



BANCA D'ITALIA
EUROSISTEMA

Questioni di Economia e Finanza

(Occasional Papers)

Foreign holders of Italian government debt securities:
new evidence

by Valerio Della Corte and Stefano Federico

October 2016

Number

363



BANCA D'ITALIA
EUROSISTEMA

Questioni di Economia e Finanza

(Occasional papers)

Foreign holders of Italian government debt securities:
new evidence

by Valerio Della Corte and Stefano Federico

Number 363 – October 2016

The series Occasional Papers presents studies and documents on issues pertaining to the institutional tasks of the Bank of Italy and the Eurosystem. The Occasional Papers appear alongside the Working Papers series which are specifically aimed at providing original contributions to economic research.

The Occasional Papers include studies conducted within the Bank of Italy, sometimes in cooperation with the Eurosystem or other institutions. The views expressed in the studies are those of the authors and do not involve the responsibility of the institutions to which they belong.

The series is available online at www.bancaditalia.it .

ISSN 1972-6627 (print)

ISSN 1972-6643 (online)

Printed by the Printing and Publishing Division of the Bank of Italy

FOREIGN HOLDERS OF ITALIAN GOVERNMENT DEBT SECURITIES: NEW EVIDENCE

by Valerio Della Corte* and Stefano Federico*

Abstract

Drawing on data from the Eurosystem's recent Securities Holdings Statistics (SHS) and the IMF's Coordinated Portfolio Investment Survey (CPIS), the paper provides a detailed breakdown of foreign holders of Italian government securities by sector and geographical area. We estimate that euro-area investors held more than 60 per cent of the Italian general government securities held by non-residents at the end of 2015; the sector in the euro area holding the largest share was 'other financial intermediaries' (predominantly non-money market funds), followed by banks and the insurance industry and pension funds. We also show that foreign demand for Italian government debt was mainly driven by euro-area countries in 2014, while in 2015 it mostly reflected purchases made by investors outside the euro area.

JEL Classification: F30, G10, H60.

Keywords: securities holdings, cross-border investment, sovereign debt.

Contents

| | |
|--|----|
| 1. Introduction and main conclusions..... | 5 |
| 2. Data sources..... | 5 |
| 3. Methodological issues | 7 |
| 4. Foreign holdings of Italian government debt securities by area and sector | 9 |
| 5. Foreign purchases of Italian government debt securities by area and sector in 2014-15.... | 10 |
| 6. Residual maturity of foreign holdings of Italian government debt | 12 |
| References | 14 |

* Bank of Italy, Directorate General for Economics, Statistics and Research.

1. Introduction and main conclusions

This work provides, for the first time, a detailed picture of the composition of foreign holders of Italian general government securities by sector and geographical area. To this end, it combines information from the Eurosystem's recent Securities Holdings Statistics (SHS) data and from the IMF's Coordinated Portfolio Investment Survey (CPIS). This allows us to overcome the limitation of the sources used to compile the balance of payments and the international investment position statistics, which do not record any information on foreign investors' characteristics.

Detailed information on the composition of foreign holders of Italian government debt can prove useful for several purposes. First, it shows how the exposure toward sovereign debt varies across different holders and how differences in investors' profiles translate into investment patterns (for instance, a preference for short-term or long-term debt instruments, depending on the maturity composition of the investors' balance sheet). Second, it helps to understand the behavior of foreign investors in the context of monetary policy measures such as the ECB's Expanded Asset Purchase Programme (APP), thus providing direct evidence on the "portfolio rebalancing" channel. Third, it can be useful for financial stability purposes, as shown for instance by the market tensions experienced by Italy during the most acute phase of the sovereign debt crisis.

Our main findings can be summarized in two main points. First, we estimate that euro-area investors held more than 60 per cent of the Italian general government securities held by non-residents at the end of 2015; the main sector represented in the euro area was 'other financial intermediaries' (predominantly non-money market funds), followed by banks and the insurance industry and pension funds. Second, we find that foreign demand for Italian government debt was mainly driven by euro-area countries in 2014, while in 2015 it mostly reflected purchases made by non-euro area investors.

The structure of the work is as follows. Section 2 presents the data sources, while Section 3 deals with methodological issues: the discussion highlights the extremely rich information available in the new data sources, but also a few important limitations that need to be taken into account when interpreting the data. Section 4 reports the main results on the composition of foreign holders of Italian government debt. Section 5 illustrates recent trends in foreign demand for Italian government debt. Section 6 focuses on the residual maturity of the Italian public debt held abroad.

2. Data sources

We use two main data sources: the Eurosystem's SHS and the IMF's CPIS.

The development of the first dataset has its roots in the financial crisis of 2008-2009, which made it clear that central banks need reliable and granular information to adequately monitor matters like the exposure of economic sectors toward a specific issuer, the risk of contagion between financial institutions as well as, in the euro area, developments in the financial integration process within the

currency union.¹ Official statistics, which traditionally tend to have a macroeconomic perspective, fall short of the required level of detail, prompting the Eurosystem to develop the Securities Holdings Statistics (SHS).²

SHS data report quarterly information about the holdings of debt instruments, quoted shares and mutual fund units on a security-by-security basis. The database consists of two separate modules: SHS-Sector and SHS-Group.³ In the first module, used in our analysis, securities are disaggregated by sector (as defined under the ESA 2010) and country of residence of the holder. The archive includes information on securities issued by euro area and non-euro area residents and held by euro-area investors and on those issued by euro area residents and held by non-euro area investors in custody with euro-area custodians. The dataset is available since the last quarter of 2013; quarterly updates are released around four months after the end of the corresponding quarter.

SHS data are derived from the combination of very detailed information provided by euro-area central banks and selected EU non-euro area central banks which participate to the project on a voluntary basis. Central banks in turn collect the information from two sources. The first one is a “direct” source, as resident institutions that are subject to statistical reporting requirements (mostly banks and financial intermediaries) report detailed information on their own holdings of securities to the national central bank. The second source is an “indirect” one as it is based on information provided by resident custodians on the amount of securities held in custody on behalf of their customers. These two sources complement each other, as the indirect reporting by resident custodians crucially helps filling at least part of the gap in the coverage of securities held by investors that are not subject to statistical reporting (such as “third-party holdings” by households and other non-financial investors as well as holdings by investors located outside the euro area). Data on holdings by euro-area investors are generally derived from both sources, while data on holdings by non-euro area investors are based only on the “indirect” reporting by euro-area custodians and are therefore not complete.

Importantly, data are recorded at an individual security level (using the ISIN code as identifier). The advantage of this choice is twofold. First, it enables end-users to aggregate the data in a flexible way according to their specific analytical needs, thus greatly expanding the range of uses of the dataset. Second, it significantly lowers the statistical burden on reporting agents, to the extent that they only have to report, for each individual security, the amount held at a given date. Detailed information on prices and other characteristics of each security – needed for instance for valuation purposes – is directly managed by the central banks through their Centralised Securities Database (CSDB).

Despite being a relatively new source, SHS data have already been used to compute breakdowns by sector or area of holders of specific types of securities (DNB 2015, ECB 2015) and to build more

¹ For a discussion of the data needs revealed by recent financial developments and how they relate to the SHS, see Sola and Stobbe (2010).

² Efforts in this direction culminated with the Regulation of the European Central Bank of 17 October 2012 (ECB/2012/24) and Guideline of the European Central Bank of 22 March 2013 (ECB/2013/7), subsequently amended by Regulation ECB/2015/18 and Guideline ECB/2015/19), which provide an adequate legal basis for the collection and production of these statistics.

³ The SHS-Group module, which is not used in this work, gives information on holdings of large euro area banking groups, with a breakdown by individual banking group. For a more detailed description of the SHS dataset, see ECB (2015).

comprehensive financial integration indicators for the euro area (Fache Rousová and Caloca, 2014; ECB, 2016).

The other main source of our analysis is the global survey of portfolio holdings run by the IMF (CPIS). A large set of reporting countries, which includes all advanced economies and most emerging economies (although with a few significant exceptions such as some Asian countries and most oil-exporting countries) provides information on cross-border portfolio holdings of securities, with a breakdown by issuer country and holder sector.⁴ Since 2013 CPIS data are reported on a semi-annual basis and are released nine months after the reference period. In contrast to the extremely granular SHS data, CPIS data are available at a much more aggregate level, in terms of both instrument (long-term debt securities, short-term debt securities and equities) and information (stocks at market values only). The advantage of CPIS data for the purpose of our work is twofold: first, it allows overcoming the lack of information on holdings by euro-area central banks in the SHS;⁵ second, data are fully consistent with balance of payments and international investment position statistics and allow for a cross-check of information included in the SHS database.

3. Methodological issues

When using the rich information available in the SHS, a few relevant shortcomings of the database must be taken into account. As far as euro-area investors are concerned, the main limitations involve the incomplete coverage of holdings of securities in custody with non-euro area custodians and of holdings by sectors that are not subject to statistical reporting requirements (households, non-financial companies, etc.).

The shortcomings of SHS data are more pronounced for holdings of investors outside the euro area. As mentioned above, the only source of information in this case comes from resident custodians, and its quality may thus be affected by the presence of cross-border chains of custody. The problem arises when euro-area custodians report information on securities held by their immediate non-euro area customers, but the latter are custodians themselves acting on behalf of the ultimate owner of the securities. The ownership of these securities may then be recorded as belonging to the intermediate custodian rather than to the final investor. This might induce a significant bias in the allocation by country or sector of the holdings of securities (“custodial bias”), typically overstating holdings of countries that are major custodial centers. For example, securities kept in custody by a euro-area

⁴ CPIS data have been used by several studies, some of which pointing to a significant “under-reporting” of debt and equity securities, presumably due to tax evasion (Lane and Milesi-Ferretti 2008; Pellegrini and Tosti 2012; Zucman 2013).

⁵ For confidentiality reasons, SHS do not include holdings by the Eurosystem and by the European Stability Mechanism. For the Eurosystem (excluding the Bank of Italy), we collect data on debt securities held by euro-area central banks from the CPIS; although these aggregates in theory include not only government debt securities but also private debt securities, in practice, for the period under analysis the amount of private debt securities in the balance sheet of euro area central banks is likely to be almost negligible. For a subset of euro-area central banks whose holdings are not reported in the CPIS for the most recent years we make extrapolations based on information reported at previous dates or imputations based on a “capital-key” share of total holdings of Italian government debt by the Eurosystem under the Securities Market Programme. No estimate is made instead for holdings by the European Stability Mechanism.

custodian on behalf of another custodian resident in the United Kingdom are recorded as holdings by United Kingdom investors in the SHS, even if the final investor is resident in a third country.⁶

In order to assess the actual impact of the aforementioned shortcomings in term of data quality, we cross-check our estimates of foreign holdings of Italian government bonds with various alternative sources.

Comparison with Italy's balance of payments and international investment position data. – When compared with Italy's international investment position statistics, our estimates based on SHS and CPIS data turn out to overestimate the amount of Italian government debt held by non-residents (on average by about 10 percent). This overestimate does not depend on the application of our methodology to Italian government debt data, but it seems to reflect a more general feature of SHS data, which are derived from the combination of multiple and unrelated sources that may lead to a “double-counting” of securities holdings. Similar evidence has indeed already been found also for euro area aggregates. For example, the amount of euro-area securities held by non-euro area investors is significantly higher than the corresponding liabilities in the euro-area international investment position (by a similar percentage as that found for Italy). Furthermore, holdings by euro-area and non-euro area investors of debt securities issued by euro-area residents according to the SHS database also appear to be larger than the outstanding stocks according to securities issues statistics, again pointing to an upward bias of SHS data relative to securities issued in the euro area.

Various methodological issues might explain this upward bias. A first explanation is related to the treatment of repo transactions and securities lending. Although regulations prescribe reporting agents to assign the ownership of securities exchanged in the context of such transactions to the original owner and not the temporary acquirer, in practice the identification of the original owner might be quite challenging for the reporting custodians. A second related problem might arise when a security is temporarily transferred by a euro-area investor to a non-euro area investor and subsequently sold by the latter to a euro-area investor. In this case, both euro-area investors (the original holder and the temporary final holder) own the same security, while the non-euro area investor – which has an obligation to return the security to the original owner – has a negative position on the specific security. The reporting system correctly records the holdings of the security by the two euro-area investors, but – as there is no direct reporting for non-euro area investors in the SHS data – does not net out the non-euro area investor's negative position, thus determining a double counting of the security.

The upward bias of our estimates seems anyway to be relatively stable over time. Turning to flows, a comparison with Italy's balance of payments data shows indeed that, while significant differences may arise quarter-on-quarter, overall there is a very high correlation between the two sources (Figure

⁶ The “custodial bias” (or “custodial center bias”) is pervasive in data on external financial assets and liabilities. The collection of data at the level of individual security, as is the case for the SHS, helps to avoid the bias on the asset side (since the true issuer of the security is known), but not necessarily on the liability side. For a more general discussion, see Sà (2013) and the references therein.

1). The largest discrepancies are found in the third and fourth quarters of 2014 and in the second and third quarters of 2015, but largely disappear on an annual basis.⁷

Comparison with CPIS data – A cross-check between SHS and CPIS data proves to be particularly useful to assess the quality of the breakdown of holdings by country and the impact of the “custodial bias” on non-euro area investors. There are some methodological differences that need to be taken into account. First, CPIS include securities held as portfolio investment but not those held as direct investment or reserve assets, while SHS include all functional categories. Second, the break down by issuer sector is available only for a subset of the reporting countries in CPIS data. We therefore compare the overall level of debt securities issued by Italian public and private sectors across the two sources instead of only those issued by the public sector. Finally, since SHS data do not include securities held by euro-area central banks, for euro-area countries we compute total holdings net of those of the national central bank according to the CPIS.

The evidence, based on data at the end of 2014, suggests that there are significant differences between SHS and CPIS in a few non-euro area countries. In particular, SHS tends to overestimate holdings by the United States and, to a minor extent, by the United Kingdom. This presumably reflects the higher degree of custodial bias suffered by the former source, and can be interpreted as securities held by custodians located in these two countries on behalf of international investors. The differences are instead relatively small in most of the other holder countries.

Overall, the combination of SHS and CPIS data allow to derive a detailed decomposition of foreign holders of Italian government debt securities, which is broadly consistent with Italy’s balance of payments data and which, with the caveat of the “custodial bias” effect on a few non-euro area countries, can be used to monitor the evolution of foreign demand for Italian government debt.

4. Foreign holdings of Italian government debt securities by area and sector

We estimate that euro-area investors held more than 60 per cent of the Italian general government securities held by non-residents at the end of 2015 (Table 1). The main sector represented in the euro area was ‘other financial intermediaries’ (predominantly non-money market funds; 23.0 percent of securities held by non-residents). Euro-area banks⁸ and insurance corporations and pension funds held 13.9 and 11.5 per cent of foreign holdings of Italian government debt, respectively.

The share held by the other euro-area sectors (including the Eurosystem⁹ except the Bank of Italy, households, non-profit institutions serving households and non-financial corporations) amounted to

⁷ An additional minor source of discrepancy is related to the inclusion, since the second quarter of 2015, of the third party holdings by euro-area investors, which determined a small break in the time series.

⁸ Data reported for the banking sector refer to the “other monetary financial institutions” (MFI), which includes money market funds.

⁹ Holdings by the Eurosystem include securities purchased by the ECB and by national central banks excluding the Bank of Italy in the context of SMP and APP or for non-monetary policy purposes.

13.2 percent; the gradual decline of this share since the end of 2013 can be partially traced back to securities purchased by the Eurosystem under the Securities Markets Programme reaching maturity. Among the investors outside the euro area, significant shares are held by both the private sector and the public sector (composed by central banks and general governments).

| Holders | Breakdown of end-year stocks (%) | | | Flows (EUR billion) | |
|---|----------------------------------|--------------|--------------|---------------------|-------------|
| | 2013 | 2014 | 2015 | 2014 | 2015 |
| Euro area | 62.8 | 63.5 | 61.6 | 37.4 | -6.3 |
| Banks (2) | 15.1 | 15.0 | 13.9 | 5.7 | -7.8 |
| Insurance and pension funds | 10.5 | 11.7 | 11.5 | 8.8 | -1.6 |
| Other financial intermediaries | 21.5 | 22.8 | 23.0 | 20.7 | 5.5 |
| Other sectors (3) | 15.7 | 14.0 | 13.2 | 2.2 | -2.4 |
| Extra-euro area | 37.2 | 36.5 | 38.4 | 14.5 | 25.1 |
| Total foreign holders (our estimates) | 100.0 | 100.0 | 100.0 | 51.9 | 18.8 |
| Total foreign holders (balance of payments data) | | | | 58.8 | 21.1 |

Source: estimates on ECB (SHS), IMF (CPIS) and Bank of Italy data. (1) Our estimates do not cover the entire universe of non-resident holders of Italian general government securities; this explains the difference as compared with balance of payments data. (2) Including money-market funds. – (3) It includes the following sectors: non-financial corporations, households, NPISH, general government, Eurosystem (excluding Bank of Italy).

By country, the main euro-area holders of Italian government securities are France and Luxembourg, followed by Germany and Spain; outside the euro area, they are the United States, the United Kingdom, China and Japan. The holdings by Luxembourg and other countries with a large fund industry presumably reflect, to a large extent, a “round-tripping” phenomenon where Italian investors purchase units of mutual funds based in these countries, which in turn reinvest into Italian assets including Italian government debt (Felettigh e Monti 2008). The relevance of “round-tripping” may be roughly estimated between 10 and 16 percent of total foreign holdings of Italian government debt depending on the method.¹⁰

5. Foreign purchases of Italian government debt securities by area and sector in 2014-15

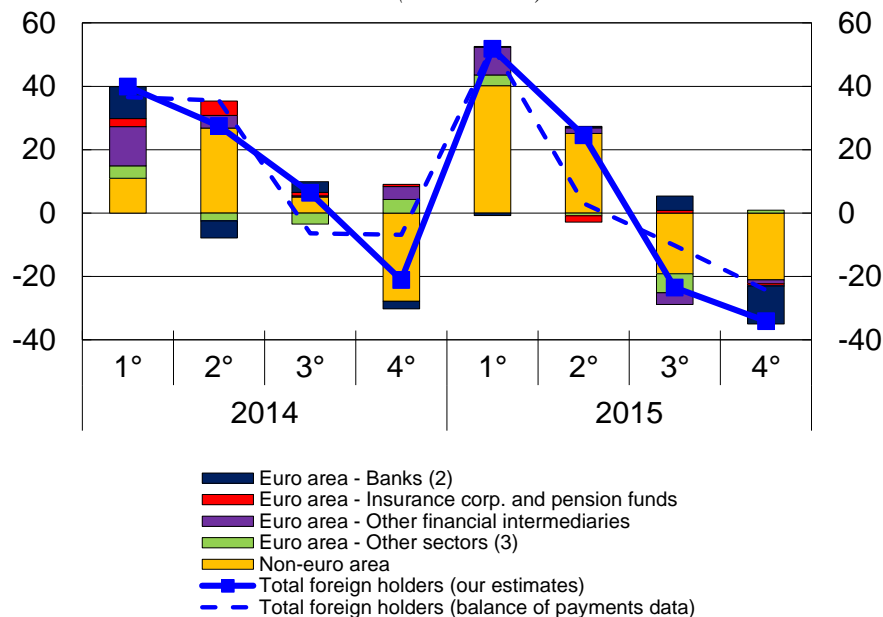
Foreign demand for Italian government bonds, which had plummeted in 2011-12 during the most acute phase of the sovereign debt crisis, recovered between 2014 and the first semester of 2015.

¹⁰ One admittedly rough method considers the total holdings of Italian government debt by mutual funds based in Luxembourg and Ireland. An alternative method assumes that the share of Italian government debt on total assets of round-trip mutual funds is the same as the share of Italian government debt in total assets of Italian-based mutual funds. Both methods produce only very imperfect estimates of “round-tripping” of debt securities, therefore the results have to be interpreted with great caution.

According to Italian balance of payments data, foreign investors made €58.8 billion net purchases of Italian government debt securities in 2014 and €21.1 billion in 2015. Our estimates based on SHS and CPIS data provide a quite similar picture, with net purchases from abroad amounting to €52.6 billion in 2014 and to €18.8 billion in 2015.¹¹

According to our estimates, over two-thirds of net purchases of Italian government debt securities in 2014 came from euro area investors (Table 1 and Figure 1). More than half of these investments were undertaken by the “other financial intermediaries” sector (€20.7 billion). Insurance corporations and pension funds and, to a lesser extent, banks also made net acquisitions (€8.8 billion and €5.7 billion respectively). Non-euro area investors purchased €14.5 billion of these securities, as a result of net purchases in the first three quarters and net sales toward the end of the year.

Figure 1 - Foreign holders of Italian government debt securities by area and sector (1)
(EUR billion)



Source: estimates on ECB (SHS), IMF (CPIS) and Bank of Italy data. (1) Our estimates do not cover the entire universe of non-resident holders of Italian general government securities; this explains the difference as compared with balance of payments data. (2) Including money market funds. – (3) It includes the following sectors: non-financial corporations, households, NPISH, general government and the Eurosystem (net of Bank of Italy).

In 2015 the increase in foreign investment in Italian government securities was instead entirely due to investors from outside the euro area: their large net acquisitions in the first half of the year were only partially offset by net disposals in the second half. The timing of the inflows from non-euro area investors might therefore be related to the announcement and to the first months of operation of the ECB’s APP. It is worth noting that, according to the euro-area balance of payments statistics, non-euro area investors made net sales of euro-area government debt securities in 2015 (€39.3 billion). This information, combined with the net purchases of Italian government debt securities by non-euro area

¹¹ Flows are based on authors’ estimates on stocks at nominal value in SHS data and stocks at market value in CPIS data.

investors, provides suggestive evidence of a change in the euro-area government debt portfolio held by non-euro area investors, possibly related to the implementation of the APP.

Euro-area investors showed instead a decrease in their preference for Italian government securities, with net disinvestments amounting to €6.3 billion. They were largely driven by the euro-area banking sector, which reduced its exposure by €7.8 billion. These net sales might reflect, at least to some extent, a relatively cautious approach by euro-area banks, possibly in relation to the discussions concerning changes to the regulatory treatment of sovereign exposure.¹² Insurance companies and pension funds made also net sales, but on a modest scale. Euro-area other financial intermediaries instead kept buying Italian governments bonds, albeit for amounts significantly lower than in the previous year (€5.7 billion).

6. Residual maturity of foreign holdings of Italian government debt

In order to better assess the strength of the recovery in the foreign demand for Italian government debt, it is useful to focus on developments in its maturity composition. Looking at the maturity buckets targeted by foreign investors may not only provide hints on the preferences and strategies behind their choices, but it is also a relevant feature to monitor per se. For instance, investments in short-term debt are typically deemed to be more volatile and more prone to reversals than investments in debt with longer maturity, thus increasing the issuer's exposure to roll-over risk and capital flights.¹³

According to balance of payments data, in 2014 foreign net purchases of Italian government debt securities were mainly directed toward long-term securities, which international standards define as instruments having original maturity of more than one year.¹⁴ Foreign demand was even more skewed toward these securities in 2015.

Nevertheless, if we focus on the residual maturity of the securities rather than the original one, the overall picture turns out to be reversed. According to our estimates, which are based on security-by-security data used to compile the Italian balance of payments, the residual maturity of the Italian government debt held abroad dropped to 6.5 years at the end of 2015, from 7.0 years at the end of 2014 (and 7.2 years at the end of 2013, Figure 2).¹⁵ The decline recorded for 2015 presumably mirrored the preferences of non-euro area investors, whose purchases in the first half of the year targeted especially securities with short residual maturity (and yet original maturity longer than one year).

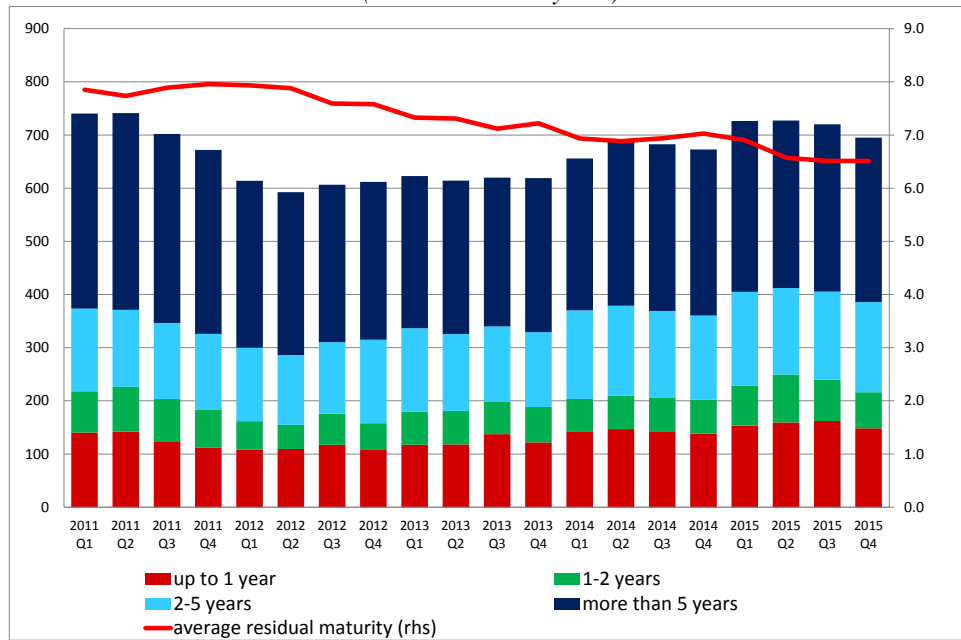
¹² For a review of the proposed policies, see ESRB (2015).

¹³ See Kose et al. (2009).

¹⁴ See IMF (2009, p. 97).

¹⁵ The average residual maturity of the outstanding stock of central government securities slightly increased over 2015 (to 6.6 years from 6.4; see Bank of Italy, 2016). Likewise did the residual maturity relative to the overall Italian public debt (from 6.8 to 7.1 years), which however also includes MFI's loans to general government.

Figure 2 – Maturity breakdown of foreign holdings of Italian government debt securities
(EUR billion and years)



Source: calculations on Bank of Italy data.

References

- Bank of Italy (2016), *Financial Stability Report*, April, no. 1,
- DNB (2015), *Overview of Financial Stability in The Netherlands*, Autumn.
- ECB (2015), Who holds what? New information on securities holdings, *Economic Bulletin*, Issue 2.
- ECB (2016), Special Feature D: New financial integration indicators built from securities holdings statistics, in *Financial Integration in Europe 2016*.
- ESRB (2015), *ESRB report on the regulatory treatment of sovereign exposures*, Frankfurt/Main.
- Fache Rousová L., Rodríguez Caloca A. (2014), The use of Securities Holdings Statistics (SHS) for designing new euro area financial integration indicators, *Irving Fisher Committee on Central-Bank Statistics: Proceedings of the Seventh IFC Conference*, Bank for International Settlements, Basel.
- Felettigh A., Monti P. (2008), How to interpret the CPIS data on the distribution of foreign portfolio assets in the presence of sizeable cross-border positions in mutual funds. Evidence for Italy and the main euro-area countries, *Bank of Italy Occasional Papers*, n. 16.
- IMF (2009), *Balance of Payments and International Investment Position Manual*, sixth edition.
- Kose M.A., Prasad E., Rogoff K. and Wei, S. (2009), Financial Globalization: A Reappraisal, *IMF Staff Papers*, Palgrave Macmillan, vol. 56(1), pp. 8-62.
- Lane P. R., Milesi-Ferretti G.M. (2008), The Drivers of Financial Globalization, *American Economic Review*, American Economic Association, vol. 98(2), pp. 327-332.
- Pellegrini V., Tosti E. (2012), In search of lost capital: an estimation of undeclared portfolio assets, *Bank of Italy Occasional Papers*, n. 131.
- Sá F. (2013), Bilateral Financial Links, in *The Evidence and Impact of Financial Globalization*, edited by Caprio G., Beck T., Claessens S. and Schmukler S. L., Academic Press, San Diego, pp. 51-65.
- Sola P., Strobbe F. (2010), Addressing data gaps revealed by the financial crisis: European Central Bank statistics on holdings of securities, Irving Fisher Committee on Central-Bank Statistics, *IFC Bulletin*, No. 34, Bank for International Settlements, Basel.
- Zucman G. (2013), The missing wealth of nations: are Europe and the U.S. net debtors or net creditors?, *The Quarterly Journal of Economics*, vol. 128(3), pp. 1321-1364.