BANCA D'ITALIA
EUROSISTEMA

RESEARCH AT THE BANK OF ITALY

DIRECTORATE GENERAL FOR ECONOMICS, STATISTICS AND RESEARCH

NEWSLETTER

NUMBER 66
MAY 2022

Contents

Highlights

3rd Banca d'Italia Human Capital Workshop

(Rome, 25 March 2022)

Banca d'Italia organized the '**3rd Banca d'Italia Human Capital Workshop**' on 25th March. The workshop was held in person and live-streamed online. After a presentation by Piero Cipollone, Deputy Governor of the Banca d'Italia, leading researchers in the field of education and human capital presented their research, both theoretical and empirical. The lively discussions that followed each presentation offered an opportunity to exchange ideas. The keynote speaker, Prof. Christopher Neilson from Princeton University, gave a very good overview of the current state of the art on the topic.

The current versions of the papers presented during the workshop are available with the programme here.

3rd Biennial Conference on Financial stability and Regulation

(Online, 17-18 March 2022)

The Banca d'Italia and Bocconi University - BAFFI CAREFIN organized '**3rd Biennial Conference on Financial stability and Regulation**' on 17-18 March, 2022, in an online format. The aim of this biennial event is to bring together leading world scholars and policy makers to discuss topics related to financial stability, the regulation of the financial sector and the use of macroprudential policies. The Governor of the Banca d'Italia, Ignazio Visco, welcomed the participants. The conference featured keynote lectures by Stefano Giglio (Yale School of Management) on Climate Finance and by Victoria Ivashina (Harvard Business School) on the financial stability implications of COVID-19.

The programme of the conference and links to the papers, the presentations and discussion slides can be found here.

Forthcoming events

6th CEPR International Macroeconomics and Finance (IMF) Programme Meeting

(Rome, 9-10 June 2022)

Banca d'Italia and CEPR are organizing the sixth annual '**CEPR International Macroeconomics and Finance (IMF) Programme Meeting**' which will take place in person on 9-10 June 2022.

The aim of the conference is to bring together leading world scholars and policy-makers to discuss topics mainly relating to international macroeconomics and stabilization policy, international financial architecture, currency and financial/debt crises, and capital flows, risk taking and financial fragility.

The workshop will feature a keynote lecture by Iván Werning (Massachusetts Institute of Technology).

The call for papers can be found here.

Latest Working Papers

No. 1369: **Public guarantees and credit additionality during the Covid-19 pandemic** (April 2022)

Giuseppe Cascarino, Raffaele Gallo, Francesco Palazzo and Enrico Sette

This paper examines the public loan guarantee programs implemented in Italy for small and medium-sized enterprises in the aftermath of the outbreak of the pandemic and granted between April 2020 and March 2021. The analysis quantifies to what extent public guarantees created additional credit with respect to pre-existing levels, across programs with different coverage ratios and over time.

The credit additionality of the guarantee programs was highest between April and June 2020, especially for 100 per cent guaranteed loans, for which each euro of guarantee generated around 84 cents of additional credit. In the following quarters, the degree of additionality decreased for all programs, to 60 cents on average. For loans with a coverage ratio lower than 100 per cent, credit granted by better capitalized banks showed greater additionality.

Full text (pdf)

No. 1368: **Exchange rate pass-through in small, open, commodity-exporting economies: lessons from Canada** (April 2022)

Marco Flaccadoro

This paper studies the pass-through of changes in exchange rates to prices in small, open, commodity-exporting economies, taking Canada as a case study. Our econometric setup estimates pass-through, conditional on shocks to the international demand for oil and all industrial commodities. Our measure is free from endogeneity concerns between prices and exchange rates, thus improving upon the standard estimates in the literature.

Our pass-through measure, which is free from endogeneity concerns between prices and exchange rates, leads in some cases to an opposite inference in reference to the sign of the pass-through compared with standard estimates. By focusing on industry-level producer price indices, we show that conditional pass-through decreases with industry market power, while it increases with the degree of import penetration and the persistence of industry-specific shocks.

Full text (pdf)

No. 1367: **The role of non-bank financial institutions in the intermediation of capital flows to emerging markets** (April 2022)

Alessandro Moro and Alessandro Schiavone

This paper analyses the role of non-bank intermediaries in financing emerging economies during the period 2012-2020, focusing on their allocative choices. With reference to investment funds, their responsiveness to the global financial cycle is examined, taking into account investment strategies and geographical focus. In addition, we study how the variability of portfolio inflows to emerging economies depends on the share of their external liabilities held by investment funds.

During periods of financial turmoil, investment funds tend to reduce their exposure to emerging economies more than do banks and other intermediaries. Passive funds, and in particular ETFs, show a greater pro-cyclicality than the other types of funds. Portfolio inflows are more volatile in emerging markets with a higher share of portfolio liabilities held by investment funds rather than by banks and other financial intermediaries.

Full text (pdf)

No. 1366: **Monetary policy in the open economy with digital currencies** (April 2022)

Pietro Cova, Alessandro Notarpietro, Patrizio Pagano and Massimiliano Pisani

The paper assesses the domestic and international macroeconomic effects, and the impact on monetary policy effectiveness, of the introduction of digital currencies. We use a two-country dynamic general equilibrium model in which the means of payment include, besides cash, a stablecoin (SC), issued by a private fund and used in both countries, and a central bank digital currency (CBDC) issued by the central bank of one country and used only in that country.

When SC prevails as a means of payment, the effects of an expansionary monetary policy shock are smaller, compared to the "standard" case in which cash prevails, if the supply of SC does not sufficiently increase. The standard transmission of the shock is restored if SC is fully backed by cash, or if households show a strong preference for CBDC and the latter can easily substitute for other

Latest Working Papers

means of paymen.
Full text (pdf)

No. 1365: **Foreign monetary policy and domestic inflation in emerging markets** (April 2022)

Marco Flaccadoro and Valerio Nispi Landi

This paper studies the effect of US monetary policy shocks on the inflation rate of emerging markets, differentiating for the exchange rate regime (peg or floating) and for the potential adoption of inflation targeting. The empirical analysis uses the local projection method on a sample of 27 countries; the theoretical analysis is based on a New Keynesian model for a small open economy, with export prices denominated in foreign currency.
The estimates show that the inflation response of emerging markets to a sudden rise in the US interest rate depends on the monetary policy framework: inflation rises in countries with a floating exchange rate regime without inflation targeting, it decreases in countries with a peg regime, it does not react in inflation targeters. The theoretical model is consistent with these results and shows that a peg exchange rate regime yields the lowest level of welfare.
Full text (pdf)

No. 1364: **Making subsidies work: rules vs. discretion** (March 2022)

Federico Cingano, Filippo Palomba, Paolo Pinotti and Enrico Rettore

We study the effects of a large programme of investment subsidies in Italy on firms' employment and investment strategies. The analysis leverages on detailed firm-level data and on recent econometric advancements to evaluate the effectiveness, in terms of (public) cost per new job and new investment, of specific design features of the programme: the 'Rules vs. Discretion' trade-off, and the characteristics of targeted areas. The programme induced a substantial (33%) net increase in firms' investments. Six years after receiving the subsidy, employment was 17% higher. The cost per new job is higher in southern regions, and when the allocation criterion reflects political discretion rather than objective rules.
Full text (pdf)

Other recent Working Papers

December 2021 — February 2022

No. 1363: Insurers' investments before and after the Covid-19 outbreak
Federico Apicella, Raffaele Gallo and Giovanni Guazzarotti

No. 1362: Nowcasting the state of the Italian economy: the role of financial markets
Donato Ceci and Andrea Silvestrini

No. 1361: How do firms adjust to a negative labor supply shock? Evidence from migration outflows
Emanuele Dicarlo

No. 1360: Nowcasting the state of the Italian economy: the role of financial markets
Anna Laura Mancini and Pietro Tommasino

No. 1359: Currency demand at negative policy rates
Edoardo Rainone

No. 1358: Toward a green economy: the role of central bank's asset purchases
Alessandro Ferrari and Valerio Nispi Landi

No. 1357: The macroeconomic effects of falling long-term inflation expectations
Stefano Neri

No. 1356: Does gender matter? The effect of high performing peers on academic performances
Francesca Modena, Enrico Rettore and Giulia Martina Tanzi

Latest Occasional Papers

No. 691: **The future of European fiscal governance: a comprehensive approach** (April 2022)

Marzia Romanelli, Pietro Tommasino and Emilio Vadalà

After presenting the historical evolution of money through a combination of technological developments and institutional changes, the paper discusses the arguments in favour of introducing a central bank digital currency (CBDC) and the potential related risks. The issuance of a CBDC would make it possible to counteract the risk of a loss of monetary sovereignty (understood as the ability to respond to the needs of the people; Draghi, 2019), in the event that other central banks issue this type of currency on an international scale, private digital currencies develop on a global scale, or cash is no longer used by citizens. The risks associated with the issuance of CBDCs could be mitigated through the introduction of specific technical features.

Full text (pdf)

No. 690: **Technological progress and institutional adaptations: the case of the central bank digital currency (CBDC)** (April 2022)

Riccardo De Bonis and Giuseppe Ferrero

After presenting the historical evolution of money through a combination of technological developments and institutional changes, the paper discusses the arguments in favour of introducing a central bank digital currency (CBDC) and the potential related risks. The issuance of a CBDC would make it possible to counteract the risk of a loss of monetary sovereignty (understood as the ability to respond to the needs of the people; Draghi, 2019), in the event that other central banks issue this type of currency on an international scale, private digital currencies develop on a global scale, or cash is no longer used by citizens. The risks associated with the issuance of CBDCs could be mitigated through the introduction of specific technical features.

Full text (pdf)

No. 689: **Stacking machine-learning models for anomaly detection: comparing AnaCredit to other banking datasets** (April 2022)

Pasquale Maddaloni, Davide Nicola Continanza, Andrea del Monaco, Daniele Figoli, Marco di Lucido, Filippo Quarta and Giuseppe Turturiello

This study addresses the problem of anomaly detection in banking loans collected in AnaCredit. The main idea is the comparison between such information and the more aggregated credit data available in the other datasets, namely the 'Balance Sheet Items' and the 'Financial Reporting'. The final output is given by stacking the predictions of several machine-learning algorithms.

This methodology makes it possible to identify, more accurately than that of each algorithm alone, the potential outliers present in the AnaCredit dataset. Furthermore, it makes it easy for reporting agents to analyse the reason for the anomaly since the check is ultimately a reconciliation exercise between AnaCredit and a benchmark source.

Full text (pdf)

No. 688: **Climate change and credit risk: the effect of carbon taxes on Italian banks' business loan default rates** (April 2022)

Maria Alessia Aiello and Cristina Angelico

The study investigates the potential impact on Italian banks' business loan default rates at the sector level, following the introduction of a tax on CO_2 emissions (carbon tax). We perform a counterfactual analysis, building on the microsimulation model of the Bank of Italy, which estimates the share of financially vulnerable firms and their debt. Assuming that the Government had introduced a carbon tax of €50 per ton of CO_2 in 2018, our estimates show that the average quarterly loan default rate for the firms analysed would have increased by around one quarter in 2019 (from 2.8 to 3.6 per cent). Even considering a tax equal to €800 per ton of CO_2 – an assumption coherent with a disorderly transition scenario – the default rate would have remained below the historical peak of about 9.5 per cent recorded in

Latest Occasional Papers

2013. However, these impacts could be more severe if the carbon tax were introduced in periods characterized by higher firm vulnerability or more elevated default rates.
Full text (pdf)

No. 687: **A model of system-wide stress simulation: market-based finance and the Covid-19 event** (April 2022)

Giovanni di Iasio, Spyridon Alogoskoufis, Simon Kordel, Dominika Kryczka, Giulio Nicoletti and Nicholas Vause

The paper develops a system-wide stress testing model designed for the market-based financial system. The model includes banks, which intermediate markets, as well as important holders of assets, such as insurers, pension funds and several types of investment funds. The work applies the model to the euro-area market-based financial system during the March 2020 turmoil caused by Covid. Shock amplification is mainly due to the behaviour of open-ended funds that, given insufficient liquidity buffers, must sell corporate bonds and equities to meet investor redemption requests, thereby depressing asset prices. In all the simulations, banks and insurers show a good degree of resilience to shocks and limit their price impact.
Full text (pdf)

No. 686: **Will the green transition be inflationary? Expectations matter** (April 2022)

Alessandro Ferrari and Valerio Nispi Landi

In this paper we analyse the possible effects on prices of a progressive increase in the tax on emissions in a simple two-period New Keynesian model with an AS-AD representation. We then extend the analysis in a medium-scale DSGE model. In both models, emissions increase with production and the green transition is modelled as a gradual increase in the tax on emissions. We find that an increase in the tax today exerts inflationary pressures, but the expected further increase in the tax tomorrow depresses current demand, putting downward pressure on prices: we show that the second effect is larger. However, if households do not anticipate a future fall in income (because they are not rational or the government is not credible), the overall effect of the transition may initially be inflationary.
Full text (pdf)

No. 685: **Regional inequality in Italy in the face of economic crises, recovery, and the health emergency** (April 2022)

Antonio Accetturo, Giuseppe Albanese, Rosario M. Ballatore, Tiziano Ropele and Paolo Sestito

This paper provides evidence on the evolution of the economic divide between the South and the Centre-North of Italy in the period 2007-2021. In particular, the study describes the widening of regional disparities observed after the double-dip recession of 2008-09 and 2011-13, as well as the most recent fallout from the pandemic crisis.

In the South of Italy, the drop in GDP between 2007 and 2014 was sharper than in the rest of the country, especially during the sovereign debt crisis; the subsequent recovery was milder. In 2019 the GDP in the South was still 10 per cent lower than at the 2007 peak, compared with a 2 per cent reduction in the Centre-North of Italy. Until now the pandemic crisis has not had significant effects on regional economic disparities. Over the period of analysis of this study, the structural weaknesses of southern Italy's economy, relative to the rest of the country, have expanded.
Full text (pdf) in Italian only

No. 684: **The banking system and the financing of southern Italian firms** (April 2022)

Giorgio Albareto, Michele Cascarano, Stefania De Mitri, Cristina Demma, Roberto Felici and Carlotta Rossi

This paper describes the territorial gaps in firms' access to bank credit between 2008 and 2019 and assesses to what extent they reflect firms' observable characteristics. The paper also analyses the dynamics of loans to firms, highlighting which categories of banks have most supported the financing of firms in the southern regions and the consequences in terms of their credit quality and profitability. The estimates provided in the paper show that, other things being equal, Italy's southern firms share a similar

Latest Occasional Papers

probability of accessing bank credit with those from other regions. However, southern firms face worse credit conditions in a more adverse socio-economic context. In the period considered, bank lending to southern firms was stable, while it tightened in the Centre and North: the tightening of credit by the five largest banking groups was offset by other banks, especially cooperative ones. Southern banks are characterized by lower asset quality and profitability.
Full text (pdf) in Italian only

No. 683: **Italian economic growth and the North-South gap: historical trends and future projections in light of the recent demographic scenarios** (April 2022)

Marta De Philippis, Andrea Locatelli, Giulio Papini and Roberto Torrini

This paper presents a historical account of economic trends in Italy and its two macro-regions, the Centre and North and the South, since the 1950s, and outlines several growth scenarios based on recent demographic projections and alternative hypotheses on future labour market and productivity paths. We document a progressive slowdown in GDP, particularly in the South, driven by productivity and, more recently, also by employment and capital accumulation dynamics. Going forward, given the reduction in the working age population, without improvements in productivity and labour force participation, the Italian economy – the southern one in particular – is projected to shrink from the second half of the current decade. Despite the unfavourable demographic trends, robust growth rates could still be achieved if productivity grew at the same rate as in other European countries and assuming a catching-up process of between the South and the Centre and North of the country.
Full text (pdf) in Italian only

No. 682: **The digital transformation in the Italian banking sector** (April 2022)

Davide Arnaudo, Silvia Del Prete, Cristina Demma, Marco Manile, Andrea Orame, Marcello Pagnini, Carlotta Rossi, Paola Rossi and Giovanni Soggia

Using a survey of almost 280 banks (Regional Bank Lending Survey, RBLS), this paper proposes a composite indicator of the digital supply of financial services and provides early evidence on the digital transformation process that Italian banks experienced between 2007 and 2018. Moreover, the paper examines the correlations between the degree of digitalization, bank profitability and the structure of the branch network. The adoption of digital technologies has gradually increased over time, accelerating after 2013, though it has played out differently across business areas: digitalization started in payment services and then spread to asset management, whereas it is still less frequent in lending. Digitalization is positively correlated with bank profitability and negatively correlated with the number of branches; the latter relationship signals a potential substitution effect between physical and digital channels.
Full text (pdf)

No. 681: **An epidemic model for SARS-CoV-2 with self-adaptive containment measures** (April 2022)

Sabina Marchetti, Alessandro Borin, Francesco Paolo Conteduca, Giuseppe Ilardi, Giorgio Guzzetta, Piero Poletti, Paolo Pezzotti, Antonino Bella, Paola Stefanelli, Flavia Riccardo, Stefano Merler, Andrea Brandolini and Silvio Brusaferro

During the Covid-19 pandemic, several countries have resorted to self-adaptive mechanisms that allow containment measures on epidemiological and health care indicators to be tailored. In this paper, we propose a model for the spread of the epidemic that embeds an algorithmic mechanism to define non-pharmaceutical interventions automatically. Such a mechanism reproduces the self-adaptive colour-based regional tier system, effective in Italy since November 2020. The analysis shows that self-adaptive mechanisms based on the pace of virus transmission respond swiftly to surges in the number of cases, but they involve strict restrictions on mobility and social contacts. With more favourable external conditions, for instance high vaccine coverage, mechanisms based on hospital occupancy rates allow for milder

Latest Occasional Papers

restrictions, while obtaining public health outcomes comparable with those achieved under more restrictive policy schemes.
Full text (pdf)

No. 680: **The level of digitalization of Italy's local administrations: North-South differences** (April 2022)

Marco Corradetti and Walter Giuzio

The paper examines indicators of the level of digitalization of local administrations in Italy, identifying differences between the South and the rest of the country. In particular, the paper analyses the following elements: ability to provide online services, basic IT infrastructure, integration of available technologies, governance of innovation processes, and training activities. Italy ranks 18th among 28 European countries for digital public services availability. Only one in three administrations are able to provide services to citizens and businesses through their websites. The South has basic IT infrastructure and systems integration in line with the Centre-North, but scores lower in the provision of online services, governance of innovation and training activities.
Full text (pdf) in Italian only

No. 679: **Calibrating the CCyB for Italy** (March 2022)

Pierluigi Bologna and Maddalena Galardo

This paper uses two approaches to identify the thresholds needed to account for the credit-to-GDP gap currently used by the Banca d'Italia (an adjusted credit-to-GDP gap) in the process of setting the countercyclical capital buffer (CCyB). The two approaches suggest activating the CCyB when the adjusted gap reaches, respectively, 1 and 3 percentage points, and increasing the buffer until it reaches 2.5 per cent when the gap is, respectively, at 9 and 8 percentage points. Based on the estimates, the use of the pair (1,9) should allow us to maximize the accuracy in forecasting the vulnerability of the banking system. In any case, the setting of the CCyB is not mechanical as, in addition to the credit-to-GDP gap, it considers a large set of macro-financial cycle indicators.
Full text (pdf)

No. 678: **Ownership, governance, management and firm performance: evidence from Italian firms** (March 2022)

Audinga Baltrunaite, Sara Formai, Andrea Linarello and Sauro Mocetti

This paper studies to what extent differences in ownership, governance and management could explain territorial gaps among Italian firms. First, it analyses the role of education in the selection process for entrepreneurs and managers, and second, it studies the distinctive characteristics of ownership, governance and management in the Centre and North and in the South of Italy. In the South of Italy, the education levels of entrepreneurs and managers are lower than in the Centre and North and account for about one tenth of the size gap between firms located in the two areas. Southern firms are characterized by more frequent family ownership and a higher fraction of local and family directors on the board; these characteristics are associated with lower separation between ownership and governance, lower adoption of structured managerial practices and lower productivity.
Full text (pdf)

No. 677: **Local government staff. The Southern regions compared with the North-Centre of Italy** (March 2022)

Luciana Aimone Gigio, Massimiliano Bolis, Paolo Chiades, Antonio Lo Nardo, Daniele Marangoni and Massimiliano Paolicelli

The paper analyzes how the characteristics of the employees of the local governments in the Southern regions of Italy have changed compared to those of the North-Centre over the period 2008-2019.
During the period analyzed, there was a convergence between the two macro areas in terms of workforce size and costs; however, there are still strong regional differences in employees' seniority, education, professional qualifications and contractual schemes. The skill deficit of the employees of Southern local authorities render them less well equipped than those in the rest of the country to tackle the challenges posed by the

Latest Occasional Papers

National Recovery and Resilience Plan (NRRP).
Full text (pdf) in Italian only

No. 676: **Structural change and firm dynamics in the South of Italy** (March 2022)

Francesco Bripi, Raffaello Bronzini, Elena Gentili, Andrea Linarello and Elisa Scarinzi

This paper examines structural change in sectoral employment shares in the last two decades in the Centre-North and in the South of Italy. In the first part, we analyse the dynamics of employment by industry and the role of structural change on productivity. In the second part, we examine the effect of firms' entry and exit on employment in each area of the country. The process of deindustrialization in the South of Italy started later than in the rest of the country, it was stronger and led mainly by less knowledge-intensive services. The recomposition of employment shares in favour of services has slowed down productivity growth in the Centre-North; in the South productivity declined across all sectors. In the Centre-North, incumbent firms and larger ones led employment growth; in the South it was led by the entry of new firms.
Full text (pdf)

No. 675: **The geographic divides of the Italian higher education system** (March 2022)

Vincenzo Mariani and Roberto Torrini

The work discusses from a comparative perspective the divergences in the demand and supply of tertiary education between the North and the South of Italy and analyzes the dynamics and the allocation of financial resources assigned to the university system.
The human capital production of universities placed in South is affected by the mobility of students toward Centre and Northern regions - partly due to the lower quality of local universities - and by the low average competencies of Southern students. After the cuts of the last decade, the public funding of the university system needs to be increased and the allocation mechanisms should be revised taking into greater consideration the features of the local contexts, while preserving the incentives for universities to improve their performance introduced by the tertiary education reform of 2010.
Full text (pdf) in Italian only

No. 674: **Explainable Artificial Intelligence: interpreting default forecasting models based on Machine Learning** (March 2022)

Giuseppe Cascarino, Mirko Moscatelli, Laura Mellone and Fabio Parlapiano

The paper applies the most common methods of Explainable Artificial Intelligence to a model based on the random forest approach that has shown a good ability to predict defaults of Italian firms. The analysis aims at identifying the most relevant variables for the model and evaluates their contribution to the estimation of the probability of default.
The use of Explainable Artificial Intelligence methods allows us to clarify the logic underlying the decision-making process of a model based on the random forest approach, showing how it is able to exploit a large set of predictive variables and, compared with traditional statistical models, to give greater importance to indicators that have a non-linear relationship with firm default, such as indicators of liquidity.
Full text (pdf)

No. 673: **Don't let me down: Unemployment Insurance in the United States** (March 2022)

Francesco Spadafora

The paper analyses the Unemployment Insurance (UI) system in the United States, providing a comprehensive overview of its main structural features. It then compares the role played by UI programmes in mitigating the impact of the Great Recession and the 2020 Covid-19 pandemic and discusses the main reform proposals put forth to address the well-known challenges faced by the UI system. The Unemployment Insurance system has played a decisive lifeline role in effectively mitigating the

Latest Occasional Papers

economic and social impact of the Covid-19 pandemic, which prompted an expansion of UI programmes unprecedented in scale, scope, and cost. However, the crisis has once again exposed the duality between state regular programmes and federal emergency programmes, a key feature of the system that gives rise to its uneven effectiveness in supporting unemployed workers. [Full text (pdf)]

Other recent Occasional Papers

December 2021 — February 2022

No. 672: Measuring market power: macro and micro evidence from Italy
Emanuela Ciapanna, Sara Formai, Andrea Linarello and Gabriele Rovigatti

No. 671: Gender diversity in the non-financial reporting of Italian banks
Emanuela Atripaldi, Nicole Gila, Alessia Musco and Ulrike Sauerwald

No. 670: Addressing the sustainability of distributed ledger technology
Carlo Gola and Johannes Sedlmeir

No. 669: Mind the gap! The (unexpected) impact of Covid-19 pandemic on VAT revenue in Italy
Francesco Berardini and Fabrizio Renzi

No. 668: Rolling in the deep(fakes)
Sabina Marchetti

No. 667: The integrated approach adopted by Bank of Italy in the collection and production of credit and financial data
Massimo Casa, Laura Graziani Palmieri, Laura Mellone and Francesca Monacelli

No. 666: A decision-making rule to detect insufficient data quality: an application of statistical learning techniques to the non-performing loans banking data
Barbara La Ganga, Paolo Cimbali, Marco De Leonardis, Alessio Fiume, Luciana Meoli and Marco Orlandi

No. 665: Financial support measures and credit to firms during the pandemic
Stefania De Mitri, Antonio De Socio, Valentina Nigro and Sabrina Pastorelli

No. 664: Forecasting Italian GDP growth with epidemiological data
Valentina Aprigliano, Alessandro Borin, Francesco Paolo Conteduca, Simone Emiliozzi, Marco Flaccadoro, Sabina Marchetti and Stefania Villa

No. 663: A composite indicator of sovereign bond market liquidity in the euro area
Riccardo Poli and Marco Taboga

No. 662: Digitalisation in Italy: evidence from a new regional index
Andrea Benecchi, Carlo Bottoni, Emanuela Ciapanna, Annalisa Frigo, Aldo Milan and Elisa Scarinzi

No. 661: Organized crime in Italy: an economic analysis
Sauro Mocetti and Lucia Rizzica

No. 660: Revisiting monetary policy objectives and strategies: international experience and challenges from the ELB
Giuseppe Fiori and Filippo Scoccianti

No. 659: The implementation of public works in Italy: institutional features and regional characteristics
Audinga Baltrunaite, Tommaso Orlando and Gabriele Rovigatti

No. 658: Public sector employment: North-South differences in its composition and selection
Lucia Rizzica

No. 657: Benchmark effects from the inclusion of Chinese A-shares in the MSCI EM index
Stefano Antonelli, Flavia Corneli, Fabrizio Ferriani and Andrea Gazzani

Notes on Financial Stability and Supervision

No. 28: **Survey on the management of 'inadempienze probabili'** (March 2022)

R. Angeletti, S. Gallina, F.M. Conti, A. Rendina, C. Salvaggio and M. Scotto di Carlo

The rise in Non performing loans (NPLs) that occurred during the last decade has prompted the supervisory authorities to request that banks proactively manage these credits, urging them to improve NPL management and monitoring processes and to develop dedicated support procedures. Most of the progress has been made

for credits classified as bad loans ('sofferenze'), which involve insolvency proceedings and that banks manage with a view to liquidation.

The management of NPLs other than sofferenze, which are almost entirely comprised of 'inadempienze probabili' (IP), poses new challenges to banks. These loans have different management procedures....

Full text (pdf) in Italian only

Markets, Infrastructures, Payment Systems

No. 22: **Quando innovazione finanziaria e finanza sostenibile si incontrano: i Sustainability-Linked Bonds** (April 2022)
Paola Antilici, Gianluca Mosconi and Luigi Russo
Full text (pdf) in Italian only

No. 21: **Report on the payment attitudes of consumers in Italy: results from ECB surveys** (March 2022)
Gabriele Coletti, Alberto Di Iorio, Emanuele Pimpini and Giorgia Rocco
Full text (pdf)

No. 20: **Flash crashes on sovereign bond markets - EU evidence** (March 2022)
Antoine Bouveret, Martin Haferkorn, Gaetano Marseglia and Onofrio Panzarino
Full text (pdf)

No. 19: **Cross-Currency Settlement of Instant Payments in a Cross-Platform Context: a Proof of Concept** (March 2022)
Massimiliano Renzetti, Andrea Dimartina, Riccardo Mancini, Giovanni Sabelli, Francesco Di Stasio, Carlo Palmers, Faisal Alhijawi, Erol Kaya, Christophe Piccarelle, Stuart Butler, Jwallant Vasani, Giancarlo Esposito, Alberto Tiberino and Manfredi Caracausi
Full text (pdf)

No. 18: **Cyber resilience per la continuità di servizio del sistema finanziario** (March 2022)
Boris Giannetto and Antonino Fazio
Full text (pdf) in Italian only

No. 17: **What lies ahead for euro money market benchmarks?** (February 2022)
Daniela Della Gatta
Full text (pdf)

Selection of Journal articles and books

Authors' names in boldface: Bank of Italy

Full list since 1990

Forthcoming

Aprigliano V., **S. Emiliozzi, G. Guaitoli, A. Luciani, J. Marcucci** and **L. Monteforte**, "The Power of Text-Based Indicators in Forecasting Italian Economic Activity", *International Journal of Forecasting*. (WP No. 1321)

Bamieh O., **F. Bripi** and M. Fiorini, "Services Trade and Labour Market Outcomes: Evidence from Italian Firms", *Review of International Economics*.

Battaglini M., E. Patacchini and **E. Rainone**, "Endogenous Social Interactions with Unobserved Networks", *Review of Economic Studies*.

Bia M., A. Mattei and **A. Mercatanti**, "Assessing Causal Effects in a Longitudinal Observational Study with "truncated" Outcomes Due to Unemployment and Nonignorable Missing Data", *Journal of Business & Economic Statistics*.

Bottero M., C. Minoiu, J. Peydrò, A. Presbitero and **E. Sette**, "Expansionary Yet Different: Credit Supply and Real Effects of Negative Interest Rate Policy", *Journal of Financial Economics*. (WP No. 1269)

Cantelmo A., "Rare Disasters, the Natural Interest Rate and Monetary Policy", *Oxford Bulletin of Economics and Statistics*. (WP No. 1309)

Cantelmo A. and G. Melina, "Sectoral Labor Mobility and Optimal Monetary Policy", *Macroeconomic Dynamics*.

Carriero A., **F. Corsello** and M. Massimiliano, "The Global Component of Inflation Volatility", *Journal of Applied Econometrics*. (WP No. 1170)

Ciapanna E. and **G. Rovigatti**, "The Grocery Trolley Race in Times of Covid-19. Evidence from Italy", *Italian Economic Journal*. (WP No. 1341)

Citino L. and **A. Linarello**, "The Impact of Chinese Import Competition on Italian Manufacturing", *Review of International Economics, special issue on "Globalisation: Implications for workers, firms and markets"*.

De Philipis M., "STEM Graduates and Secondary School Curriculum: Does Early Exposure to Science Matter?", *Journal of Human Resources*.

Dossche M., **A. Gazzani** and V. Lewis, "Labor Adjustment and Productivity in the OECD", *Review of Economic Dynamics*.

Fabiani S., **A. Felettigh** and **A. Rosolia**, "Foreign Value Added along the Consumption Distribution", *Italian Economic Journal*. (OP No. 580)

Faiella I. and **A. Mistretta**, "The Net Zero Challenge for Firms' Competitiveness", *Environmental & Resource Economics*. (WP No. 1259)

Graziano M. and **D. Loschiavo**, "Liquidity-Poor Households in the Midst of the COVID-19 Pandemic", *Review of Income and Wealth*. (OP No. 642)

Lilla F., "Volatility Bursts: A Discrete-Time Option Model with Multiple Volatility Components", *Journal of Financial Econometrics*. (WP No. 1336)

Loberto M., "Foreclosures and House Prices", *Italian Economic Journal*. (WP No. 1325)

Loberto M., **A. Luciani** and M. Pangallo, "What do Online Listings Tell us About the Housing Market?", *International Journal of Central Banking*. (WP No. 1171)

Mariani R., **A. Pasquini** and F. Rosati, "The Immigration Puzzle in Italy: A Survey of Evidence and Facts", *Italian Economic Journal*.

Pericoli M. and **M. Taboga**, "Nearly Exact Bayesian Estimation of Non-Linear No-Arbitrage Term-Structure Models", *Journal of Financial Econometrics*. (WP No. 1189)

Tanzi G. M., "Scars of Youth Non-employment and Labour Market Conditions", *Italian Economic Journal*. (WP No. 1325)

Tomat G. M., "An Asset-Based Approach to Housing Prices", *Empirical Economics*.

2022

Alpino M., K. Hauge, A. Kotsadam and S. Markussen, "Effects of Dialogue Meetings on Sickness Absence-Evidence from a Large Field Experiment", *Journal of Health Economics*, v. 83, Article 102615.

Affinito M., **G. Albareto** and **R. Santioni**, "Purchases of Sovereign Debt Securities by Italian Banks During the Crisis: the Role of Balance-Sheet Conditions", *Journal of Banking & Finance,* v. 138, Article 105575. (OP No. 330)

Albanese G., G. Barone and **G. de Blasio**, "Populist Voting and Losers' Discontent: Does Redistribution Matter?", *European Economic Review*, v. 141, Article 104000.

Barbieri T., **G. Basso** and S. Scicchitano, "Italian Workers at Risk During the COVID-19 Epidemic", *Italian Economic Journal*, v. 8, 1, pp. 175-195. (OP No. 569)

Bronzini R., **E. Ciani** and **F. Montaruli**, "Tourism and Local Growth in Italy", *Regional Studies*, v. 56, 1, pp- 140-154. (OP No. 509)

Guiso L., A. Pozzi, A. Tsoy, L. Gambacorta and **. E. Mistrulli**, "The Cost of Steering in Financial Markets: Evidence from the Mortgage Market", *Journal of Financial Economics*, v.143, 3, pp. 1209-1226. (WP No. 1252)

Havari E. and **M. Savegnago**, "The Intergenerational Effects of Birth Order on Education", *Journal of Population Economics*, v. 35, 1, pp. 349-377.

Jacquinot P., M. Lozei and **M. Pisani**, "Macroeconomic Effects of Tariffs Shocks: The Role of the Effective Lower Bound and the Labour Market", *Journal of International Money and Finance*, v. 120, Article 102528.

Mocetti S., **G. Roma** and E. Rubolino, "Knocking on Parents' Doors: Regulation and Intergenerational Mobility", *Journal of Human Resources*, v. 57, 2, pp. 525-554. (WP No. 1182)

Selection of Journal articles and books

Rossi P. and **D. Scalise**, "Financial Development and Growth in European Regions", *Journal of Regional Science*, v. 62, 2, pp. 389-411. (WP No. 1246)

Sbrana G., **A. Silvestrini**, "Random coefficient state-space model: Estimation and performance in M3-M4 competitions", *International Journal of Forecasting*, v. 38, 1, pp. 352-366.

Schivardi F., **E. Sette** and G. Tabellini, "Credit misallocation during the european financial crisis", *Economic Journal*, v. 132, 641, pp. 391-423. (WP No. 1139)

Taboga M., "Cross-Country Differences in the Size of Venture Capital Financing Rounds: a Machine Learning Approach", *Empirical Economics*, v. 62, 3, pp. 991-1012. (WP No. 1243)

2021

Acceturo A., **A. Lamorgese, S. Mocetti** and **D. Pellegrino**, "Housing Price Elasticity and Growth: Evidence from Italian Cities", *Journal of Economic Geography*, v. 21, 3, pp. 367-396. (WP No. 1267)

Affinito M. and **M. Piazza**, "Always Look on the Bright Side? Central Counterparties and Interbank Markets during the Financial Crisis", *International Journal of Central Banking*, v. 17, 1, pp. 231-283. (WP No. 1181)

Albanese G., **E. Ciani** and **G. de Blasio**, "Anything New in Town? The Local Effects of Urban Regeneration Policies in Italy", *Regional Science and Urban Economics*, v. 86. (WP No. 1214)

Albanese G. and **G. de Blasio**, "Industrialization, Turnout, and Left-Wing Vote", *Economics Letters*, v. 206, Article 109973.

Albanese G., **G. de Blasio** and **A. Locatelli**, "Does EU Regional Policy Promote Local TFP Growth? Evidence from the Italian Mezzogiorno", *Papers in Regional Science*, v. 100, 2, pp. 327-348. (WP No. 1253)

Albanese G., **E. Galli, I. Rizzo** and **C. Scaglioni**, "Transparency, Civic Capital and Political Accountability: A Virtuous Relation?", *Kyklos*, v. 74, 2, pp. 155-169.

Albertazzi U., **A. Nobili** and **F. M. Signoretti**, "The Bank Lending Channel of Conventional and Unconventional Monetary Policy", *Journal of Money, Credit and Banking*, v. 53, 2-3, pp. 261-299. (WP No. 1094)

Alpino M. and E. Hammersmark, "The Role of Historical Christian Missions in the Location of World Bank Aid in Africa", *World Bank Economic Review*, v. 35, 1, pp. 207-233.

Anzuini A. and **L. Rossi**, "Fiscal Policy in the US: A New Measure of Uncertainty and Its Effects on the American Economy", *Empirical Economics*. v. 61, 6, pp. 2613-2634 (WP No. 1197)

Auer S., **M. Bernardini** and **M. Cecioni**, "Corporate Leverage and Monetary Policy Effectiveness in the Euro Area", *European Economic Review*, v. 140, Article 103943. (WP No. 1258)

Banerjee R., L. Gambacorta and **E. Sette**, "The Real Effects of Relationship Lending" *Journal of Financial Intermediation*, v. 48, Article 100923. (WP No. 1133)

Barone G. and **S. Mocetti**, "Intergenerational Mobility in the Very Long Run: Florence 1427-2011", *Review of Economic Studies*, v. 88, 4, pp. 1863–1891. (WP No. 1060)

Barone G., **F. David**, **G. de Blasio** and **S. Mocetti**, "How do House Prices Respond to Mortgage Supply?", *Journal of Economic Geography*. v. 21, 1, pp. 127-140. (WP No. 1282)

Barone G., **L. Mirenda** and **S. Mocetti**, "Losing My Connection: The Dark Side of Bank–Firm Interlocking Directorates", *Economica,* v. 88, 350, pp. 474–498.

Batini N., **A. Cantelmo**, G. Melina and **S. Villa**, "How Loose, How Tight? A Measure of Monetary and Fiscal Stance for the Euro Area", *Oxford Economic Papers,* v. 73, 4, pp. 1536-1556. (WP No. 1295)

Benetton M. and **D. Fantino**, "Targeted Monetary Policy and Bank Lending Behavior", *Journal of Financial Economics*, v. 142, 1, pp. 404-429. (WP No. 1187)

Borgonovi F., A. Choi and **M. Paccagnella**, "The Evolution of Gender Gaps in Numeracy and Literacy between Childhood and Young Adulthood", *Economics of Education Review*, v. 82.

Bottone M., **A. Tagliabracci** and **G. Zevi**, "What do Italian Households Know About the ECB's Target?", *Economics Letters*, v. 207, Article 110023.

Bovini G. and A. B. Fernandez, "It's Time to Learn: School Institutions and Returns to Instruction Time", *Economics of Education Review*, v. 80, Article 102068.

Brugnolini L., A. D'Agostino and **A. Tagliabracci**, "Is Anything Predictable in Market-Based Surprises?" *Italian Economic Journal*, v. 7, 3, pp. 387-410.

Busetti F., **M. Caivano** and **D. Delle Monache**, "Domestic and Global Determinants of Inflation: Evidence from Expectile Regression", *Oxford Bulletin of Economics and Statistics*, v. 83, 4, pp. 982-1001. (WP No. 1225)

Busetti F., **S. Neri**, **A. Notarpietro** and **M. Pisani**, "Monetary Policy Strategies in the New Normal: A Model-Based Analysis for the Euro Area", *Journal of Macroeconomics*, v. 70, Article 103366. (WP No. 1308)

Caggiano G., E. Castelnuovo, **S. Delrio** and R. Kima, "Financial Uncertainty and Real Activity: The Good, the Bad and the Ugly?", *European Economic Review*, v. 136.

Capolongo A. and **C. Pacella**, "Forecasting Inflation in the Euro Area: Countries Matter!", *Empirical economics*, v. 61, 4, pp. 2477-2499. (WP No. 1224)

Carletti E., F. De Marco, V. Ioannidou and **E. Sette**, "Banks As Patient Lenders: Evidence from a Tax Reform", *Journal of Financial Economics*, v. 141, 1, pp. 6-26.

Carmignani A., **G. de Blasio**, **C. Demma** and **A. D'Ignazio**, "Urbanization and Firm Access to Credit", *Journal of Regional Science*, v. 61, 3, pp. 597-622. (WP No. 1222)

Selection of Journal articles and books

Carpinelli L. and M. Crosignani, "The Design and Transmission of Central Bank Liquidity Provisions", *Journal of Financial Economics*, v. 141, 1, pp. 27-47.

Colabella A., "Do ECB's Monetary Policies Benefit EMEs? A GVAR Analysis on the Global Financial and Sovereign Debt Crises and Post-Crises Period", *Oxford Bulletin of Economics and Statistics*, v. 83, 2, pp. 472-494.

Comi S., F. Orrigo, L. Pagani and **M. Tonello**, "Last and Furious: Relative Position and School Violence", *Journal of Economic Behavior & Organization*, v. 188, pp. 736-756.

Conflitti C. and **R. Zizza**, "What's Behind Firms' Inflation Forecasts?", *Empirical Economics*, v. 61, 4, pp. 2449-2475. (OP No. 465)

Corsello F., **S. Neri** and **A. Tagliabracci**, "Anchored or de-Anchored? That is the Question", *European Journal of Political Economy,* v. 69, Article 102031. (OP No. 516)

Cova P., **A. Notarpietro**, P. Pagano and **M. Pisani**, "Secular Stagnation, R&D, Public Investment and Monetary Policy: a Global-Model Perspective", *Macroeconomic Dynamics*, v. 25, 5, pp. 1267-1287. (WP No. 1156)

de Blasio G., M. De Paola, S. Poy and V. Scoppa, "Massive Earthquakes, Risk Aversion, and Entrepreneurship", *Small Business Economics*, v. 57, 1, pp. 295-322.

De Philipis M. and F. Rossi, **"**The Parents, Schools and Human Capital Differences across Countries", *Journal of the European Economic Association*, v. 19, 2, pp. 1364-1406.

De Philipis M., "Multitask Agents and Incentives: the Case of Teaching and Research for University Professors", *Economic Journal*, v. 131, 636, pp. 1643-1681. (WP No. 1042)

Decarolis F. and **G. Rovigatti**, "From Mad Men to Maths Men: Concentration and Buyer Power in Online Advertising", *American Economic Review*, v. 111, 10, pp. 3299-3327.

Delle Monache D., I. Petrella and F. Venditti, "Price Dividend Ratio and Long-Run Stock Returns: a Score Driven State Space Model", *Journal of Business & Economic Statistics*, v. 39, 4, pp. 1054-1065.

De Santis R., **A. Zaghini**, "Unconventional Monetary Policy and Corporate Bond Issuance", *European Economic Review*, v. 135, Article 103727.

Di Giacinto V., **L. Monteforte**, **A. Filippone, A. Montaruli** and **T. Ropele**, "ITER: A Quarterly Indicator of Regional Economic Activity in Italy", *Italian Economic Journal*, v. 7, 1, pp. 129-147. (OP No. 489)

Fallucchi F., **A. Mercatanti** and J. Niederreiter, "Identifying Types in Contest Experiments", *International Journal of Game Theory*, v. 50, 1, pp. 39-61.

Ferrero G., **M. Loberto** and **M. Miccoli**, "The Assets' Pledgeability Channel of Unconventional Monetary Policy", *Economic Inquiry*, v. 59, 4, pp. 1547-1568. (WP No. 1119)

Ferriani F., "From Taper Tantrum to Covid-19: Portfolio Flows to Emerging Markets in Periods of Stress", *Journal of International Financial Markets, Institutions and Money*, v. 74, Article 101391.

Fidora M., **C. Giordano** and M. Schmitz, "Real Exchange Rate Misalignments in the Euro Area", *Open Economies Review*, v. 32, 1, pp. 71-107. (WP No. 1162)

Gambacorta L., **G. Ricotti**, S. Sundaresan and Z. Wang, "Tax Effects on Bank Liability Structure", *European Economic Review*, Article 103820. (WP No. 1101)

Giordano C. and **F. Zollino**, "Long-Run Factor Accumulation and Productivity Trends in Italy", *Journal of Economic Surveys*, v. 35, 3, pp. 741-803.

Hertweck M., V. Lewis and **S. Villa**, "Going the Extra Mile: Effort by Workers and Job-Seekers", *Journal of Money, Credit and Banking*, v. 53, 8, pp. 2099-2127. (WP No. 1277)

Kovacs A., **C. Rondinelli** and S. Trucchi, "Permanent Versus Transitory Income Shocks over the Business Cycle", *European Economic Review*, Article 103873.

Li F., **A. Mercatanti**, **T. Mäkinen** and **A. Silvestrini**, "A Regression Discontinuity Design for Ordinal Running Variables: Evaluating Central Bank Purchases of Corporate Bonds", *The Annals of Applied Statistics*, v. 15, 1, pp. 304-322. (WP No. 1213)

Loschiavo D., "Big-City Life (Dis)Satisfaction? The Effect of Urban Living on Subjective Well-Being", *Journal of Economic Behavior & Organization*, v. 192, pp. 740-764. (WP No. 1221)

Loschiavo D., "Household Debt and Income Inequality: Evidence from Italian Survey Data", *Review of Income and Wealth,* v. 67, 1, pp. 61-103. (WP No. 1095)

Metelli L. and **F. Natoli**, "The International Transmission of US Tax Shocks: A Proxy-SVAR Approach", *IMF Economic Review*, v. 69, 2, pp. 325-356. (WP No. 1223)

Mistretta A. and **F. Zollino**, "Recent Trends in Economic Activity and TFP in Italy with a Focus on Embodied Technical Progress", *Italian Economic Journal*, v. 7, 1, pp. 79-107.

Nispi Landi V. and **A. Schiavone**, "The Effectiveness of Capital Controls", *Open Economies Review*, v. 32, 1, pp. 183-211. (WP No. 1200)

Papetti A., "Demographics and the Natural Real Interest Rate: Historical and Projected Paths for the Euro Area", *Journal of Economic Dynamics and Control*, v. 132, Article 104209. (WP No. 1306)

Pereda Fernandez S., "Copula-Based Random Effects Models for Clustered Data", *Journal of Business & Economic Statistics,* v. 39, 2, pp. 575-588. (WP No. 1092)

Peydrò P, A. Polo and **E. Sette**, "Monetary Policy at Work: Security and Credit Application Registers Evidence", *Journal of Financial Economics*, v. 140, 3, pp. 789-814.

Selection of Journal articles and books

Sahel B., **A. Scalia** and L. Zaccaria, "Career Concerns and Peer Effects in Institutional Tournaments: Evidence from ECB Reserve Currency Portfolios", *Financial Management*, v. 50, 1, pp. 47-73.

Vander Donckt M., P. Chan and **A. Silvestrini**, "A New Global Database on Agriculture Investment and Capital Stock", *Food Policy*, Article 101961.

2020

Acceturo A., **G. Albanese** and **A. D'Ignazio**, "A New Phoenix? Large Plants Regeneration Policies in Italy", *Journal of Regional Science*.

Alessandri P. and **M. Bottero**, "Bank Lending in Uncertain Times", *European Economic Review*, v. 128, Article 103503. (WP No. 1109)

Antunes A. and **V. Ercolani**, "Public Debt Expansions and the Dynamics of the Household Borrowing Constraint", *Review of Economic Dynamics*, v. 37, pp. 1-32. (WP No. 1268)

Anzuini A., L. Rossi and **P. Tommasino**, "Fiscal Policy Uncertainty and the Business Cycle: Time Series Evidence from Italy", *Journal Journal of Macroeconomics*, v. 65.

Arduini T., E. Patacchini and **E. Rainone**, "Treatment Effects with Heterogeneous Externalities", *Journal of Business & Economic Statistics*, v. 38, 4, pp. 826-838. (WP No. 974)

Arias J., G. Ascari, **N. Branzoli** and E. Castelnuovo, "Innovative Investments, Financial Imperfections, and the Italian Business Cycle", *International Journal of Central Banking*, v. 16, 3, pp. 51-94.

Avdjiev S., L. Gambacorta, L. Goldberg and **S. Schiaffi**, "The Shifting Drivers of Global Liquidity" *Journal of International Economics*, v. 125, Article 103324

Ballatore R., **M. Paccagnella** and **M. Tonello**, "Purchases Bullied Because Younger Than My Mates? The Effect of Age Rank on Victimisation at School", *Journal of Labour Economics*.

Baltrunaite A., "Political Contributions and Public Procurement: Evidence from Lithuania", *Journal of the European Economic Association*, v. 18, 2, pp. 541-582.

Baltrunaite A., **C. Giorgiantonio**, **S. Mocetti** and **T. Orlando**, "Discretion and Supplier Selection in Public Procurement", *Journal of Law, Economics, and Organization*, v. 37, 1, pp. 134-166 (WP No. 1178)

Basso G. and G. Peri, "Internal Mobility: The Greater Responsiveness of Foreign-Born to Economic Conditions", *Journal of Economic Perspectives*, v. 34, 3, pp. 77-98.

Basso G., G. Peri and A. Rahman, "Computerization and Immigration: Theory and Evidence from the United States", *Canadian Journal of Economics*, v. 53, 4, pp. 1457-1494.

Bernardini M., S. De Schryder and G. Peersman, "Heterogeneous Government Spending Multipliers in the Era Surrounding the Great Recession", *Review of Economics and Statistics*, v. 102, 2, pp. 304-322.

Bernardini M. and L. Forni, "Private and Public Debt Interlinkages in Bad Times", *Journal of International Money and Finance*, v. 109, Article 102239.

Bologna P., **A. Miglietta** and **A. Segura**, "Contagion in the CoCos Market? A Case Study of Two Stress Events", *International Journal of Central Banking*, v. 16, 6, pp. 137-184. (WP No. 1201)

Bottero M., F. Mezzanotti and S. Lenzu, "Sovereign Debt Exposure and the Bank Lending Channel: Impact on Credit Supply and the Real Economy", *Journal of International Economics*. (WP No. 1032)

Bragoli D., F. Cortelezzi, G. Marseguerra and **M. Rigon**, "Innovative Investments, Financial Imperfections, and the Italian Business Cycle", *Oxford Economic Papers*, v. 72, 2, pp. 412-434.

Branzoli N. and A. Caiumi, "How Effective is an Incremental ACE in Addressing the Debt Bias? Evidence from Corporate Tax Returns", *International Tax and Public Finance*, 27, 6, pp. 1485-1519.

Bripi L., **D. Loschiavo** and **D. Revelli**, "Services Trade and Credit Frictions: Evidence with Matched Bank – Firm Data", *The World Economy*, v. 43, 5, pp. 1216-1252. (WP No. 1110)

Bronzini R., G. Caramellino and **M. Silvia**, "Venture Capitalists at Work: a Diff-in-Diff Approach at Late-Stages of the Screening Process", *Journal of Business Venturing*, v. 35, 3. (WP No. 1131)

Bronzini R., **S. Mocetti** and M. Mongardini, "The Economic Effects of Big Events: Evidence from the Great Jubilee 2000 in Rome", *Journal of Regional Science*. (WP No. 1208)

Carta F. and M. De Philippis, Discussion on "Labor Market Trends and the Changing Value of Time" by J. Boerma and L. Karabarbounis, *Journal of Economic Dynamics and Control*.

Coibion O., Y. Gorodnichenko and **T. Ropele**, "Inflation Expectations and Firms' Decisions: New Causal Evidence", *Quarterly Journal of Economics*, v. 135, 1, pp. 165-219. (WP No. 1219)

Corsello F. and **V. Nispi Landi**, "Labor Market and Financial Shocks: a Time-Varying Analysis", *Journal of Money, Credit and Banking*, v. 52, 4, pp. 777-801. (WP No. 1179)

Cova P. and **F. Natoli**, "The Risk-Taking Channel of International Financial Flows", *Journal of International Money and Finance*, v. 102. (WP No. 1152)

Del Prete S. and **S. Federico**, "Do Links between Banks Matter for Bilateral Trade? Evidence from Financial Crises", *Review of World Economics*. (WP No. 1217)

Depalo D., "Explaining the Causal Effect of Adherence to Medication on Cholesterol through the Marginal Patient", *Health Economics*, v. 29, 51, pp. 110-126.

Depalo D. and **S. Pereda Fernandez**, "Consistent Estimates of the Public/Private Wage Gap", *Empirical Economics*, v. 58, 6, pp. 2937-2947.

Selection of Journal articles and books

Di Giacinto V., **G. Micucci** and **A. Tosoni**, "Knowledge Intensive Business Services and Urban Areas: An Analysis of Localization and Productivity on Italian Data", *Annals of Regional Science.* (OP No. 443)

D'Ignazio A. and **C. Menon**, "The Causal Effect of Credit Guarantees for SMEs: Evidence from Italy", *Scandinavian Journal of Economics*, v. 122, 1, pp. 191-218. (WP No. 900)

Ercolani V. and **F. Natoli**, "Forecasting US Recessions: The Role of Economic Uncertainty ", *Economics Letters*, v. 193. (WP No. 1299)

Gazzani A., "News and Noise Bubbles in the Housing Market", *Review of Economic Dynamics*, v. 36, pp. 46-72.

Giordano R., S. Lanau, **P. Tommasino** and P. Topalova, "Does Public Sector Inefficiency Constrain Firm Productivity? Evidence from Italian Provinces", *International Tax and Public Finance*, v. 27, 4, pp. 1019-1049.

Ladu G., **A. Linarello** and F. Oropallo, "Trade Shocks, Product Mix Adjustment and Productivity Growth in Italian Manufacturing", *The World Economy*, v. 43, 5, pp. 1434-1451. (OP No. 513)

Mäkinen T., L. Sarno and **G. Zinna**, "Services Risky Bank Guarantees", *Journal of Financial Economics*, v. 136, 2, pp. 490-522. (WP No. 1232)

Mele A., K. Molnár and **S. Santoro**, "On the Perils of Stabilizing Prices when Agents are Learning", *Journal of Monetary Economics*.

Nispi Landi V., "Capital Controls Spillovers", *Journal of International Money and Finance*, v. 109, Article 102238. (WP No. 1184)

Pavan G., A. Pozzi and **G. Rovigatti**, "Strategic Entry and Potential Competition: Evidence from Compressed Gas Fuel Retail", *International Journal of Industrial Organization*, v. 69.

Pericoli M., "On Risk Factors of the Stock–Bond Correlation", *International Finance*, v. 23, 3, pp. 392-416.

Pietrunti M. and **F. M. Signoretti**, "Unconventional Monetary Policy and Household Debt: the Role of Cash-Flow Effects", *Journal of Macroeconomics*, v. 64. (WP No. 1142)

Rainone E., "The Network Nature of OTC Interest Rates", *Journal of Financial Markets.* (WP No. 1022)

Rainone E. and F. Vacirca, "Estimating the Money Market Microstructure with Negative and Zero Interest Rates", *Quantitative Finance*, v. 20, 2, pp. 207-234. (WP No. 1059)

Rizzica L., "Raising Aspirations and Higher Education. Evidence from the UK's Widening Participation Policy", *Journal of Labor Economics*, v. 38, 1, pp. 183-214. (WP No. 1188)

Santioni R., F. Schiantarelli and P. Strahan, "Internal Capital Markets in Times of Crisis: The Benefit of Group Affiliation", *Review of Finance*, v. 24, 4, pp. 773-811. (WP No. 1146)

Sbrana G. and **A. Silvestrini**, "Forecasting with the Damped Trend Model Using the Structural Approach", *International Journal of Production Economics*, v. 226.

Schiantarelli F., **M. Stacchini** and P. Strahan, "Bank Quality, Judicial Efficiency and Loan Repayment Delays in Italy", *Journal of Finance*, v. 75, 4, pp. 2139-2178. (WP No. 1072)

Segura A. and J. Zeng, "Off-Balance Sheet Funding, Voluntary Support and Investment Efficiency", *Journal of Financial Economics*, v. 137, 1, pp. 90-107.

Stagnaro C, C. Amenta, G. Di Croce and **L. Lavecchia**, "Managing the Liberalization of Italy's Retail Electricity Market: A Policy Proposal", *Energy Policy*, v. 137, Article 111150.

Tomat G. M., "Does Trade in Differentiated Goods Raise Wages?", *Structural Change and Economic Dynamics*, v. 53, pp. 344-352.

Tomat G. M., "Does Trade in Differentiated Goods Raise Wages?", *Structural Change and Economic Dynamics*, v. 53, pp. 344-352.

Useful links

WORKING PAPERS OF THE OTHER EURO AREA CENTRAL BANKS:

European Central Bank
Banco de España
Banco de Portugal
Bank of Estonia
Bank of Finland
Bank of Greece
Bank of Slovenia
Banque Centrale du Luxembourg
Banque de France
Banque Nationale de Belgique
Central Bank of Cyprus
Central Bank of Ireland
Central Bank of Malta
Central Bank of the Republic of Lithuania
De Nederlandsche Bank
Deutsche Bundesbank
Národná banka Slovenska
Latvijas Banka
Oesterreichische Nationalbank

OTHER

BIS Central Bank Research Hub
Einaudi Institute for Economics and Finance
OECD working papers series
Research at the IMF
Research at the World Bank

Directorate General for Economics, Statistics and Research
Via Nazionale, 91
00184 Roma - Italia
Tel. +390647921
E-mail: temidiscussione@bancaditalia.it

www.bancaditalia.it

Youtube.com/bancaditalia

@UfficioStampaBI