# Monetary policy transmission by securitising banks

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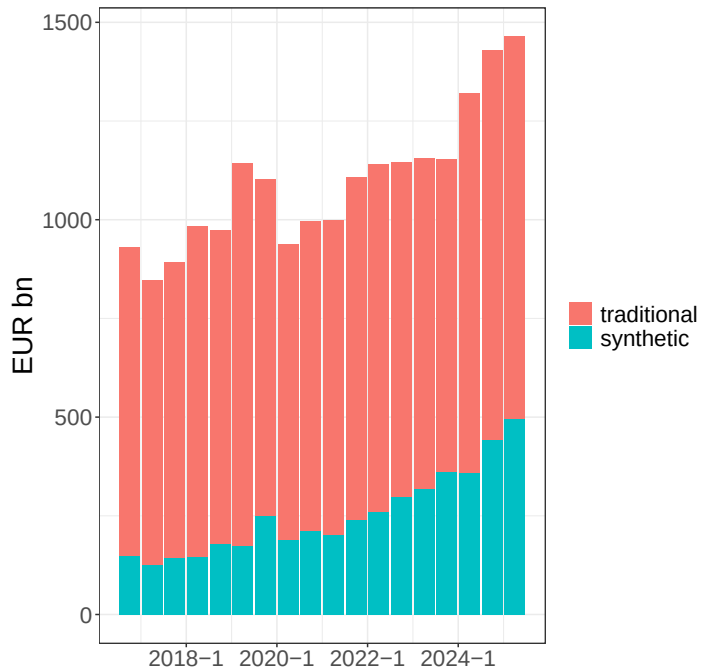
# Motivation: securitisation is on the rise (again)




Two recent drivers:

- Development of synthetic securitisations
- Significant Risk Transfers

Figure: Total securitised loan pool of euro area banks (source: COREP) ▸ Traditional ▸ By sector ▸ Share securitised ▸ Number securitising

**Question: how does this affect monetary policy transmission?**

# What is the impact on transmission?

- Traditional view: securitisation makes banks more capitalised and liquid, dampening the bank lending channel [Altunbas et al., 2009]
- However: funding through securitisation may be more sensitive to monetary policy
  - Considerable evidence that securitisation supports bank lending [Altunbas et al., 2009, Osberghaus and Schepens, 2025]
  - Ultimate investors expect yields consistent with market rates making securitising more profitable just after an easing shock (resp. less profitable after tightening) if lending rates adjust sluggishly

# Different lending dynamics over recent cycle


Figure: Median lending growth depending on securitisation activity between matched banks

▸ Ease of access to funding by type

# What we do

1. Using a matching approach and credit register data, show that banks actively securitising loans are more sensitive to monetary policy

2. Argue that this operates through a *securitisation channel* as the share of securitised loans also declines upon MP tightening

# Literature review

- Focus mainly of risks from securitisation on financial stability [Albertazzi et al., 2025, Benmelech et al., 2012, Acharya et al., 2013], more recently Osberghaus and Schepens [2025] on synthetic securitisations
- Less or more indirect focus on role for transmission:
  - Role of securitisation in affecting MP transmission: Altunbas et al. [2009] vs Maddaloni and Peydró [2011], Aysun and Hepp [2011]
  - Relative sensitivity of banks vs non-banks to MP: Nelson et al. [2018], Elliott et al. [2024], Cucic and Gorea [2025] vs Chen [2025]
  - Role of securitisation in transmitting other shocks: case of GFC market freeze in di Patti and Sette [2016]

# Empirical approach

We estimate the following equation for bank i, firm j, instrument type k, quarter t, horizon h:

$$Log(Loan_{i,j,k,t+h}) = \mathbb{1}\{Sec_i\} * MP_t + X_{it-1} + FE_{jt} + FE_{ij} + \epsilon_{i,j,k,t+h} \quad (1)$$

- Borrower-bank-instrument panel of loans from AnaCredit
  ▸ Descriptive stats
- High-frequency monetary policy shocks with sign restriction [Jarociński and Karadi, 2020] ▸ MP shocks
- Controlling for demand using firm-time fixed effects [Khwaja and Mian, 2008]
- Sample of banks actively securitising loans pre-21Q1 matched to pre-21Q1 characteristics ▸ Matching procedure

# Matching procedure

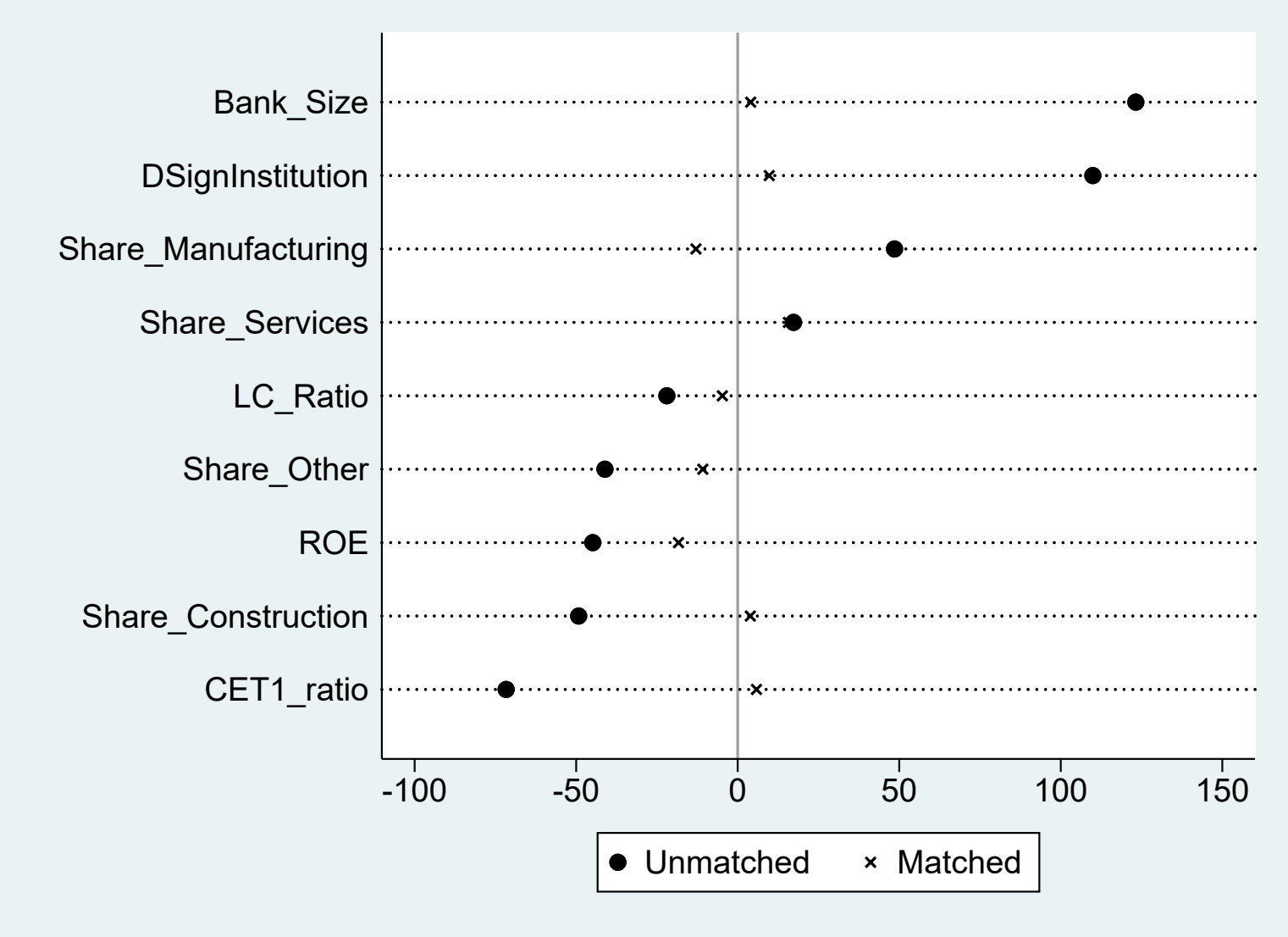



Figure: Standardized differences in means

# Main results

Table: Impact of securitisation on monetary policy transmission

| | (1) NoControls | (2) Baseline | (3) InstFE | (4) Share | (5) TightMatch |
|---|---|---|---|---|---|
| IsScrtsn=1 × L(MP) | -0.025*** | -0.020*** | -0.019*** | | -0.067*** |
| | (0.004) | (0.005) | (0.004) | | (0.022) |
| ShareSec × L(MP) | | | | -0.123*** | |
| | | | | (0.033) | |
| L(TotAssetsLog) | | -0.041 | -0.046*** | -0.040 | -1.255*** |
| | | (0.025) | (0.015) | (0.025) | (0.347) |
| L(CET1r) | | 2.055* | -0.046 | 2.078** | -1.187 |
| | | (1.040) | (0.379) | (1.038) | (2.718) |
| L(ROE) | | 0.036 | 0.047* | 0.043 | 0.184 |
| | | (0.046) | (0.026) | (0.046) | (0.160) |
| L(LCR) | | -0.004 | 0.003 | -0.004 | 0.029 |
| | | (0.004) | (0.003) | (0.004) | (0.022) |
| Borrower-time | Yes | Yes | No | Yes | Yes |
| Borrower-bank | Yes | Yes | No | Yes | Yes |
| Borrower-Inst-time | No | No | Yes | No | No |
| Borrower-Inst-bank | No | No | Yes | No | No |
| Observations | 2257631 | 2238705 | 1128485 | 2238705 | 30478 |
| $R^2$ | 0.792 | 0.791 | 0.962 | 0.791 | 0.919 |
| r2_a | 0.646 | 0.644 | 0.911 | 0.644 | 0.805 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans. "Share" is the average share of securitised loans on banks' balance sheets pre-21Q1. "'TightMatch" restricts the regression to borrowers with at least one securitising and one non-securitising lender. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

# Large set of robustness checks

- Change MP shock (6M, 1Y, 2Y) ▸ Table, also using directly changes in rates ▸ Table
- Results persistent up to 1 year ▸ Table
- Dependent variable in delta log: significant decline in first quarter, not compensated thereafter ▸ Table
- Matching without replacement
- Grouping at the borrower-bank instead of borrower-bank-instrument type level
- Running the matching approach pre-19Q1, and the analysis since 2019Q1

# How could it work?

- On the one hand, securitising banks have less balance sheet constraints... [Altunbas et al., 2009]
- ...on the other hand, banks increase lending by tapping into a more MP-sensitive type of investors. Two key ingredients
  1. Banks increase lending with securitisation
  2. Investors in securitisations are more sensitive to monetary policy: substitutability with other market instruments who reprice with MP? risk-taking channel?

# Ingredient 1: securitisation expands lending

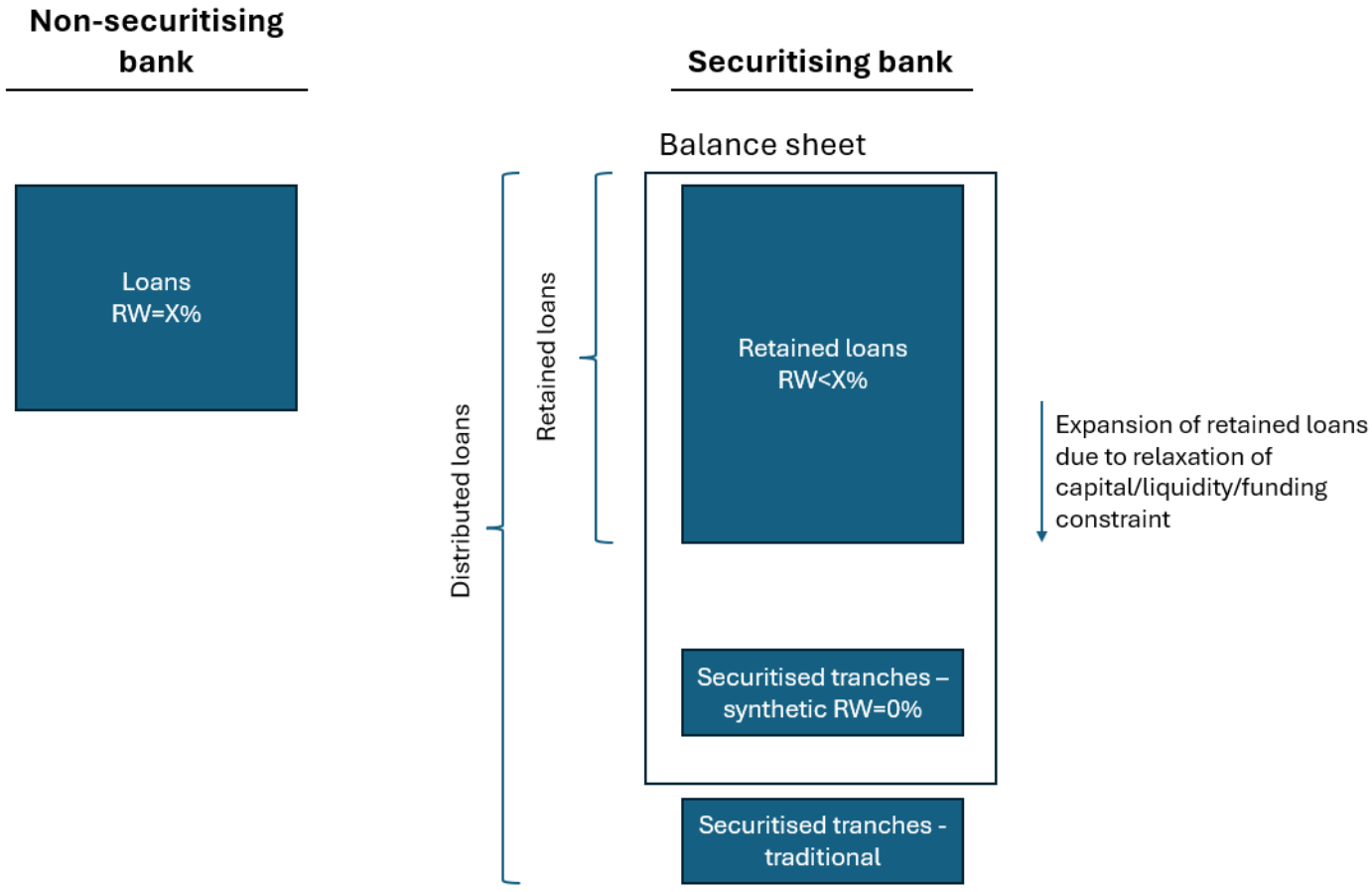



Figure: Effect of securitisation on bank asset

# Ingredient 2: securitisation investors are more sensitive to MP

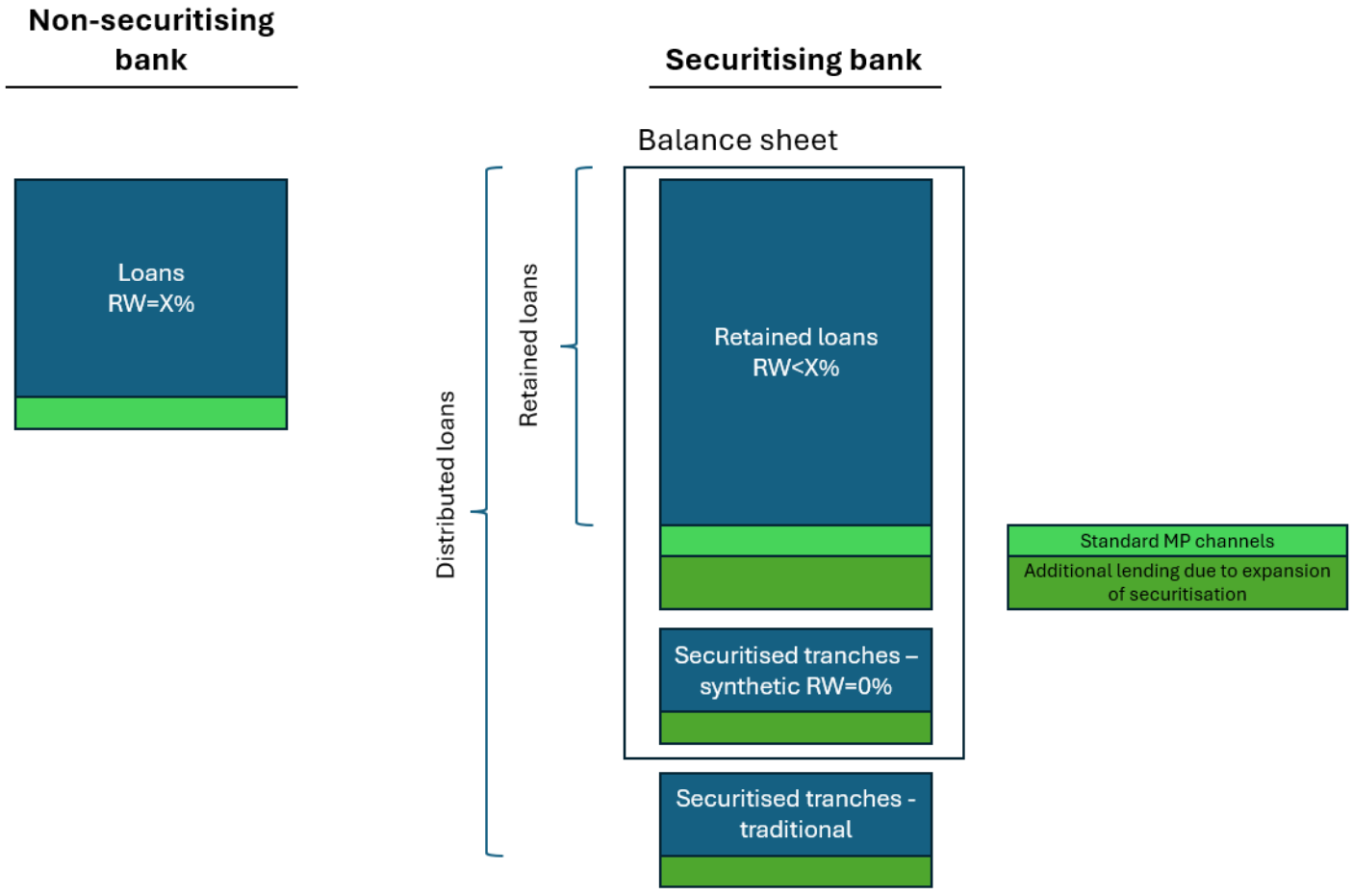



Figure: Effect of easing shock depending on whether bank securitises

# Does securitisation activity itself change with MP?

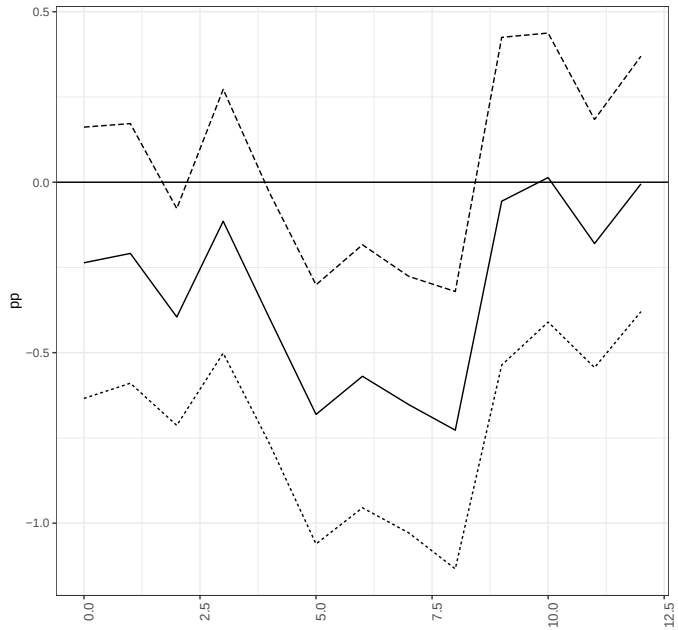
We estimate for bank i asset class k month t horizon h:

$$ShareSec_{i,k,t+h} = \beta * MP_t + X_{it-1} + FE_{m(k),r(k),i} + \epsilon_{i,k,t+h}, \quad (2)$$

- Asset classes k are residual maturity (3 buckets) - CQS brackets (6 buckets)
- $X_{it-1}$ includes bank CET1 ratio, LCR, log total assets, and ROE (2 lags)

# The share of securitised loans decreases with MP tightening

Figure: Impact of MP on securitisation




- Non-banks tighten their balance sheet above and beyond banks' contraction of lending
- Effect seems stronger for traditional securitisations suggesting funding matters? ▸ Securitisation type (shares)

# Can firms substitute out?

We estimate for firm i quarter t:

$$Log(Loan_{i,t}) = \beta * \mathbb{1}\{Sec_{it}\} * MP_t + X_{it-1} + FE_{m(i),t} + FE_i + \epsilon_{i,t},$$

- $\mathbb{1}\{Sec_{it-1}\}$: a dummy taking value 1 if the firm is borrowing from a securitising bank at t-1/ the loan-weighted share of these banks
- $FE_{m(i),t}$ are sector-size-country-time fixed effects

# Results

Table: Impact of securitisation on firm borrowing - firm level regression

| | (1) Dummy | (2) Share |
|---|---|---|
| L(IsScrtsn)=1 | -0.465*** | |
| | (0.009) | |
| L(IsScrtsn)=1 × L(MP) | -0.033*** | |
| | (0.004) | |
| L(ShareScrtsn) | | 1.070*** |
| | | (0.019) |
| L(ShareScrtsn) × L(MP) | | -0.028*** |
| | | (0.004) |
| PD | 0.043** | 0.113*** |
| | (0.022) | (0.023) |
| PD × L(MP) | -0.054*** | -0.049*** |
| | (0.015) | (0.015) |
| SalesLog | -0.016*** | -0.015*** |
| | (0.001) | (0.001) |
| SalesLog × L(MP) | -0.002*** | -0.001 |
| | (0.001) | (0.001) |
| Cntry-Sector-Size-time | Yes | Yes |
| Borrower | Yes | Yes |
| Observations | 11705091 | 10562454 |
| $R^2$ | 0.800 | 0.809 |
| $r2_a$ | 0.779 | 0.788 |

*Notes: Standard errors are clustered at the borrower level. IsScrtsn is a dummy taking value 1 if the borrower is linked to at least one securitising bank. ShareScrtsn corresponds to the loan-weighted share of each firms' lenders which are securitising banks. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

# Conclusions

- Banks actively securitising adjust credit supply more abruptly to monetary policy shocks
- Effect driven by *securitisation channel*: the share of securitised loans decreases, on top of the decline in lending originated
- Important implications for next monetary policy cycle given current rise in securitisation activity

# Annex

# Traditional securitisations

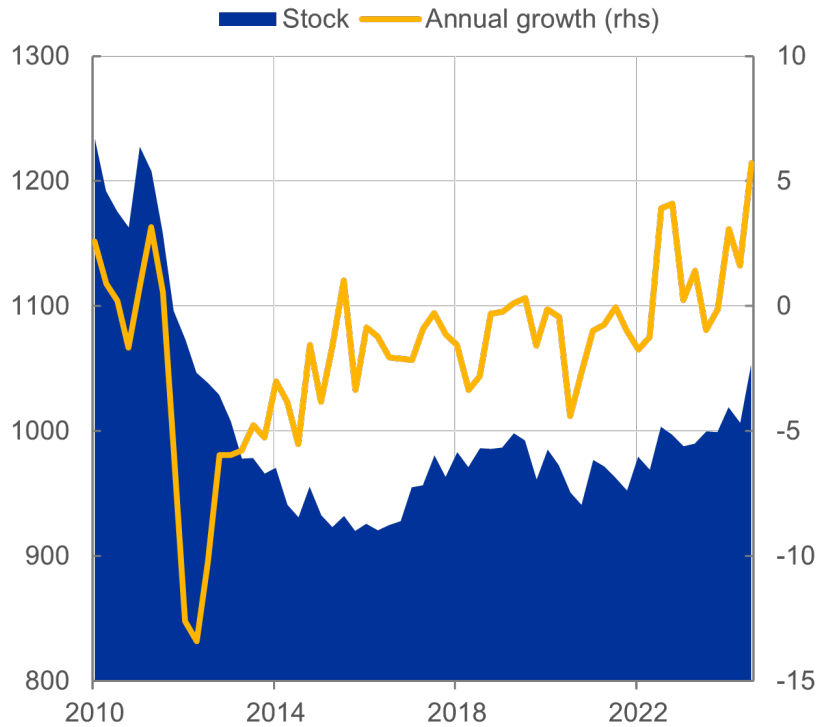



Figure: Securitised loans originated by euro area MFIs reported by FVCs, traditional (source: FVC statistics)

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# Securitised loans by sector

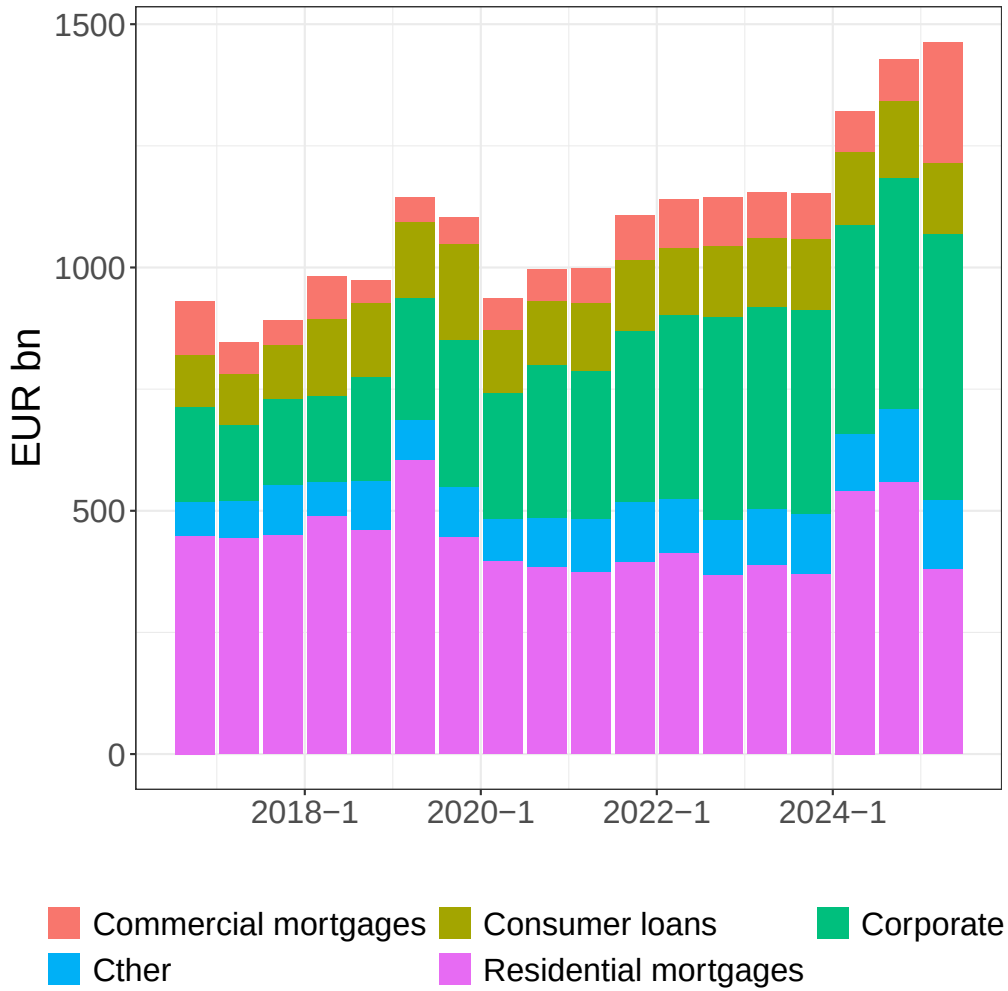


Figure: Securitised loans by sector (source: COREP)

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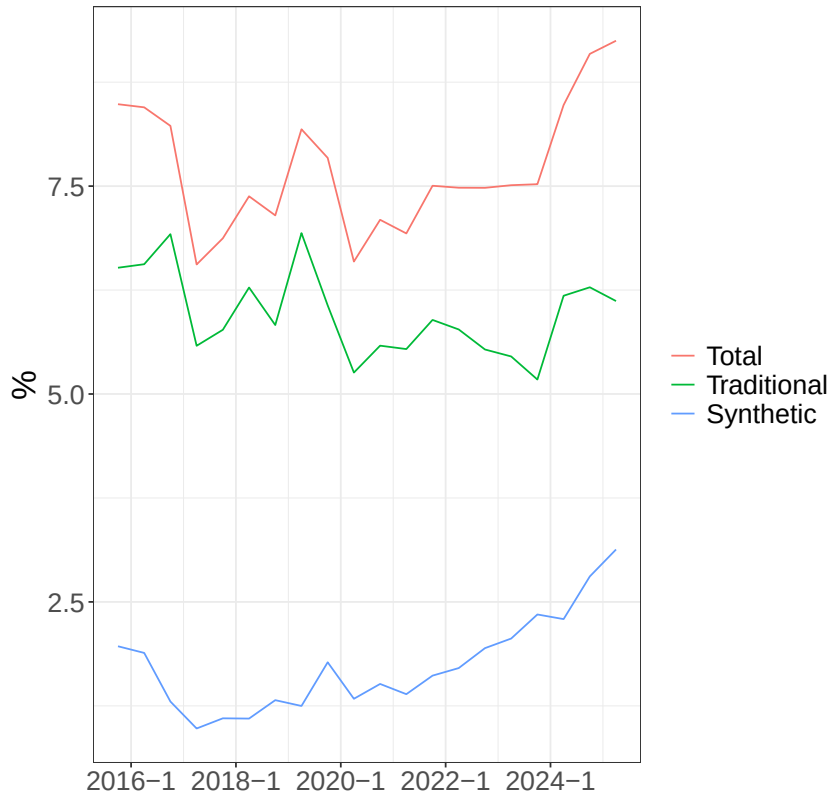
# Aggregate share of loans securitised




*Notes: Represents the value of securitised loans over total loans on balance sheet, to which traditionally securitised loans added back.*

Figure: Aggregate share of non-financial private sector loans securitised (source: COREP and FINREP)

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# Number of banks actively securitising

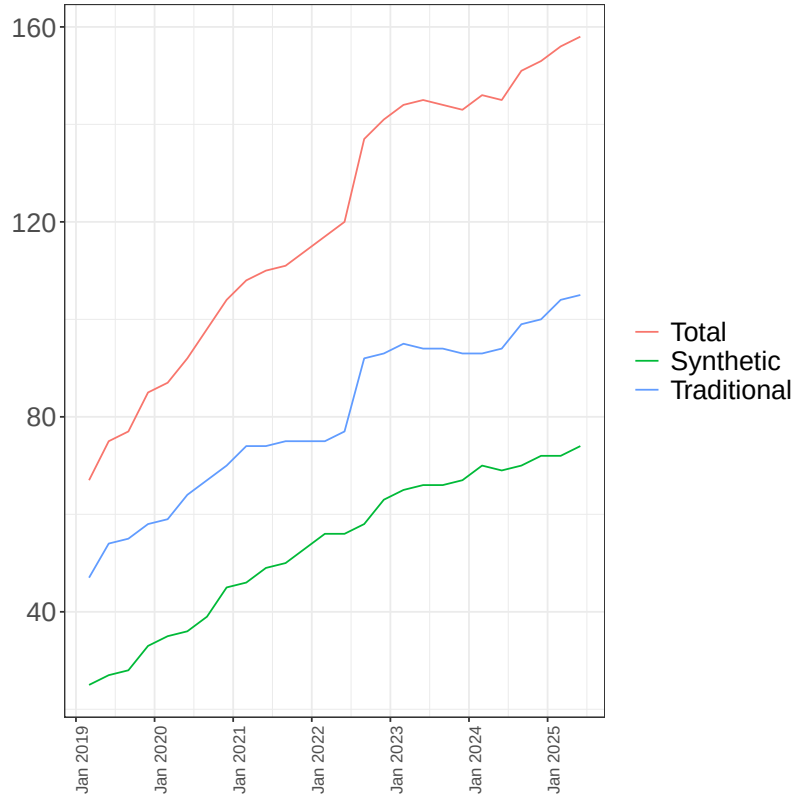


Figure: Cumulated number of banks actively securitising (source: AnaCredit)

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# Descriptive statistics

| | mean | p50 | sd | p25 | p75 | min | max | count |
|---|---|---|---|---|---|---|---|---|
| Panel A.a.: Securitising banks | | | | | | | | |
| Bank Size (Tn) | 0.615 | 0.357 | 0.671 | 0.034 | 1.398 | 0.000 | 2.286 | 87 |
| CET1 Ratio | 0.142 | 0.134 | 0.030 | 0.124 | 0.148 | 0.107 | 0.311 | 87 |
| ROE | 0.017 | 0.026 | 0.062 | -0.023 | 0.059 | -0.161 | 0.171 | 87 |
| LC Ratio | 2.002 | 1.601 | 1.447 | 1.432 | 1.963 | 1.265 | 10.045 | 87 |
| Share Manufacturing | 0.171 | 0.155 | 0.130 | 0.066 | 0.253 | 0.000 | 0.507 | 87 |
| share Services | 0.662 | 0.626 | 0.176 | 0.528 | 0.802 | 0.211 | 1.000 | 87 |
| Share Construction | 0.049 | 0.035 | 0.048 | 0.013 | 0.076 | 0.000 | 0.236 | 87 |
| Share Others | 0.118 | 0.098 | 0.107 | 0.029 | 0.170 | 0.000 | 0.531 | 87 |
| D(Significant)=1 | 0.782 | 1.000 | 0.416 | 1.000 | 1.000 | 0.000 | 1.000 | 87 |
| Panel A.b.: Non-securitising banks | | | | | | | | |
| Bank Size (Tn) | 0.681 | 0.158 | 0.823 | 0.020 | 1.320 | 0.000 | 2.322 | 69 |
| CET1 Ratio | 0.139 | 0.133 | 0.020 | 0.123 | 0.151 | 0.107 | 0.203 | 69 |
| ROE | 0.032 | 0.038 | 0.051 | 0.018 | 0.069 | -0.161 | 0.116 | 69 |
| LC Ratio | 2.103 | 1.608 | 1.798 | 1.472 | 2.176 | 1.291 | 15.644 | 69 |
| Share Manufacturing | 0.175 | 0.142 | 0.160 | 0.058 | 0.252 | 0.000 | 0.756 | 69 |
| share Services | 0.627 | 0.621 | 0.212 | 0.476 | 0.811 | 0.000 | 1.000 | 69 |
| Share Construction | 0.053 | 0.036 | 0.054 | 0.003 | 0.088 | 0.000 | 0.233 | 69 |
| Share Others | 0.146 | 0.106 | 0.168 | 0.044 | 0.164 | 0.000 | 1.000 | 69 |
| D(Significant)=1 | 0.725 | 1.000 | 0.450 | 0.000 | 1.000 | 0.000 | 1.000 | 69 |
| Panel B: Borrowers | | | | | | | | |
| turnover (Mn) | 165.032 | 2.378 | 6937.866 | 0.737 | 8.318 | 0.000 | 1209207.337 | 113426 |
| Panel C: Exposures | | | | | | | | |
| totcred (Mn) | 2.017 | 0.125 | 24.129 | 0.042 | 0.496 | 0.000 | 5396.699 | 2387820 |
| PD | 0.030 | 0.012 | 0.064 | 0.004 | 0.030 | 0.000 | 1.000 | 1345572 |

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# Monetary policy shocks

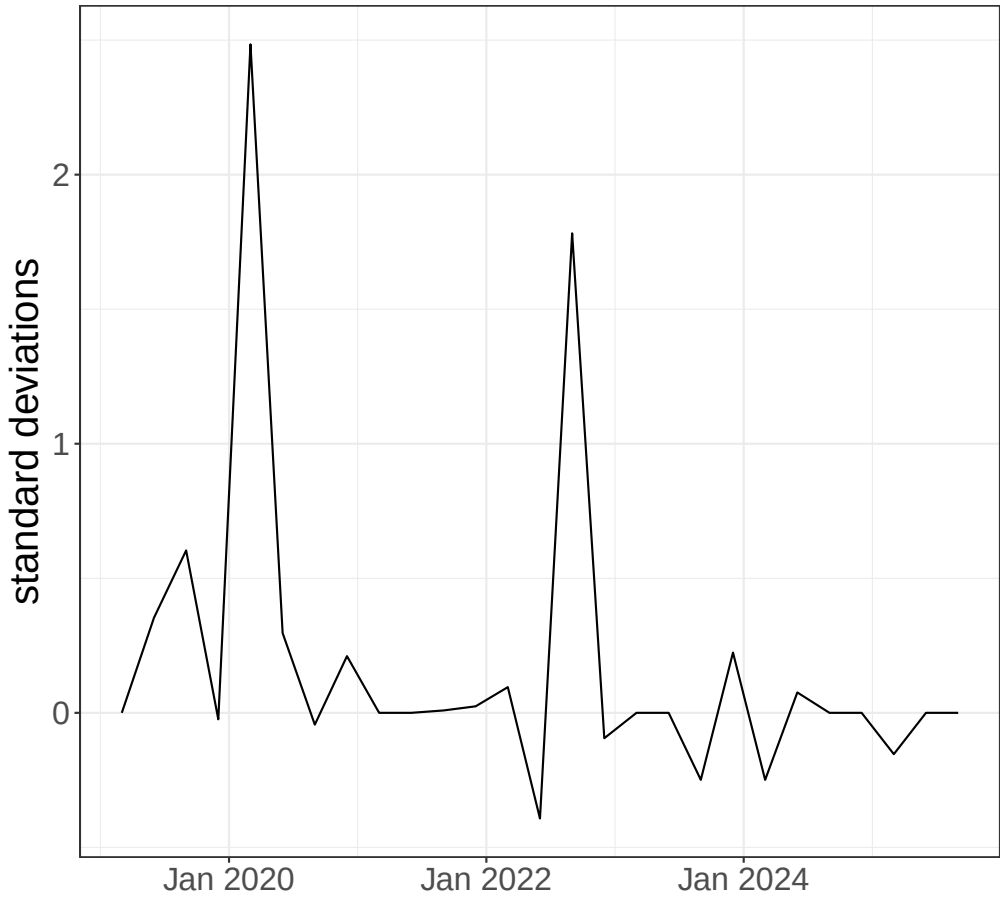


Figure: Monetary policy shocks [Jarociński and Karadi, 2020]

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# Matching procedure

- Mahalobonis distance matching
- Matching variables: log total assets, ROE, CET1 ratio, LCR, dummy for SI banks, country of incorporation, sectoral specialisation (share of: construction, services, manufacturing, and other, in total corporate loans)

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# Change in ease of funding by funding source

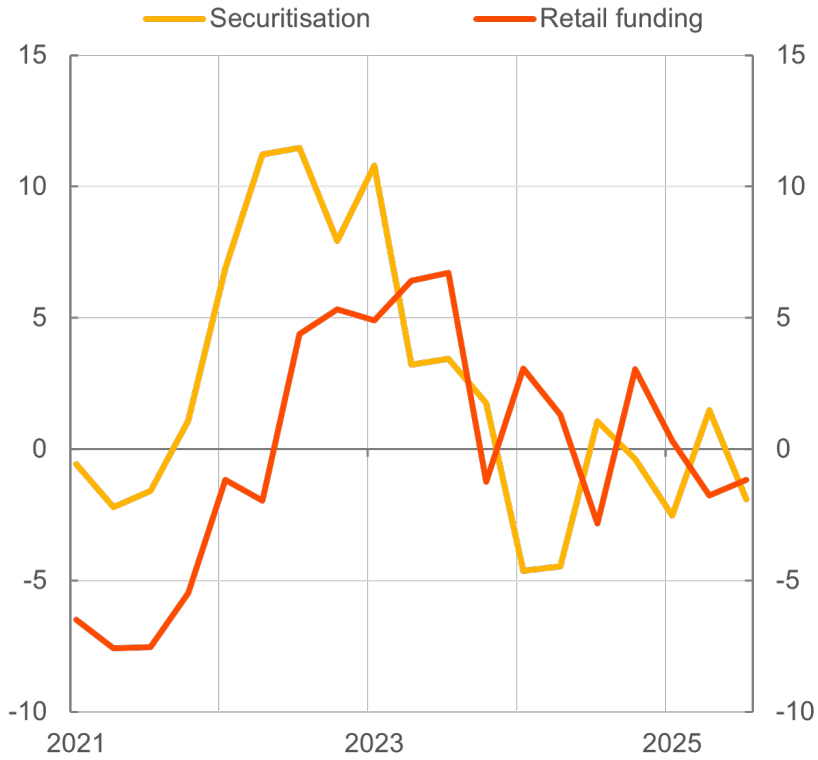


Figure: Net percentage of banks reporting a tighter access to funding by source (source: BLS)

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# Robustness - using delta OIS3M

Table: Impact of securitisation on MP transmission - OIS3M changes

| | (1) NoControls | (2) Baseline | (3) InstFE | (4) Share | (5) TightMatch |
|---|---|---|---|---|---|
| IsScrtsn=1 × L(MP) | -0.017*** | -0.018*** | -0.010** | | -0.047*** |
| | (0.005) | (0.005) | (0.004) | | (0.013) |
| ShareSec × L(MP) | | | | -0.070* | |
| | | | | (0.037) | |
| L(TotAssetsLog) | | -0.045* | -0.046*** | -0.039 | -1.057*** |
| | | (0.026) | (0.015) | (0.025) | (0.301) |
| L(CET1r) | | 2.150** | 0.032 | 2.112** | 0.725 |
| | | (1.026) | (0.345) | (1.036) | (2.667) |
| L(ROE) | | 0.018 | 0.038 | 0.040 | 0.190 |
| | | (0.049) | (0.024) | (0.046) | (0.150) |
| L(LCR) | | -0.003 | 0.003 | -0.004 | 0.029 |
| | | (0.004) | (0.003) | (0.004) | (0.023) |
| Borrower-time | Yes | Yes | No | Yes | Yes |
| Borrower-bank | Yes | Yes | No | Yes | Yes |
| Borrower-Inst-time | No | No | Yes | No | No |
| Borrower-Inst-bank | No | No | Yes | No | No |
| Observations | 2257631 | 2238705 | 1128485 | 2238705 | 30478 |
| $R^2$ | 0.792 | 0.791 | 0.962 | 0.791 | 0.919 |
| r2_a | 0.646 | 0.644 | 0.911 | 0.644 | 0.805 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans. "Share" is the average share of securitised loans on banks' balance sheets pre-21Q1. "'TightMatch" restricts the regression to borrowers with at least one securitising and one non-securitising lender. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

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# Effects over time

Table: Impact of securitisation on MP transmission - local projection

| | (1) Lead1 | (2) Lead2 | (3) Lead3 | (4) Lead4 |
|---|---|---|---|---|
| IsScrtsn=1 × L(MP) | -0.020*** | -0.011** | -0.006 | -0.018*** |
| | (0.005) | (0.005) | (0.006) | (0.006) |
| L(TotAssetsLog) | -0.041 | -0.050** | -0.044* | -0.056** |
| | (0.025) | (0.025) | (0.025) | (0.026) |
| L(CET1r) | 2.055* | 2.029* | 2.403** | 2.049** |
| | (1.040) | (1.133) | (1.114) | (1.013) |
| L(ROE) | 0.036 | 0.076** | 0.140*** | 0.118** |
| | (0.046) | (0.037) | (0.041) | (0.050) |
| L(LCR) | -0.004 | -0.002 | -0.004 | -0.003 |
| | (0.004) | (0.004) | (0.004) | (0.003) |
| Borrower-time | Yes | Yes | Yes | Yes |
| Borrower-bank | Yes | Yes | Yes | Yes |
| Observations | 2238705 | 2231697 | 2224823 | 2217906 |
| $R^2$ | 0.791 | 0.791 | 0.791 | 0.791 |
| r2_a | 0.644 | 0.643 | 0.643 | 0.643 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans h periods ahead. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

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# Robustness - using delta log lending

Table: Impact of securitisation on MP transmission - local projection

| | (1) Lead1 | (2) Lead2 | (3) Lead3 | (4) Lead4 |
|---|---|---|---|---|
| IsScrtsn=1 × L(MP) | -0.013*** | 0.003 | -0.004 | -0.000 |
| | (0.003) | (0.003) | (0.003) | (0.001) |
| L(TotAssetsLog) | -0.034** | -0.032** | -0.037** | -0.050*** |
| | (0.015) | (0.014) | (0.015) | (0.017) |
| L(CET1r) | 0.245** | 0.219** | 0.046 | -0.061 |
| | (0.107) | (0.102) | (0.101) | (0.131) |
| L(ROE) | 0.003 | -0.010 | 0.017 | -0.000 |
| | (0.014) | (0.013) | (0.019) | (0.010) |
| L(LCR) | -0.000 | -0.002*** | -0.001 | -0.003** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Borrower-time | Yes | Yes | Yes | Yes |
| Borrower-bank | Yes | Yes | Yes | Yes |
| Observations | 1875929 | 1876192 | 1869676 | 1863093 |
| $R^2$ | 0.334 | 0.334 | 0.334 | 0.335 |
| r2_a | -0.158 | -0.158 | -0.158 | -0.158 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans h periods ahead. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

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# Robustness - different shocks

Table: Impact of securitisation on MP transmission - different shocks

| | (1) OIS3M | (2) OIS6M | (3) OIS1Y | (4) OIS2Y |
|---|---|---|---|---|
| IsScrtsn=1 × L(MP) | -0.020*** | -0.017*** | -0.017*** | -0.013*** |
| | (0.005) | (0.003) | (0.004) | (0.003) |
| L(TotAssetsLog) | -0.041 | -0.041 | -0.040 | -0.039 |
| | (0.025) | (0.025) | (0.025) | (0.024) |
| L(CET1r) | 2.055* | 2.055** | 2.056** | 2.064** |
| | (1.040) | (1.036) | (1.026) | (1.020) |
| L(ROE) | 0.036 | 0.040 | 0.044 | 0.045 |
| | (0.046) | (0.046) | (0.047) | (0.046) |
| L(LCR) | -0.004 | -0.004 | -0.004 | -0.004 |
| | (0.004) | (0.004) | (0.004) | (0.004) |
| Borrower-time | Yes | Yes | Yes | Yes |
| Borrower-bank | Yes | Yes | Yes | Yes |
| Observations | 2238705 | 2238705 | 2238705 | 2238705 |
| $R^2$ | 0.791 | 0.791 | 0.791 | 0.791 |
| r2_a | 0.644 | 0.644 | 0.644 | 0.644 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

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# Effect of securitisation type

Table: Impact of securitisation on MP transmission - share securitised loans

| | (1) TotalShare | (2) ShareSynthetic | (3) ShareTraditional | (4) BothShares |
|---|---|---|---|---|
| ShareSec × L(MP) | -0.123*** | | | |
| | (0.033) | | | |
| ShareSecSynth × L(MP) | | -0.106*** | | -0.106*** |
| | | (0.036) | | (0.034) |
| ShareSecTrad × L(MP) | | | -0.170*** | -0.171*** |
| | | | (0.064) | (0.061) |
| L(TotAssetsLog) | -0.040 | -0.039 | -0.041 | -0.040 |
| | (0.025) | (0.025) | (0.025) | (0.025) |
| L(CET1r) | 2.078** | 2.079** | 2.068** | 2.075** |
| | (1.038) | (1.040) | (1.037) | (1.038) |
| L(ROE) | 0.043 | 0.045 | 0.042 | 0.043 |
| | (0.046) | (0.046) | (0.046) | (0.046) |
| L(LCR) | -0.004 | -0.004 | -0.005 | -0.005 |
| | (0.004) | (0.004) | (0.004) | (0.004) |
| Borrower-time | Yes | Yes | Yes | Yes |
| Borrower-bank | Yes | Yes | Yes | Yes |
| Observations | 2238705 | 2238705 | 2238705 | 2238705 |
| $R^2$ | 0.791 | 0.791 | 0.791 | 0.791 |
| r2_a | 0.644 | 0.644 | 0.644 | 0.644 |

*Notes: Standard errors are clustered at the borrower and creditor level. MP shocks are expressed in standard deviation. Dependent variable is log loans. Signif. Codes: ***: 0.01, **: 0.05, *: 0.1.*

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