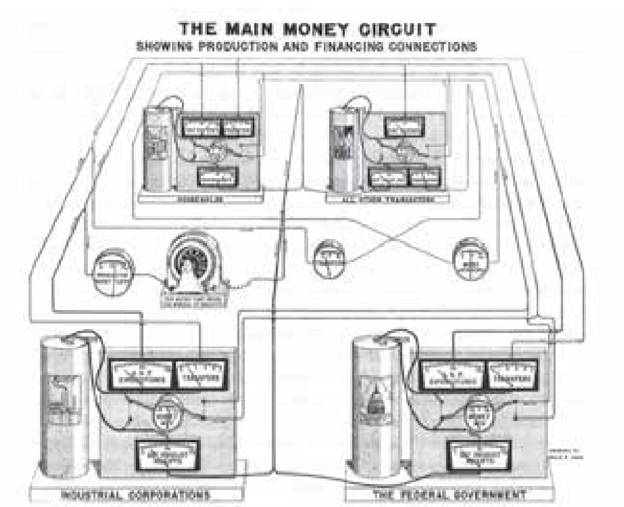
Bank of Italy conference on '*How financial systems work: evidence from financial accounts*'

Opening remarks: Luigi Federico Signorini,
Bank of Italy, Deputy Governor

Thursday, 30 November 2017

It is a pleasure to welcome you to the Banca d'Italia for this workshop. As a former head of the Statistical Directorate I am particularly happy to see such a distinguished list of speakers and guests on this occasion. I would like to thank all those who contributed, from other institutions, from academia, and from inside the Bank.

Financial accounts have a long history and we take some pride in having worked on them almost from the beginning. As many in this room will know, the first model accounts were developed by Morris A. Copeland for the US.[1]



The picture above, which has a nice vintage feel to it, summarises his idea of the economy as a money circuit, showing the connections between the institutional sectors. In 1955 the Federal Reserve published its first version of the annual flow of funds.

Italy's first financial accounts appeared about ten years later, in the *Annual Report of the Banca d'Italia* for the year 1964. We were among the first countries for which financial accounts became available. Of course, the pioneering work at the Fed was an inspiration, but there had been some significant preparatory work here as well. Since the 1940s Paolo Baffi, who was to become Governor many years later (1975-79), had been working on reconstructing

[1] Copeland M. (1952), *A Study of Moneyflows in the United States*, NBER, New York. Here we draw from De Bonis R. and A. Gigliobianco (2012), 'The origins of financial accounts in the United States and Italy: Copeland, Baffi and the institutions', in De Bonis R. and A. Pozzolo (eds.), *The Financial Systems of Industrial Countries. Evidence from Financial Accounts*, Springer.

the financial statements of the institutional sectors. He was influenced by Giorgio Mortara, an eminent statistician and his teacher, and by Wesley Mitchell, whose work on business cycles he had translated.[2]

They used to tell a story here at the Bank of Italy about how Baffi visited the Federal Reserve Board in the mid-1950s, as Head of Research, to discuss the construction of financial accounts. Proof that this was no myth was recently discovered in our historical archives in the form of several letters (one is pictured below) exchanged between William McChesney Martin, Chairman of the Board of Governors of the Federal Reserve System from 1951 to 1970, and Donato Menichella, Governor of the Bank of Italy from 1950 to 1960. Baffi stayed at the Fed for a few months in 1956.

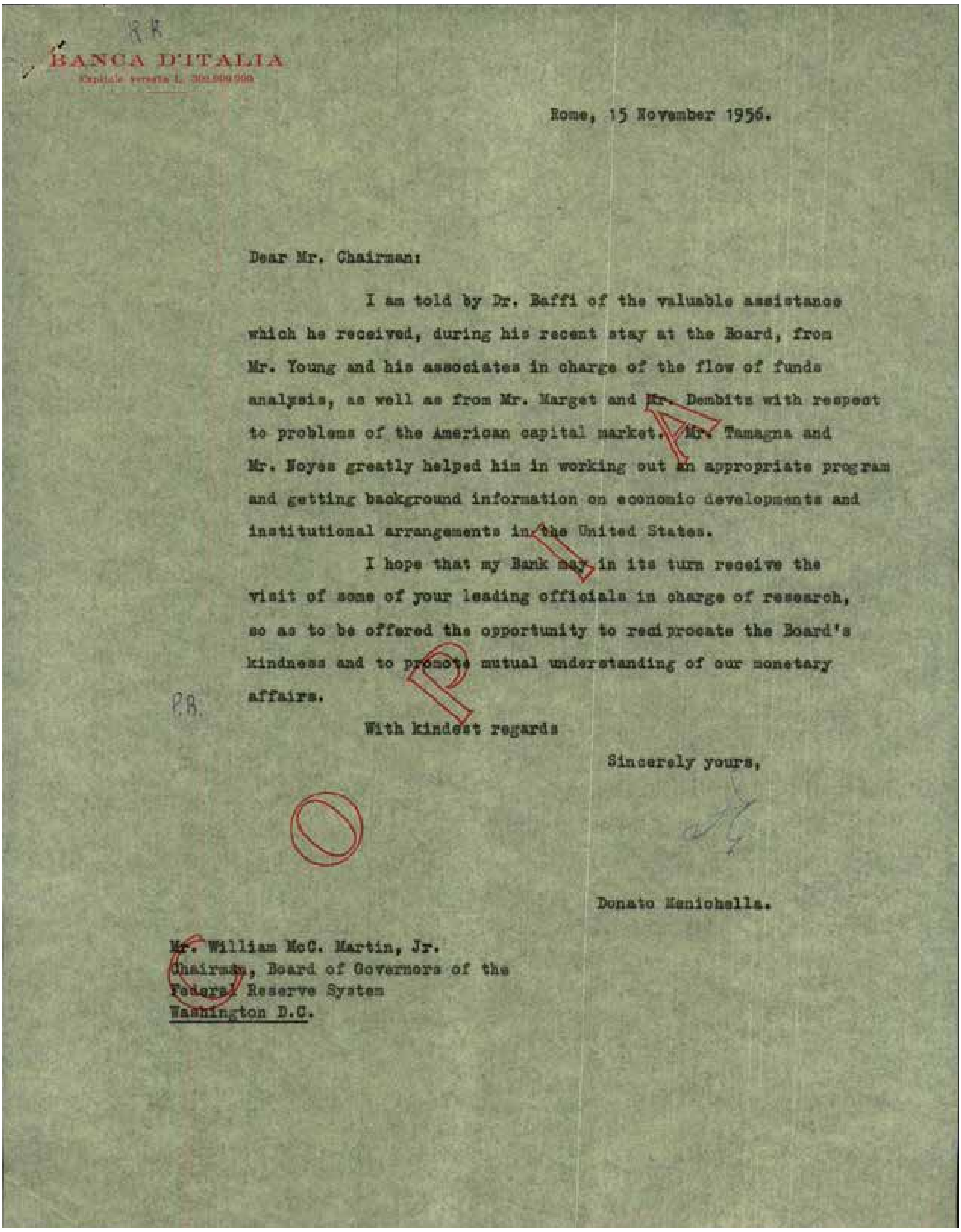
In the 1960s other countries – the UK and Germany among them – began to publish national financial accounts on a regular basis. These accounts became part of a triad that also included non-financial national accounts and input-output tables.[3]

Real national accounts had begun to be compiled following the Keynesian revolution, as the invention of macroeconomics and the definition of the attending concepts (income, consumption, investment, savings) prompted the development of statistical methods to produce a reasonable approximation of the real-world counterparts to those concepts. The first release of the United Nations' Systems of National Accounts came in 1947. Once the statistical foundations for *real* national accounts had been laid, moving on to *financial* accounts seemed natural. As we were soon to learn, this was no easy task. Even more, making the two sets of macro accounts consistent, i.e. integrated – a logical and easy step in theory – was in fact very difficult in practice.

The effort to understand and possibly control business cycles after the devastation of the Great Depression was itself a powerful driving force for the development of financial accounts. Financial variables such as bank loans and deposits, bonds and shares, arranged within a consistent framework, were seen as necessary to get a full picture of the cyclical factors in the economy.

2 Baffi was worried about the lack of good data: 'At the Research Office, where we follow and analyse statistics, principally of a monetary and financial nature, we find ourselves poorly equipped to understand the movements of non-monetary aggregates, barring those associated with foreign trade and the manufacture of some products. Yet such movements are among those at the root of financial phenomema …. We are at a similar disadvantage as regards our knowledge of the problems encountered by business enterprises …' (excerpts from a letter written in January, 1941).

3 Klein L. R. (2003), 'Some Potential Linkages for Input-Output Analysis with Flow-of-Funds', Economic Systems Research, 15, September, 269-277.



BANCA D'ITALIA

Capitale versato L. 300.000.000

Rome, 15 November 1956.

Dear Mr. Chairman:

I am told by Dr. Baffi of the valuable assistance which he received, during his recent stay at the Board, from Mr. Young and his associates in charge of the flow of funds analysis, as well as from Mr. Marget and Mr. Dembitz with respect to problems of the American capital market. Mr. Tamagna and Mr. Noyes greatly helped him in working out an appropriate program and getting background information on economic developments and institutional arrangements in the United States.

I hope that my Bank may in its turn receive the visit of some of your leading officials in charge of research, so as to be offered the opportunity to reciprocate the Board's kindness and to promote mutual understanding of our monetary affairs.

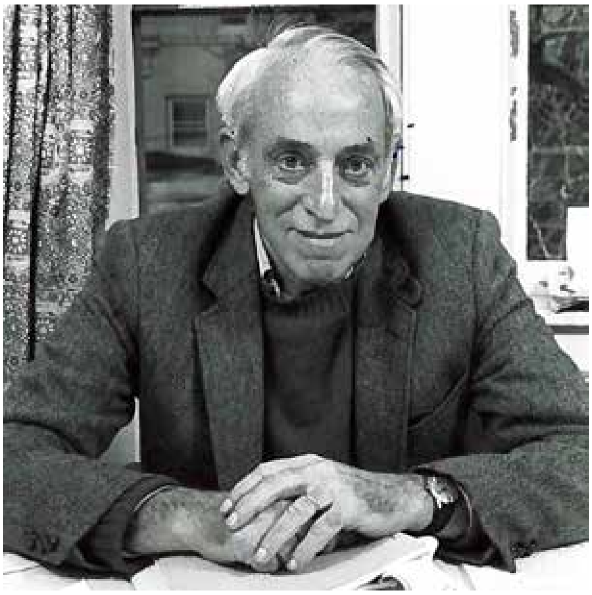
With kindest regards

Sincerely yours,

Donato Menichella.

Mr. William McC. Martin, Jr.
Chairman, Board of Governors of the
Federal Reserve System
Washington D.C.

The availability of information on financial flows may also have been regarded in those days as instrumental to economic planning; in some Western countries this was considered a very important and effective tool of economic policy in the post-war period. With illusions of top-down planning long forgotten in many market economies, this point is easily overlooked nowadays, but it was surely another significant factor in those times.



There was a golden age of financial accounts between the 1960s and the early 1970s. James Tobin, among others, used them to look at the way agents allocate wealth across financial and non-financial assets; in his Nobel Memorial Lecture in 1981, he discussed ‘Money and finance in the macro-economic process’ using flow-of-fund tables. Tobin and others had built models based on the interaction between the real and the financial sectors. This idea was taken up by central banks. For instance, the 1986 version of the Bank of Italy Quarterly Econometric Model contained a complete description of the links between saving, non-financial investments and financial flows.[4] Financial accounts were also a rather popular subject for research. Surveys of the literature list around 250 works on flows of funds published in twenty years or so after Copeland’s book.[5]

Interest in financial accounts declined in the 1980s, only to pick up again after the crisis. Many factors were at play: a growing focus on the micro foundations of macroeconomics; an increasing concentration on inflation as a target, and on money and credit aggregates as instruments, for monetary policy; some neglect of interconnections across the financial system; and much trust (too much, one would say in retrospect) in the self-correcting mechanism of price adjustments, which implied less interest in the quantities (flows and stocks) that make up financial accounts. On the statistical front, the main effort then was directed at fuller international harmonisation of real statistics, which resulted in the 1993 System of National Accounts; at the same time, as I mentioned earlier, integrating real and financial accounts was proving elusive.

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4 On these issues see Ando A. and F. Modigliani (1975), ‘Some reflections on describing structures of financial sectors’, in Fromm G. and L. R. Klein (eds.), *The Brookings Model: Perspective and Recent Developments*, New York, North-Holland.

5 Cohen, J. (1972), ‘Copeland’s Moneyflows after Twenty-Five Years: A Survey’, Journal of Economic Literature, 1, March; Bain, A.D. (1973), ‘Surveys in Applied Economics: Flow of Funds Analysis’, The Economic Journal, December; Roe, A.R. (1973), ‘The Case for Flow of Funds and National Balance Sheet Accounts’, The Economic Journal, 330, June.

Financial accounts continued to be used, though to a lesser extent, by economists such as Wynne Godley and Raymond Goldsmith.[6] Then the Asian crisis of the late 1990s showed the importance of sectoral financial connections and the need to study the balance sheets of banks, firms, and households.[7] Since the start of monetary union, the ECB's monetary analytical framework has included financial accounts as a tool for cross-checking its 'first pillar' (economic analysis) against its 'second pillar' (monetary analysis).[8]

However, it was the global financial crisis that generated renewed interest. A lesson of the crisis was that tracking sectoral imbalances was important; that an excessive level of debt may cause vulnerabilities; and that therefore the pursuit of financial stability required monitoring the level of corporate and household debt and the leverage of financial institutions. Finance was no longer a mere veil.

In 2011 the European Union adopted a surveillance procedure to monitor and correct macroeconomic imbalances. Among the indicators used are three key elements of the financial accounts: the stock and the flow of private sector debt and the change in the financial sector's liabilities.[9]

Finally, the importance of the interactions between the real economy and the financial sector for econometric modelling is now well-recognised and efforts are being made to integrate macro-financial relationships for key sectors such as non-financial corporations and households into large macro models.[10]

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6 Godley constantly followed the idea that economic models should be founded on flows and stocks, and developed consistent models of the US economy and the economies of other countries (see Godley, W. and M. Lavoie, 2007, *Monetary Economics: An Integrated Approach to Money, Credit, Income, Production and Wealth*, Palgrave MacMillan, Basingstoke). Goldsmith dedicated his research programme to the building of national and sector balance sheets, exploiting the financial accounts time series. See Goldsmith R. W. (1969), *Financial Structure and Development*, Yale University Press; Goldsmith R. W. (1985), *Comparative National Balance Sheets, A Study of Twenty Countries 1688-1978*, The University of Chicago Press.

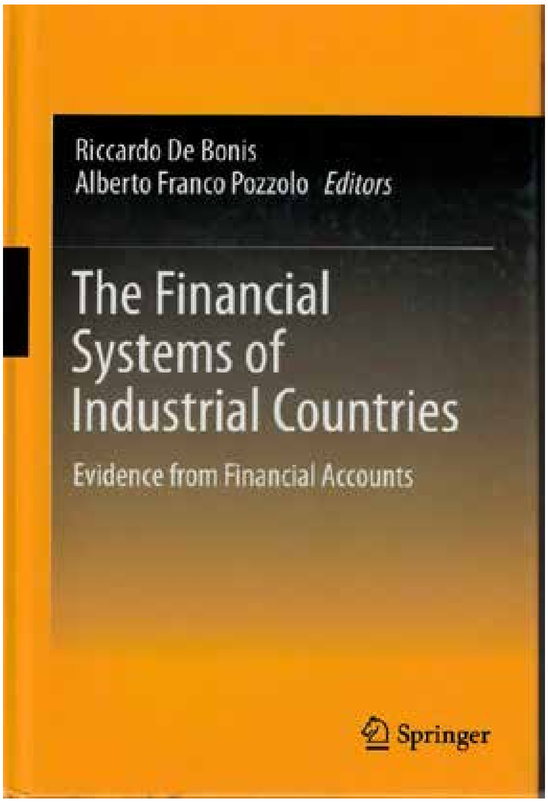
7 See Allen M., C. Rosenberg, C. Keller, B. Setzer and N. Roubini (2002), 'A balance sheet approach to financial crisis', IMF Working Papers, No. 210, International Monetary Fund, Washington, D.C.

8 See L. D. Papademos and J. Stark (2010), Enhancing Monetary Analysis, ECB, in particular chapter 7, 'Cross-checking and the flow of funds'.

9 Actually, before the crisis we wrote a paper on the use of financial accounts and other statistics for the analysis of financial stability. See R. De Bonis, G. Grande, S. Magri, L. F. Signorini and M. Stacchini (2005), 'Financial stability: an overview of Bank of Italy statistics', Irving Fisher Committee Bulletin, 23, October.

10 For an example see Duca, J. and J. Muellbauer (2014), 'Tobin lives: Integrating evolving credit market architecture into flow of funds based macro-models', in A Flow-of-Funds Perspective on the Financial Crisis, Vol. II, Palgrave Macmillan, Basingstoke. We also draw from Muellbauer J. (2016), Macroeconomics and consumption: Why central bank models failed and how to repair them, Vox.eu, 21 December.

Here at the Bank of Italy financial accounts have been used rather intensively in research over the years. An incomplete list of articles and books based on Italian financial accounts includes around 100 works by Bank of Italy authors alone. Research has covered, among other things, the structure of the Italian financial system, household wealth, firms' financial structure; convergence of financial systems, and macro financial imbalances. A 2012 collection of essays on the evolution of financial systems is one example. We regularly comment on financial accounts statistics in the Annual Report, the Economic Bulletin and the Financial Stability Report.



Let me now turn briefly to purely statistical issues. As I mentioned, the Bank of Italy has regularly published the country's financial accounts (stocks and flows) since the 1960s; yearly stocks have been reconstructed for the main institutional sectors as far back as 1950. Below is the first statistical manual we published in 1969. We implemented the SEC79 standards (and showed quarterly figures for the first time) in the early 1990s, the ESA95 standards in 2002 (during my time in Statistics), and the ESA2010 standards in 2016.

Over the years countless methodological improvements have been made to coverage and estimation methods. Many people here will be familiar with the multiple challenges of using diverse sources, often designed for non-statistical purposes and lacking common methodological standards, to obtain consistent statistics;[11] of reconciling inconsistent classifications; of building

[11] Here we draw from De Bonis R., C. Giron, L. Infante and G. Quirós (2017), 'Financial accounts uses', in P. van de Ven and D. Fano (edited by, 2017), Understanding Financial Accounts, OECD.

statistical bridges across valuation criteria (historical cost vs. market prices) and recording conventions (cash vs. accrual); and of credibly interpolating low-frequency data. Work continues on these and other fronts and there is still much to do. Tomorrow Luigi Cannari will talk to you about some of the main pieces of work in progress, including the reconciliation of micro and macro financial data; the integration of financial and non-financial assets in a consistent balance-sheet framework for each sector; and the improvement of statistics on cross-border flows and holdings.

Before I leave the floor, let me take this opportunity to pay tribute to the memory of our colleague, Andrea Generale, a talented, committed researcher and then regulator, who passed away a year ago after a long illness. Besides being a highly qualified senior professional, Andrea was generous and open with everyone. He had a lifetime commitment to the analysis of banks, corporations, financial institutions and financial systems. For some time Andrea coordinated the Bank's research on financial flows and significantly contributed to our body of research based on the use of financial accounts.[12] We shall remember him with affection and gratitude.

This is all on my part. I see that you have a full agenda, with three keynote lectures and twelve papers packed into one and a half days. I wish you all some very fruitful and enjoyable presentations and discussions.

[12] One contribution is in Bartiloro L., R. De Bonis, A. Generale and I. Longhi (2008), The financial structures of the leading industrial countries: a medium-term analysis, paper presented at the conference "Financial Accounts: History, Methods, the case of Italy and International Comparisons", Perugia, December 2005.

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