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Spring 2020

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Welcome to the Banco de España Research Update

The Banco de España is pleased to announce the release of the Spring 2020 issue of its *Research Update*. The *Update* aims to inform both academic and policy-oriented economists and financial specialists about publications, conferences, and other research activities at the Banco de España, during the semester from September 2019 to March 2020.

As usual, this issue includes several feature articles summarizing policy-relevant findings from recent Banco de España projects in diverse areas of research. First, S. Albrizio, S. Choi, D. Furceri, C. Yoon study the international spillovers of monetary policy, showing that a tightening of domestic monetary policy decreases international bank lending, due to an increase in funding costs or a rise in risk-aversion. Second, M. Delgado-Tellez, E. Moral-Benito, and J. J. Perez leverage the heterogeneity of the degree of outsourcing in the provision of public goods and services across Spanish regions and find that a higher level of services and goods outsourced are associated with higher spending-to-GDP ratios. Third, A. Erosa and B. González analyse how different forms of taxing capital income affect investment and financial policies over the life cycle of firms. They find that relative to dividends and capital gains taxation, corporate income taxation slows down growth of firms by reducing after-tax profits available for reinvesting and diminishes entry by negatively affecting the value of entrants relative to that of incumbent firms. Finally, A. Buesa, J. Población, and J. Tarancón look at the cyclical properties of different credit impairment accounting regimes. They argue that since the US GAAP prescribes that lifetime expected losses are fully provisioned at inception, credit volume is negatively correlated with realized losses. In contrast, under IFRS 9, provisions are done based on the expected losses for the following 12 months, and as such, higher provisions occur during the downswing phase of the financial cycle.

Moreover, the *Update* reports on other research news, such as recent publications and conferences. This issue also includes an interview with Carlos Thomas, the Director of the Macro-financial Analysis and Monetary Policy Department, covering his research agenda and the activities at the Banco de España related to the revision of the monetary policy strategy carried out at the European Central Bank.

We highlight these and other research developments at the Banco de España in hopes that they will interest the broader research community in Spain and internationally, and thereby contribute to an improved understanding of economic policy.

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International bank lending channel of monetary policy

SILVIA ALBRIZIO, SANGYUP CHOI, DAVIDE FURCERI, CHANSIK YOON

Summary of Banco de España Working Paper no. 1938

Since the 90s, the rapid financial integration has stimulated a sharp increase in international bank lending. In this context, should we expect a monetary policy tightening in systemic countries to increase cross-border bank lending or to trigger a sudden reversal of capital flows? Using a panel of nine systemic countries of origin and 46 recipient countries, we find that a tightening of domestic monetary policy decreases international bank lending, due to an increase in funding costs or a rise in risk-aversion.

INTERNATIONAL BANK LENDING AND MONETARY POLICY

The rapid increase in financial integration since the 90s has stimulated a sharp rise of gross cross-border banking flows. In such financially interconnected context, banks can play an important role in transmitting monetary policy changes from major advanced economies to the rest of the world. The transmission goes mainly through three channels. First, a monetary policy tightening, such as an increase in the official interest rate, translates into higher financing costs for banks operating globally. In turn, this decreases domestic and foreign bank lending, negatively affecting global activity (bank lending channel). Second, a monetary policy contraction implies a higher remuneration of safer assets, which discourages banks to invest in riskier, higher return assets, reducing global credit supply (risk-taking channel). Third, a domestic monetary policy tightening may increase cross-border bank lending by eroding the net worth and collateral value of domestic borrowers and thus leading to a reallocation of lending toward relatively safer borrowers abroad (international portfolio rebalancing channel). Therefore, domestic monetary policy could have a negative as well as positive effect on international bank lending depending on which transmission mechanism prevails.

Empirical work has not reached a consensus on the prevailing sign of these effects. Bruno and Shin (2015), Bräuning and Ivashina (2019), Morais *et al.* (2019), among others, find empirical support for the banking lending channel. Miranda-Agrippino and Rey (2019) provide evidence of the existence of the global financial cycle since they show that a tightening of the monetary policy of the United States causes a rapid increase in risk aversion and, consequently, a decline in international credit flows, particularly in the banking sector. On the contrary, Cerutti *et al.* (2017), Correa *et al.* (2017) and Avdjiev *et al.* (2018), Argimón *et al.* (2019) obtain evidence in support of the portfolio rebalancing channel (positive effect).

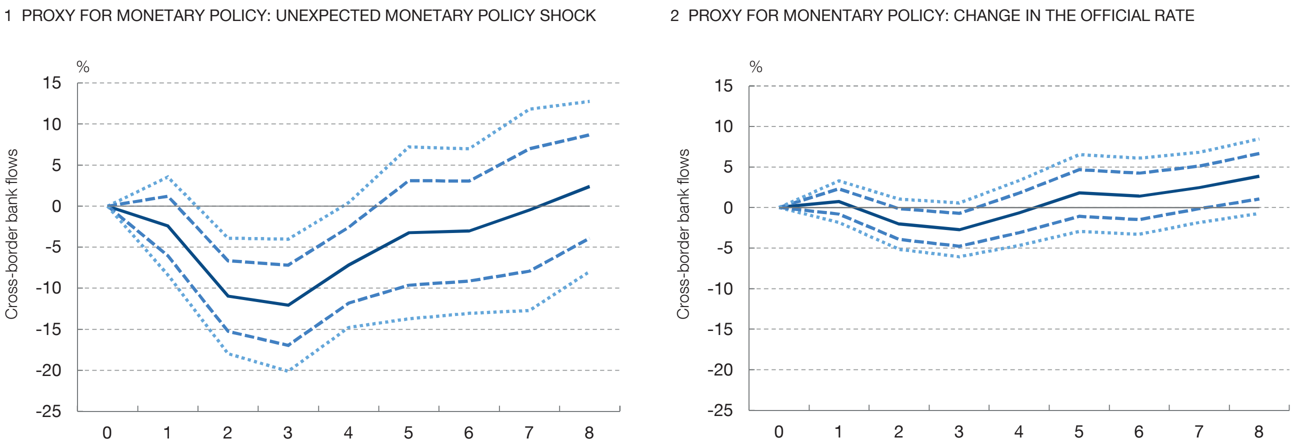
This article shows that this lack of empirical consensus is mainly a consequence of how previous contribution has identified monetary policy shocks. Since monetary policy usually responds systematically to economic conditions as if guided by a rule, it is difficult, in practice, to isolate the causal relationship that goes from monetary policy actions to economic activity. For example, a central bank could reduce interest rates due to an expected worsening of the future economic situation in the future. If this systematic behavior – call it the monetary policy rule – is not taken into account, the direction of causality would be misinterpreted and we could wrongly conclude that the economic slowdown has been caused by a monetary expansion. As Ramey (2016) argues, in order to identify the causal effect of monetary policy, it is necessary to consider unexpected deviations from the monetary rule. However, most of the mentioned studies use changes in the official interest rate as proxy for monetary policy, and such measure incorporates both unexpected changes as well as systematic responses of monetary policy to the underlying economic conditions.

MONETARY POLICY SURPRISES

We consider nine source countries (Canada, Germany, Italy, Japan, the Netherlands, Spain, Sweden, United Kingdom and the Unites States) and 46 recipient countries distributed worldwide over the period 1990 to 2012. To identify monetary policy surprises in the United States, we use Romer and Romer (2004) series of unexpected changes in monetary policy extended by Coibion (2012). The quarterly

Figure 1

EFFECT OF US MONETARY POLICY ON INTERNATIONAL BANK LENDING



NOTE: The figures show the response of cross-border bank lending to a 100 bp U.S. monetary policy shock (left-hand side panel) and to a 100 bp change in Fed Funds rate (right-hand side panel) and their 68% and 90% confidence bands. Horizon h = 0 captures th.

series of unexpected shocks are constructed as changes of the Federal Reserve's objective interest rate at each meeting of the Federal Open Market Committee (FOMC) purged of the systematic variations due to macroeconomic conditions as captured by the Fed macroeconomic projections. For the rest of the systemic economies considered, including the European ones, we use a similar methodology base on Furceri *et al.* (2018). As a robustness test for the US, we also use the identification strategy by Gertler and Karadi (2015) based on the high-frequency variation in interest rate futures contracts within a 30 minute window around policy announcements.

THE EFFECT ON INTERNATIONAL BANK LENDING

Based on the Locational Banking Statistics of the Bank for International Settlements, we find that an unexpected tightening of monetary policy in a systemic country generates a significant and economically relevant decrease in cross-border bank lending. Figure 1 present the results for the US case. The left-hand side panel shows the effect of a monetary policy tightening on international bank lending over an horizon of 8 quarters using Coibion´s unexpected changes. An unexpected tightening of monetary policy equivalent to 100 basis points generates, on average, a reduction in cross-border bank flows by over 10%, with a peak-effect of 12% during the third quarter. These results differ considerably from the evidence presented in previous works using similar banking data but different proxy for monetary policy shocks, i.e. levels or changes in the official interest rates (Correa *et al.*, 2017; Avdjiev *et al.*, 2018; Argimón *et al.*, 2019, among others). To compare our results with previous literature, the right-hand side panel of Figure 1 reports the results using the official rate as measure of monetary policy and shows a null or slightly positive effect. In the case of the other systemic economies considered (i.e. Canada, Germany, Italy, Japan, the Netherlands, Spain, Sweden, United Kingdom), the effect of un unexpected change in monetary policy has a negative effect on international lending, although smaller and delayed compared to the case of the United States.

Finally, we find that the effect is weakened during periods of high uncertainty but do not vary according to the degree of risk of the borrower country, further weakening support for the international portfolio rebalancing channel.

CONCLUSION

Our paper shows that a monetary policy tightening in economically important countries reduces international bank lending which may have local real consequences. These findings suggest that the increase in funding costs or the rise in risk-aversion induced by monetary policy unexpected changes prevail over the portfolio rebalancing needs of domestic banks.

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Outsourcing and public expenditure: an aggregate perspective with regional data

MAR DELGADO-TÉLLEZ, ENRIQUE MORAL-BENITO AND JAVIER J. PÉREZ

Summary of Banco de España Working Paper no. 1939

The generalisation of outsourcing the provision of public goods and services raises the question of whether this is a cost-efficient measure.There is no consensus about the expected impact of an increase in the outsourcing level onpublic expenditure from the theoretical literature, and there is littleempirical evidence. Thus, we exploit a panel of seventeen Spanish regions from 2002 to 2018 in order to estimate the relationship between the level of outsourcing and public spending. Our estimates suggest that for these regional governments an increase in outsourcing has entailed a rise in public spending.

Governments generally outsource part of the provision of public services and goods to the private sector. They contract private companies to carry out functions that typically belong to the public sector under the belief that the private sector can be more efficient and reduce public spending levels. Nonetheless, there is little empirical evidenceonthe link between outsourcing and public expenditure.

From the theoretical front, there are two main branches in the literature claiming opposite effects of outsourcing on spending. On the one hand, there are those that claim that outsourcing increases fiscal soundness due to higher efficiency of the private sector as private firms may innovate more and focus on reducing the production cost. Other possible explanation is the misalignment of bureaucrats' incentives with the general public's ones.

On the other hand, the detractors of the expenditure saving impact of outsourcing offer numerous arguments, namely: the existence of transaction costs in the contracting process; the apparition of the so-called "hold-up" problem, an increase in cost that may occur when contracts are complex and the government needs to renegotiate it in case of unforeseen events;the increase in cost of provision due to asymmetry of information and cost of control; fiscal illusion generated when the services are financed by a source of revenue other than taxes, e.g. fees, reducing the impression of fiscal misbehaving and encouraging an increase in the demand of public services; and the increase in cost due to corruption and the existence of "revolving doors".

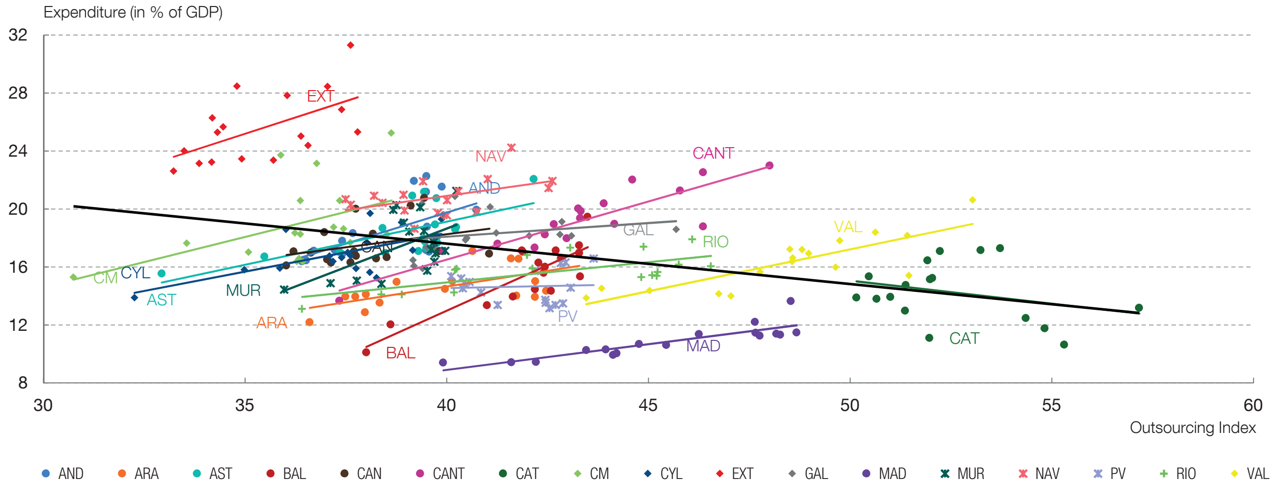
In this paper, we provide some empirical evidence about the relationship between outsourcing and public expenditure in percentage of GDP and in per capita terms. We take advantage of a good laboratory economy, the Spanish regional governments (Autonomous Communities, AC henceforth) over the period 2002 to 2018. ACs are the governmental level responsible for the main part of health and education expenditure, two main essential public services that may be outsourced. Despite the common legal framework,, ACs present substantial heterogeneity in their levels of outsourcing and public expenditure (see figure 1). A first glimpse at the data suggests that, with the exception of Catalonia, all ACs present a positive relationship between outsourcing and expenditure (see figure 1).

The outsourcing index is measured following theOECD (2011) definition, that is, the ratio of the sum of intermediate consumption and transfers in kind over total expenditure for each AC.

Based on thecross-country approach in Alonso *et al.* (2017) and Potrafke (2018), we employ two strategies to estimate the effect of outsourcing on public spending. Firstly, we control for country-specific factors affecting both variables including a region fix effect. This strategy is well suited when the omitted characteristics are time invariant.Secondly, we use instrumental variables (IV) regressions to estimate the possible causal effect. In particular, we relax the exogeneity assumption by allowing current spending-to-GDP to affect future outsourcing levels. Specifically we use panel IV estimators using lags as instrumental variables following the estimation strategy of Anderson and Hsiao (1982). Finally, we include in all specifications a rich set of control variables including economic, demographic, political, and public services quality indicators.

Figure 1

REGIONAL GOVERNMENT OUTSOURCING INDEX AND EXPENDITURE OVER GDP BY CCAA (2002-2018)



SOURCE: The General Comptroller of the State Administration (IGAE) and own calculations.

Our findings suggest that higher outsourcing levels are associated to higher public spending at the regional government level. Indeed, according to our preferred IV specification, the long-run effect of a 10 percentage points increase in the outsourcing ratio leads to an increase of 4.6 percentage points in spending-GDP-ratio, and a 84 euros increase in public spending per capita. These results are robust to the inclusion of controls for the quality of the provision of public services such as school dropouts and health status. In addition, we find that those ACs with larger level of outsourcing have not been more fiscally responsible during the years of austerity that follow the European debt crisis. Finally, we test whether an ACs with higher level of outsourcing tends to invest more, as it is the other main expenditure item in ACs budget. We test whether additional resources that may emanate from the efficiency gain produced by the outsourcing of goods and services lead to a higher level of investment. Nonetheless, we do not find any significant impact of outsourcing on investment.

Our work aims to provide empirical evidence to the significant question of whether those governments with higher level of services and goods outsourced tend to have lower spending-to-GDP ratios. We find that, at least for Spanish ACs, this is not true suggesting that there is probably not a strong gain in efficiency when outsourcing that may compensate the costs bound to the outsourcing process. Nonetheless, there are two caveats for our analysis. First, we need a granular data approach to evaluate case by case the potential gains in efficiency, however this data is not available at the moment. Second, the outsourcing process has occurred in parallel with a technology revolution that has increased the cost of production, especially in the health sector with the utilisation of new treatments and equipments.

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Taxation and the life cycle of firms

ANDRÉS EROSA AND BEATRIZ GONZÁLEZ

Summary of Banco de España Working Paper no. 1943

The aim of this paper is to understand how different forms of taxing capital income affect investment and financial policies over the life cycle of firms. Relative to dividends and capital gains taxation, corporate income taxation slows down growth of firms by reducing after-tax profits available for reinvesting. It also diminishes entry by negatively affecting the value of entrants relative to that of incumbent firms. With these mechanisms in mind, we calibrate our model economy to the US and discuss different revenue-neutral tax reforms that would lead to increases in aggregate output and capital.

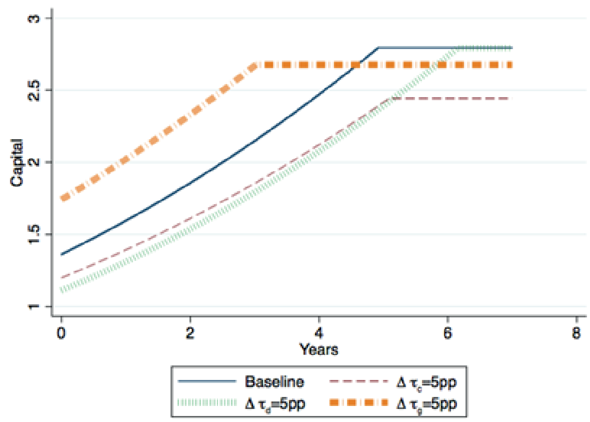
Incentivizing employment growth and having a dynamic firm environment is at the heart of most firm-related policies all over the world. Evidence showing the importance of young and small firms for employment creation (Haltiwanger *et al.* 2013) have spurred a lot of policy actions targeted towards these firms, such as tax incentives to small businesses or subsidies to firm creation. However, despite its policy importance, there is still a lack of understanding of how different simple capital taxes might affect growth of firms over the life cycle, and the decision to start a firm. In this paper, we claim that the various ways capital income can be taxed (corporate income, dividend, or capital gains taxation) have very different effects on investment and payout policies over the life cycle of firms, and hence on their life cycle growth. They also have different and asymmetric effects on the market valuation of new versus incumbent firms, and therefore on firm entry. To this purpose, we extend the (Hopenhayn and Rogerson 1993) framework of firm dynamics by introducing different ways of taxing firms' income as in (Gourio and Miao 2011) .

HOW DO TAXES IMPACT THE LIFE CYCLE OF A FIRM?

We start by theoretically analysing a simple version of the model with a deterministic fixed level of productivity determined upon entry. A firm needs to raise equity to start operating (equity issuance phase). Once the firm is set up, they continue growing by reinvesting profits in the firm (growing phase), until they reach their optimal size and start distributing dividends (maturity phase). Even in this very simple setting, each of the taxes have asymmetric effects in each of these three phases, along the lines of (Korinek and Stiglitz 2009).

Figure 1
THE LIFE CYCLE OF FIRMS

Life cycle of three identical firms in equilibriums with different taxes. Blue is the baseline: corporate tax $\tau_c = 0.34$, dividend tax $\tau_d = 0.15$, capital gains tax $\tau_g = 0.15$ and interest rate tax $\tau_r = 0.25$. Changes after an increase of 5pp of each of the tax rates one at a time, maintaining everything else constant. X-axis is years since creation of the firm. Y-axis is capital (size) of the firm. Firm is created in year 0 (equity issuance phase), grows by reinvesting (growth phase) until they reach their optimal size (maturity phase).



An increase in dividend taxes (see green dashed line of Figure 1) would not distort the investment decisions of firms in the maturity phase (this is called the 'new view' of dividend taxation). This is because this increase has proportional effects on the benefits and cost of investment. However, it decreases the amount of equity raised in the equity issuance phase, which means firms start with a smaller size and therefore the growing phase becomes longer (this is the 'traditional view' of dividend taxation). Intuitively, since the profits reinvested in the firm are not taxed by dividend taxes, the firm can effectively diminish the taxes paid by reducing (initial) equity issuance and by financing investment with retained earnings.

Increasing capital gains taxation (see yellow dashed line of Figure 1) encourages firms to issue more equity at entry stage in order to make the growth phase shorter. This is because a decrease of internal growth translates in an smaller increase of the value of the shares of the firm, which are taxed at capital gains tax rate. Furthermore, it distorts the optimal size of the firm at the maturity phase, since the return on holding firms' shares needs to increase to satisfy the non-arbitrage condition, and when technology features decreasing returns, this is attained by reducing the optimal size of the firm.

Finally, an increase in corporate income taxation (see red dashed line of Figure 1) impacts all three stages of the firm. First, it decreases the optimal size and dividends paid at maturity phase by decreasing the return on capital. Second, it decreases after-tax earnings, making it harder for firms to finance investment in the growth phase with retained earnings, which translates in firms growing at a slower pace over their life cycle. As a result, the market value of the firm decreases, which makes firms raise less equity when they are setting the firm up at the equity issuance phase.

AGGREGATE EFFECTS OF REFORMING THE TAXATION OF CAPITAL INCOME

With these mechanisms in mind, we enrich the simple model by introducing idiosyncratic productivity shocks at the firm level and capital adjustment costs and study this issue in a full general equilibrium model with endogenous entry. The model is calibrated to the US, using micro data on firms' investment and financing decisions. We use the calibrated model economy to quantitatively assess the effects of a reform that decreases the taxation of corporate income while keeping constant the tax revenue collected on capital. This tax cut is financed by an increase of all the other taxes on capital income (dividend, interest income, and capital gains taxes), which are set to a common tax rate. The purpose of the proposed policy reform is twofold. Firstly, all sources of capital income are treated symmetrically from the shareholders' perspective. Secondly, by decreasing the corporate income tax, financially constrained firms are able to accumulate profits and to reach maturity phase faster. Note that although the tax mix changes, the tax burden still falls on the shareholders, i.e. the owners of the firms.

In equilibrium, such tax policy leads to an increase in the initial size at entry, a decrease in the optimal size at maturity, and a decrease in the time to reach maturity. The decrease of corporate income taxation allows financially constrained firms to retain a larger fraction of their earnings and increase their investment. Since the ability to retain earnings is particularly relevant for young firms (they are more likely to be constrained than the average incumbent firm in the economy), the tax reform benefits mostly young firms, thereby increasing entry significantly. Aggregate output increases, accompanied by a large increase in the aggregate capital stock. Larger firm entry, together with a reallocation of resources to financially constrained firms, lead to a significant increase in aggregate TFP. The large response of firm entry is important for understanding the macroeconomic effects of the tax reform: when entry is kept fixed, the increase in output is a third and the rise in capital is half of those in the economy with endogenous entry.

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Measuring the procyclicality of impairment accounting regimes: a comparison between IFRS 9 and US GAAP

ALEJANDRO BUESA, JAVIER POBLACIÓN AND JAVIER TARANCÓN

Summary of Banco de España Working Paper no. 2003

We compare the cyclical behaviour of various credit impairment accounting regimes, namely IAS 39, IFRS 9 and US GAAP. We model the impact of credit impairments on the Profit and Loss (P&L) account under all three regimes. Our results suggest that although IFRS 9 is less procyclical than the previous regulation (IAS 39), it is more procyclical than US GAAP because it merely requests to provision the expected loss of one year under Stage 1 (initial category). Instead, since US GAAP prescribes that lifetime expected losses are fully provisioned at inception, the amount of new loans originated is negatively correlated with realized losses. This leads to relatively higher (lower) provisions during the upswing (downswing) phase of the financial cycle. Nevertheless, the lower procyclicality of US GAAP seems to come at cost of a large increase in provisions.

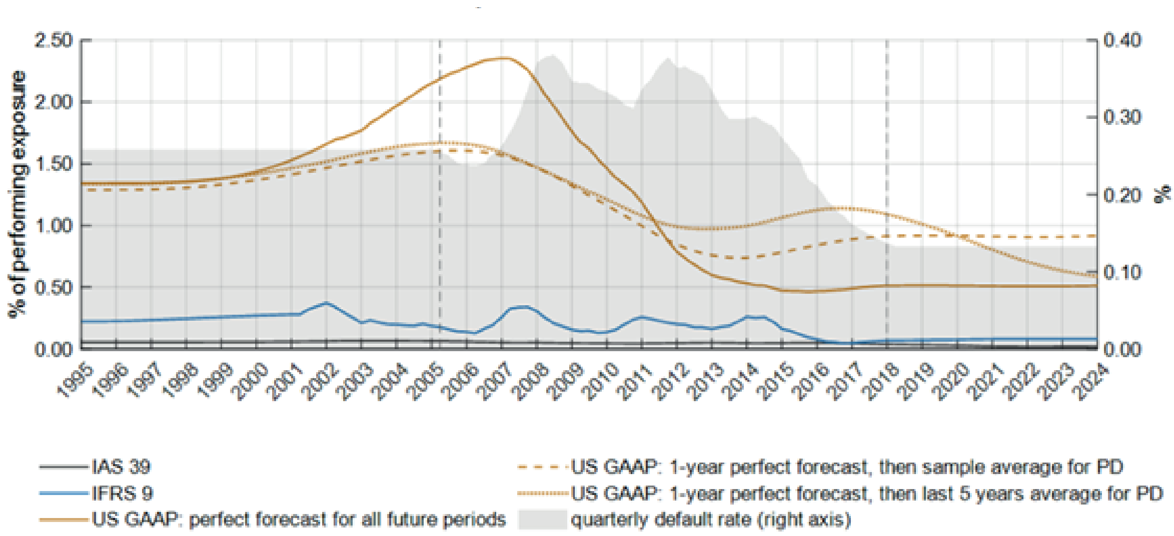
In the early years of the 21st century, the accounting of financial assets was still guided by International Accounting Standard (IAS) 39, which prescribed the use of the incurred loss model for the recognition of credit losses in the profit and loss (P&L) account. As such, if there was objective evidence that an impairment loss on a loan had been incurred, its amount needed to be calculated, although losses expected because of future events were not recognized. Following the financial crisis of the late 2000s, concerns were raised about this method. More concretely, recognizing losses on a financial asset after they had been incurred was widely criticized for being “too little, too late”. In parallel, procyclicality in banks’ financial soundness and credit supply is a well-known issue with many roots, such as the tendency to make a more lenient assessment of risk in good times than in bad ones, the amplification of shocks led by varying collateral valuations and deterioration in managerial ability.

In response to such concerns, the G20 issued a clear mandate to reform international prudential and accounting standards, endorsing the Financial Stability Forum’s report on addressing procyclicality in the financial system (FSF, 2009). The document recommended replacing the incurred loss method of provisioning with a more forward-looking expected loss approach using statistical information to identify probable future losses. The result was the publication of International Financial Reporting Standards 9 (IFRS 9). According to the new rules, a financial institution needs to recognize the expected loss for any financial asset.

The degree to which the expected credit loss (henceforth, ECL) has to be recognized depends, however, on the severity of credit quality deterioration. At origination or purchase of the asset, and as long as the condition for classification into other stages does not subsist, the value correction has to account for the expected loss for the following 12 months (Stage 1). However, if there has been a significant increase in the risk of the financial instrument from inception (Stage 2) or default (Stage 3), the institution will recognize the expected loss for the full expected lifetime. Conversely, US GAAP accounting standards follow the Current Expected Credit Loss (CECL) approach and try to prevent under-provisioning by immediately recognizing, at the moment of origination or purchase of any asset, the full amount of credit losses expected over the assets’ foreseeable lifetime.

This paper contributes to the literature that aims at establishing whether forward-looking accounting standards are actually more procyclical. There is a lack of consensus among the research conducted to date on this issue. Earlier work as well as policymakers agreed on the fact that forward-looking provisioning would reduce procyclicality; some examples are Balla and McKenna (2009), Laeven and Majnoni (2003) or Wezel *et al.* (2012). More recent contributions, however, point in the opposite direction: Abad and Suárez (2017) find that under the two forward-looking accounting standards, the impact of an exogenous increase in substandard loans on P&L and capital is greater

Figure 1
SIMULATION EXERCISE: STOCK OF PROVISIONS



than under the incurred loss approach (with the IFRS 9 impact being the greatest). They conclude, therefore, that forward-looking approaches may amplify the effect of an unexpected increase in risk, since they concentrate the impact of future losses on P&L at the beginning of a contractionary phase of the credit cycle, possibly determining negative feedback effects on credit supply just as economic conditions start to worsen.

In this paper, we will focus exclusively on the dynamics of P&L impact under the three different accounting standards (IAS 39, IFRS 9 or US GAAP) with a simulated mortgage portfolio. In the context of this paper, procyclicality is defined as the correlation with the contemporaneous evolution of credit quality, proxied by realised losses; however, it can also be defined in terms of correlation with macroeconomic variables, usually with GDP.

We propose an exercise which simulates provisions and losses under different regimes for a fictional portfolio composed only of mortgages with 20-year maturity over the years 2006-2018. Average default rates for mortgages are estimated from the Italian central credit register (Centrale dei Rischi, CR). In this dataset, however, it is not possible to separately identify multiple exposures toward the same subject nor the contractual maturity of mortgages at origination, which makes it difficult to estimate the relationship between default rates and loan age. We therefore obtain the latter using data from the European Data Warehouse (EDW), composed of more than 9 million European loans that are part of residential mortgage-backed securities (RMBS). Data on new loans for house purchases in Italy is extracted from the MFI Interest Rate Statistics (MIR), available at the European Central Bank. In our simulation exercise, in each period new loans are originated for a normalized amount that tracks the historical series of new loans for house purchases.

We model the impact of credit impairments on P&L using the different accounting regimes under various assumptions on how financial institutions incorporate information in the expectation for lifetime losses. As expected, provisions under IFRS 9 forecast realized losses approximately one year in advance (Figure 1), with the provisions for loans in Stage 1 accounting for the greatest share of the impact on P&L: provisions for Stage 2 loans do not have a significant effect. The impact on P&L under IFRS 9, therefore, appears less procyclical than under the previous regime (IAS 39, where it just coincided with realized losses), but still likely to hit financial institutions when a contractionary phase of the credit or business cycle has already started. Provisions under US GAAP appear to be less cyclical then those required under IFRS 9 under all the scenarios considered. The lower procyclicality of US GAAP, however, comes at the cost of holding a larger stock of provisions at all times. In contrast with Abad and Suárez (2017), we find that forward-looking impairment accounting systems may allow to build up provisions in advance, smoothing out the impact of losses.

Our results suggest that, in order to reduce the cyclicality of impairments, it is preferable to use an accounting method that takes into consideration the expected loss of credit portfolios over the entire lifetime of the asset, i.e., the approach followed by US GAAP. In the latter case, since for each loan provisions made at the origination date account for its lifetime expected credit loss (ECL), overall provisions tend to increase with the flow of newly originated loans, ceteris paribus. Given that origination is negatively correlated with default rates, two opposite effects influence the dynamics of provisions. While a higher new loan origination rate tends to increase provisions during credit cycle's boom phases (and vice versa during crises), it is also possible that lifetime ECL is underestimated during credit booms, leading to insufficient provisioning at inception and subsequent adjustments in the provisions held for loans originated in previous periods. Thus, the degree of cyclicality of the impact on P&L under the US GAAP framework, and how it compares with IFRS 9, cannot be disentangled beforehand but depends on which effect is empirically stronger.

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Recent working papers

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THE SPANISH PERSONAL INCOME TAX: FACTS AND PARAMETRIC ESTIMATES

ESTEBAN GARCÍA-MIRALLES, NEZIH GUNER AND ROBERTO RAMOS

Working Paper no. 1907

THE CHINA SYNDROME AFFECTS BANKS: THE CREDIT SUPPLY CHANNEL OF FOREIGN IMPORT COMPETITION

SERGIO MAYORDOMO AND OMAR RACHEDI

Working Paper no. 1908

EXPLORING TREND INFLATION DYNAMICS IN EURO AREA COUNTRIES

MÓNICA CORREA-LÓPEZ, MATÍAS PACCE AND KATHI SCHLEPPER

Working Paper no. 1909

MONETARY POLICY IMPLICATIONS OF STATE-DEPENDENT PRICES AND WAGES

JAMES COSTAIN, ANTON NAKOV AND BORJA PETIT

Working Paper no. 1910

MONETARY POLICY, CORPORATE FINANCE AND INVESTMENT

JAMES CLOYNE, CLODOMIRO FERREIRA, MAREN FROEMEL AND PAOLO SURICO

Working Paper no. 1911

DRIVERS OF PRODUCTIVITY IN THE SPANISH BANKING SECTOR: RECENT EVIDENCE

CHRISTIAN CASTRO AND JORGE E. GALÁN

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THE EFFECTS OF PENSION-RELATED POLICIES ON HOUSEHOLD SPENDING

SUSANA PÁRRAGA RODRÍGUEZ

Working Paper no. 1913

A NEW APPROACH TO DATING THE REFERENCE CYCLE

MAXIMO CAMACHO, MARÍA DOLORES GADEA AND ANA GÓMEZ LOSCOS

Working Paper no. 1914

THE GENDER PROMOTION GAP: EVIDENCE FROM CENTRAL BANKING

LAURA HOSPIDO, LUC LAEVEN AND ANA LAMO

Working Paper no. 1915

QUEST FOR ROBUST OPTIMAL MACROPRUDENTIAL POLICY

PABLO AGUILAR, STEPHAN FAHR, EDDIE GERBA AND SAMUEL HURTADO

Working Paper no. 1916

IS MARKET LIQUIDITY LESS RESILIENT AFTER THE FINANCIAL CRISIS? EVIDENCE FOR US TREASURIES

CARMEN BROTO AND MATÍAS LAMAS

Working Paper no. 1917

GENDER GAPS IN THE EVALUATION OF RESEARCH: EVIDENCE FROM SUBMISSIONS TO ECONOMICS CONFERENCES

LAURA HOSPIDO AND CARLOS SANZ

Working Paper no. 1918

A FRAMEWORK FOR DEBT-MATURITY MANAGEMENT

SAKI BIGIO, GALO NUÑO AND JUAN PASSADORE

Working Paper no. 1919

INFLATION INTERDEPENDENCE IN ADVANCED ECONOMIES

LUIS J. ÁLVAREZ, MARÍA DOLORES GADEA AND ANA GÓMEZ-LOSCOS

Working Paper no. 1920

MEASURING RETAIL TRADE USING CARD TRANSACTIONAL DATA

DIEGO BODAS, JUAN R. GARCÍA LÓPEZ, JUAN MURILLO ARIAS, MATÍAS J. PACCE, TOMASA RODRIGO LÓPEZ, JUAN DE DIOS ROMERO PALOP, PEP RUIZ DE AGUIRRE, CAMILO A. ULLOA AND HERIBERT VALERO LAPAZ

Working Paper no. 1921

JOBS MULTIPLIERS: EVIDENCE FROM A LARGE FISCAL STIMULUS IN SPAIN

MARIO ALLOZA AND CARLOS SANZ

Working Paper no. 1922

THE BENEFITS AND COSTS OF ADJUSTING BANK CAPITALISATION: EVIDENCE FROM EURO AREA COUNTRIES)

KATARZYNA BUDNIK, MASSIMILIANO AFFINITO, GAIA BARBIC, SAIFFEDINE BEN HADJ, EDOUARD CHRETIEN, HANS DEWACHTER, CLARA ISABEL GONZÁLEZ, JENNY HU, LAURI JANTUNEN, RAMONA JIMBOREAN, OTSO MANNINEN, RICARDO MARTINHO, JAVIER MENCÍA, ELENA MOUSARRI, LAURYNAS NARUŠEVIČIUS, GIULIO NICOLETTI, MICHAEL O'GRADY, SELCUK OZSAHIN, ANA REGINA PEREIRA, JAIRO RIVERA-ROZO, CONSTANTINOS TRIKOUPIS, FABRIZIO VENDITTI AND SOFIA VELASCO

Working Paper no. 1923

THE ELASTICITY OF TAXABLE INCOME IN SPAIN: 1999-2014

MIGUEL ALMUNIA AND DAVID LÓPEZ-RODRÍGUEZ

Working Paper no. 1924

FLUCTUATIONS IN GLOBAL MACRO VOLATILITY

DANILO LEIVA-LEON AND LORENZO DUCTOR

Working Paper no. 1925

DO SVARs WITH SIGN RESTRICTIONS NOT IDENTIFY UNCONVENTIONAL MONETARY POLICY SHOCKS?

JEF BOECKX, MAARTEN DOSSCHE, ALESSANDRO GALESI, BORIS HOFMANN AND GERT PEERSMAN

Working Paper no. 1926

QUALITY OF ENFORCEMENT AND INVESTMENT DECISIONS. FIRM-LEVEL EVIDENCE FROM SPAIN

DANIEL DEJUÁN AND JUAN S. MORA-SANGUINETTI

Working Paper no. 1927

PROPAGATION OF SECTOR-SPECIFIC SHOCKS WITHIN SPAIN AND OTHER COUNTRIES

MARIO IZQUIERDO, ENRIQUE MORAL-BENITO AND ELVIRA PRADES

Working Paper no. 1928

ON FINANCIAL FRICTIONS AND FIRM MARKET POWER

MIGUEL CASARES, LUCA DEIDDA AND JOSÉ E. GALDÓN-SÁNCHEZ

Working Paper no. 1929

MAPPING CHINA´S TIME-VARYING HOUSE PRICE LANDSCAPE

MICHAEL FUNKE, DANILO LEIVA-LEON AND ANDREW TSANG

Working Paper no. 1930

BEYOND THE LTV RATIO: NEW MACROPRUDENTIAL LESSONS FROM SPAIN

JORGE E. GALÁN AND MATÍAS LAMAS

Working Paper no. 1931

STAYING DRY ON SPANISH WINE: THE REJECTION OF THE 1905 SPANISH-ITALIAN TRADE AGREEMENT

JACOPO TIMINI

Working Paper no. 1932

DOMESTIC AND FOREIGN INVESTMENT IN ADVANCED ECONOMIES. THE ROLE OF INDUSTRY INTEGRATION

TERESA SASTRE AND LAURA HERAS RECUERO

Working Paper no. 1933

EXCHANGE RATE SHOCKS AND INFLATION COMOVEMENT IN THE EURO AREA

DANILO LEIVA-LEON, JAIME MARTÍNEZ-MARTÍN AND EVA ORTEGA

Working Paper no. 1934

CHILD LABOR UNDER CASH AND IN-KIND TRANSFERS: EVIDENCE FROM RURAL MEXICO

FEDERICO TAGLIATI

Working Paper no. 1935

EXTERNAL ADJUSTMENT WITH A COMMON CURRENCY: THE CASE OF THE EURO AREA

ALBERTO FUERTES

Working Paper no. 1936

ECONOMIC GROWTH, INSTITUTIONAL QUALITY AND FINANCIAL DEVELOPMENT IN MIDDLE-INCOME COUNTRIES

LAURA HERAS RECUERO AND ROBERTO PASCUAL GONZÁLEZ

Working Paper no. 1937

INTERNATIONAL BANK LENDING CHANNEL OF MONETARY POLICY

SILVIA ALBRIZIO, SANGYUP CHOI, DAVIDE FURCERI AND CHANSIK YOON

Working Paper no. 1938

OUTSOURCING AND PUBLIC EXPENDITURE: AN AGGREGATE PERSPECTIVE WITH REGIONAL DATA

MAR DELGADO-TÉLLEZ, ENRIQUE MORAL-BENITO AND JAVIER J. PÉREZ

Working Paper no. 1939

HETEROGENEOUS SPILLOVERS OF HOUSING CREDIT POLICY

MYROSLAV PIDKUYKO

Working Paper no. 1940

MODELLING REGIONAL HOUSING PRICES IN SPAIN

LAURA ÁLVAREZ ROMÁN AND MIGUEL GARCÍA-POSADA GÓMEZ

Working Paper no. 1941

THE GLOBAL FINANCIAL CYCLE AND US MONETARY POLICY IN AN INTERCONNECTED WORLD

STÉPHANE DÉES AND ALESSANDRO GALESI

Working Paper no. 1942

TAXATION AND THE LIFE CYCLE OF FIRMS

ANDRÉS EROSA AND BEATRIZ GONZÁLEZ

Working Paper no. 1943

DYNAMIC EFFECTS OF PERSISTENT SHOCKS

MARIO ALLOZA, JESÚS GONZALO AND CARLOS SANZ

Working Paper no. 1944

THE GENDER GAP IN BANK CREDIT ACCESS

PABLO DE ANDRÉS, RICARDO GIMENO AND RUTH MATEOS DE CABO

Working Paper no. 1945

THE SHERLOC: AN EWS-BASED INDEX OF VULNERABILITY FOR EMERGING ECONOMIES

IRMA ALONSO AND LUIS MOLINA

Working Paper no. 1946

FROM FIXED-EVENT TO FIXED-HORIZON DENSITY FORECASTS: OBTAINING MEASURES OF MULTI-HORIZON UNCERTAINTY FROM SURVEY DENSITY FORECASTS

GERGELY GANICS, BARBARA ROSSI AND TATEVIK SEKHPOSYAN

Working Paper no. 1947

BAYESIAN VAR FORECASTS, SURVEY INFORMATION AND STRUCTURAL CHANGE IN THE EURO AREA

GERGELY GANICS AND FLORENS ODENDAHL

Working Paper no. 1948

DEBT SUSTAINABILITY AND FISCAL SPACE IN A HETEROGENEOUS MONETARY UNION: NORMAL TIMES VS THE ZERO LOWER BOUND

JAVIER ANDRÉS, PABLO BURRIEL AND WENYI SHEN

Working Paper no. 2001

¿CÓMO AFECTA LA COMPLEJIDAD DE LA REGULACIÓN A LA DEMOGRAFÍA EMPRESARIAL? EVIDENCIA PARA ESPAÑA

JUAN S. MORA-SANGUINETTI AND RICARDO PÉREZ-VALLS

Working Paper no. 2002

MEASURING THE PROCYCLICALITY OF IMPAIRMENT ACCOUNTING REGIMES: A COMPARISON BETWEEN IFRS 9 AND US GAAP

ALEJANDRO BUESA, FRANCISCO JAVIER POBLACIÓN GARCÍA AND JAVIER TARANCÓN

Working Paper no. 2003

FROM SECULAR STAGNATION TO ROBOCALYPSE? IMPLICATIONS OF DEMOGRAPHIC AND TECHNOLOGICAL CHANGES

HENRIQUE S. BASSO AND JUAN F. JIMENO

Working Paper no. 2004

DOLLAR BORROWING, FIRM-CHARACTERISTICS, AND FX-HEDGED FUNDING OPPORTUNITIES

LEONARDO GAMBACORTA, SERGIO MAYORDOMO AND JOSÉ MARÍA SERENA

Working Paper no. 2005

STRATEGIC INTERACTIONS AND PRICE DYNAMICS IN THE GLOBAL OIL MARKET

IRMA ALONSO ÁLVAREZ, VIRGINIA DI NINO AND FABRIZIO VENDITTI

Working Paper no. 2006

THE BENEFITS ARE AT THE TAIL: UNCOVERING THE IMPACT OF MACROPRUDENTIAL POLICY ON GROWTH-AT-RISK

JORGE E. GALÁN

Working Paper no. 2007

FOREIGN DIRECT INVESTMENT AND THE EQUITY HOME BIAS PUZZLE

SVEN BLANK, MATHIAS HOFFMANN AND MORITZ A. ROTH

Working Paper no. 2008

Recent occasional papers

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MEASURING CREDIT-TO-GDP GAPS. THE HODRICK-PRESCOTT FILTER REVISITED

JORGE E. GALÁN

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THE PROCESS OF STRUCTURAL CHANGE IN THE SPANISH ECONOMY FROM A HISTORICAL STANDPOINT

VÍCTOR GONZÁLEZ-DÍEZ AND ENRIQUE MORAL-BENITO

Occasional Paper no. 1907

CAN SURVEY-BASED INFORMATION HELP ASSESS INVESTMENT GAPS IN THE EU?

PANA ALVES, DANIEL DEJUÁN AND LAURENT MAURIN

Occasional Paper no. 1908

THE SURVEY OF FINANCIAL COMPETENCES (ECF): DESCRIPTION AND METHODS OF THE 2016 WAVE

OLYMPIA BOVER, LAURA HOSPIDO AND ERNESTO VILLANUEVA

Occasional Paper no. 1909

EL ÍNDICE DE PRECIOS DE CONSUMO: USOS Y POSIBLES VÍAS DE MEJORA

LUIS JULIÁN ÁLVAREZ

Occasional Paper no. 1910

ASSESSING THE MACROECONOMIC IMPACT OF BREXIT THROUGH TRADE AND MIGRATION CHANNELS

ANTOINE BERTHOU, ÁNGEL ESTRADA, SOPHIE HAINCOURT, ALEXANDER KADOW, MORITZ A. ROTH AND MARIE-ELISABETH DE LA SERVE

Occasional Paper no. 1911

AN ESTIMATION OF THE EFFECTS OF BREXIT ON TRADE AND MIGRATION

RODOLFO CAMPOS AND JACOPO TIMINI

Occasional Paper no. 1912

A TENTATIVE EXPLORATION OF THE EFFECTS OF BREXIT ON FOREIGN DIRECT INVESTMENT VIS-À-VIS THE UNITED KINGDOM

ANA DE ALMEIDA, TERESA SASTRE, DUNCAN VAN LIMBERGEN AND MARCO HOEBERICHTS

Occasional Paper no. 1913

CICLOS ECONÓMICOS Y CLUSTERS REGIONALES EN EUROPA

MARÍA DOLORES GADEA-RIVAS, ANA GÓMEZ-LOSCOS AND EDUARDO BANDRÉS

Occasional Paper no. 1914

LA MEJORA DE LA SITUACIÓN DE LAS FINANZAS PÚBLICAS DE LAS CORPORACIONES LOCALES EN LA ÚLTIMA DÉCADA

MARIO ALLOZA AND PABLO BURRIEL

Occasional Paper no. 1915

FINANCIAL INNOVATION FOR A SUSTAINABLE ECONOMY

ANDRÉS ALONSO AND JOSÉ MANUEL MARQUÉS

Occasional Paper no. 1916

THE USE OF BVARs IN THE ANALYSIS OF EMERGING ECONOMIES

ÁNGEL ESTRADA, LUIS GUIROLA, IVÁN KATARYNIUK AND JAIME MARTÍNEZ-MARTÍN

Occasional Paper no. 2001

PUBLIC INTERVENTION IN THE RENTAL HOUSING MARKET: A REVIEW OF INTERNATIONAL EXPERIENCE

DAVID LÓPEZ-RODRÍGUEZ AND M.ª DE LOS LLANOS MATEA

Occasional Paper no. 2002

STRUCTURAL TRANSFORMATION IN THE SPANISH ECONOMY

OMAR RACHEDI

Occasional Paper no. 2003

DETERMINANTS OF INVESTMENT IN TANGIBLE AND INTANGIBLE FIXED ASSETS

MIGUEL GARCÍA-POSADA, ÁLVARO MENÉNDEZ AND MARISTELA MULINO

Occasional Paper no. 2004

UNA INTRODUCCIÓN AL DEBATE ACTUAL SOBRE LA MONEDA DIGITAL DE BANCO CENTRAL (CBDC)

JUAN AYUSO AND CARLOS CONESA

Occasional Paper no. 2005

A SECTORAL ANATOMY OF THE SPANISH PRODUCTIVITY PUZZLE

PILAR CUADRADO, ENRIQUE MORAL-BENITO AND IRUNE SOLER

Occasional Paper no. 2006

Financial stability review

The Financial Stability Review is a half-year journal published by the Banco de España that aims to act as a platform for communication and dialogue regarding issues related to financial stability, with a particular focus on prudential regulation and supervision. Its board of editors comprises internal and external professionals. All article appearing in the journal, which may be authored by Banco de España staff or researchers from other institutions, are refeered by at least one member of the board of editors.

The 2019 autumn edition of the Financial Stability contains the following articles:

ENERGY TRANSITION AND FINANCIAL STABILITY. IMPLICATIONS FOR THE SPANISH DEPOSIT-TAKING INSTITUTIONS

MARGARITA DELGADO

Financial Stability Review, Autumn 2019, 9 – 40

THE ENERGY TRANSITION AND THE FINANCIAL SYSTEM

JAIME TERCEIRO LOMBA

Financial Stability Review, Autumn 2019, 41 – 74

BUILDING A SUSTAINABLE FINANCIAL SYSTEM: THE STATE OF PRACTICE AND FUTURE PRIORITIES
SIMON DIKAU, NICK ROBINS AND MATTHIAS TÄGER
Financial Stability Review, Autumn 2019, 75 – 98

NON-BANK FINANCIAL INTERMEDIATION
ANA MARTÍNEZ-PINA GARCÍA
Financial Stability Review, Autumn 2019, 99 – 122

THE SHADOW BANKING SYSTEM AND REGULATORY ARBITRAGE: THE ETERNAL RETURN?
JOSÉ MARÍA ROLDÁN ALEGRE
Financial Stability Review, Autumn 2019, 123 – 138

CAPTURING MACROPRUDENTIAL REGULATION EFFECTIVENESS: A DSGE APPROACH WITH SHADOW INTERMEDIARIES
FEDERICO LUBELLO AND ABDELAZIZ ROUABAH
Financial Stability Review, Autumn 2019, 139 – 180

FINANCIAL SYSTEM INTERCONNECTEDNESS
JOSÉ ALONSO AND PATRICIA STUPARIU
Financial Stability Review, Autumn 2019, 181 – 200

BREXIT: UNCERTAINTIES AND CHALLENGES IN THE FINANCIAL SECTOR
PALOMA MARÍN BONA, SUSANA MORENO SÁNCHEZ, AND MARÍA GARCÍA LECUONA
Financial Stability Review, Autumn 2019, 201 – 222

SECOND FINANCIAL STABILITY CONFERENCE OF THE BANCO DE ESPAÑA AND OF THE CEMFI. MADRID, 3 AND 4 JUNE 2019
RAFAEL REPULLO AND JESÚS SAURINA
Financial Stability Review, Autumn 2019, 223 – 228

Recent publications in refereed journals

SERVICE REGULATIONS, INPUT PRICES AND EXPORT VOLUMES: EVIDENCE FROM A PANEL OF MANUFACTURING FIRMS
MÓNICA CORREA-LÓPEZ AND RAFAEL DOMÉNECH
Journal of Industrial Economics
Volume 67, Issue 2, June 2019, pp 328-371

TOWARDS A MORE RESILIENT EURO AREA
ESTHER GORDO AND IVAN KATARYNIUK
Economics and business letters
Volume 8, Issue 2, June 2019, pp 106-114

MAPPING CHINA'S TIME-VARYING HOUSE PRICE LANDSCAPE
MICHAEL FUNKE, DANILO LEIVA-LEON AND ANDREW TSANG
Regional Science and Urban Economics
Volume 78, September 2019, Article 103464

THE ELASTICITY OF TAXABLE INCOME IN SPAIN: 1999-2014
MIGUEL ALMUNIA AND DAVID LÓPEZ-RODRÍGUEZ
SERIEs-Journal of the Spanish Economic Association
Volume 10, Issue 3-4, November 19, pp 281-320

THE SPANISH PERSONAL INCOME TAX: FACTS AND PARAMETRIC ESTIMATES
ESTEBAN GARCÍA-MIRALLES, NEZIH GUNER AND ROBERTO RAMOS
SERIEs-Journal of the Spanish Economic Association
Volume 10, Issue 3-4, November 19, pp 439-477

COMPETITION AND THE WELFARE GAINS FROM TRANSPORTATION INFRASTRUCTURE: EVIDENCE FROM THE GOLDEN QUADRILATERAL OF INDIA
JOSE ASTURIAS, MANUEL GARCÍA-SANTANA AND ROBERTO RAMOS
Journal of the European Economic Association
Volume 17, Issue 6, December 2019, pp 1881-1940

MONETARY POLICY AND THE ASSET RISK TAKING CHANNEL

ANGELA ABBATE AND DOMINIK THALER

Journal of Money Credit and Banking
Volume 51, Issue 8, December 2019, pp 2115-2144

THE DECLINE IN VOLATILITY IN THE US ECONOMY. A HISTORICAL PERSPECTIVE

MARÍA DOLORES GADEA-RIVAS, ANA GÓMEZ-LOSCOS AND GABRIEL PÉREZ-QUIRÓS

Oxford Economic Papers
Volume 72, Issue 1, January 2020, pp 101–123

GROWING LIKE SPAIN: 1995-2007

MANUEL GARCÍA-SANTANA, ENRIQUE MORAL-BENITO, JOSEP PIJOAN-MAS AND ROBERTO RAMOS

International Economic Review
Volume 61, Issue 1, February 2020, pp 383-416

FINANCIAL DEVELOPMENT, DEFAULT RATES, AND CREDIT SPREADS

ALESSANDRO PERI AND OMAR RACHEDI

Economic Journal
Volume 130, Issue 626, February 2020, pp 534-553

BACKING THE INCUMBENT IN DIFFICULT TIMES: THE ELECTORAL IMPACT OF WILDFIRES

ROBERTO RAMOS AND CARLOS SANZ

Comparative Political Studies
Volume 53, Issue 3-4, March 2020, pp 469-499

INTERNATIONAL BANK LENDING CHANNEL OF MONETARY POLICY

SILVIA ALBRIZIO, SANGYUP CHOI, DAVIDE FURCERI, AND CHANSIK YOON

Journal of International Money and Finance
Volume 102, Issue 124, April 2020

MARKOV-SWITCHING THREE-PASS REGRESSION FILTER

PIERRE GUÉRIN, DANILO LEIVA-LEON AND MASSIMILIANO MARCELLINO

Journal of Business & Economic Statistics
Volume 38, Issue 2, April 2020, pp 285-302

Forthcoming articles in refereed journals

MEASURING ECONOMIC AND ECONOMIC POLICY UNCERTAINTY AND THEIR MACROECONOMIC EFFECTS: THE CASE OF SPAIN

CORINNA GHIRELLI, MARÍA GIL, JAVIER J. PÉREZ AND ALBERTO URTASUN

Empirical Economics

DO THE UNEMPLOYED PAY LOWER PRICES? A REASSESSMENT OF THE VALUE OF UNEMPLOYMENT INSURANCE

RODOLFO G. CAMPOS AND ILIANA REGGIO

Journal of the European Economic Association

IMPLICIT PUBLIC DEBT THRESHOLDS: AN OPERATIONAL PROPOSAL

MARIO ALLOZA, JAVIER ANDRÉS, JAVIER PÉREZ AND JUAN ROJAS

Journal of Policy Modeling

AN AGENT-BASED MODEL FOR THE ASSESSMENT OF LTV CAPS

ALEJANDRO BUESA, MIHA LEBER, DIMITRIOS LALIOTIS AND JAVIER POBLACIÓN

Quantitative Finance

INSTITUTIONAL AND ECONOMIC DETERMINANTS OF REGIONAL PUBLIC DEBT IN SPAIN

MAR DELGADO-TÉLLEZ AND JAVIER J. PÉREZ

Public Finance Review

EMPLOYMENT PROTECTION LEGISLATION, LABOR COURTS, AND EFFECTIVE FIRING COSTS

J. F. JIMENO, M. MARTÍNEZ-MATUTE AND J. S. MORA-SANGUINETTI

IZA Journal of Labor Economics

A SHORT TERM FORECASTING MODEL FOR THE SPANISH GDP AND ITS DEMAND COMPONENTS

ANA ARENCIBIA, ANA GÓMEZ LOSCOS, MERCEDES DE LUIS AND GABRIEL PÉREZ QUIRÓS

Economia Journal

FIRM DYNAMICS AND PRICING UNDER CUSTOMER CAPITAL ACCUMULATION

PAU ROLDAN-BLANCO AND SONIA GILBUKH

Journal of Monetary Economics

WHEN FISCAL CONSOLIDATION MEETS PRIVATE DELEVERAGING

JAVIER ANDRÉS, ÓSCAR ARCE, DOMINIK THALER AND CARLOS THOMAS

Review of Economic Dynamics

HOW DO EUROPEAN BANKS COPE WITH MACROPRUDENTIAL CAPITAL REQUIREMENTS?

SERGIO MAYORDOMO AND MARÍA RODRÍGUEZ-MORENO

Finance Research Letters

ON THE DIRECT AND INDIRECT REAL EFFECTS OF CREDIT SUPPLY SHOCKS

LAURA ALFARO, MANUEL GARCÍA-SANTANA AND ENRIQUE MORAL-BENITO

Journal of Financial Economics

HOW DOES REGULATORY COMPLEXITY AFFECT BUSINESS DEMOGRAPHY? EVIDENCE FROM SPAIN

JUAN S. MORA-SANGUINETTI AND RICARDO PÉREZ-VALLS

European Journal of Law & Economics

GLOBAL IMBALANCES FROM A STOCK PERSPECTIVE: THE ASYMMETRY BETWEEN CREDITORS AND DEBTORS

ENRIQUE ALBEROLA, ÁNGEL ESTRADA AND FRANCESCA VIANI

Journal of International Money and Finance

News

JEEA OUTSTANDING ARTICLE AWARD

Roberto Ramos has been awarded the 2020 Hicks-Tinbergen medal by the European Economic Association for the paper "Competition and the Welfare Gains from Transportation Infrastructure: Evidence from the Golden Quadrilateral of India" (with José Asturias and Manuel García-Santana). The Hicks-Tinbergen medal recognizes the best article published in the Journal of the European Economic Association over the last two years.

OUTSTANDING REFEREE AWARD

Omar Rachedi has been awarded the 2019 referee prize of the Economic Journal, which recognizes the contribution of exceptional referees with an annual award.

YOUNG ECONOMIST BEST PAPER AWARD

The paper "Macroeconomics, Firm Dynamics and IPOs" by Beatriz González received the Young Economist Best Paper Award of the 7th Workshop in Macro Banking and Finance held at Collegio Carlo Albero (Turin, Italy) on the 3rd and 4th of October 2019.

Recent conferences

Link to conferences page

7th JOINT BANCO DE ESPAÑA – CEMFI RESEARCH WORKSHOP

Madrid, 22 October 2019

On October 22, the Banco de España hosted the 7th Joing Research Workshop with CEMFI, in which researchers from both institutions discuss their recent work. This meeting continued the series of regular workshops meant to forge stronger links between the Banco de España and the wider Madrid research community.

Conference program

6th WORLD BANK-BANCO DE ESPAÑA INTERNATIONAL POLICY CONFERENCE

Madrid, 28 October 2019

On October 28, the Banco de España hosted the sixth joint policy conference with The World Bank, entitled: "Economic Policies in a Changing World". The goal of this conference is to foster the discussion between academics and policy makers on the challenges of a changing world environment and its effects on emerging market economies and their economic policies. The conference includeed a keynote address by Jaume Ventura and two round tables: an academic panel with Ricardo Reis, Daniel Gros, Joana Silva, and Jaume Ventura, and a policy panel with Manuel Caldeira Cabral, Alicia García Herrero, Enrique Alberola, and Luis Óscar Moren.

Conference programme

24th MEETING OF THE CENTRAL BANK RESEARCHERS NETWORK CEMLA

Madrid, 30-31 October 2019

On October 30 and 31, the Banco de España hosted the 24th Meeting of the Central Bank Researchers Network CEMLA. Dimitrios Tsomocos and Gianluca Violante gave the keynote speeches.

Conference programme

BANCO DE ESPAÑA – EIB CONFERENCE ON "DIGITALISATION AND INVESTMENT IN INTANGIBLE CAPITAL: THE SPANISH CASE WITHIN THE EUROPEAN UNION"

Madrid, 4 November 2019

On November 4, the Banco de España hosted a workshop on "Digitalisation and Investment in Intangible Capital: The Spanish Case within the European Union" jointly organized with the European Investment Bank (EIB). Participants include speakers from different public and private institutions, the corporate sector, and academia.

Conference program

WORKSHOP ON "HOUSING AFFORDABILITY: POLICIES IN THE RENTAL MARKET"

Madrid, 20 November 2019

On November 20, the Banco de España hosted a workshop on "Housing affordability: Policies in the rental market". The aim of this workshop was to analyze the characteristics and effects of some recent political experiences that have been carried out in various European rental markets. To this end, the organizers gathered four papers regarding various policies that are currently on the table: rent control, restrictions on holiday apartments, imposition of empty housing and social rental housing.

Conference programme

Recent economic research seminars

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WAGES, EXPERIENCE AND TRAINING OF WOMEN OVER THE LIFECYCLE

MONICA COSTA DIAS

Institute of Fiscal Studies London
2 October 2019

ECONOMIC LOSERS AND POLITICAL WINNERS. SWEDEN'S RADICAL RIGHT

JOHANNA RICKNE

Stockholm University
9 October 2019

FRONTIERS, WARFARE AND THE ECONOMIC GEOGRAPHY OF COUNTRIES: THE CASE OF SPAIN

DANIEL OTO-PERALIAS

Univeridad Pablo de Olavide
14 October 2019

WAGES, EXPERIENCE AND TRAINING OF WOMEN OVER THE LIFECYCLE

MONICA COSTA DIAS

Institute of Fiscal Studies London
2 October 2019

ARE TRADE AGREEMENTS GOOD FOR YOU?

RALPH OSSA

University of Zurich
23 October 2019

A NEW YEAR, A NEW YOU? A TWO-SELVES MODEL OF WITHIN-INDIVIDUAL VARIATION IN FOOD PURCHASES

FREDERIC VERMEULEN

Katholieke Universiteit Leuven
6 November 2019

FORECASTING WITH ECONOMIC NEWS

SEBASTIANO MANZAN

Joint Research Centre of the European Commission
13 November 2019

MONETARY POLICY IN THE GRIP OF A PINCER MOVEMENT

CLAUDIO BORIO

Bank for International Settlements
25 November 2019

THE IMPACT OF BREXIT ON UK FIRMS

PAWEL SMIETANKA

Bank of England
27 November 2019

CARBON TAXES AND STRANDED ASSETS: EVIDENCE FROM WASHINGTON STATE

STEFANO CARATTINI

Georgia State University
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CARLOS THOMAS

Director, Macro-financial Analysis and Monetary Policy Department
DG Economics, Statistics and Research

You joined the Banco de España in 2007. Can you please tell us about your background before joining the Banco, and what have been the drivers to become an economist in a central bank?

I graduated in Economics at the University of Zaragoza, after which I did a Master's Degree in Economics and Finance at CEMFI, in Madrid. Then I did my PhD in Economics and the London School of Economics. My main topic of interest during my PhD was monetary policy, so working for a central bank was a natural choice for me. The Banco de España was my preferred option, so when I received their offer, I did not have to think twice.

One of your thesis committee member is Chris Pissarides, who was awarded the 2010 Nobel Prize in Economics for his work on unemployment. He surely has influenced your research early on, since many of your papers focused on the dynamics of the labor market. Can you briefly describe this line of your work?

Chris Pissarides was certainly very influential for my research. During my PhD, I first became very interested in New Keynesian models of monetary policy. Then I became familiar with the search and matching model of the labor market developed by Chris and others, where unemployment arises in equilibrium due to search frictions in hiring and job-finding efforts by firms and unemployed workers, respectively. I then realized it would be a good idea to combine both frameworks in order to study how a central bank can optimally stabilize both inflation and unemployment, which historically have been central banks' two main stabilization objectives. That is the topic of my job market paper, which showed that if the nominal wages bargained between firms and workers are perfectly flexible, then the optimal monetary policy is strict inflation targeting, that is, keeping inflation on target at all times. However, in the more realistic case in which nominal wages are bargained only infrequently, then the central bank faces a trade-off between stabilizing inflation and stabilizing unemployment. In other words, focusing too much on one target leads to excessively large fluctuations in the other, which is not socially optimal.

Then, you switched your research interests more and more towards the analysis of monetary policy, and the role of financial frictions as a relevant transmission channel. How did you switch your research portfolio and what is the unifying theme in this strand of your work?

The financial crisis that started in 2008 obviously had a lot to do with me becoming interested in financial frictions. My longtime coauthors Óscar Arce and Javier Andrés also had much to do with it. They had worked together on models with financial frictions – monopolistic banking competition and collateral constraints on private borrowing – with the aim of understanding the long-run and cyclical implications of banking competition. I then joined them to analyze how those same financial frictions shape the optimal conduct of monetary policy. Working with them allowed me to become familiar with financial frictions models. Over the years, Óscar, Javier and I, together with other coauthors like Samuel Hurtado and Dominik Thaler, used models with collateral constraints and long-term debt to study environments with slow private sector deleveraging – such as the one experienced by Spain for many years after the crisis – and role that different macroeconomic policies – structural reforms, fiscal policy, monetary policy – can play in such circumstances.

Later, I joined forces with Galo Nuño, another longtime coauthor of mine, to build a model with a frictional financial sector with the purpose of understanding why financial intermediaries' leverage ratio – i.e. the scale of their lending activities in relation to their capital – behaves procyclically in the data and why this matters for the ups and downs in GDP, just like it did during the Great Financial Crisis.

What is your current research agenda?

In the last few years, I have focused on different topics related to monetary policy. In a paper with Galo Nuño, we studied to what extent monetary policy can improve the sustainability of sovereign debt and raise social welfare when the government cannot commit to repay it but also not to reduce its real value through inflation. Our analysis shows that, even though surprise inflation can help stabilize sovereign debt in some special circumstances, using inflation to inflate debt away at discretion is generally not a good idea, because investors will just expect higher inflation in the future and will demand higher yields accordingly. In another paper also with Galo, we analyze the optimal monetary policy in a model with heterogeneous households and nominal assets. We show that some inflation in the short run can raise social welfare by redistributing resources from lenders to borrowers, because the latter have a higher marginal utility of consumption. However, over the long run it is best not to use inflation for redistributive purposes, because the welfare costs from higher inflation become more important.

While being able to publish your papers in the leading macroeconomic journals, you also have been contributing more and more to the policy debate of the Banco, up to being nominated in December 2018 the Head of the Macro-financial Analysis and Monetary Policy Department.

Can you tell us about your professional experience and the role of researchers in policy making in the Banco?

Since I joined the Banco in 2007, I have always used my research to address policy questions that were relevant for the Spanish economy or for the euro area as a whole. These questions ranged from Spain's macroeconomic performance during the first ten years of the euro to the effects of different reforms in the housing and labor markets, the macroeconomic costs of different fiscal consolidation strategies, or the transmission and aggregate effects of the ECB's monetary policy. So for me research and policy analysis have gone hand in hand since I joined the Banco. Ever since I acquired managerial responsibilities, I have obviously had less time for research. But I have continued doing research as much as possible. I think research is crucial at helping policymakers think of policy issues. And conversely, being close to the policy debate is extremely helpful at coming up with good research ideas. All in all, my advice to young researchers at the Banco is: try to participate as much as you can in the policy analysis and debate. Not only will you enrich it with your research-based insights, but your own research will also benefit in terms of relevance, influence and visibility.

Nowadays, your Department is greatly involved in the revision of the monetary policy strategy carried out at the European Central Bank. What is the structure and aim of this revision?

A key aim of such revision is a reassessment of the ECB's quantitative formulation of price stability, the well-known inflation aim of "below, but close to, 2 percent", together with the approaches and instruments by which price stability is achieved. The Eurosystem will need to reconsider that formulation and its policy toolbox in light of the structural transformations that have taken place since the ECB last reviewed its monetary policy strategy in 2003. Key among those transformations is the apparent decline in the so-called natural real interest rate. This decline, to put it simply, implies that monetary policy will have less space for cutting its interest rates in response to future crisis and economic downturns. Understanding what this implies for the price stability objective and the best way to achieve it will be a key theme in the strategy review.

What will be the contribution of your Department - and more broadly that of the Banco de España - to this monetary policy strategy revision?

Our contribution will take place at different levels. Some of our best economists will participate in a series of Workstreams that will analyze different aspects of the strategy review. At the same time, Óscar Arce, José González Mínguez and myself, as Spanish members of the ECB's Monetary Policy Committee, will have the chance to reflect on the input provided by the Workstreams and give them guidance for further work. Finally, our Governor, together with the other members of the ECB Governing Council, will have his say in how the Workstreams' and Committees' analysis and assessment is translated into the actual decisions related to the ECB's monetary policy strategy.

Going forward, what areas of research you envisage that are likely to be policy-relevant?

Well, following the Covid-19 outbreatk, all the topics related to the economic and social impact of the pandemia, the health and macroeconomic policy response to it, and the legacy it leaves behind in our economies will take center stage, not only in the short run but also in the years to come. Of course, topics that were becoming very popular before Covid-19 will continue to develop. This is particularly true for economic research on heterogeneity, all the more so given the unequal economic and social impact of the pandemia on different households and economic groups. I think topics such as fiscal consolidation and private deleveraging will come back with full force, given the likely legacy of high public and private debt that the crisis will leave behind in most economies. And the question of how best to complete the economic governance structure of the European Union will definitely experience renewed interest, in light of the current heated debate on the European response to the crisis and the instruments available for that response.

Upcoming conferences

Link to conferences page

All conferences and events at the Banco de España have been postponed as a result of measures taken to address the Covid-19 pandemic.

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