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Highlights

Digital archives and research tools: strategies for accessing knowledge

(Rome, 10 November 2017)

On 10 November 2017, the Bank of Italy hosted a seminar on 'Digital archives and research tools: strategies for accessing knowledge' at the Carlo Azeglio Ciampi Centre for Monetary and Financial Education. The seminar was organized by Associazione ITALE together with the Paolo Baffi Library of the Bank of Italy to describe how the Bank's institutional archives were enhanced by the use of advanced technologies and to share information on best practices in designing digital architectures that can be accessed over the internet. Those in attendance included representatives of university libraries and of Italian and foreign research centres, who analysed the potential areas for development and the problems related to research and remote access tools. Emmanuele Somma, from the Paolo Baffi Library, spoke on the topic of 'Free software for digital archives'. The seminar documentation can be found on the [Associazione ITALE website](#).

Along the 'narrow path'.

Subnational governments in times of crisis

(Rome, 4 December 2017)

On 4 December 2017 the Bank of Italy hosted a seminar on local public finance, with particular reference to subnational tax autonomy, expenditure consolidation and accounting rules, with the aim of stimulating a discussion about the efficiency and equity implications of decentralization, which is gaining renewed momentum in the public debate.

More information is available on the [Bank of Italy website](#).

Forthcoming events

Bank of Italy Microsimulation Workshop

(Rome, 23 February 2018)

Microsimulation models are useful tools to evaluate the distributive effects of tax and expenditure programmes. Their development and maintenance require a significant investment in terms of data and computation owing to the high level of detail required to replicate the institutional framework. On 23 February 2018 the Bank of Italy will host an international workshop on microsimulation that will address the methodological issues relating to the building, improvement and use of microsimulation models. Furthermore, specific models – some of which aimed at studying a single country, others with a multi-country scope – will be analysed in detail. Besides focusing on technical issues, the workshop will also include more substantive, policy-oriented sessions, in which changes to the tax-benefit systems (either already enacted or still at the proposal stage) will be discussed. The programme features a keynote speech by Olivier Bargain (Bordeaux University) titled: ‘Microsimulation and welfare analysis: present and future’.

More information will be available soon on the [Bank of Italy website](#).

Workshop on ‘Human Capital’

(Rome, 2 March 2018)

The Bank of Italy is pleased to announce a workshop on ‘Human Capital’ to be held on 2 March 2018. The meeting will bring together leading economists and young researchers to discuss the role played by the accumulation of knowledge, skills and ability as a key driver of productivity and economic growth, with an emphasis on micro mechanisms and policy implications.

More information is available [here](#).

Labour market participation: Forces at work and policy challenges

(Rome, 15-16 March 2018)

The Bank of Italy and the CEPR are organizing a conference on "Labour market participation: Forces at work and policy challenges". The event will take place on 15-16 March 2018 at the Bank of Italy headquarters in Rome. The patterns of labour market participation have recently started to diverge across advanced economies, reflecting structural and demographic factors as well as the long term legacies of the Great Recession, whose impact has been felt differently across countries. A full understanding of labour supply determinants is key to gauge the cyclical response of labour markets to shocks, but also to anticipate the growth prospects of each country, and the degree of its social inclusiveness. The conference aims to provide researchers with an opportunity to present theoretical and empirical research related to these issues.

For further details, see [here](#).

20th Banca d’Italia Workshop on Public Finance

(Rome, 21-23 March 2018)

The 20th Banca d’Italia Workshop on Public Finance will be held in Rome on 21-23 March 2018. The event will focus on two main areas: (1) reform of the euro area institutional architecture, discussing issues such as the strengthening of the European Stability Mechanism, the creation of a finance ministry for the euro area, and the desirability of sovereign debt restructuring mechanisms, and (2)

Forthcoming events

the design of tax-benefit policies in advanced countries. Moreover, the workshop will explore to what extent international cooperation – most notably at EU level – can help to address the challenges posed by globalization and technological progress.

More information will be available soon on the [Bank of Italy website](#).

1st Biennial Bank of Italy and Bocconi University conference on 'Financial stability and Regulation'

(Rome, 5-6 April 2018)

The Bank of Italy and Bocconi University – BAFFI CAREFIN are organizing the first biennial conference on 'Financial stability and Regulation'. The event will take place on 5-6 April 2018 at the headquarters of the Bank of Italy in Rome. The aim of the conference is to bring together leading world scholars and policy-makers in order to discuss topics related to financial stability, financial sector regulation and the use of macroprudential policies. Itay Goldstein (Wharton School, University of Pennsylvania) and Atif Mian (Princeton University) will deliver the keynote lectures.

For further details see [here](#).

Sixth CEPR Economic History Symposium

(Rome, 22-24 June 2018)

The sixth CEPR Economic History Symposium will take place in Rome, 22-24 June 2018. The event will be organised by Stephen Broadberry (Nuffield College and CEPR) and Alfredo Gigliobianco (Banca d'Italia). The symposium aims to bring together leading researchers in the field. Papers are being sought on topics including, but not necessarily limited to: 1) Macroeconomic and financial history; 2) Economic growth in the very long run: demographic and technological factors; 3) Institutions and economic development; 4) The history of the international economy. One half day will be devoted to a policy session, exploring ways in which economic history can provide lessons for today's economic challenges. The deadline for the Call for Papers is Monday 19 February 2018, 18:00 GMT.

For further details see the [Call for Papers](#).

SEMINARS AT THE BANK OF ITALY

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Latest Working Papers

No. 1164: Are lenders using risk-based pricing in the consumer loan market? The effects of the 2008 crisis (January 2018)

Silvia Magri

This paper analyzes whether in Italy the price of consumer loans is based on borrower specific risk. Mispricing could threaten financial stability through negative effects on lenders' profitability; risk-based pricing also leads to a more efficient allocation of credit through lower prices for low-risk borrowers, with positive effects on economic growth and financial stability. The evidence available from data collected since 2006 through the Survey on Household Income and Wealth shows that consumer loan pricing has been more risk-based after the 2008 financial crisis. Households' economic and financial conditions (net wealth, number of income earners and education of the household head) became significant and economically important in influencing the interest rates in 2010-12. These are also the most important drivers of the probability of delinquency on consumer loans; lenders also focus on these variables in selecting borrowers. As a consequence of the 2008 crisis, lenders have therefore paid more attention to borrowers' credit risk not only during the selection process, but also in deciding the price of the loan.

[Full text \(pdf\)](#)

No. 1163: What will Brexit mean for the British and euro area economies? A model-based assessment of trade regimes (January 2018)

Massimiliano Pisani and Filippo Vergara Caffarelli

This paper evaluates the macroeconomic effects on the UK and the euro area of an increase in trade tariffs associated with Brexit, by simulating a dynamic general equilibrium model of the UK, the euro area, and the rest of the world (RW). Our results are as follows: first, the imposition of tariffs reduces UK exports and economic activity by a non-negligible amount; second, the macroeconomic costs for the UK are reduced if it decides unilaterally not to increase tariffs on imports from the euro area and to reduce those on imports from the RW; third, the macroeconomic costs are particularly high if the lower UK trade openness resulting from the

imposition of tariffs reduces the UK's total factor productivity; and fourth, Brexit has negative, but quite limited, effects on euro-area economic activity.

[Full text \(pdf\)](#)

No. 1162: Real exchange rate misalignments in the euro area (January 2018)

Michael Fidora, Claire Giordano and Martin Schmitz

Building upon a behavioural equilibrium exchange rate (BEER) model, estimated at a quarterly frequency since 1999 on a broad sample of 57 countries, this paper assesses whether both the size and persistence of real effective exchange rate misalignments from the levels implied by economic fundamentals have been affected by the adoption of a single currency. A comparison of real misalignments across different country groupings (euro area, non-euro area, advanced and emerging economies), shows they are smaller in the euro area than in its main trading partners. However, in the euro area real disequilibria are also more persistent, although after the global financial crisis the reactivity of real exchange rates to past misalignments increased, and therefore the persistence decreased. In the absence of the nominal adjustment channel, an improvement in the quality of regulation and institutions is found to reduce the persistence of real exchange rate misalignments, plausibly by removing real rigidities.

[Full text \(pdf\)](#)

No. 1161: Please in my back yard: the private and public benefits of a new tram line in Florence (January 2018)

Valeriia Budiakivska and Luca Casolaro

Urban agglomerations, revealing the highest levels of productivity and growth, raise severe congestion problems. This issue can be mitigated by the construction of transport facilities allowing a higher centre-suburbs permeability. The returns of similar infrastructures are under debate, especially in cities characterized by huge artistic and urbanistic constraints. The purpose of this paper is to estimate the private and public benefits of a new tramline recently built in Florence. We apply the synthetic control method on metropolitan micro-zones in order to estimate the impact of the facility on house prices in the suburbs located close to the

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tram stops. We also estimate a hedonic pricing model on individual bids downloaded from a popular real estate agency. The results, coherent in both approaches, demonstrate that houses located in proximity to the new tram network register a price increase of 200-300 euros per square meter, the 7-10 per cent of the total value. The study also confirms the presence of public benefits related to the facility in terms of accidents reduction and improved air quality.

[Full text \(pdf\)](#)

No. 1160: Pairwise trading in the money market during the European sovereign debt crisis
(December 2017)

Edoardo Rainone

This paper studies over-the-counter (OTC) trading in the unsecured interbank market for euro funds. The goal of our analysis is to identify the determinants of the probability of trading, the bilateral rate and the quantity exchanged during the European sovereign debt crisis. We show how the specific features of this market bring to a non-standard estimation framework. A dyadic econometric model with shadow rates is proposed to control for possibly endogenous matching with the counterparty. A unique dataset containing banks characteristics and bilateral trades is built and used to study the evolution of trading patterns. The estimates bring mild evidence towards the existence of shadow rates. Active monitoring decreased market access to low equity and illiquid borrowers, while dispersion in rates and quantities is mainly driven by banks' nationality, especially during the peak of the crisis.

[Full text \(pdf\)](#)

No. 1159: Banks' maturity transformation: risk, reward, and policy
(December 2017)

Pierluigi Bologna

The aim of this paper is twofold: first, to study the determinants of banks' net interest margin with a particular focus on the role of maturity transformation, using a new measure of maturity mismatch; second, to analyse the implications for banks of the relaxation of a binding prudential limit on maturity mismatch, in place in Italy until

the mid-2000s. The results show that maturity transformation is an important driver of the net interest margin, as higher maturity transformation is typically associated with higher net interest margin. However, there is a limit to this positive relationship as 'excessive' maturity transformation — even without leading to systemic vulnerabilities — has some undesirable implications in terms of higher exposure to interest rate risk and lower net interest margin.

[Full text \(pdf\)](#)

No. 1158: Targeting policy-compliers with machine learning: an application to a tax rebate programme in Italy (December 2017)

Monica Andini, Emanuele Ciani, Guido de Blasio, Alessio D'Ignazio and Viola Salvestrini

Machine Learning (ML) can be a powerful tool to inform policy decisions. Those who are treated under a programme might have different propensities to put into practice the behaviour that the policymaker wants to incentivize. ML algorithms can be used to predict the policy-compliers; that is, those who are most likely to behave in the way desired by the policymaker. When the design of the programme is tailored to target the policy-compliers, the overall effectiveness of the policy is increased. This paper proposes an application of ML targeting that uses the massive tax rebate scheme ("80 euro") introduced in Italy in 2014.

[Full text \(pdf\)](#)

No. 1157: The CSPP at work: yield heterogeneity and the portfolio rebalancing channel
(December 2017)

Andrea Zaghini

We assess the impact of the corporate sector purchase programme (CSPP), the corporate arm of the ECB's quantitative easing policy, in its first year of activity (June 2016 – May 2017). Focusing on the primary bond market, we find evidence of a significant impact of the CSPP on yield spreads, both directly on targeted bonds and indirectly via the portfolio rebalancing channel. While spreads on eligible bonds have declined since the start of the programme (by 60 basis points in 2016), non-

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eligible bonds remained unaffected until 2017, when the entire corporate market recorded a further decline in spreads of 56 basis points.

[Full text \(pdf\)](#)

No. 1156: Secular stagnation, R&D, public investment and monetary policy: a global-model perspective
(December 2017)

Pietro Cova, Patrizio Pagano, Alessandro Notarpietro and Massimiliano Pisani

We evaluate the global macroeconomic effects of fiscal and monetary policy measures to counterbalance secular stagnation by simulating a five-region New Keynesian model of the world economy, calibrated to the United States (US), the euro area (EA), Japan (JP), China (CH), and the rest of the world (RW). The model includes investment in research and development (R&D) as a factor that affects global growth. Our main findings are as follows. First, a negative efficiency shock to R&D in the main advanced economies partially replicates the observed slowdown in long-term global growth and the decrease in interest rates. Second, in the medium- and long-term, the increase in US public investment favours global growth; in the short-term, it stimulates US economic activity but reduces foreign activity. Third, in the US an accommodative monetary stance, which provokes the crowding-in effect, amplifies the short-term macroeconomic effectiveness of public investment, without inducing additional negative spillovers. Fourth, EA, JP, and CH, by simultaneously increasing public investment and adopting an accommodative monetary policy, counterbalance US short-run negative spillovers and further enhance long-term world growth.

[Full text \(pdf\)](#)

No. 1155: Optimal monetary policy and fiscal interactions in a non-Ricardian economy
(December 2017)

Massimiliano Rigon and Francesco Zanetti

This paper studies optimal discretionary monetary policy and its interaction with fiscal policy in a New Keynesian model with finitely-lived consumers and government debt. Optimal discretionary monetary policy involves debt

stabilization to reduce consumption dispersion across cohorts of consumers. The welfare relevance of debt stabilization is proportional to the debt-to-output ratio and inversely related to the households probability of survival that affects the household's propensity to consume out financial wealth. Debt stabilization bias implies that discretionary optimal policy is suboptimal compared with the inflation targeting rule that fully stabilizes the output gap and the inflation rate while leaving debt to freely fluctuate in response to demand shocks.

[Full text \(pdf\)](#)

No. 1154: Capital controls, macroprudential measures and monetary policy interactions in an emerging economy
(December 2017)

Valerio Nispi Landi

Are capital controls and macroprudential measures desirable in an emerging economy? How do these instruments interact with monetary policy? I address these questions in a DSGE model for an emerging economy whose banks are indebted in foreign currency. The model is augmented with financial frictions. The main results are as follows. First, capital controls and macroprudential policies are able to mitigate the adverse effects of an increase in the foreign interest rate. Second the desirability of these measures is shock dependent. Third, capital controls and monetary policy are complementary in addressing the trade-off between inflation and financial fluctuations.

[Full text \(pdf\)](#)

No. 1153: Systemic risk and systemic importance measures during the crisis (December 2017)

Sergio Masciantonio and Andrea Zaghini

Systemic risk and systemic importance are two different concepts that came out of the crisis and are now widely employed to assess the potential impact on the banking system as a whole of shocks that hit one specific bank. However, those two measures are often improperly used and misunderstandings arise. This paper sheds light about their meaning, measurement and information

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content. Empirically, the two measures provide different information; it is therefore worthwhile investigating both, so to have a thorough understanding of single name and aggregate systemic risk exposure. In addition, by relying on the standard risk management perspective, we propose how to integrate systemic importance and systemic risk concepts. We provide two measures of systemic risk exposure and compare them to SRISK.

[Full text \(pdf\)](#)

No. 1152: International financial flows and the risk-taking channel
(December 2017)

Pietro Cova and Filippo Natoli

During the 1990s, the increased propensity to save in emerging market economies triggered massive inflows towards safe assets in the United States; a few years later, rising dollar funding by global banks was concurrent to increasing inflows to private-label US securities. While it is well documented that foreign financial flows have eased financing conditions in the US through the compression of long-term yields, in this paper we also find significant effects on the credit spread and the VIX, suggesting a relevant risk appetite channel. Moreover, flows into the US corporate bond market, partly linked to the previous saving glut in emerging economies, also directly affected bank leverage, household indebtedness and the housing market. This evidence provides a new perspective on the global banking glut, complementary to the role of banks in the risk-taking channel of monetary policy.

[Full text \(pdf\)](#)

No. 1151: Fiscal policy uncertainty and the business cycle: time series evidence from Italy
(December 2017)

Alessio Anzuini, Luca Rossi and Pietro Tommasino

Economic uncertainty is an important factor behind macroeconomic fluctuations: in an uncertain environment, firms reduce hiring and investment, financial intermediaries are more reluctant to lend and households increase their propensity to save. In the present paper, we study the effects of the uncertainty which arises from fiscal policy decisions. We propose a new measure

of fiscal policy uncertainty (FPU). In particular, we estimate a fiscal reaction function, allowing the volatility of the shocks to be time-varying. The time series of this volatility is our proxy for FPU.

Looking at Italian data over the period 1981-2014, we find that an unexpected increase in our FPU measure has a negative impact on the economy.

One implication of this result is that the same change in the government budget can have different effects depending on whether it is associated with a reduction or an increase in FPU. Therefore, the neglect of FPU may partly explain why the size (and sign) of fiscal multipliers differs so much across existing empirical studies.

[Full text \(pdf\)](#)

No. 1150: Public investment and monetary policy stance in the euro area
(December 2017)

Lorenzo Burlon, Alberto Locarno, Alessandro Notarpietro and Massimiliano Pisani

This paper evaluates the macroeconomic impact of a programme for public infrastructure spending in the euro area (EA) under alternative assumptions about funding sources and the monetary policy stance. The quantitative assessment is made by simulating a dynamic general equilibrium model of a monetary union with region-specific fiscal policy. The main results are the following. First, EA-wide stimuli are more effective than unilateral (region-specific) stimuli. Second, under EA-wide stimulus, the fiscal multiplier is close to 2 if the forward guidance (FG) on the short-term policy rate holds. Third, if the monetary authority keeps down both the policy rates (with FG) and the long-term interest rates (with quantitative easing), the fiscal multiplier exceeds 3 at peak and investment spending is self-financing. Fourth, the financing method is relevant: debt financing, particularly under an accommodative monetary policy stance and if the sovereign spreads do not increase, is more growth-friendly than tax financing in the short-term (but not in the long-term). Fourth, the effectiveness of the fiscal stimulus is larger if government spending is directed towards productive goods and its implementation occurs efficiently and without delays.

[Full text \(pdf\)](#)

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No. 1149: Looking behind the financial cycle: the neglected role of demographics (December 2017)

Alessandro Ferrari

Data demonstrate a correlation between demographic variables and financial cycle: an increase in the working-age population is associated with an expansion of the financial cycle,

that is, credit growth and increased housing prices. To account for this stylized fact, this paper uses an OLG model with data on housing prices, life-cycle of income, and consumption. A transitory baby boom, which increases the working-age population, leads to higher housing prices and household borrowing.

[Full text \(pdf\)](#)

Other recent Working Papers

October 2017

No. 1148: Investment decisions by European firms and financing constraints

Andrea Mercatanti, Taneli Mäkinen and Andrea Silvestrini

No. 1147: Consistent inference in fixed-effects stochastic frontier models

Federico Belotti and Giuseppe Ilardi

No. 1146: Internal capital markets in times of crisis: the benefit of group affiliation in Italy

Raffaele Santioni, Fabio Schiantarelli and Philip E. Strahan

No. 1145: A Financial Conditions Index for the CEE economies

Simone Auer

No. 1144: Leaving your mamma: why so late in Italy?

Enrica Di Stefano

No. 1143: Capital misallocation and financial development: a sector-level analysis

Daniela Marconi and Christian Upper

No. 1142: Monetary policy in times of debt

Mario Pietrunti and Federico M. Signoretti

No. 1141: A quantitative analysis of risk premia in the corporate bond market

Sara Cecchetti

September 2017

No. 1140: Natural rates across the Atlantic

Andrea Gerali and Stefano Neri

No. 1139: Credit misallocation during the European financial crisis

Fabiano Schivardi, Enrico Sette and Guido Tabellini

No. 1138: Tony Atkinson and his legacy

R. Aaberge, F. Bourguignon, A. Brandolini, F. H. G. Ferreira, J. C. Gornick, J. Hills, M. Jäntti, S. P. Jenkins, E. Marlier, J. Micklewright, B. Nolan, T. Piketty, W. J. Radermacher, T. M. Smeeding, N. H. Stern, J. Stiglitz and H. Sutherland

No. 1137: On secular stagnation and low interest rates: demography matters

Giuseppe Ferrero, Marco Gross and Stefano Neri

No. 1136: Macroeconomic effects of non-standard monetary policy measures in the euro area: the role of corporate bond purchases

Anna Bartocci, Lorenzo Burlon, Alessandro Notarpietro and Massimiliano Pisani

No. 1135: Legislators' behaviour and electoral rules: evidence from an Italian reform

Giuseppe Albanese, Marika Cioffi and Pietro Tommasino

No. 1134: Credit demand and supply: a two-way feedback relation

Ugo Albertazzi and Lucia Esposito

No. 1133: The real effects of relationship lending

Ryan Banerjee, Leonardo Gambacorta and Enrico Sette

No. 1132: Low frequency drivers of the real interest rate: a band spectrum regression approach

Fabio Busetti and Michele Caivano

No. 1131: Venture capitalists at work: what are the effects on the firms they finance?

Raffaello Bronzini, Giampaolo Caramellino and Silvia Magri

Latest Occasional Papers

No. 423: **Oil price and inflation expectations** (January 2018)

Cristina Conflitti and Riccardo Cristadoro

In line with other recent studies, we find a statistically significant impact of oil price changes on long run inflation expectations in the euro area since the global financial crisis. However, over the same period, (i) oil prices comoved with economic indicators, such as stock prices, and (ii) the correlation between short and long run expectations increased. Once these factors are taken into account, the effect of oil prices on long-term inflation expectations is no longer significant. This suggests that the link between oil prices and long term inflation expectations is not direct, but rather the result of underlying factors: the prolonged feeble economic conditions and the possible de-anchoring of long-run inflation expectations.

[Full text \(pdf\)](#)

No. 422: **Productivity growth in Italy: a tale of a slow-motion change** (January 2018)

Matteo Bugamelli, Francesca Lotti (eds.), Monica Amici, Emanuela Ciapanna, Fabrizio Colonna, Francesco D'Amuri, Silvia Giacomelli, Andrea Linarello, Francesco Manaresi, Giuliana Palumbo, Filippo Scoccianti, Enrico Sette

Productivity is the main factor holding back long-term economic growth in Italy. Since the second half of the 1990s, productivity growth has been feeble both by historical standards and compared with the other main euro area countries. Understanding the reasons for such a performance and finding the most effective policy levers is crucial to increase Italy's potential growth rate. Against this background, we provide a detailed analysis of the data and a critical review of the available empirical evidence to identify both the structural weaknesses limiting productivity growth and the strengths of the Italian productive system that may support it looking forward. Since the end of the 1990s and more intensively since the second half of 2011, the reform effort has been particularly effective in the regulation of product and labor markets and industrial policy. On other factors which are very relevant for productivity dynamics, the reform action has been less effective so far.

[Full text \(pdf\)](#)

No. 421: **Internal capital markets in Italian business groups: evidence from the financial crisis** (January 2018)

Raffaele Santioni and Ilaria Supino

Using unique detailed data, we describe the role of internal capital markets in Italian business groups before and after the financial crisis, an exogenous event which provides an ideal setting to assess whether the working of internal capital markets helps group-affiliated firms to mitigate external financial constraints. Our findings support the hypothesis that internal capital markets are typically activated by firms standing at the top of the control chain given their easier access to external borrowing. Larger and more profitable firms serve as internal suppliers of capital and support financially constrained group members that struggle to stay viable. We also show that firms affiliated to larger and diversified groups benefit from the existence of internal mechanisms of resource reallocation that can substitute external finance when it becomes more expensive and hard to access. During the crisis, group-affiliated firms were more likely to survive than unaffiliated firms.

[Full text \(pdf\)](#)

No. 420: **Corporate liquidity in Italy and its increase in the long recession** (January 2018)

Davide Dottori and Giacinto Micucci

In this paper we analyse the evolution over time and the determinants of corporate liquidity in Italy, for which the empirical literature is still scant. Using a very large sample of firms for the period 2002-15 (about 460,000 firms per year on average), we document a substantial increase in cash holdings since 2011. We show that the rise in the cash ratio is mainly related to macro factors common to all firms. Among these macro factors, a strong correlation emerges with the lower opportunity cost of holding cash, as measured by the interest rate decline. We also assess the role of cash determinants at the firm level, relating them to different motives for holding cash, such as precautionary reasons, transaction costs, and the effects of information

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asymmetries in financial markets. Among firm-specific factors, the liquidity rise was initially linked primarily to the fall in investment and then to improved cash flows and enhanced deleveraging.

[Full text \(pdf\)](#)

No. 419: Analyzing the structural transformation of commodity markets: financialization revisited
(January 2018)

Filippo Natoli

The first decade of the 21st century saw wide fluctuations in commodity prices and a massively increased participation of financial investors in the commodity derivatives markets. The investigation of whether the presence of financial investors was responsible for these fluctuations - and, more in general, whether large trades affected futures and spot prices - has yielded mixed results in the literature. We take up this question by linking financialization to the ongoing structural transformation of the commodity markets. First, we discuss issues related to the identification of the price effects of financialization; then, we present models of commodity markets with heterogeneous agents and informational frictions and discuss the role of financial investors as the counterparts of commercial hedgers. Lastly, we suggest some avenues for future research, including the possible implications of the shale revolution and of the trading of commodity options in the financialization process.

[Full text \(pdf\)](#)

No. 418: Interbank Payment System architecture from a Cyber Security perspective
(January 2018)

Antonino Fazio and Fabio Zuffranieri

This paper outlines how a paradigm shift is required when approaching cyber risk management for interbank payment systems, which are affected by the growing interconnectedness of systems, the digitalization of financial services and continuously evolving cyber threats. In this scenario, cyber threats may derive from a wider number of actors, who are constantly active on

the Internet and able to exploit an increasing number of vulnerabilities and attack vectors to achieve their goals. Financial institutions should therefore assume that specific cyber threats can overcome any defence. Firstly, the paper outlines the theoretical reasons for this necessary paradigm shift; secondly, it aims to highlight the importance of all the stakeholders in strengthening the cyber resilience of payment systems, in particular the central and enabling role of messaging service operators, by providing an analysis of a real case study, the recent Central Bank of Bangladesh cyber fraud; and finally, the paper aims to encourage discussion on the new paradigm and the adequacy of current regulatory frameworks and supervisory approaches.

[Full text \(pdf\)](#)

No. 417: Risks and challenges of complex financial instruments: an analysis of SSM banks
(December 2017)

R. Roca and F. Potente (coordinators), L. G. Ciavoliello, A. Conciarelli, G. Diprizio, L. Lodi, R. Mosca, T. Perez, J. Raponi, E. Sabatini, A. Schifino

We investigate the valuation risk affecting financial instruments classified as L2 and L3 for accounting purposes. These are instruments that are not directly traded in active markets and are often relatively complex, opaque and illiquid. There is a huge volume of L2 and L3 instruments in the balance sheets of SSM banks (around €6.8 trillion worth, considering both assets and liabilities). We argue that the complexity and opacity of these instruments create substantial room for discretionary accounting and prudential choices by financial intermediaries, which have incentives to use this discretion to their advantage. The current regulatory reporting standard is not sufficient to make a comprehensive assessment of the overall risks stemming from L2 and L3 instruments. We highlight that these instruments share some characteristics with NPLs (illiquidity, opacity), and argue that the risk they pose might also be comparable.

[Full text \(pdf\)](#)

Latest Occasional Papers

No. 416: **Recent developments of Italy's industrial relations system** (December 2017)

Francesco D'Amuri and Raffaella Nizzi

The article reviews the recent developments of Italy's industrial relations system, covering both bargaining rules and outcomes. An increasing fragmentation is observable in collective bargaining at the national level, with the spread of new agreements amongst small and recently created associations of workers and employers, leading to lower labor costs. The role of decentralized bargaining has remained secondary and subordinate to the provisions decided at the national level, although several - gradually more generous - tax breaks have been introduced in order to encourage the diffusion of firm-level wages. Giving decentralized bargaining a greater role in setting wages and in labour organization would allow for a better alignment of wage growth and increases in productivity, relaxing some of the rigidity in national bargaining, especially in terms of the duration of agreements and of the automatic indexing mechanisms, which risk making inflation more persistent.

[Full text \(pdf\)](#)

No. 415: **Patterns of convergence (divergence) in the euro area: profitability versus cost and price indicators** (December 2017)

Monica Amici, Emmanuele Bobbio and Roberto Torrini

We analyse patterns of convergence (divergence) across euro-area countries in manufacturing since monetary union and find that not only costs, but also profitability have followed divergent paths. We further find that profitability developments only partially overlap with those of unit labour costs and producer prices, more extensively studied in the literature. Considering the largest countries, profitability in manufacturing in Germany and Spain has risen by comparison with non-tradables and with respect to France and Italy, where profit margins in manufacturing have declined and have lost ground with respect to the non-tradable sector. We show that these developments are correlated to the

relative export performance of these countries. This correlation also holds in a two digit sector-level panel analysis, comprising all the euro area countries that first entered the monetary union. This is consistent with the recent international trade literature, according to which successful exporting firms, which are more efficient or produce better products, also charge higher mark-ups. Turning to Italy, after a protracted decline both export shares and profit margins in manufacturing have improved in recent years, which is consistent with a recovery in external competitiveness.

[Full text \(pdf\)](#)

No. 414: **What does the heterogeneity of the inflation expectations of the Italian firms tell us?** (December 2017)

Laura Bartiloro, Marco Bottone and Alfonso Rosolia

Quite a lot. We investigate how the cross-sectional heterogeneity of firms' inflation expectations reflects information availability and awareness of recent macroeconomic developments, observable firm characteristics and broader macroeconomic developments using the Bank of Italy's survey on businesses' inflation and growth expectations. We find that: on average about half of the dispersion of expectations is traceable to a lack of information about the most recent price developments; firms incorporate new information into their expectations within a quarter; the dispersion of expectations is related in a statistically significant way to some important aggregate economic variables, and it is greater when current inflation is farther away from the ECB's price stability goal. Since 2015 the weight attributed to prior beliefs of low inflation has steadily increased and the uncertainty surrounding them has decreased. Furthermore, since 2014 there has no longer been an empirical connection between the dispersion of expectations and the distance from the ECB price stability. These two facts suggest an increased risk of inflation expectations being de-anchored.

[Full text \(pdf\)](#)

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No. 413: Wage growth in the euro area: where do we stand?
(December 2017)

Guido Bulligan, Elisa Guglielminetti and Eliana Viviano

One of the key questions about the current economic recovery in the euro area is why the decline in unemployment recorded since the second half of 2013 has been accompanied by subdued growth in nominal wages. In this paper we adopt a Phillips curve framework to assess whether alternative indicators of labour market slack can explain the current modest wage dynamics in the euro area and in its five largest economies. Our results suggest that the intensive margin of labour utilization plays a relevant role in wage growth: our estimates indicate that the shape of the Phillips curve becomes flatter for lower levels of hours per worker, implying that wage growth is less responsive to unemployment. Looking ahead, a significant recovery in the intensive margin appears key to achieve a robust increase in nominal wage growth.

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No. 412: The impact of a new airport on international tourism: the case of Ragusa (Sicily)
(December 2017)

Francesco David and Giuseppe Saporito

Airports play a crucial role in connecting places and boosting local economic development; notwithstanding this, empirical evidence on the subject is relatively limited. This paper estimates the impact of a new airport in Ragusa, in southeastern Sicily, on international tourism flows in the area, using a synthetic control approach. Connecting by air a relatively peripheral and isolated area of Sicily with a high tourism potential has made it possible to increase by about one fifth the number of nights spent by foreign tourists (for over 5,100 additional nights), generating €434 thousand more in tourist expenditure per month.

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No. 411: Firms' financial surpluses in advanced economies: the role of net foreign direct investments
(November 2017)

Tatiana Cesaroni, Riccardo De Bonis and Luigi Infante

According to macroeconomic predictions firms are expected to be net borrowers: the net change of their financial assets should be smaller than the net change of their financial liabilities. However, since the mid-1990s, the non-financial sector has been on average a net lender in countries such as Japan, the UK, Germany and the Netherlands. Conversely firms remained on average net borrowers in countries such as France, Italy and the US. Using financial accounts, we investigate the sources of corporate sector surpluses and deficits applying panel data techniques. Our statistics include 18 industrial countries over the period 1995-2014. We find that firms' surpluses are structurally linked to net foreign direct investments. The econometric results are robust to the use of variables that control for the business cycle, such as the output gap, the ratio of corporate investment to GDP, firms' profits and leverage, and taxation.

[Full text \(pdf\)](#)

No. 410: Investing in the electric utilities sector: the implications of carbon risk
(November 2017)

Enrico Bernardini, Johnny Di Giampaolo, Ivan Faiella and Riccardo Poli

The decarbonization process has made the traditional value-creation model of companies operating in the electricity sector (energy utilities - UEN) obsolete, particularly affecting those with a greater share of fossil fuels in their energy mix that have been forced to write down their carbon-intensive activities with a negative impact on operating income, equity and leverage. Institutional investors have a significant exposure to UEN risk capital and debt: if the transition process towards a low-carbon system is faster than expected by the market, the risk that these weaknesses may spread across the financial system shouldn't be underestimated. Analyses based on risk-premium factor models show that there was a significant low-carbon premium

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during the years in which the decarbonization process increased; in the period considered, an investment strategy that focused more on low-carbon companies would have delivered higher returns without modifying the overall risk profile.

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No. 409: Household investments through Italian asset management products (November 2017)

Andrea Cardillo and Massimo Coletta

This study is the first to analyse the portfolio investments underlying the Italian asset management products held by Italian households in the period 2014-2016. The indirect portfolio is primarily composed of Italian government bonds, while the proportion of Italian corporate bonds and shares is negligible. The share of the bonds and equities issued by foreign intermediaries and firms rose over the three years: at the end of 2016, Italian households were investing a greater amount indirectly in French and US non-financial corporations than in Italian non-financial corporations. The reclassification of indirect investments leads to an increase in the share of Italian government bonds and investments in foreign debt securities and mutual funds shares in Italian households' total financial assets.

[Full text \(pdf\) in Italian only](#)

No. 408: Municipal socialism or municipal capitalism? The performance of local public enterprises in Italy (November 2017)

Nicola Curci, Domenico Depalo and Emilio Vadalà

This paper evaluates the performance of Italian local public enterprises (LPEs) with respect to their private sector counterparts. We address the following questions: i) do LPEs perform worse than (comparable) private firms?; ii) does the performance gap depend on the ownership structure (the share held by the public) or on the market structure (the degree of competition in the sector)?; iii) which are the main determinants of LPEs' performance in terms of productivity? The main findings – which are robust to the possible endogeneity of the ownership structure – are as follows: i) LPEs perform less well than private

companies by about 8 percent in terms of TFP; ii) although both ownership structure and market structure matter, our results suggest that the ownership structure is more important; and iii) the performance gap of LPEs with respect to private firms seems to be driven by over-capitalization rather than by over-employment.

[Full text \(pdf\)](#)

No. 407: The price of cyber (in)security: evidence from the Italian private sector (November 2017)

Claudia Biancotti

This paper presents evidence on the economic dimension of cyber risk in the Italian private non-financial sector, based on Bank of Italy survey data. In 2016, the median amount spent on preventing cyber attacks was a modest €4,530, i.e. 15 per cent of a typical worker's annual gross wages. A wide variation exists across sectors and size classes, reflecting differences in how appealing a target a firm is to attackers and firms' awareness of threats: median values range from €3,120 for small firms to €19,080 in the ICT sector and €44,590 for large firms. The market for cyber defence in our reference universe is worth at least €570 million. Having been attacked in the past proves to be a strong incentive to invest in security. The majority of breached firms suffered damages worth less than €10,000; 0.1 per cent reported costs of at least €200,000. Neither the sampling design nor the questionnaire were geared towards the measurement of tail events: underestimation of large incidents is likely. More information is needed before the economy-wide cost can be estimated.

[Full text \(pdf\)](#)

No. 406: Long-run trends in Italian productivity (November 2017)

Claire Giordano, Gianni Toniolo and Francesco Zollino

Based on updated datasets of value added and of labour and capital inputs, this paper provides a reassessment of the proximate causes of Italy's economic development since its political unification in 1861 to 2016. Italy's pre-WWII economy featured weak productivity growth, with the exception of the Giolitti era and the 1920s.

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Italy then embarked on an exceptional catching-up process relative to the technological leaders during the Golden Age. Compared with the pre-WWII years, when the Italian economy was held back by slow productivity growth in the large agricultural sector, the catching-up process during the Golden Age was propelled by the rapid shift of labour out of agriculture. As in many countries, this rapid growth in productivity could not be sustained after 1973, but the further slowdown since the 1990s has been more pronounced in Italy than elsewhere. The disappointing performance of the Italian economy since the early 1990s is largely explained by slow labour productivity growth in the now dominant services sector and by sluggish aggregate total factor productivity. Labour productivity developments actually turned negative during the protracted crisis following the global financial turmoil, due to the decline in capital accumulation and in total factor productivity. Since the start of the recovery in 2013, while total factor productivity has returned to a moderately positive trend, the capital stock has not fully overcome the legacy of the crisis.

[Full text \(pdf\)](#)

No. 405: Oil price pass-through into core inflation (November 2017)

Cristina Conflitti and Matteo Luciani

This work estimates the effect that fluctuations in oil prices have on changes in consumer prices in both the United States and the euro area. For many of the basic items in the basket of goods used to estimate inflation, the effects of oil price trends are divided into two components: the first is linked to the specific characteristics of individual products (such as, for example, the importance of energy in the production process), while the second is related to macroeconomic factors which are in turn connected with changes in oil prices. The results show that changes in oil prices mainly pass through to core inflation (or rather to inflation excluding food and energy products) by means of macroeconomic factors; while the effect is limited, it is statistically different from zero and persists over time.

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October 2017

- No. 404: A new measure of households' energy poverty
Ivan Faiella, Luciano Lavecchia and Marco Borgarello
- No. 403: A critical review of the statistics on the size and riskiness of the securitization market: evidence from Italy and other euro area countries
Giorgio Nuzzo
- No. 402: Corruption and personnel selection and allocation in the public sector
Sauro Mocetti and Tommaso Orlando
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Francesco Caprioli, Marzia Romanelli and Pietro Tommasino
- No. 397: Legal enforcement and Global Value Chains: micro-evidence from Italian manufacturing firms
Antonio Accetturo, Andrea Linarello and Andrea Petrella

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- No. 396: The dynamics of the Italian labour force participation rate: determinants and implications for the employment and unemployment rate
Marta De Philippis
- No. 395: A composite index of inflation tendencies in the euro area
Marcello Miccoli, Marianna Riggi, Lisa Rodano and Laura Sigalotti
- No. 394: BIMic: the Bank of Italy microsimulation model for the Italian tax and benefit system
Marika Cioffi, Nicola Curci and Marco Savegnago
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Riccardo Settimo
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Giuseppe Ferrero and Stefano Neri
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Giorgio Albareto, Giuseppe Cappelletti, Andrea Cardillo and Luca Zucchelli
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- No. 388: Incentives to local public service provision: an evaluation of Italy's *Obiettivi di Servizio*
Guglielmo Barone, Guido de Blasio, Alessio D'Ignazio and Andrea Salvati
- No. 387: Debtor-in-possession financing and credit priority: the effects of the preferential status granted by law in a composition with creditors
Elisa Brodi and Luca Casolaro

Notes on Financial Stability and Supervision

No. 11: **Bad loan recovery rates in 2016** (November 2017)

*Francesco Maria Conti, Igino Guida, Anna Rendina
and Giovanni Santini*

This note updates the bad loan recovery rates estimated in Notes on Financial Stability and Supervision, No. 7, and provides a comparative analysis of the characteristics of closed bad loan positions relative to stocks outstanding at the end of 2016. The data, along with some detailed breakdowns that are commented on but not reported in this text, are available in digital format. Our analysis reached the following main conclusions.

In 2016 the overall amount of closed positions reached its highest level since 2006 (€17 billion, compared with €13 billion in 2015), mainly owing to the increase in sales on the secondary market. This value is still lower than that of newly classified bad loans, but the difference has more than halved over the last three years. The number of positions closed exceeded that of positions opened.

In 2016 the average recovery rate came to 34 per cent (35 per cent in 2015 and 34 per cent in 2014). The slight decline reflected the significant increase in the share of positions sold, whose recovery rates remain far below those obtained using

standard recovery procedures. Nonetheless, the average recovery rate for positions sold on the market did increase (23 per cent compared with 20 per cent in 2015).

The speed of disposal of bad loans is still rising gradually. The share of positions closed within one year of being classified as a bad loan, which had fallen to a low of 20 per cent in 2012, rose to 38 per cent for the positions opened in 2015. As for the amounts involved, the ratio between the amount of bad loans closed each year and the stock outstanding at the start of the period, which had reached a low of 6 per cent in 2013, was consistently above 8 per cent in the last three years, reaching over 9 per cent in 2016.

The recovery rates observed recently do not appear to overestimate potential recoveries in the next few years. In fact, the age of the positions closed during the period 2006-16, for which the recovery rates have been calculated, is much higher than the average vintage of the stock of positions outstanding at the end of 2016. These closed positions also show a smaller percentage of positions secured by collateral. Their composition by counterparty sector (households, firms) and geographical distribution (north, centre, south) appears very similar to that of the outstanding.

[Full text \(pdf\)](#)

Economic History Working Papers

No. 43: Business cycles, credit cycles, and bank holdings of sovereign bonds: historical evidence for Italy 1861-2013

(November 2017)

Silvana Bartoletto, Bruno Chiarini, Elisabetta Marzano and Paolo Piselli

We propose a joint dating of Italian business and credit cycles on a historical basis by applying a local turning-point dating algorithm to the level of the variables. Along with short cycles corresponding to traditional business cycle fluctuations, we also investigate medium cycles, because there is evidence that financial booms and busts are longer and more persistent than business cycles. After comparing our cycles with the prominent qualitative features of the Italian economy, we carry out some statistical tests for comovement between credit and business cycles and find evidence that credit and business cycles are poorly synchronized, especially in the medium term. Nonetheless, we demonstrate that only for medium-term frequencies the coincidence of financial downturns and economic recessions significantly increases output losses.

We do not find evidence that the credit cycle leads the business cycle, both in medium and short-term fluctuations. On the contrary, in the short cycle, we find some evidence that the business cycle leads the credit cycle. Finally, credit and business cycle comovement increases when credit embodies public bonds held by banks, i.e., bank financing to the public sector.

[Full text \(pdf\)](#)

No. 42: The age distribution of the labour force as evidence of prior events: the Italian data for 1911 and the long swing in investment from unification to the Great War
(November 2017)

Roberto Pezzuto

Data on the age distribution of the labor force, by activity, appear in numerous early twentieth-century European censuses; but economic historians seem never to have explored them. This paper provides an initial examination of the age-distribution data in the Italian census of 1911, showing how they shed light on various aspects of the economy of the day, and on its preceding path.

A point of particular interest is that these data reflect the long cycle in construction, and in the production of construction materials. They further suggest that the long cycle of the engineering industry documented by its aggregate metal consumption was indeed present in the production of construction-related hardware, but notably absent from the production of machinery and, derivatively, industrial investment.

This last point denies the empirical premise of the extant interpretations of Italy's post-Unification industrial growth; but it sits well with the new disaggregated time-series estimates of the engineering industry's product.

[Full text \(pdf\)](#)

Selection of Journal articles and books

Authors' names in boldface: Bank of Italy

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