

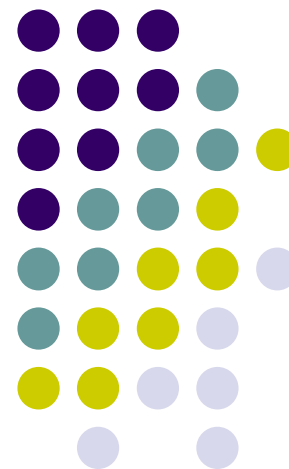
# Macroprudential and Monetary Policies: The Need to Dance the Tango in Harmony

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# Agenda

- 1) Introduction
- 2) Literature overview
- 3) Data & stylized facts
- 4) Methodology & results
- 5) Robustness checks
- 6) Conclusion

# Introduction



- In the wake of the 2007-2008 global financial crisis, macroprudential policy has attracted considerable attention from **policymakers and researchers**
- Substantial progress made in emerging and industrialised economies to put in place dedicated **institutional arrangements for macroprudential policy**
- **Main objective of macroprudential policy**: safeguard the stability of the financial system as a whole by strengthening its resilience and preventing the build-up of systemic risk



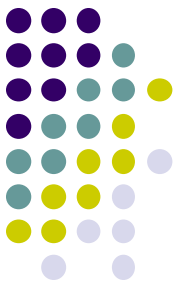
# Introduction

- Mitigating and preventing excessive growth in credit and leverage is particularly important for safeguarding financial stability  
→ **procyclical behaviour of the banking industry**
- Such behaviour tends to put upward pressure on asset prices and is often viewed as a key driver of the probability and cost of banking crises
- This is why several macroprudential tools have been designed to **curb excessive credit growth and mitigate the procyclicality of domestic credit**



# Introduction

- However, the implementation of macroprudential policies raises a **number of challenges**
- An important challenge concerns how macroprudential policy **interacts with other policies** that also have an impact on financial stability, such as fiscal and monetary policies
- Macroprudential and monetary policies pursue different primary objectives that **could be in conflict** with one another
  - each policy can have **“side effects”** on the objective of the other and make it more or less effective
  - side effects from monetary policy pose significant challenges for the conduct of macroprudential policy if they are **detrimental to financial stability**



# Introduction

- Monetary policy can have **detrimental side effects** on financial stability through various channels (IMF, 2013)

Source of financial instability	Channel	Predicted effect when $\uparrow r$ ( $\uparrow$ improves stability)	Tools to contain side effects
Borrowing constraints	Balance sheet	$\uparrow$	Caps on LTI or DSTI ratio
	Default	$\downarrow$	
Risky behaviour of financial institutions	Risk-taking	$\uparrow$	Capital buffers, leverage ratio
	Risk-shifting	$\downarrow$	Net stable funding ratio, capital buffers
Externalities through aggregate prices	Asset price	$\uparrow$	Limits on LTV ratio
	Exchange rate	$\downarrow$	FX reserve requirements, limits on FX lending, Levy on FX non-core liabilities



# Introduction

- Consensus in the theoretical literature about the **benefits of synchronisation** between macroprudential and monetary policies
- But **little is known from an empirical perspective**  
→ very few empirical studies have addressed this issue and their results are far from conclusive (Bruno et al., 2017; Zhang & Tressel, 2017; Gambacorta & Murcia, 2019)
- **Main objective of the paper:** investigate empirically for a sample of emerging and advanced economies whether the effectiveness of macroprudential policy is conditional on monetary policy conditions



# Introduction

- Findings suggest macroprudential policy is **more effective at curbing credit growth** when macroprudential and monetary policies are both working in the same direction in harmony
- **2 important results:**
  - A restrictive monetary policy enhances the impact of macroprudential tightening on domestic credit growth
  - Monetary policy helps to reduce the transmission delay of macroprudential policy actions
- First empirical paper in the literature that formally confirms the **benefits of synchronisation** between macroprudential and monetary policies





## Literature overview

- Only **3 empirical studies** assess how the monetary policy stance affects the effectiveness of macroprudential policy
- Bruno et al. (2017): sample of **12 Asia-Pacific economies** over the period 2004-2013
  - Before 2007 monetary policy usually changed in tandem with macroprudential measures, but the opposite result is found after 2007
  - Macroprudential policies effectively reduced banking inflows over the period 2004-2007, but they were not effective after 2007
  - Findings **indirectly suggest** that monetary and macroprudential policies tend to be more successful when they are pulling in the same direction



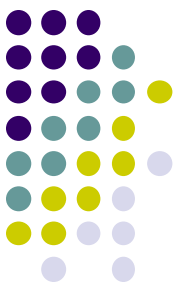
## Literature overview

- Gambacorta et al. (2017): meta-analysis techniques and credit registry data for a sample of 5 Latin American countries
  - Macroprudential tools more effective at dampening credit cycles when monetary policies are pushing in the same direction
- Zhang & Tressel (2017): sample of euro area countries
  - Assess whether the loan-to-value (LTV) ratio is more effective in containing credit growth and housing prices when monetary policy is tightened  
→ results relatively mixed



## Data & stylized facts

- **Sample:** 37 emerging and advanced economies
- **Quarterly data:** 2000Q1-2014Q4
- **Data sources:** BIS & IMF
- **Monetary policy stance:** Taylor gap
  - Gap between the shadow rate (Krippner, 2013) and the Taylor rate for the Euro area, Japan, the United Kingdom and, the United States
- **Macroprudential policy stance:** 6 alternative indicators based on Cerutti et al. (2017)
  - 5 types of prudential instrument: capital buffers, interbank exposure limits, concentration limits, LTV ratio limits, and reserve requirements
  - number of easing (-1) and tightening (+1) measures for each type of macroprudential instrument implemented by each country in each quarter



## Data & stylized facts

Table 1: Macroprudential policy instruments: number of events

Instruments	Target	No. of events	No. of net tightening events	No. of net loosening events
CB REC	Lender	33	28	5
CB CC	Lender	9	7	2
CB OS	Lender	11	7	4
CAP REQ	Lender	65	65	0
CONC	Lender	15	14	1
IBEX	Lender	16	16	0
LTV	Borrower	47	33	14
RR FC	Lender	56	33	23
RR LC	Lender	108	47	61
Total events		360	250	110
[share]		[17.86%]	[12.41%]	[5.46%]

Source: Cerutti et al. [2017b].

Note: CB REC: real estate credit related specific capital buffers; CB CC: consumer credit related specific capital buffers; CB OS: other specific capital buffers; CAP REQ: capital requirements; CONC: concentration limits; IBEX: limits on interbank exposures; LTV: loan-to-value ratio; RR LC: reserve requirements for deposit accounts denominated in local currency; RR FC: reserve requirements for deposit accounts denominated in foreign currency. The number of events is based on our sample of 37 countries from 2000Q1 to 2014Q4.

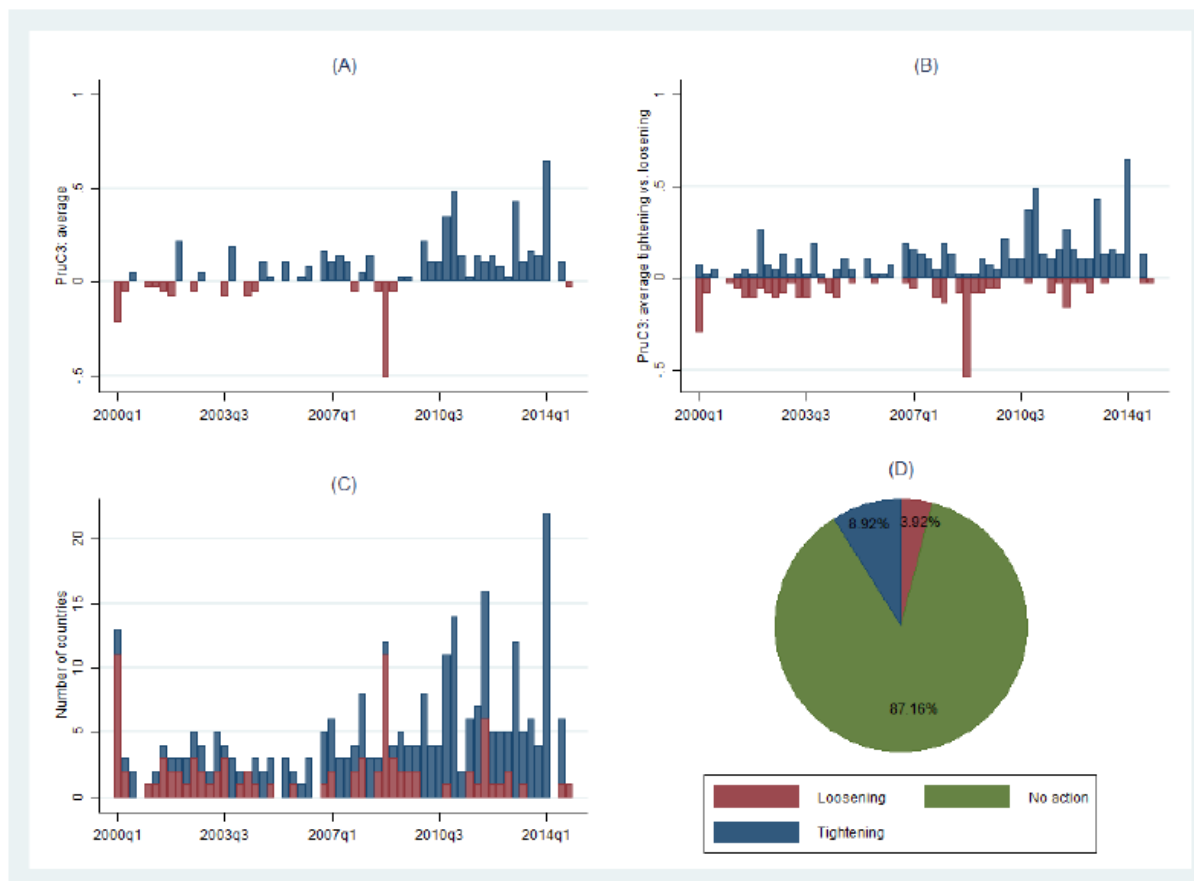


## Data & stylized facts

- 6 different measures for assessing the stance of macroprudential policies:
    - **PruC** & **PruC2** taken from Cerutti et al. (2017) and based on the sum of the quarterly changes of the nine instruments:  $\{-1, 0, +1\}$
    - **PruC3**: difference for each quarter between the sum of tightening actions and the sum of loosening actions
    - **PruC4**: PrC3 divided by the number of instruments adopted by a country
    - **PruC5**: PruC3 divided by the number of instruments actually changed during a given quarter
    - **PruC6**: similar to PruC5 but distinction between tightening and loosening actions
- PruC3 to PruC6: higher value indicates a more restrictive macroprudential policy<sub>13</sub>

# Data & stylized facts

Figure 1: Descriptive statistics on macroprudential policy stance



Source: Cerutti et al. [2017b] and authors' calculations.

Note: All panels are based on our sample of 37 countries. Panel (A) presents the cross-sectional average value of the *PruC3* index for each quarter. In panel (B), the blue bars correspond to the average value of the *PruC3* index of countries with a net tightened macroprudential policy stance, and the red bars correspond to the average value of the *PruC3* index of countries with a net loosened macroprudential policy stance. Panel (C) presents the number of countries in which the macroprudential policy stance changed over a given quarter by distinguishing between tightened and loosened stances. Panel (D) presents the share of quarterly observations with a net tightened or a net loosened macroprudential policy stance. No action corresponds to no change in all instruments or to the same number of tightening and loosening actions during a given quarter.

# Data & stylized facts

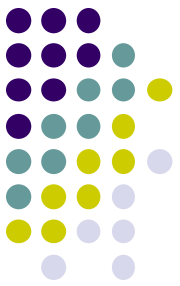
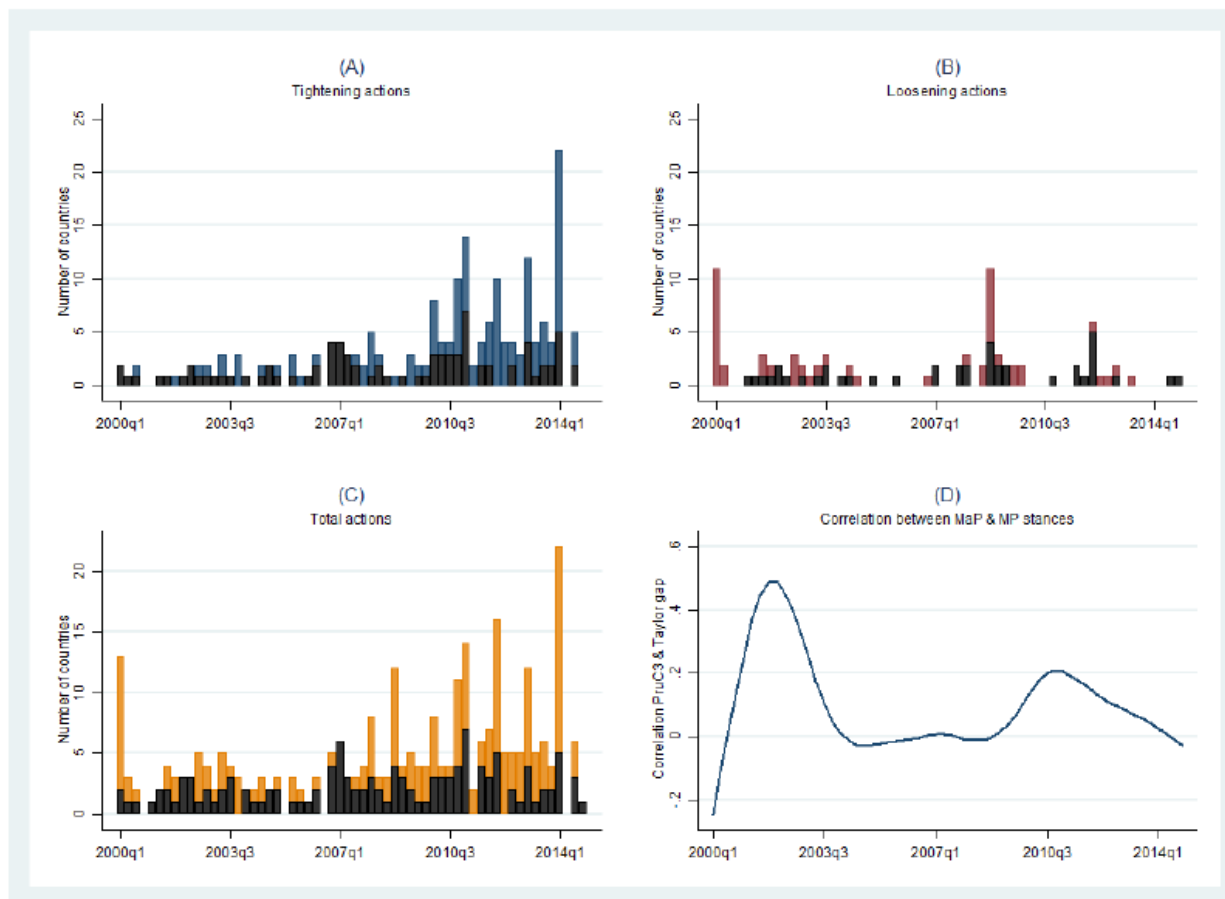
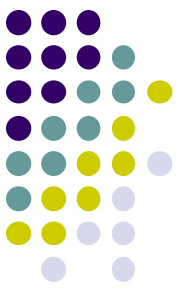


Figure 3: Synchronisation of the stances of macroprudential and monetary policies



Source: Cerutti et al. [2017b] and authors' calculations.

Note: All panels are based on our sample of 37 countries. Panels (A) and (B) represent the number of countries with a net tightened and a net loosened macroprudential policy stance respectively for each quarter. Panel (C) represents the number of countries in which the macroprudential policy stance changed over the given quarter, whatever the direction of the macroprudential policy. For each of these panels, the grey bars correspond to the number of cases where macroprudential and monetary policies move in the same direction. Panel (D) represents the trend of the cross-sectional correlation between the *PruC3* index and the Taylor gap for each quarter. The trend is obtained using the Hodrick-Prescott filter.



# Methodology & results

- Empirical analysis in 2 steps:
  - Reinvestigate whether macroprudential policy stance affect credit growth: credit to private sector and credit to households

$$\Delta Credit_{i,t} = \alpha + \sum_{k=1}^4 \beta_k MaP_{i,t-k} + \eta X_{i,t-1} + \theta Crisis_t + \mu_i + \epsilon_{i,t}$$

- Assess whether a tighter macroprudential policy is more likely to curb domestic credit growth when it is accompanied by a restrictive monetary policy, giving a positive Taylor gap

$$\Delta Credit_{i,t} = \alpha + \sum_{k=1}^4 \beta_k MaP_{i,t-k} + \sum_{k=1}^4 \gamma_k (MaP_{i,t-k} \times TG_{i,t-k} \times D_{i,t-k}) + \eta X_{i,t-1} + \theta Crisis_t + \mu_i + \epsilon_{i,t}$$



# Methodology & results



- 1<sup>st</sup> difference of the Taylor gap considered as an alternative measure of the monetary policy stance

$$\Delta Credit_{i,t} = \alpha + \sum_{k=1}^4 \beta_k MaP_{i,t-k} + \sum_{k=1}^4 \gamma_k (MaP_{i,t-k} \times \Delta TG_{i,t-k} \times I_{i,t-k}) \\ + \eta X_{i,t-1} + \theta Crisis_t + \mu_i + \epsilon_{i,t}$$

- The Taylor gap reflects whether a monetary policy is **accommodative or restrictive**, while its first difference captures the **monetary policy orientation**, meaning whether monetary policy has been tightened or loosened

# Methodology & results



Results obtained with *PruC* and *PruC2*

	<i>PruC</i>						<i>PruC2</i>					
	Credit to private sector			Credit to households			Credit to private sector			Credit to households		
	(1.1)	(1.2)	(1.3)	(1.4)	(1.5)	(1.6)	(1.7)	(1.8)	(1.9)	(1.10)	(1.11)	(1.12)
L.MaP	0.972 (1.184)	0.931 (0.959)	0.743 (1.032)	-0.377 (1.638)	-0.557 (1.403)	-0.697 (1.437)	0.980 (1.199)	0.948 (0.973)	0.758 (1.044)	-0.416 (1.651)	-0.583 (1.418)	-0.724 (1.449)
L2.MaP	-0.658 (1.132)	-0.861 (0.937)	-1.007 (0.958)	-2.377 (1.679)	-2.556* (1.471)	-2.645* (1.467)	-0.721 (1.162)	-0.914 (0.966)	-1.060 (0.987)	-2.450 (1.705)	-2.616* (1.497)	-2.704* (1.489)
L3.MaP	-2.029 (1.388)	-2.285* (1.256)	-2.475* (1.227)	-4.030** (1.914)	-4.207** (1.703)	-4.356** (1.657)	-2.082 (1.382)	-2.324* (1.258)	-2.513** (1.229)	-4.073** (1.911)	-4.234** (1.708)	-4.382** (1.662)
L4.MaP	-3.073* (1.775)	-3.670** (1.473)	-3.675** (1.425)	-5.769** (2.472)	-5.987*** (1.993)	-6.058*** (1.968)	-3.053* (1.768)	-3.632** (1.468)	-3.637** (1.420)	-5.727** (2.481)	-5.927*** (2.003)	-5.998*** (1.977)
L.(MaP × TG × D)		-1.156*** (0.231)			-0.896 (0.604)			-1.154*** (0.231)			-0.891 (0.606)	
L2.(MaP × TG × D)		-0.914*** (0.188)			-0.816* (0.433)			-0.911*** (0.189)			-0.811* (0.435)	
L3.(MaP × TG × D)		-0.824*** (0.198)			-0.771* (0.387)			-0.821*** (0.198)			-0.767* (0.388)	
L4.(MaP × TG × D)		0.215 (0.175)			-0.336 (0.515)			0.214 (0.175)			-0.337 (0.514)	
L.(MaP × Δ TG × I)			-1.078*** (0.209)			-0.822 (0.545)			-1.077*** (0.209)			-0.818 (0.547)
L2.(MaP × Δ TG × I)			-0.931*** (0.136)			-0.833** (0.328)			-0.928*** (0.136)			-0.829** (0.330)
L3.(MaP × Δ TG × I)			-0.856*** (0.111)			-0.806*** (0.271)			-0.854*** (0.111)			-0.802*** (0.271)
L4.(MaP × Δ TG × I)			0.135 (0.169)			-0.382 (0.497)			0.134 (0.169)			-0.382 (0.496)
L.Δ GDP	2.460*** (0.256)	2.155*** (0.241)	2.142*** (0.234)	2.725*** (0.296)	2.442*** (0.363)	2.429*** (0.347)	2.458*** (0.256)	2.153*** (0.242)	2.140*** (0.234)	2.719*** (0.294)	2.437*** (0.365)	2.423*** (0.348)
L.Δ Policy rate	-0.793 (0.722)	2.415 (1.628)	2.452 (1.539)	-2.406 (2.173)	-0.340 (4.511)	-0.306 (4.315)	-0.790 (0.725)	2.408 (1.631)	2.446 (1.541)	-2.403 (2.177)	-0.355 (4.516)	-0.318 (4.318)
Crisis dummy	-4.246*** (1.442)	-4.707*** (1.291)	-4.692*** (1.293)	-5.568*** (1.802)	-6.119*** (1.620)	-6.075*** (1.612)	-4.237*** (1.442)	-4.698*** (1.293)	-4.682*** (1.295)	-5.548*** (1.801)	-6.098*** (1.622)	-6.054*** (1.614)

# Methodology & results



Results obtained with *PruC3* and *PruC4*

	<i>PruC3</i>						<i>PruC4</i>					
	Credit to private sector			Credit to households			Credit to private sector			Credit to households		
	(2.1)	(2.2)	(2.3)	(2.4)	(2.5)	(2.6)	(2.7)	(2.8)	(2.9)	(2.10)	(2.11)	(2.12)
L.MaP	-0.025 (0.719)	0.343 (0.718)	0.345 (0.736)	-0.985 (0.993)	-0.879 (1.082)	-0.855 (1.092)	0.017 (5.470)	2.462 (5.471)	2.459 (5.625)	-7.708 (7.828)	-7.098 (8.364)	-6.932 (8.455)
L2.MaP	-0.682 (0.662)	-0.502 (0.685)	-0.480 (0.682)	-1.795 (1.130)	-1.596 (1.201)	-1.555 (1.200)	-4.499 (4.889)	-3.103 (4.981)	-2.962 (4.970)	-13.076 (8.719)	-11.516 (9.122)	-11.221 (9.128)
L3.MaP	-1.387 (0.825)	-1.083 (0.973)	-1.075 (0.969)	-2.430* (1.247)	-2.108 (1.430)	-2.080 (1.427)	-10.072 (6.189)	-7.906 (7.130)	-7.870 (7.099)	-18.254* (9.717)	-15.966 (10.848)	-15.774 (10.839)
L4.MaP	-1.526 (1.269)	-2.020* (1.148)	-1.983* (1.135)	-3.441* (1.941)	-3.332* (1.679)	-3.285* (1.670)	-11.690 (9.217)	-14.994* (8.449)	-14.726* (8.348)	-26.257* (14.269)	-25.305* (12.639)	-24.966* (12.572)
L.(MaP × TG × D)		-0.099*** (0.024)			-0.059 (0.062)			-0.779*** (0.192)			-0.457 (0.504)	
L2.(MaP × TG × D)		-0.079*** (0.015)			-0.060 (0.038)			-0.634*** (0.120)			-0.490 (0.306)	
L3.(MaP × TG × D)		-0.075*** (0.014)			-0.065* (0.033)			-0.602*** (0.107)			-0.515* (0.263)	
L4.(MaP × TG × D)		0.023 (0.017)			-0.025 (0.045)			0.175 (0.137)			-0.211 (0.369)	
L.(MaP × Δ TG × I)			-0.092*** (0.022)			-0.055 (0.057)			-0.726*** (0.179)			-0.429 (0.460)
L2.(MaP × Δ TG × I)			-0.074*** (0.013)			-0.058* (0.034)			-0.601*** (0.105)			-0.468* (0.271)
L3.(MaP × Δ TG × I)			-0.071*** (0.012)			-0.062** (0.029)			-0.570*** (0.090)			-0.492** (0.231)
L4.(MaP × Δ TG × I)			0.021 (0.016)			-0.023 (0.041)			0.160 (0.128)			-0.196 (0.338)
L.Δ GDP	2.466*** (0.267)	2.209*** (0.237)	2.204*** (0.234)	2.706*** (0.297)	2.504*** (0.343)	2.493*** (0.336)	2.466*** (0.267)	2.209*** (0.236)	2.204*** (0.233)	2.710*** (0.298)	2.509*** (0.343)	2.498*** (0.336)
L.Δ Policy rate	-0.733 (0.834)	1.574 (1.508)	1.633 (1.454)	-2.362 (2.471)	-1.199 (4.191)	-1.114 (4.082)	-0.766 (0.827)	1.544 (1.524)	1.602 (1.469)	-2.384 (2.473)	-1.241 (4.242)	-1.157 (4.132)
Crisis dummy	-4.294*** (1.507)	-4.735*** (1.309)	-4.684*** (1.304)	-5.738*** (1.836)	-6.173*** (1.601)	-6.101*** (1.582)	-4.303*** (1.508)	-4.744*** (1.311)	-4.692*** (1.306)	-5.742*** (1.835)	-6.178*** (1.601)	-6.106*** (1.582)

# Methodology & results



Results obtained with *PruC5* and *PruC6*

	<i>PruC5</i>						<i>PruC6</i>					
	Credit to private sector			Credit to households			Credit to private sector			Credit to households		
	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)	(3.6)	(3.7)	(3.8)	(3.9)	(3.10)	(3.11)	(3.12)
L.MaP	-0.014 (1.008)	0.384 (0.998)	0.372 (1.023)	-1.318 (1.347)	-1.175 (1.371)	-1.156 (1.388)	-0.015 (1.009)	0.399 (0.995)	0.386 (1.020)	-1.323 (1.347)	-1.175 (1.368)	-1.156 (1.385)
L2.MaP	-1.409* (0.830)	-1.255 (0.851)	-1.240 (0.858)	-3.003** (1.379)	-2.822* (1.424)	-2.776* (1.431)	-1.416* (0.829)	-1.255 (0.844)	-1.240 (0.851)	-3.029** (1.388)	-2.845* (1.426)	-2.799* (1.434)
L3.MaP	-2.526** (1.032)	-2.270* (1.145)	-2.288* (1.143)	-4.237*** (1.521)	-3.952** (1.642)	-3.940** (1.643)	-2.552** (1.031)	-2.302** (1.135)	-2.319** (1.133)	-4.287*** (1.523)	-4.008** (1.631)	-3.996** (1.634)
L4.MaP	-2.733* (1.611)	-3.226** (1.485)	-3.182** (1.467)	-5.518** (2.300)	-5.343** (2.017)	-5.297** (2.006)	-2.791* (1.594)	-3.292** (1.478)	-3.247** (1.460)	-5.587** (2.278)	-5.418** (2.003)	-5.371** (1.992)
L.(MaP × TG × D)		-0.199*** (0.048)			-0.124 (0.126)			-0.200*** (0.048)			-0.125 (0.126)	
L2.(MaP × TG × D)		-0.157*** (0.031)			-0.121 (0.078)			-0.157*** (0.031)			-0.121 (0.078)	
L3.(MaP × TG × D)		-0.150*** (0.025)			-0.127* (0.063)			-0.150*** (0.025)			-0.127** (0.062)	
L4.(MaP × TG × D)		0.041 (0.035)			-0.059 (0.099)			0.042 (0.035)			-0.058 (0.099)	
L.(MaP × Δ TG × I)			-0.186*** (0.044)			-0.117 (0.114)			-0.186*** (0.044)			-0.117 (0.115)
L2.(MaP × Δ TG × I)			-0.149*** (0.026)			-0.117* (0.068)			-0.150*** (0.026)			-0.117* (0.068)
L3.(MaP × Δ TG × I)			-0.143*** (0.020)			-0.122** (0.054)			-0.143*** (0.020)			-0.122** (0.053)
L4.(MaP × Δ TG × I)			0.036 (0.033)			-0.055 (0.091)			0.037 (0.033)			-0.055 (0.091)
L.Δ GDP	2.485*** (0.269)	2.225*** (0.238)	2.218*** (0.234)	2.732*** (0.300)	2.525*** (0.343)	2.514*** (0.335)	2.488*** (0.271)	2.228*** (0.238)	2.222*** (0.235)	2.740*** (0.303)	2.532*** (0.342)	2.521*** (0.334)
L.Δ Policy rate	-0.657 (0.794)	1.763 (1.570)	1.820 (1.503)	-2.295 (2.418)	-1.086 (4.339)	-0.997 (4.212)	-0.661 (0.789)	1.767 (1.569)	1.824 (1.502)	-2.304 (2.418)	-1.090 (4.338)	-1.001 (4.211)
Crisis dummy	-4.194*** (1.514)	-4.631*** (1.326)	-4.583*** (1.319)	-5.623*** (1.870)	-6.069*** (1.648)	-6.001*** (1.626)	-4.198*** (1.517)	-4.634*** (1.327)	-4.587*** (1.321)	-5.634*** (1.873)	-6.079*** (1.650)	-6.011*** (1.628)

# Methodology & results

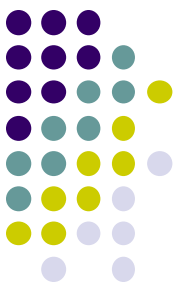


- 3 important results:
  - Overall tightening in macroprudential policies is associated with a reduction in credit growth, even if macroprudential policy actions take time to curb domestic credit growth effectively
  - The monetary policy stance matters for the effectiveness of macroprudential policy: a restrictive monetary policy enhances the impact of macroprudential tightening actions on credit growth
  - Monetary policy helps to reduce the transmission delay of macroprudential policy actions on private sector credit growth

# Robustness checks



- We check the robustness of our previous findings in 3 ways:
  - Pass-through of monetary policy shocks to bank lending rates usually sluggish and incomplete  
→ change in the nominal policy rate as a control variable replaced by the change in the bank lending rate
  - Potential sensitivity of the interest rate gap to the Taylor rule specification taken into account  
→ six alternative Taylor rules considered and median of the resulting Taylor gaps



# Robustness checks

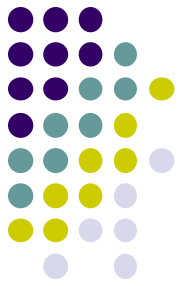
Table 6: Alternative measures of the monetary policy stance

Benchmark	Definition of the benchmark
Taylor (1)	$i_t^* = 0.9i_{t-1}^* + 0.1 \{rr_t^* + \bar{\pi} + 1.5 (\pi_t - \bar{\pi}) + 0.5\tilde{y}_t\}$
Taylor (2)	$i_t^* = rr_t^* + \bar{\pi} + 1.5 (\pi_t - \bar{\pi}) + 0.5\tilde{y}_t$
Taylor (3)	$i_t^* = 1.5\pi_{t+12} + 0.5\tilde{y}_t$
Taylor (4)	$i_t^* = 0.9i_{t-1}^* + 0.1 \{rr_t^* + \bar{\pi} + 1.5 (\pi_{t+12} - \bar{\pi}) + 0.5\tilde{y}_t\}$
Taylor (5)	$i_t^* = i_{t-1} + \Delta i_t^*$ , with $\Delta i_t^* = 0.5 (\pi_{t+12} - \bar{\pi}) + 0.5\Delta\tilde{y}_t$
Interest trend (6)	$i_t^* = HP(i_t)$
<i>Equilibrium real rate</i>	$rr_t^* = \Delta y_t^*$ , with $y_t^* = HP(y_t)$

Source: Colletaz et al. [2018].

Note:  $\tilde{y}_t = (y_t - y_t^*)$ , with  $y_t^* = HP(y_t)$ .  $HP(x)$  means Hodrick-Prescott Filter applied to variable  $x$ . All measures of the monetary policy stance are computed as the difference between the actual interest rate  $i_t$  and the corresponding benchmark  $i_t^*$ .  $\bar{\pi}$  corresponds to mean inflation over the sample period.

# Robustness checks



- No consensus in the literature on the best shadow rate to be used  
→ median of different shadow rate series used to calculate the Taylor gap







# Conclusion

- **Interaction of macroprudential and monetary policies** at the heart of the current academic and policy debate
- Monetary policy can have detrimental **side effects on financial stability**, while financial stability is the primary objective of macroprudential policy
  - monetary policy can make macroprudential policy less effective at achieving its objective
  - this suggests the need for synchronisation
- A growing number of theoretical studies address this issue and confirm the benefits of coordination between the two policies, but **little is known from an empirical standpoint**



# Conclusion

- Our paper **fills this gap in the existing literature** by providing the first empirical evidence for a large sample of economies on how monetary policy conditions impact the effectiveness of macroprudential policy
- **2 important results:**
  - A restrictive monetary policy enhances the impact of macroprudential tightening actions on domestic credit growth
  - Monetary policy helps to reduce the transmission delay of macroprudential policy actions
- Our findings confirm the **complementarities between the two policies** and the potential benefits of coordination highlighted by the theoretical literature.



## Conclusion

- **Crucial open question:** what is the appropriate institutional framework and governance structure for conducting macroprudential policy?
- No clear-cut consensus among economists about this issue
- In practice countries have implemented **different macroprudential policy frameworks**
  - Some countries have assigned macroprudential mandates to an independent council, some other countries have delegated macroprudential regulation to the central bank
- **Extension of the paper:** investigate empirically whether the institutional framework and the governance structure of macroprudential policy are the key drivers of its effectiveness



# Thank you for your attention

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