Using the universe of term loans in Ireland, we provide evidence against the view that non-bank lenders act as a "spare tyre" to banks.
- Non-bank lending rates respond significantly more to monetary tightening than bank lending rates.
- Non-banks also contract more on the extensive margin, reducing new lending more sharply than banks.
- We argue that this differential response reflects funding structure: banks benefit from stable, rate-insensitive deposits, while non-banks rely on wholesale and institutional funding.
- Consistent with this mechanism, short-term-funded non-banks raise rates and cut lending more than both banks and longer-term-funded non-banks.