MINISTERO DELL'ECONOMIA E DELLE FINANZE

# PUBLIC DEBT REPORT
# 2014

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# INTRODUCTORY NOTE BY MINISTER PIER CARLO PADOAN

*Italy's economic policy has a long-term and multi-dimensional approach that is designed to address the structural delays accumulated by the nation's economic system in the past. The government is pursuing the objectives of accelerating the exit from a lengthy crisis, and relaunching the country's growth potential through a broad programme of structural reforms; at the same time, the path toward fiscal consolidation remains a priority in facilitating a reduction of the high debt burden.*

*After eight years of uninterrupted increases, the debt-to-GDP ratio is projected to decrease in 2016 and to continue declining in subsequent years, due in part to a primary surplus since 1992 (with the exception of 2009) combined with a return to growth. The existing high public debt represents a key factor that conditions the framework within which economic-policy decisions are made. The government has adjusted the pace of fiscal consolidation to the phase of the economic cycle, and has simultaneously adopted measures that provide for a growth-friendly mix of revenue and expenditure, so that the balances shaping fiscal consolidation will not prevent the implementation of economic policy with an expansionist bent.*

*These objectives can be achieved without the excessive conditioning caused by fluctuations of the financial markets only if Italy's interaction with the markets is supported by adequate technical management, which is ensured by a special structure within the Ministry: the Public Debt Directorate, part of the Department of the Treasury. The Public Debt Directorate works daily with the challenges of the markets by using all of the operational and analytical tools available for effective and timely action. The professionalism demonstrated by the offices responsible has represented over time an indispensable force in controlling a high debt, laying the groundwork so that Italy can now recapture its economic growth momentum.*

*The now-distant financial and foreign-exchange crisis of 1992 had evidenced the intrinsic weaknesses of a high public debt that was decidedly skewed in favour of short-term maturities and excessively exposed to interest-rate risk. The issuance and management activity was completely overhauled thereafter, with the priorities of gradually lengthening the average life of the debt and mitigating rate risk so to make the debt mix less exposed to the fluctuations of the economic cycle and the financial markets, and to secure a solid structure adhering to the best international standards. At the same time, efforts were undertaken to expand the base of investors in Italian government securities, with the aim of leveraging this as another means to reduce the cost of the debt.*

*In more recent years, with the sovereign debt crisis involving various countries of the Euro Area as from 2010, the operational difficulties once again significantly worsened; more specifically, from mid-2011 and until September 2012, the management of Italy's debt presented severe critical issues. It was no small accomplishment to be able to maintain orderly and efficient recourse to the market in exceptionally adverse conditions, the reverberations and memory of which are finally starting to fade.*

*At present, the economic cycle is marked by extremely low inflation that, in Italy and in Europe, is far from the European Central Bank's stated 2 per cent target. The interest rates set by monetary policy have also consequently been reduced to extraordinary low levels in order to ward off deflationary pressures and to sustain the recently initiated economic recovery. At the same time, we are seeing the weakening of those emerging economies which have been the driving force of global growth in recent years.*

*This overall framework translates into a financial-market structure that offers opportunities for reducing the debt servicing cost; at the same time, the management of the portfolio reflects the constraints dictated by the high level of interest rates in past years.*

*Italy's public debt management continues to pursue the difficult balance between i) reducing the risk that Italy's public finances will be exposed to uncontrolled shocks, that could entail an increase of the interest expenditure or difficulty in refinancing the debt, and ii) minimising the debt cost over the long run. For these purposes, the best standards adopted by other advanced economies represent a constant reference, and the continuous updating and coordination by the public debt management teams of the various other countries allow for progressive improvement.*

*From the standpoint of information disclosure, the Ministry has aimed to achieve an optimal balance between two partially conflicting obligations: on the one hand, the obligation of transparency, and on the other hand, the obligation of protecting information related to relationships with third parties, as occurs in international practice. The operations of the Ministry are regularly subject to the scrutiny of the Court of Auditors, while the financial effects of the debt management are publicly disclosed in the forecasts of the planning documents, in the State budget forecast, and in all final data, as well as by national and European statistics institutes.*

*This first edition of the Public Debt Report makes reference to 2014. As from 2016 the report will be regularly published in the spring of each year, with reference to the preceding year. The intention is to improve the quality and level of transparency of disclosures concerning the crucial public-debt management function. As a result of this report, the data already published at different times and in different forms have been incorporated into a standard document, and rounded out with additional information.*

Rome, 30 November 2015

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# I. INTRODUCTION TO THE PUBLIC DEBT REPORT

## I.1 THE SUBJECT OF THE REPORT AND THE ORGANISATION OF THE CHAPTERS

This Report illustrates the activity of Italian public debt management in 2014. It should be noted at the outset that the broad definition of public debt embraces the gross consolidated liabilities of all of the public administrations (central government, local government and social security institutions); a more limited definition instead coincides with the amount of the government securities outstanding, and therefore, it regards only the securities issued by the State, on the domestic market and foreign market. This Report refers to the latter, more limited definition, which is moreover the subject of legislation known as the Consolidated Public Debt Act (CPDA). At 31 December 2014, the public debt represented by government securities accounted for approximately 83% of the total public debt.

The basic legislative and regulatory provisions on the subject of public debt are thus those found in the CPDA (Decree of the President of the Republic No. 398 of 30 December 2003), which governs the issuance, the centralised management, the admission to trading, and the trading of the government securities. The activity of managing the Treasury's liquidity is also governed by the CPDA, which regulates the current account held by the Treasury at the Bank of Italy for the treasury service (Liquidity Account) and the Fund for the Amortisation of Government Securities. The CPDA has been supplemented by subsequent legislation and regulations.

This Report outlines objectives, trends and results with respect to the public debt, in consideration of the backdrop provided by the macroeconomic cycle and the financial markets. The publication of the first edition of this Report is also rounded out by (i) an overview of the structure of the government securities market and the organisation of the offices of the Ministry that are responsible for the issuance and management of government securities, and (ii) an illustration of both the public finance framework of reference and the State's financing needs that are supported by debt management.

The next section of this chapter describes the organisation of the Ministry, providing an account of the functions of the Public Debt Directorate at the Department of the Treasury.

The individual chapters of this Report are focused on the following aspects: market structure, objectives, the general market situation, public finance, and the activity carried out. The following comments provide a summary of the presentation.

Chapter II provides a description of the organisation of the public debt market. It describes the placement mechanisms, and the workings of the secondary government securities market, which are concentrated on the role of the Government Bond Specialists.

Chapter III outlines the debt management objectives for 2014, providing a perspective with respect to international experience and the institutional framework of the formal planning documents. The chapter delineates both the two strategic objectives (namely, the optimisation of the relationship between the debt portfolio's cost and risk, and the management of the Liquidity Account) and the related operational objectives. With regard to the trade-off between cost and risk, the emphasis is placed on the variables for the monitoring of the refinancing and interest-rate risks (average life, duration and average refixing period) and instruments for their management, more specifically, the optimal mix of the portfolio of issues as identified by risk/cost analysis of the debt and the use of debt exchanges and buyback transactions as well as derivatives. With reference to the monitoring and management of the Treasury's available liquidity, the chapter describes the measures aimed at stabilising their balance and at the control of the credit risk in relation to liquidity management.

Chapter IV is dedicated to the international macroeconomic framework in 2014, which was marked by European Central Bank's adoption of initial non-conventional monetary-policy measures, and an overview of the Euro Area's money market and bond market, with a particular emphasis on Italian government securities and an analysis of their trend over the year.

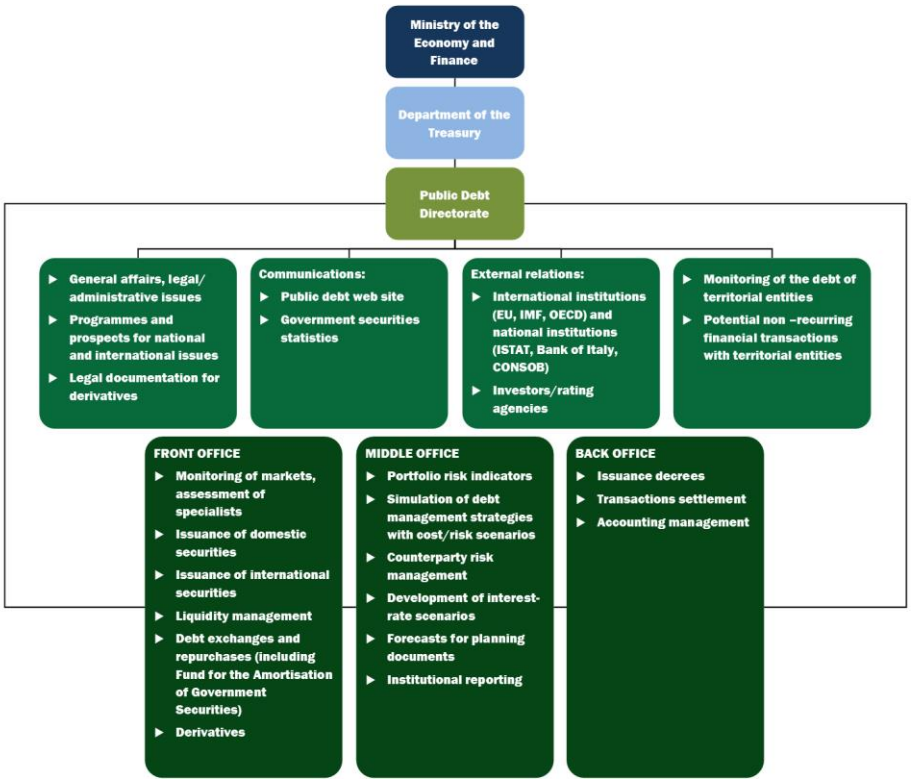
Chapter V presents the public finance framework for 2014, which is inclusive of the debt management activity. The chapter sets out the key aggregates represented by the State Sector and Public Sector borrowing requirements, the debt of the public administrations and net borrowing, as well as the principles for a reconciliation between the requirement and actual borrowing.

The Report concludes with Chapter VI which describes debt management results for 2014. The chapter starts off with a representation of the trend of the individual issuance segments (short- and long-term issues, nominal and inflation-indexed issues; domestic and international issues; BOTs, CTZs, CCTs and CCTeu, BTPs, BTPei, BTP Italy; commercial paper, Global and MTN programmes), and the portfolio management transactions (debt exchanges and repurchases of government securities, derivatives). The chapter then illustrates the results of issuing decisions and other debt management transactions in relation to the objective of containing cost and risk, providing a representation of the final mix of the portfolio and the trend of cost and risk indicators. Finally, with reference to the objective of liquidity management, the chapter summarises the transactions for stabilising of the balance of the Liquidity Account and the results achieved.

## I.2 THE ORGANISATIONAL STRUCTURE OF THE PUBLIC DEBT DIRECTORATE AT THE DEPARTMENT OF THE TREASURY

The Second Directorate of the Department of the Treasury is dedicated to public debt management and is made up of 11 offices. The directorate carries out its activity in close collaboration with the other directorates of the Department of the Treasury, the State General Accounting Department, the Bank of Italy and other institutional bodies. The responsibilities of the Public Debt Directorate are summarised by function in the figure reported below.

**FIGURE I.1: THE ORGANISATION OF THE PUBLIC DEBT DIRECTORATE**




The directorate has functions typical of financial market intermediaries which are also seen in other Debt Management Offices (DMOs) in other highly industrialised countries: front office, middle office and back office.

The front office embraces all activities involving direct contact with the market. The first of these activities is issuance, which regards financing needs and starts from a market analysis in order to decide on the types of securities to be offered and the means and timing for placement; the results of this analysis determine the operations on the primary market, for both the domestic and foreign programmes. The front office also handles very short-term liquidity management, non-recurring debt exchanges and repurchase transactions, and transactions in derivatives.

Other tasks directly functional to the execution of the front-office activity are the monitoring of the various components of the secondary government securities

market, and the selection and assessment of Government Bond Specialists, an overview of which is given in the next chapter.

The middle-office functions include all analytical activities that allow for delineating the boundaries of the cost/risk profile, which are needed for shaping and/or limiting front-office operations. The identification of various issues portfolios with their respective cost/risk combinations assists the front office in defining the most appropriate issuance and hedging strategies, whereas the monitoring of counterparty risk determines the restrictions to be observed for both the management of the derivatives portfolio and transactions for employing liquidity.

The activity of the middle office also includes long-term forecasts of interest expenditure and the debt of the Public Administration for planning documents and institutional reporting[1].

The functions of the back office include the preparation of the issuance decrees, and the accounting activity regarding the procedures to ensure prompt execution of payments.

Other fundamental aspects of the debt management activity are the functions regarding the preparation of legal documentation with reference to borrowings and derivatives, and the drafting of the prospectuses for the two international issuance programmes (Global, MTN) and other securities placed outside of auction. Similarly, as part of the administrative structure of the Department of the Treasury, the Public Debt Directorate carries out other legal-administrative and accounting functions that are common to the ministerial structure.

The Public Debt Directorate also performs other important functions, the most significant of which are those in relation to communications: the real-time reporting of information about issuance activity, and the reporting of statistics about the structure, trend and mix of the debt represented by government securities and by the related market. The main vehicle for this activity is the public debt site, which is regularly updated by the directorate. The statistics produced from the monitoring of the debt and of the derivatives exposure of local entities are also part of this function.

In addition to the aforementioned monitoring, the directorate is also involved in non-recurring transactions with regard to the debt of local entities, which are governed by specific laws and regulations.

Another key function is the management of relations with external institutions, more specifically at an international level. This activity includes: participation in the European coordination of public debt management as part of the European Sovereign Debt Markets (ESDM) sub-committee of EU Economic and Financial

[1] More specifically, the Economic and Financial Document (EFD) provided by Law No. 39 of 7 April 2011 (where the contribution of the Second Directorate is included in the first part "Stability Programme" and in the second part "Public Finance: Analysis and Trends"), the EFD Update, the Draft Budgetary Plan (DBP) instituted by EU Regulation No. 473/2013, the Appendix to the Quarterly Cash Report (with Article 14 of Law No. 196/2009 known as the Report of the Consolidated Cash Account of the Public Administrations), the Report to Parliament on the Fund for the Amortisation of Government Securities (attached to the General Government Account) referenced in Article 44, Paragraph 3 of the Decree of the President of the Republic No. 398/2003, the Semi-Annual Report to the Court of Auditors on public debt management pursuant to the Ministerial Decree 10/11/1995.

Committee (EFC)[2]; the participation in Eurostat statistical work groups and the contribution to the preparation of semi-annual reports regarding Excessive Deficit Procedure (EDP); the participation in different work groups for supranational institutions, such as the OECD and the IMF[3]; the Network between the Italian Treasury, the OECD and the World Bank with regard to public debt management, particularly for the benefit of emerging countries[4]; the relationships with institutional investors and the relationships with the rating agencies.

Finally, the IT activity spans across all of the directorate's offices, with virtually all work processes being automated; there are processes common to the entire administration, with uniform applications for the Department of the Treasury or for the entire Ministry of the Economy and Finance. Other processes are specific to the public debt, with dedicated instruments and applications[5] which are structured on the basis of the directorate's needs (some of the most specific aspects in this regard are reviewed in Section 3 of Chapter III); the data input to these processes come from internal sources, as well as from the Bank of Italy, Monte Titoli (the company providing centralised administration of government securities) or the company managing the screen-based market for the government securities (MTS S.p.A.).

[2] The EFC is a European Union entity aimed at promoting coordination of the economic and financial policies of the Member States. It has the function of providing consultative input to the European Council and the European Commission.

[3] Amongst other things, the directorate is part of the OECD Working Party on Public Debt Management, which is a regular venue for comparing and coordinating public-debt management policies and techniques for the OECD member countries.

[4] The Public Debt Directorate is involved in running a multi-lateral network for disseminating public-debt management techniques to emerging countries, which is the result of the signing of a protocol of intent with the OECD's Fiscal and Financial Affairs Directorate in 2004. At a later date, the World Bank Treasury also became a signatory to the protocol.

[5] The activity of planning and maintaining databases and applications is carried out in collaboration with the IT Coordination Office of the Department of the Treasury and with SOGEI, the supplier of digital architectures and assistance services. SOGEI (Società Generale d'Informatica S.p.A.) is an IT company that is 100% owned by the Ministry of the Economy and Finance.

# II. THE STRUCTURE OF THE GOVERNMENT SECURITIES MARKET

## II.1 PRIMARY MARKET

The debt instruments offered to the market by the Treasury can be subdivided into domestic securities, namely, those issued with national documentation, and foreign securities, those essentially issued on foreign markets with specific documentation consistent with international standards.

### Domestic securities

The Treasury regularly issues six categories of government securities on the market; these securities are available to private investors (retail) and institutional investors:

1) Treasury bills (BOT);
2) Zero-coupon Treasury bonds (CTZ);
3) Treasury certificates (CCT/CCTeu);
4) Treasury bonds (BTP);
5) Treasury bonds indexed to European inflation (BTP€i);
6) Treasury bonds indexed to Italian inflation (BTP Italia).

The main characteristics of the government securities - maturity, type of remuneration, means and frequency of issuance – are summarised in Table II.1.

**TABLE II.1: DOMESTIC GOVERNMENT SECURITIES**

| | BOT | CTZ | CCT/CCTeu** | BTP | BTP€i | BTP Italia |
|---|---|---|---|---|---|---|
| **Maturity** | 3, 6, & 12 months and flexible* | 24 months | 5 & 7 years | 3.5, 7, 10, 15 & 30 years | 5, 10, 15 & 30 years | 4,6 & 8 years |
| **Remuneration** | Issued at discount (difference between price of issuance and reimbursement) | Issued at discount (difference between price of issuance and reimbursement) | Semi-annual variable coupons indexed to the 6-month BOT auction rate or 6-month Euribor, possible issuing discount | Semi-annual fixed coupons, possible issuing discount | Semi-annual coupons indexed to European inflation (HICP index, net of tobacco), possible issuing discount and revaluation of principal at maturity | Semi-annual coupons indexed to Italian inflation (FOI index, net of tobacco), semi-annual revaluation of principal and bonus **** at maturity |
| **Issuing method** | Competitive auction on yield | Marginal auction with discretionary determination of price and quantity issued | Marginal auction with discretionary determination of price and quantity issued | Marginal auction with discretionary determination of price and quantity issued*** | Marginal auction with discretionary determination of price and quantity issued*** | Through the MOT (Borsa Italiana), the regulated screen-based retail market, with fixed price and no set quantity for retail investors and possible pro-rata allocation for institutional investors |
| **Issuing frequency** | Monthly for 6- and 12-month BOT and based on cash needs for 3-month and flexible BOT | Monthly | Monthly | Monthly and based on market conditions for 15-and 30-year maturities | Monthly and with choice of individual securities based on market conditions | One/two times per year |

*) Flexible BOTs are ordinary Treasury bills with a similar duration, which, in any case, does not exceed 12 months.
**) The CCTs indexed to 6-month BOT are no longer issued regularly, and are only issued when it is necessary to facilitate their liquidity on the secondary market.
***) The first tranche of the new long-maturity BTPs (15 and 30 years) or BTP€i may be offered on the market through a placement syndicate.
****) Bonus for individual investors and other similar investors who hold the security at issuance during the first phase of the placement period.

The Department of the Treasury issues the Republic of Italy government securities on the primary market through:

- Issuance auctions;
- Placement syndicates;
- Electronic trading platforms.

The issuance auctions represent the main mechanism for placement of domestic government securities. The auctions are managed through the electronic system of the Bank of Italy's National Interbank Network, which is mostly used by banking intermediaries. The Treasury can effectively implement its issuing policy through the auctions, adhering to the principles of regularity, predictability and transparency, while also ensuring an adequate degree of liquidity for the securities outstanding.

At the end of each year, the Treasury draws up and publishes the "Annual Calendar of Auctions" for the subsequent year, together with the "Public Debt Management Guidelines" so as to provide intermediaries well in advance with the information about the schedule for placements through auction and the qualitative profile behind the issuing policy during the year. More specifically, the calendar contains all of the dates for the auction announcements, the auctions and settlements indicated by category of security[1]; the Guidelines, instead, illustrate the principles underlying the Treasury's approach to the market, with reference to the offering policy and the means for issuance, which are detailed for all of the categories of securities. In addition, the "Quarterly Issuance Programme" is published four times per year, providing advance information about new securities that will be placed through auction and reoffered regularly in the quarter, together with information about the offer of securities already outstanding.

The liquidity of the securities is mainly ensured through the organisational structure of the secondary market (illustrated later in this Report), with the Treasury's issuing decisions also providing a fundamental contribution. The Treasury normally reopens the same security in different successive tranches offered at different auctions so as to ensure the market has a sufficient amount outstanding to make the trading fluid on the secondary market; the final amount of each security is therefore decided by taking into account its specific maturity, investor demand, and reimbursement profile during the period of maturity.

When securities are placed through auction, the entire process of communicating with the participants (submission of bids, allocation and settlement of the adjudicated amounts) is completely managed electronically, whereas the results are promptly communicated to the market and publicly disclosed through leading information circuits and the Treasury's and Bank of Italy's web sites.

The Treasury uses two types of auctions:

- Competitive auction in terms of yield for BOTs;
- Marginal auction, with discretionary determination of the adjudication price and the quantity issued, for CTZs, BTPs, CCT/CCTeu and BTP€i.

The competitive auction provides that each bid of the authorised intermediaries is adjudicated at the specified yield. Each dealer may present up to five bids with specified yields differing by at least 0.001%. The minimum bid is €1.5 million; the maximum bid is equal to the quantity offered by Treasury at auction,

[1] In addition, a specific calendar is published for the BOT auctions, with the detail of the securities of this segment forecast for the year, including the related issuance and maturity dates.

and bids, if any, above that amount, will be accepted for only up to the amount auctioned. The minimum subscribable amount for customers is €1,000.

The bids with the lowest yields are adjudicated first, and then the other bids, in increasing order, until the complete adjudication of the quantity offered. With reference to the highest yield specified, should it not be possible to allocate securities to all of the bidders, the securities are allotted on a pro-rata basis, with the necessary rounding.

In order to prevent the weighted average yield of the adjudication from being negatively influenced by bids submitted with yields not in line with market yields, a minimum acceptable yield (safeguard yield) is calculated. Similarly, a maximum acceptable yield (exclusion yield) is calculated in order to exclude speculative bids from the auctions.

The marginal auction is the mechanism used for the placement of medium-/long-term securities. The auction provides that the bidders are adjudicated all at the same price, the so-called marginal price. This price is determined by satisfying the bids, starting from the highest price until the total amount of bids accepted is equal to the amounts offered. The price of the last successful bid is the marginal price.

As from 2008, the determination of the adjudication price and quantities occurs with a discretionary mechanism. According to this mechanism, the quantity issued is not established beforehand, but is included within a range between a minimum amount and a maximum amount announced with a press release some days before the auction. The amount placed is determined by excluding the bids submitted at prices deemed unfavourable in view of market conditions. The lowest price among those offered by the adjudicated participants represents the price of adjudication valid for all of the intermediaries receiving an allotment (marginal price).

Should it not be possible to satisfy all bids at the marginal price, the securities are allotted on a pro-rata basis, with the necessary rounding. Each dealer may submit up to five bids, at different prices and for a nominal principal amount of no less than €500,000. Bids may not exceed the amount to be issued; bids, if any, above that amount, will be accepted for only up to the amount auctioned.

The prices indicated must vary by a minimum of 0.001% for the CTZs and by 0.01% for the other securities. The minimum amount subscribable by customers is €1,000.

A reopening of the auction for the Government Bond Specialists[2] is provided for medium-/long-term government securities and for 6- and 12-month BOTs. This reopening ends at 3:30 p.m. of the business day subsequent to the ordinary auction and is allocated at the price set at the latest auction[3]. The maximum amount offered at the reopenings for the Specialists is, as a rule, currently equal to 10% of the ordinary issuance for BOTs, whereas for the medium-/long-term securities, it is equal to 30% in the event of an offer of a first tranche of a new security and 15% for subsequent tranches.

[2] The definition of Government Bond Specialists is provided later in this chapter.
[3] For BOTs, the reference is the weighted average price of the ordinary auction.

In 2002, the Treasury introduced the placement syndicate as a mechanism for issuance of new securities, as the syndicate proved to be more efficient than the auction when:

- new instruments are introduced on the market (as in the case of the BTP€I, issued for the first time in 2003, and the CCTeu, in 2010);
- the market's interest must be evaluated in-depth (as in the case of the long-term BTP and BTP€i);
- the pricing of the security is complex;
- the amount issued must be well sized and allocated among investors in order to ensure adequate performance on the secondary market.

With a placement syndicate, the security is issued on the market through a group of intermediaries chosen by Treasury from among the Government Bond Specialists. The intermediaries are involved in: the analysis preceding the decision to issue the new security; fund raising; subsequent allocation of the orders; and the pricing of the security.

For the BTP Italia, the government security indexed to Italian inflation that was first issued in 2012 and developed for the retail market, the Treasury introduced a new issuance mechanism that uses the Borsa Italiana platform known as the MOT, which is a regulated bond market dedicated to retail trading. Unlike auctions where the price is determined at the end of the bidding, the BTP Italia coupon rate is determined at the end of the placement, on the basis of market conditions, while the price is set at par.

As from 2014, the placement period is divided into the first and second phases. During the first phase, the banks dealing on the MOT send the orders received from the investors admitted to the first phase, namely, those retail investors who have signed purchase-sale contracts on the MOT at a fixed price equal to 100. During the second phase, the banks accept bids from institutional investors, all of which have a fixed price equal to 100. These bids are fully satisfied, or in the event in which the demand covered by the bids exceeds the amount that the Treasury intends to offer, the securities are allocated by applying an equi-proportional distribution mechanism.

## Foreign securities

With a view toward expanding and diversifying the base of institutional investors in Italian government securities, the Treasury has the option of issuing securities on the international markets, working through two issuance mechanisms: the Global Bond Programme and the Medium Term Note Programme. The global notes are debt securities governed by the laws of the State of New York, admitted to the screen-based Eurobond market (EuroMOT) and the Luxembourg Exchange; the notes are held in custody and registered at The Depository Trust Company.

The Global Bond Programme represents an important means of financing, since the securities issued in this format are directed toward high-profile institutional investors who are very diversified from the standpoint of geographic origin. In the past, the volume of the issues, the almost complete coverage of the yield curve on benchmark maturities and the use of a list of banks (primary dealers) developed ad

hoc were the factors that allowed the Treasury to position itself as one of the largest and most liquid non-domestic issuers on the U.S. dollar market.

The Medium-Term Note Programme incorporates debt securities governed by Italian law, with exclusive jurisdiction of the Italian courts; the securities are quoted on the Luxembourg exchange and held in custody at the centralised management companies, Euroclear and Clearstream.

The extreme flexibility of the securities issued under the Medium-Term Note Programme, in public or private format, allows for reaching mainly European and Asian investors interested in holding a securities portfolio denominated in euros or other currencies. The high flexibility of the instrument allows for optimal alignment between the needs of the issuer and the requirements of institutional investors in terms of maturity and possibly in terms of structure. More specifically, with reference to private placements (all of the issues under the MTN Programme have been done as private placements in recent years), the Treasury considers the bids coming from individual institutional investors; the bids must meet various specific requirements: maturity of no less than three years, minimum amount of no less than €200 million and minimum negotiable amount equal to at least €500,000. In order to satisfy the needs of various institutional investors as a whole, the Treasury maintains the option of issuing securities in a public format for a higher amount (generally, €1 billion).

Issuing through either of the two channels (Global and MTN) provides the possibility of securing a cost generally below (arbitrage principle) that for domestic securities with same characteristics (structure, maturity), and contributing to achievement of the general objectives in terms of exposure to market risks. The average size of the individual issues, and the average total amount issued per year are generally significant in absolute terms, but they are modest when compared with the amounts placed on the domestic market, and therefore, the Global and MTN Programmes can only marginally influence results in terms of cost and exposure to risks, as determined by the issuance and management policy for domestic instruments only.

From the perspective of international standard documentation, the Treasury can also make use of a short-term instrument, namely, commercial paper. Issues of commercial paper can be used to round out the issuances of BOTs, and are highly flexible from the standpoint of duration, amount and currency. In this case, too, the Treasury focuses on rate arbitrage, and attempts to reconcile liquidity management needs with the preferences of individual international investors.

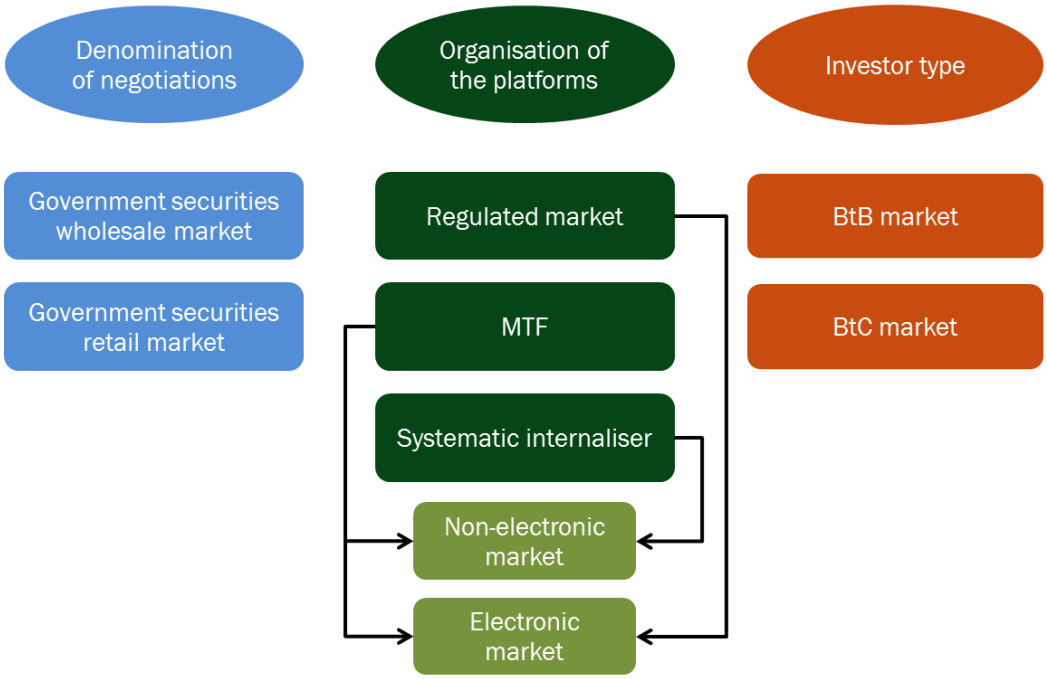
## II.2 SECONDARY MARKET

The Treasury's capacity to issue continuously and regularly, and to minimise the medium-/long-term costs is made possible not only by a particularly accurate issuing policy from the standpoint of implications for the cost and the risk of the debt, but also by the presence of a valid secondary market in which it is possible to efficiently trade the government securities outstanding. In this regard, the Treasury makes use of different instruments aimed at guaranteeing the orderly execution

and liquidity of trading[4] so as to ensure that Italian government securities represent a good investment for use by the widest possible audience of domestic and foreign investors.

The secondary government securities market represents a major component of the broader secondary market for debt securities, which also includes the bonds of bank and corporate issuers. Following is a basic chart of the market structure (see Figure II.1).

**FIGURE II.1: STRUCTURE OF THE SECONDARY MARKET FOR GOVERNMENT SECURITIES**




Specific regulations refer to type of venue in which the trading takes place: regulated market, multi-lateral trading facility (MTF) or systematic internaliser. Intermediaries who receive a buy or sell order for a security can manage the order with different means on various types of trading venues:

- regulated markets, which have specific rules for the organisation of the market (requisites for listing, requisites for participation, trading rules, etc.). Examples of regulated markets in Italy are the wholesale market for government securities (MTS Italia), managed by MTS S.p.A., and the screen-based bond market (MOT), managed by Borsa Italiana S.p.A.;
- multi-lateral trading facilities (MTFs), which are alternative markets, provided as an investment service by the companies managing the regulated markets, by banks or by investment firms;

[4] The concept of the secondary market's liquidity is addressed in various sections of this Report. With this concept, the intention is to measure the ease with which intermediaries can trade significant quantities of securities quickly and with minimum repercussions on the prices of the securities.

- systematic internalisers of orders, whereby a bank or investment firm acts as the direct counterparty, selling a financial instrument to its client or buying an instrument from its client.

The European MiFID 2 directive[5] provides for the introduction of another trading venue - the organized trading facility (OTF) – which will flank the others. The OTFs will be authorised by national oversight authorities, and through the OTFs, the parties involved in the purchase or sale of financial instruments (third parties with respect to the system) will be able to interact, consummating contracts.

The trading of government securities can take place on wholesale or retail markets. In Italy, for example, the MTS Italia is a wholesale platform in which the minimum tradeable amount is equal to €2 million; the MOT represents a retail platform in which securities are traded for a minimum amount of €1,000.

Another distinction can be made in classifying the markets in relation to the type of investors that can participate in them. The participants in the business-to-business (BtB) markets are exclusively dealers who operate for their own account or who carry out, with their own positions, orders for the account of professional clients. Through the BtB markets, dealers efficiently purchase or sell large quantities of securities, in order to satisfy the orders of their clientele.

The participants in the business-to-customer (BtC) markets also include those intermediaries excluded from the BtB markets, and therefore, final institutional investors such as investment funds, pension funds, insurance companies, hedge funds, and so forth.

The Treasury carefully monitors the activity through the BtB electronic platforms, since such platforms are fundamental for the representative value of the prices quoted (often prices of reference for other platforms) and for the capacity of facilitating distribution of the securities through dealer intermediation. Dealers take orders from institutional investors when securities are issued on the primary market, and they absorb the lack of alignment, if any, between demand and supply on the secondary market, so as to make trading orderly, liquid, and absent of excessive price volatility.

The Treasury's monitoring and intervention with respect to these markets (including through the selection and assessment of the Government Bond Specialists as illustrated later in this Report) is fundamental for favouring the liquidity of the securities, which, in turn, makes the securities traded more appealing, thereby allowing the issuer to obtain more advantageous cost conditions on the primary market. On the other hand, the liquidity of the securities represents a very powerful factor for expanding the array of the investors, thereby ensuring broad and diversified demand for the Treasury placements – an aspect that is very useful in dealing with changing market situations.

[5] EU Directive 2014/65/EU.

In order to analyse the trends of the markets in which government securities are traded, the Treasury extends its monitoring activity to other markets and to other trading related to government securities, and more specifically, to repos on government securities, BTP futures[6] and credit default swaps (CDS) on Republic of Italy credit risk.

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**MTS Italia cash segment**

MTS Italia is the single regulated wholesale electronic trading platform for Italian government securities. It is a quote-driven platform in which authorised intermediaries act as market makers committed to maintaining a book of bid and ask quotes for minimum amounts of €2 million and marginal increments of €0.5 million on a given number of securities for a certain number of hours each day; altogether, the market makers cover the entire basket of the securities. Market makers and market takers may also input alternatively buy and sell orders. The operation of the market thus allows for having prices continuously, that can be directly executed by intermediaries who can electronically "strike" a given bid or ask price throughout the entire day.

The intermediaries are financial institutions that must have minimum regulatory capital requirements and minimum volumes of traded securities in order to be admitted to operate on the platform. The platform is the main and most used electronic venue for the trading of Italian government securities, and it has played a crucial role since its inception in the process of placement on the primary market, the management of the positions and the risk of the intermediaries, and the distribution to final investors.

The prices reported on the platform are recognised by all main market intermediaries as the benchmark of reference for the securities placed through auction and offered on the secondary market.

**MTS Italia repo segment**

In the market for repurchase (repo) agreements, the seller of securities is committed to rebuy them at a future date (generally, after one or two days) and at an agreed price. At the same time, the buyer transfers money in order to receive a sum at the same future date agreed. The contract therefore serves different functions for the buyer and the seller: the latter enters into the contract in order to receive financing, while the buyer intends to lend money or to obtain the availability of a security that the buyer temporarily does not hold. The difference between the spot price and the forward price determines the interest rate on the transaction (the repo rate).

The repo market therefore fulfils a key function in support of the activity of the Specialists on both the primary and secondary markets. In the case of the primary market, the existence and solid operation of the repo market makes it possible for the Specialists to participate in the auctions of the government securities with lower risks and costs, thanks to the possibility of covering auction purchases for a sufficient time to distribute the security to final investors. On the secondary market, the capacity of the market makers to continuously provide liquidity, by quoting bid and ask prices without interruption, is made possible, including in absence of securities in portfolio, actually due to the repo market.

[6] See Chapter IV for more detailed definitions of these contracts.

## II.3 SPECIALISTS IN GOVERNMENT SECURITIES

Government Bond Specialists play a crucial role within the government securities market[7]. These financial intermediaries fulfil the function of market maker (primary dealer), and they have certain obligations (regarding subscription at the auctions of government securities and trading on the secondary market), and incentives. Incentive mechanisms for primary dealer activity have been adopted, albeit with different degrees of formality, by all highly industrialised countries in order to guarantee the efficient placement of the public debt and the liquidity of the secondary market.

Among the obligations, the Specialists must regularly participate at the auctions for placement of the government securities and must be allotted at least 3 per cent of the total issued through auction in a calendar year; they must also contribute to the efficiency of the secondary market on the basis of precise performance indicators; and they must provide consultation and research useful for public debt management and issuing decisions.

Among the incentives, the Specialists have exclusive access to the reopenings reserved for the auctions of the government securities, to the debt exchanges and repurchase auctions and to the selection as lead managers of syndicated issues, and as a rule, as counterparties to transactions in derivatives.

With this organisational structure, which is marked by the selection of intermediaries specialised in primary- and secondary-market transactions and the constant monitoring of their performance, the Treasury is able to place the public debt with efficiency and flexibility. With the monitoring of the Specialists' activity, the Treasury is also able to precisely analyse and assess the Specialists' activity in the various segments in which the Specialists are required to operate: from the auctions for the primary market (where the quantities acquired and the means for participation in the auctions are assessed) to the trading activity on the secondary market (which includes transactions on the MTS Italia platform[8] and on other trading venues), to the trading directly with the Specialists' clients outside of the markets.

This assessment process also entails the assignment of points to each Specialist, and a resulting ranking at year end, and the public disclosure of the top five positions. The assessment represents one of the fundamental criteria used by the Treasury in choosing counterparties for various market transactions (from the syndication of domestic and foreign securities to transactions in derivatives).

[7] This institutional structure, which is marked by the role of the Government Bond Specialists, is based on a decree issued by the Minister of the Economy and Finance on 22 December 2009 (No. 216) concerning the wholesale trading of government securities. Article 23 governs the fundamental characteristics of the Government Bond Specialists and the requisites for their registration and maintenance on the list, as well as the general principles for identification of admissible venues and the assessment of the activity carried out. Article 23 calls for two managerial decrees to specify the criteria for the selection of the venues for the wholesale trading of government securities admissible for the assessment of the Government Bond Specialists. Some of the cited documentation is available in the English language in the regulatory section of the public debt site www.debitopubblico.it.

[8] The MTS Italia is currently the platform selected pursuant to the decree of the Minister of the Economy and Finance of 22 December 2009 (No. 216) for the assessment of the Government Bond Specialists.

# III. DEBT MANAGEMENT OBJECTIVES FOR 2014

## III.1 PERSPECTIVE WITH RESPECT TO INTERNATIONAL EXPERIENCE

The core objective of Italian public debt management is based on the best management policies and techniques that are shared by the international community and recommended by multi-lateral financial institutions, the so-called best international practice. The objective is summarised in the guidelines published by the International Monetary Fund (IMF) and the World Bank[1] that state: "The main objective of public debt management is to ensure that the government's financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk … Minimising cost, while ignoring risk, should not be an objective. Transactions that appear to lower debt servicing costs often embody significant risks for the government and can limit the government's capacity to repay creditors. Managing cost and risk therefore involves a trade-off."[2]

The main objective of the management therefore is to ensure that payment obligations are always met, at the lowest cost compatible with the containment of the risk over the long-term horizon inherent to public debt.

The public debt cannot evidently be managed from the perspective of minimising costs in the short run. A preference given to shorter maturities and variable rates, which are normally associated with a lower cost, cannot be reconciled with the need to ensure the capacity to refinance the stock of debt over time, at the lowest cost possible over a virtually indefinite time period in which any type of shock is possible. Cost is always defined in terms of level of the rate of interest paid and the risk in terms of the possibility that this level will increase over time.

[1] *"Revised Guidelines for Public Debt Management"*, published by the International Monetary Fund and the World Bank in April of 2014, page 11.

[2] *"The main objective of public debt management is to ensure that the government' s financing needs and its payment obligations are met at the lowest possible cost over the medium to long run, consistent with a prudent degree of risk. … Minimizing cost, while ignoring risk, should not be an objective. Transactions that appear to lower debt servicing costs often embody significant risks for the government and can limit its capacity to repay lenders. Managing cost and risk therefore involves a trade-off."* The same principle is essentially repeated in Point 8 of the Principles of Stockholm, drafted by the international community of public debt managers in the summer of 2010, upon the manifestation of the initial effects of the recent sovereign debt crisis in Europe: "*Debt portfolio risks should be kept at prudent levels, while funding costs are minimized over the medium to long term*."

In this regard, the Guidelines of the IMF and the World Bank clarify that the management approach typically adopted by advanced economies is that of strategic target portfolios, which are structured according to the manager's cost and risk preferences[3]. In essence, public debt managers normally resolve the fundamental trade-off between cost and risk, by identifying trend objectives in terms of the "duration" of the debt, as defined by various technical indicators (average life, duration, average refixing period …) and gradually adjusted over time. Such point of equilibrium is dictated, at least in part, by the structure of market demand for the debt of a given country – a structure that can only gradually change over time. In addition, a prudent approach to debt management suggests that the levels of cost/risk trade-off when there is a high debt-to-GDP ratio require greater caution (and therefore, a longer duration of the debt, even if it is more costly).

## III.2 INSTITUTIONAL FRAMEWORK

Public debt management with reference to the debt tradeable on government securities markets is carried out on the basis of three documents issued annually by the Minister of the Economy and Finance:

a) Guidelines for the definition of the policy priorities;
b) General Directive of the Ministry of the Economy and Finance (MEF) for administrative action and management;
c) Ministerial decree to delineate the objectives of reference for the execution of administrative activity for financial transactions aimed at public debt management (the so-called "Framework Decree").

The policy priorities contained in the Guidelines for 2014 include "… continuation of public debt management aimed at containing the cost of the debt and at stabilising or extending its average life". The General Directive translates this policy priority into the following two strategic objectives[4]:

1) the containment of the cost of the debt, with a particular focus on its cost/risk profile, to be achieved through a number of operational objectives and measurable with indicators referring to the degree of coverage of the auctions and the stabilisation and lengthening of the average life of the debt;
2) the monitoring and the management of the Liquidity Account[5] aimed at the stabilisation of the balance, to be realised through two operational objectives, referring specifically to the management of the Treasury's liquidity and the monitoring of the related credit risk.

[3] See, for example, page 34 of the cited Guidelines.

[4] The directive also provides a third objective, on the basis of which the Public Debt Directorate is charged with contributing to the implementation of the measures aimed at ensuring the payments of the certain and liquid debts payable referenced in Decree-Law No. 35 of 8 April 2013, converted, with amendments, by Law No. 4 of 6 June 2013. Inasmuch as it is not typical of debt management, such activity is not covered in this Report.

[5] The Liquidity Account is the account held by the Treasury with the Bank of Italy for the treasury service, and is described in detail in Section III.4 of this Report.

With reference to first strategic objective, the Framework Decree for 2014[6] supplies, as it has in prior years, additional details about the operational instruments that the Public Debt Directorate is authorised to use to achieve such strategic objective. More specifically, Article 2 establishes that "… the issues of the securities must be done, not only by respecting the limits set by the law approving the budget, but also by abiding by the guidelines of this decree…" – thereby ensuring the coverage of the securities maturing during the year, in addition to the State Sector borrowing requirement – including with the purpose of "…. balancing the need to gain the markets' approval with the need to contain the total cost of the debt in the medium/long term, considering the need for protection from refinancing risk and from exposure to changes in interest rates."

For this purpose, Article 2 also sets specific directives in terms of mix of the debt at the end of 2014, in accordance with the following[7]:

- BOTs (short-term securities), between 5 per cent and 15 per cent;
- BTPs ("nominal" fixed-rate securities), between 55 per cent and 75 per cent;
- CCT/CCTeu ("nominal" variable-rate securities), between 5 per cent and 10 per cent;
- CTZs, no more than 5 per cent;
- BTP€i and BTP Italia ("real" securities) no more than 15 per cent.

In addition, in relation to foreign securities, the decree establishes that they may be issued, net of the reimbursements, for an amount no greater than 30% of the total of net issues[8].

With the objective of contributing to the containment of the total cost of borrowing and protection against market and refinancing risks, Article 3 authorises the use of debt restructuring on an accepted base, namely, through repurchase transactions, debt exchanges or early reimbursement of securities, as well as through transactions in derivatives instruments. As in prior years, the Decree establishes that repurchase transactions, debt exchanges and early reimbursement of the securities are to be handled exclusively through Government Bond Specialists[9], while Articles 4 and 5 define the criteria for counterparty selection and documentation with reference to transactions in derivatives.

In relation to the second strategic objective, Article 6 of the Framework Decree authorises the Public Debt Directorate to arrange for transactions to manage the Liquidity Account, as governed by the ministerial decrees dated 29 July 2011 and 25 October 2011. These decrees regulate the means for the movement of the Treasury's liquidity and the selection of the counterparties that participate in the related transactions. During 2014, the Public Debt Directorate was accordingly required to ensure that the management of the debt, inclusive of the issues needed to cover maturing securities and the State Sector borrowing requirement for the year, would be such as to contain the cost of the debt, keeping the main risks under

[6] Decree of 19 December 2013 published in the Official Gazette of the Italian Republic No. 303 on 28 December 2013.

[7] For a description of the various types of securities, see Table II.1 in Chapter II.

[8] The actual stock of foreign securities, considering both those issued as part of the Global Bond Programme and those as part of the Medium-Term Note Programme, is actually less than 3% of the stock of securities.

[9] See Chapters II and IV about role of the Government Bond Specialists.

control, while also contributing to ensuring a satisfactory level of stability and certainty with respect to the balance of the Liquidity Account.

The pursuit of these two ambitious strategic objectives was very challenging, partly due to the numerous exogenous factors influencing the framework of reference. For example, the changing conditions in the financial markets and the related impact on government securities are developments that considerably affect the possibility of achieving the first objective. Similarly, the significance and volatility of the State's treasury flows influence the stability of the Liquidity Account's balance, and thus significantly condition the achievement of the second objective. In addition, the two objectives are to some extent conflicting, and imply a trade-off when considering, on the one hand, that recent monetary-policy actions have pressed national central banks to maintain liquidity balances close to zero, and on the other hand, that the extremely unpredictable market conditions significantly influence the timing, the amounts and the methods of debt issuance, and could suggest increasing the balance instead of getting it close to zero. In this regard, it is worth noting the importance of the maintenance of a liquidity reserve sufficient for covering maturities in future months, including in the event of an adverse turn of events in the markets.

It is therefore necessary to make the best use of the wide range of instruments available for achievement of the aforementioned objectives. With reference to debt instruments, the "Public Debt Management Guidelines for 2014"[10] illustrate, mostly in qualitative terms, the means with which the Treasury should be present on the financial markets.

## III.3 OBJECTIVE 1: DEBT COST CONTAINMENT WITH FOCUS ON COST/RISK PROFILE

### Refinancing risk: measurement and instruments for management

Refinancing risk represents a crucial aspect of public debt management for a country such as Italy, which has a high public debt. From a strictly financial and technical perspective, refinancing risk regards the possibility of whether a borrower is or is not easily able to refinance maturing debt with new debt; in other words, it is an issue of assessing if the conditions exist for placing all of the debt needed to cover the amount maturing, and the extent to which such conditions depend on the magnitude of the amounts to be refinanced. Aside from the total debt, the magnitude of this risk depends on the extent to which the public debt manager has been able in the past to distribute and diversify the issues of securities on the basis of their maturity. In the case of a particularly large total debt stock, if the structure of maturities is uniformly distributed over time and absent of concentrations (particularly in the short term), the issuer is able to spread its recourse to the market over time, thereby limiting the size of each individual issue, and thus increasing the probability that the new debt can be fully placed and easily absorbed, at financial conditions in line with the market and without additional costs.

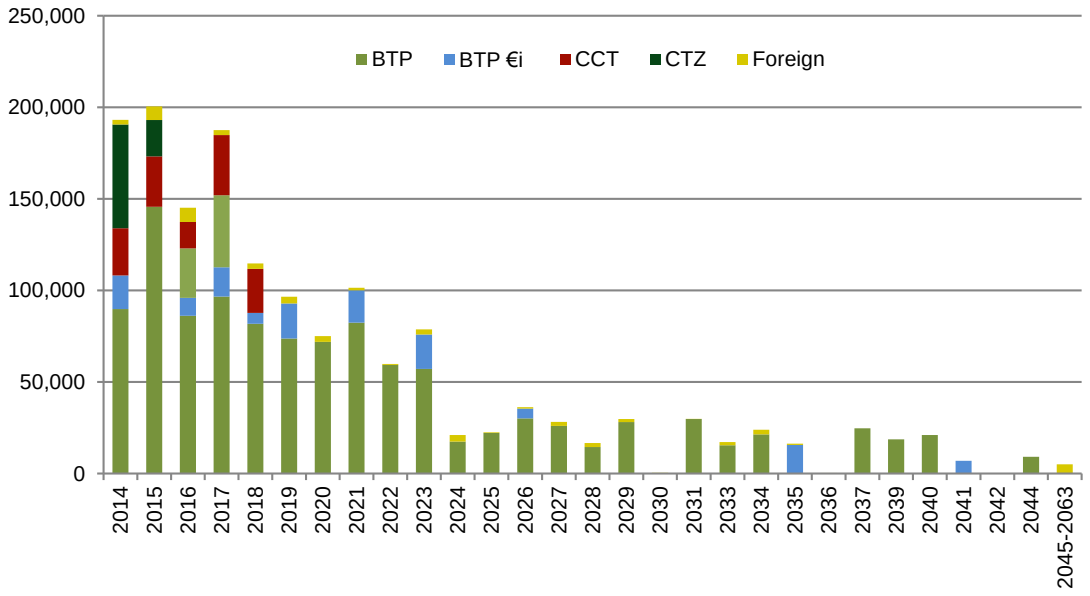
[10] Document available on the public debt site www.debitopubblico.it (English corner).

The main indicator commonly adopted for the measurement of this risk is the average life, given both the simplicity of its calculation and its immediate decipherability: it is calculated as an average of the maturities of all securities outstanding, weighted by the nominal value of each security. At the end of 2013, the average life of the debt in government securities was equal to 6.43 years, reflecting a decrease compared with 6.62 years at the end of 2012.

In accordance with the Guidelines and Minister's Directive, the strategic objective for 2014 in relation to the containment of the cost of the debt with the focus on the cost/risk profile was pursued through a debt issuance and management policy aimed at stabilising the average life, on a basis compatible with market conditions, and therefore, to interrupt – or reduce as much as possible – the decline that started in 2011.

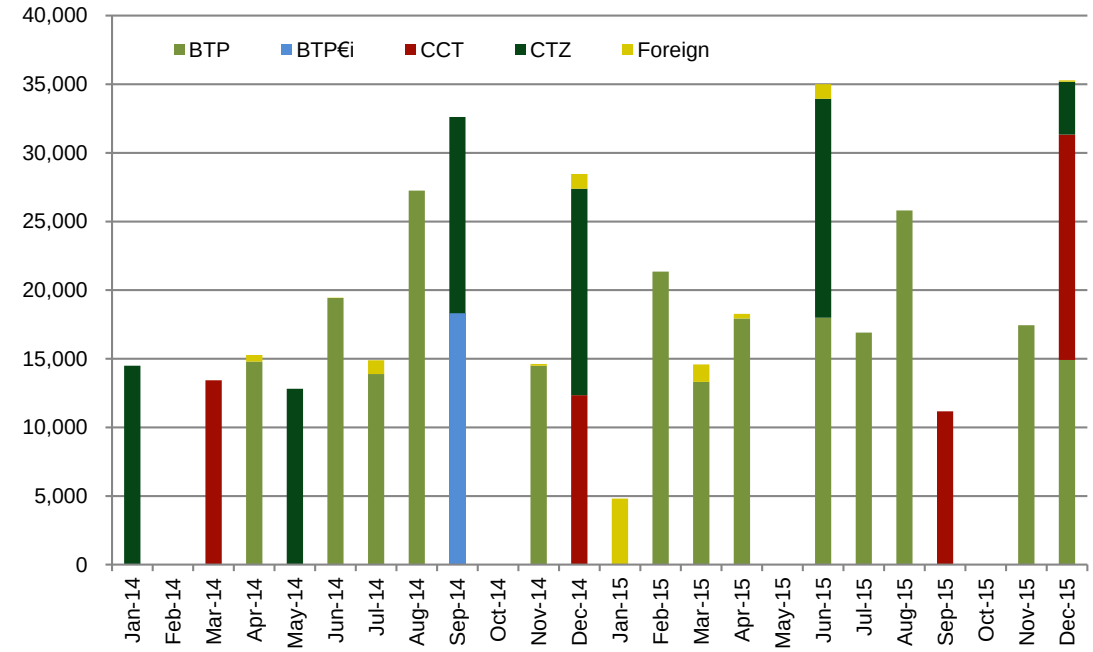
The other decision regarding the debt issuance and management policy entailed the pursuit of a gradual reduction in the volumes of securities coming due in the years ahead that are more affected by this phenomenon, so as to decrease, to the extent possible, the concentrations of reimbursements, making their profile more uniform. More specifically, when analysing the annual profile of the maturities at the end of 2013 (see Figure III.1), it was evident that intervention was mainly needed for the years of 2015 and 2017, in consideration of the significance of the amounts maturing in those years vis-à-vis the years of 2014, 2016 and 2018. It was accordingly necessary to address this objective through both the issuing policy (attempting to contain, to the extent possible and on a basis compatible with market conditions, the securities maturing in those years, and therefore, specifically, the issues of 12-month BOTs and 3-year BTPs) and the repurchase and debt exchanges (by preferably selecting securities to purchase with a maturity in the aforementioned two years).

**FIGURE III.1: MATURITIES OF MEDIUM-/LONG-TERM SECURITIES OUTSTANDING AT 31-12-2013 (€ mn)**



More precisely, when analysing the monthly profile of the maturities in 2015 (Figure III.2), the issuing policy needed to attempt to make the maturities of the months of February, June, August and December more manageable, first by limiting the amounts of the BOTs being issued, and second by effecting repurchase and debt exchanges. At the same time, considering the objective of making the Liquidity Account's balance stable (which is discussed in more detail below), the aforementioned instruments also needed to focusing on minimising, where possible, the fluctuations of the Treasury's liquidity.

**FIGURE III.2: MONTHLY PROFILE OF THE MATURITIES – MEDIUM-/LONG-TERM SECURITIES FOR THE YEARS 2014-2015 OUTSTANDING AT 31-12-2013 (€ mn)**




## Interest-rate risk: measurement and instruments for management

Exposure to interest-rate risk represents the other major factor in managing Italy's public debt, considering the size of the debt and the volumes annually offered to the market. In addressing the concept of interest-rate risk (as widely used in finance), a sovereign issuer is able to measure the potential impact on public finance resulting from unexpected movements of market interest rates, with respect to both the outstanding debt stock and new debt to be issued to refinance the existing debt and to cover the annual cash deficit. By definition, for any given period, this impact grows with any increase in the volumes of maturing securities (that need to be refinanced through new issues) or, under certain conditions, with an increase in the volumes of variable-rate securities whose coupons are reset at current market rates during such period. In this case, the increase in interest rates is transferred directly to the State budget through an increase in interest expenditure, with resulting negative effects on the deficit and on the capacity to achieve the pre-set borrowing targets.

The measures normally adopted for capturing this specific risk in sovereign debt management are numerous, since the approach can be very different depending on the perspective from which they are analysed (see Focus below). The actions range from summary measures regarding the mix of the debt, such as duration (or financial duration)[11] or the average refixing period (average time for pegging the debt to market interest rates), to numerous measures that are focused on the magnitude of the maximum additional cost in terms of interest expenditure in case of adverse-rate scenarios (cost at risk) and the probability of actually having to sustain the additional cost on the overall debt portfolio, which, in turn, is derived from the probability of the adverse scenarios.

In view of the provisions of Article 2, Paragraph 2 of the Framework Decree, which make explicit reference (as mentioned above) to the need to manage the exposure to changes in the interest rates, the Treasury had to identify two additional operational objectives for the implementation of the first strategic objective for 2014. When pursued on a basis compatible with conditions on the financial markets, these two operational objectives entailed:

a) A return to increasing the financial duration of the debt, taking into account the effect of transactions in derivatives;
b) Stabilising the average refixing period, after a decrease in 2013, with the effects of the transactions in derivatives also considered.

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**The main quantitative indicators of interest-rate risk**

It is useful to review briefly the significance of certain risk measures that are used in this Report.

Duration or financial duration is an indicator that represents, from the debtor's perspective, the average duration of the portfolio of liabilities, weighted for the present value of all payment flows, including those for paying principal and those for paying interest. The definition of financial duration used in the text corresponds to the simple duration, or Macaulay duration, and is measured in years. It represents the length of time needed for the price (present value) of a debt to be repaid by the cash flows of the debt, and it provides an indication of the average time during which the rate of the debt remains fixed, and therefore the speed with which changes in market interest are reflected on the servicing of the debt (a longer duration means that market fluctuations are refleced on the servicing of the debt at a slower rate).

The formula for the simple duration for any given bond security is as follows:

$$D = \frac{\sum_{t-1}^{N} t \times f_t \times (1+i)^{-t}}{P}$$

where t represents the maturity of each flow, f(t) is the amount of the cash flow, i is the market (or valuation) interest rate, and P the price of the bond security.

A slightly different definition is the so-called modified duration. The modified duration allows for determining the extent to which the price of a debt will vary in relation to a change in the security's yield (and therefore, in relation to changes in market rates), and it is equal to

[11] Normally, the Macaulay duration is used. See the Focus for additional details.

simple duration (Macaulay duration) divided by 100 per cent plus the yield (1 + i). The modified duration is therefore slightly shorter than the simple duration.

It is noted that longer maturities have a longer simple and modified duration (as it takes a longer time to repay the debt); bullet bonds (with payment of the principal as a lump sum at maturity) have a longer duration than the duration for amortised bonds; higher coupon rates have a shorter duration than debt with lower coupon rates (the servicing of the debt is done overall in advance in present value if the coupons are high); higher yields correspond to a shorter duration (if market rates rise, the value of the future flows to service the nearer term debt decrease less than the value of the flows in the longer term, accordingly shortening the average time needed to service the debt).

The (weighted) average refixing period (WARP or ARP) reflects the average time still to elapse (without discounting the flows) before the debt structure incorporates the new market rates. For real or nominal fixed-rate securities, the indicator is based on the residual life of each security, whereas for variable-rate securities, the indicator is based on the time to elapse until the indexing of the next coupon. Each security is included in the weighted calculation for the nominal value outstanding.

The average life (weighted average life) is also among the indicators normally used for quantifying interest-rate risk. The indicator provides a weighted time value that considers only nominal principal (not discounted) to be paid out at maturity.

Accordingly, debts with a longer financial duration, longer ARP and longer average life entail lower risks than debts with a shorter duration, shorter ARP and shorter average life. However, the former entail higher costs due to the higher rates normally associated with longer maturities.

Cost at Risk (CaR) is a measurement of risk derived from the concept of the Value at Risk (VaR). The VaR models measure the maximum expected loss on a financial instrument/portfolio, during a given period within a certain confidence interval. Similarly, the CaR provides an estimation of the variability of the cost of a debt, in a given period for a certain confidence interval, so as to allow for comparison of cost and risk levels associated with alternative debt management strategies.

The CaR measures the expected cost of the debt portfolio that cannot be surpassed with a determined probability. Simulated alternative debt portfolios with longer (shorter) duration are associated with higher costs and lower risks (lower costs and higher risks). The CaR analysis allows for identifying the portfolios with the risk-cost combinations that are positioned at an efficient frontier, so as to minimise the levels of cost and risk (trade-off between the two) for each assumed duration of the debt portfolio.

## The role of the issuing strategy in managing the trade-off between rate risk and cost for 2014

The previous Focus section evidences the existence of the trade-off between risk and cost in debt portfolio. The modelling described in this section is aimed at identifying an optimal strategy for managing this trade-off and is focused on domestic securities, which represented 96.71 per cent of the total of the government securities outstanding at the end of 2013.

In the final weeks of 2013, the Public Debt Directorate initiated its regular survey of market intermediaries in order to pinpoint the expectations about the issuing policy for 2014 and the means for implementing such policy. In addition, in line with its action of prior years, the directorate analysed the risk and cost characteristics for various possible combinations of the issues of domestic securities (so-called "issues portfolios"), as deemed compatible with market conditions, including on the basis of the practices normally used by the Treasury for ensuring the transparency, regularity and predictability of the placements and adequate liquidity to the individual securities on the secondary market.

Accordingly, a preliminary in-depth analysis was conducted with reference to the possible trend of the government securities market in the subsequent 12 months. The analysis was completed through consultation of forecast documents produced by leading public and private financial research entities and the research of leading intermediaries active in the government securities market. Ad hoc meetings were held with the latter for the purpose of obtaining a more in-depth understanding of the technical repercussions of the various options, with a specific focus on the market-related repercussions.

This exercise was followed by the identification of different issues portfolios in accordance with the market's absorption capacity[12] and with the fundamental characteristics of the public debt management in Italy.

As a preliminary condition, all of the portfolios had to allow for refinancing:

a) the maturities of the medium-/long-term securities planned for 2014 (equal to just over €193 billion),
b) the BOTs outstanding (equal to just over €141 billion), together with the rollover of BOTs during the year, namely, the BOTs needed to cover the maturities of the same volume of BOTs issued during the year, and
c) the State Sector cash borrowing requirement (in the planned amount of approximately €60 billion [13]),

as well as to generate a sufficient buffer in terms of the Treasury's liquidity balance, so as to provide for all cash management needs.

The portfolios analysed were grouped into seven categories:

1) portfolios in line with the mix of the issues for 2013, except for the BTP Italia (the issues of which were well beyond expectations in 2013, including as a result of the issuance mechanism) and the 7-year nominal BTP, the issues of which are regular on a monthly base, so as to ease the 3- and 5-year nominal BTP segment;
2) portfolios in line with portfolio 1) in terms of the issues, with the exception of BOTs, which were reduced through an offset of increased issues of 10-, 15- and 30-year nominal issues;

[12] Amongst other things, analyses were carried out about the probable impact of the impending first reimbursement of the ECB three-year LTRO transaction, executed in November 2011, about the holding of government securities by domestic credit institutions. In this regard, see Chapter IV.

[13] The figure underlying the public finance forecasts for 2014 included in the 2013 EFD Update.

3) portfolios in line with portfolio 1) in terms of the issues, but with a further increase in the 7-year nominal BTP segment and a corresponding reduction in 3- and 5-year BTPs and CTZs;
4) portfolios in line with portfolio 1) in terms of the issues, but with very significant rebalancing within of the segment of the securities indexed to Italian and European inflation in favour of the former;
5) portfolios with a pronounced reduction of all nominal maturities up to 7 years (BOTs included) and a significant increase of maturities from 10 years and beyond, with the issues of indexed and variable-rate securities being held constant compared with 2013;
6) portfolios with a pronounced reduction of all nominal BTP maturities for three years and beyond, and a sharp increase in BOTs and CTZs with the issues of indexed and variable-rate securities being held constant compared with 2013;
7) portfolios with a moderate reduction of all nominal BTP maturities for beyond three years, and an equal increase in the BTP€i across various maturities, with the issues of BTP Italia and variable-rate securities being held constant compared with 2013.

An internally developed IT model was used for testing the characteristics of each issues portfolio. The model, which is known as **SAPE** (Software for Analysis of Issues portfolios – see Focus), has been used for several years at the Public Debt Directorate, and allows for estimating over a given future time period both the cost, in terms of interest expenditure, of a specific portfolio, and its rate risk with respect to a sample representative of possible scenarios of changes in interest rates and inflation[14].

In this specific case, the model initially generated 100 scenarios in relation to the trend of government securities yield curve and Italian and European inflation over a five-year period (from 2014 to 2018). Thereafter, the monthly average change in the cost in terms of interest expenditure (according to the accrual principle) was calculated in relation to each of the seven categories of portfolios mentioned over the five-year period, for each individual yield-curve and inflation scenario generated. Therefore, the average (expected) monthly cost over the five years for the 100 scenarios generated and the related standard deviation were estimated for each of portfolio categories.

A comparison of the results in terms of cost/risk showed first of all that the differences between the different portfolios selected were somewhat limited. Those in the categories 2), 4), 5) and 6) proved to be the most efficient, since each of them allowed for achieving a cost/risk combination not within reach for the other portfolios, which presented a higher risk given the cost or vice versa. In other words, portfolios 1), 3) and 7) (which proposed, respectively, the strategy for 2013, or an increase over 2013 for 7-year issues, or an increase of the real securities to the detriment of nominal securities) were all characterised by the fact of being

[14] The database for the outstanding debt used by SAPE at the end of 2013 consisted only of the domestic securities reported in Table II.1. A project to integrate the SAPE model is already at an advanced stage, and will allow for testing issues portfolios that also include USD-denominated securities and strategies that combine issues and derivatives instruments, using all of instruments outstanding (including foreign securities and transactions in derivatives) as the database. For details about how the model works, see the Focus on SAPE.

"dominated" by the previous group of portfolios, given that, compared with the previous group, they presented a higher cost with risk being held equal, or a higher risk with cost being held equal.

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**SAPE**

*Introduction*

The financing of the Ministry of Education's 2003 Fund for Investment in Basic Research (D.D. 2186-Ric 12/12/2003) disbursed to the Calculation Applications Institute (CAI) of the National Research Council (the head of a group that included other academic institutions, such as Bocconi University, University of Milan, and Tor Vergata University of Rome) as part of a "Human, economic and social sciences" strategic programme covering "The public debt management" project objective represented the start of the software development and modelling that led to the Department of the Treasury's implementation of an instrument to support public debt management decisions. Using stochastic simulation techniques, the software allows for analysis of the cost and risk of government securities portfolios. Over the years, the model has gone through various stages of development, which have been coordinated by the CAI and the Department of the Treasury. In recent years, the Treasury has also made use of the analytical and IT support of SOGEI.

*Mathematical model*

The mathematical model and the corresponding software (known as SAPE – Software for Analysis of Issues portfolios) have been continually updated so as to achieve increasing integration of various databases and to take into account all of the managerial activities that can impact future scenarios. Since late 2013, the work on refining the model has been focused on also including securities denominated in foreign currency (USD) and simple derivatives instruments, so as to facilitate the execution of cost/risk analysis on all-inclusive strategies.

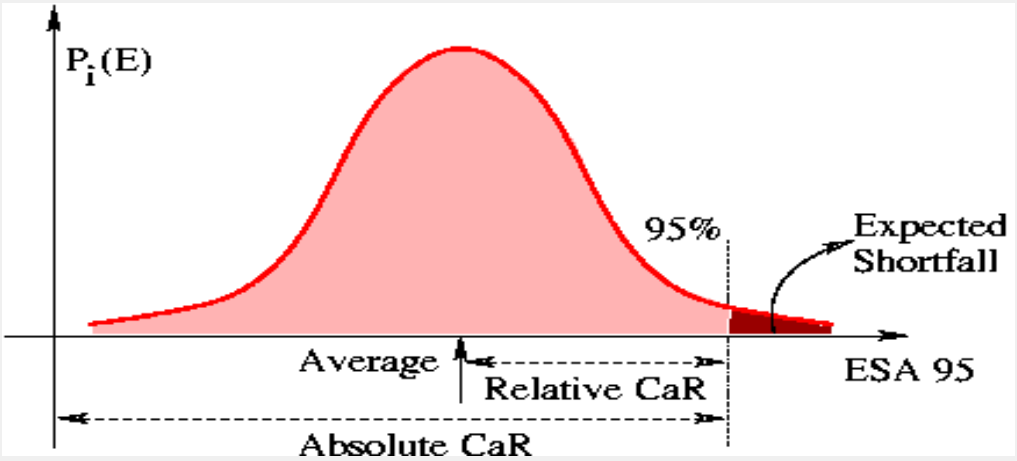
*Cost function and cost/risk analysis*

The main objective function in analysing the portfolios is the measurement (accrual basis) of the debt servicing cost pursuant to the ESA 2010 regulations. The choice between different possible issues portfolios must be weighted by taking into account both the cost (in terms of interest expenditure) and interest-rate risk of each individual portfolio in comparison with a sample representative of possible scenarios of changes in interest rates and inflation.

For each possible issues portfolio, it is possible to construct the distribution of the cost function compared with all of the examined scenarios of changes in interest rates. This distribution yields all of the information about the cost (namely, where the distribution is placed) and the risk (the width of the distribution) for the given portfolio. SAPE provides for the calculation of different summary measures of cost (average cost, cost at risk (CaR), maximum cost, etc.) and risk (standard deviation of costs, relative CaR, expected shortfall (ES), etc.) so as to allow for the most comprehensive analysis of the possible issues portfolios.

After the choice of the cost and risk functions, a consolidated portfolio-selection process takes place through the construction of the efficient frontier. This frontier is identified starting from the construction of a graph in which each portfolio is a point on the plane, whose coordinates report the risk and the cost of the portfolio. The frontier portfolios are those for which there is a lower cost for each given value of risk. The selection of one of the best portfolios, namely, those at the frontier, is based on the manager's risk aversion or risk propensity. Normally, the efficient frontier is constructed by observing the cost and risk variables at the end of the forecast period.

**SAPE – DISTRIBUTION OF COST FUNCTION**




An important modelling change was introduced with the analysis of the change over time in the distribution of the cost of each individual portfolio. In this manner, it is possible to achieve precise control over the change in the cost and the risk selected, thereby making it possible to choose the portfolio that presents a change over time in these aggregates that is the most consistent with the manager's policy decisions. It is also possible to extract an efficient frontier of the portfolios that contains a summary of the overall trend of change in cost and risk.

*Other aggregates*

A series of financial aggregates (average refixing period, duration, percentages of the mix of the debt and average interest on the debt in both absolute terms or in relation to an issuance period, etc.) is calculated for all of the possible issues portfolios. These aggregates provide decision makers with a large quantity of data needed for prudent public debt management. These data are supplied as summary values, and in detail (through Excel worksheets) that report the change over time of the financial aggregates of interest and allow for further analysis.

*Generation of the scenarios*

A key element of the SAPE software is the module generating scenarios of changes in interest rates. This module interfaces in a completely transparent manner with the module calculating cost and risk, and it incorporates the possibility of using different stochastic models for generating medium/long-term scenarios for interest rates and inflation rates. The latter option is useful for evaluating expected performance, in terms of cost-risk analysis, of different strategies related to public debt issuing policies. More in general, the generation of scenarios yields a quantitative measurement of expected exposure vis-à-vis volatility of the yield curve. In this regard, a new class of models of the term structure of interest rates has been developed in the past five years, with reference to the government curves and breakeven inflation (BEI), which have been recently rounded out by the addition of swap curves (Euro and USD).

Initially, the government curves and BEI were modelled jointly for the purpose of pricing nominal and European inflation-indexed domestic securities, endogenously deriving the curve of real rates useful for the cost-risk analysis on the issues portfolios with a short-/medium-term horizon. A similar approach has been adopted by the Federal Reserve for the

estimation of the real curve referring to inflation-linked securities (TIPS). In this regard, see the work of Gürkaynak et al (2008)[15].

The model was later expanded to include the European and U.S. swap curves in the estimation. In particular, the European swap curve has been integrated into the joint specification that already included the government and BEI curves, and allows for consistently and endogenously deriving the spread of swap rates compared with the corresponding nominal rates on government securities. The model also includes the U.S. swap curve (USD), since it is advantageous and in effect, necessary, to ensure a stable link between the two curves in the simulation so as to obtain consistent scenarios. With these data, the model is capable of processing measurements of cost and risk that explicitly take into account USD-denominated securities and transactions in derivatives. During 2014, additional analyses were conducted for the purpose of rounding out the SAPE model with an estimation of counterparty risk in relation to derivatives instruments, and more recently, a stylised model was developed in this regard for the calculation of the credit value adjustment (CVA).

The estimation of the parameters of the individual curves is done in the historical sample on a daily basis, and is generally based on a specification inspired by the Nelson-Siegel-Svensson four-factor model, in which the position of the two inflection points is appropriately calibrated on summary values calculated on the sample free estimates. The model very accurately reflects the trend of the rates of the various curves, with negligible errors.

The subsequent dynamic representation of the model is a vector autoregressive model that is conceptually referable to the Diebold and Li (2006) approach[16] that breaks down the curves into factors, according to which the "beta" parameters of the Nelson-Siegel- Svensson model may be interpreted respectively as the level, the slope and the curvature of the yield curve.

In this manner, the dynamic change of the individual factors is econometrically estimated, with monthly frequency, through a joint system of equations, which is estimated so as to take into account the interrelationships existing between the different equations. The vector model estimated in this manner is then used for stochastic simulations outside of the sample through bootstrapping on the matrix of the sample residuals. The use of this technique is especially appropriate since it does not necessitate any definition for the probability distribution of the residuals.

In general, the forecast horizon for the cost-risk analysis on the issues portfolios is approximately five years. The scenarios produced with the model's stochastic simulation are consistent with the historical data in terms of statistical properties of the yield curves, and more specifically, in terms of variance calculated for the different maturities and covariance between nominal rates and BEI and between nominal and swap rates.

With reference to the securities indexed to European and Italian inflation (BTP€i and BTP Italia), the scenarios produced for the BEI curve allow for obtaining consistent projections for the HICP and FOI price indices, taking into account the in-sample relationships observed between the BEI data and the price indices themselves.

The model's parameters are frequently calibrated so as to include the most recent observations in the historical estimation sample, with particular reference to the shocks observed in recent years to the Italian government and European swap curves.

[15] Refet S. Gürkaynak & Brian Sack & Jonathan H. Wright, 2008. "*The TIPS yield curve and inflation compensation*," Finance and Economics Discussion Series 2008-05, Board of Governors of the Federal Reserve System (U.S.)

[16] F.X. Diebold, C. Li / Journal of Econometrics 130 (2006) 337–364

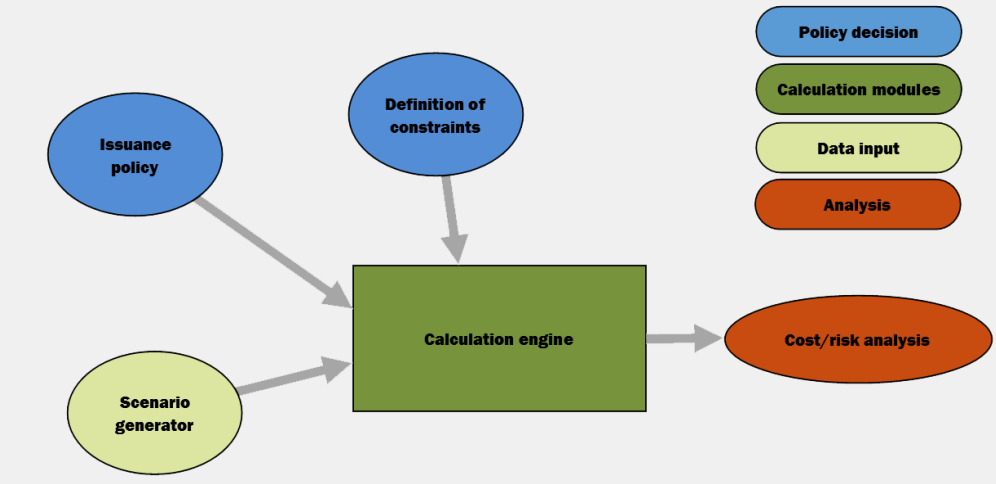
*Software structure*

The SAPE system is based on a widely tested methodology for development of multi-component applications. More specifically, SAPE features:

- A high degree of modularity through definition and documentation of clear interfaces between the various components making up the application; the system therefore allows the user to work with the various modules independently (for example, generating only scenarios of changes in interest rates), or combining them to make complex simulations, in which the historical issues portfolio is modified in order to measure the effect that possible other compositions of the portfolio might have;
- Clear-cut separation between the calculation functions, and the interfaces and data management functions; it is accordingly possible to receive input data from various sources, and in different ways (reading from files or through web services), or to input new types of securities without the user interface (and therefore, the experience) being modified;
- Modules developed based on a components-oriented logic so as to facilitate the re-use of individual components both in future versions of the modules as currently defined, and in new modules that might prove necessary for extending SAPE's operation;
- A special focus on stability (controlled through using stress tests in various operating conditions); the code is also tested in extreme usage conditions (for example, when data are missing or erroneous) so as to ensure that the user always has a response supplying the maximum information possible (including in the event of error), thereby preventing the suspension of the application (which would imply a reboot of the entire system as the only alternative);
- Use of the C language (mainly chosen for computational efficiency) for the calculation engine and generating scenarios, which are completely developed internally; the availability of the source code makes it possible to carry out accurate controls on the reliability of the calculation procedures, and guarantees the possibility of prompt intervention for any updates.

The logical organisation of the SAPE software components is shown in the chart below:

**SAPE – DIAGRAM OF THE COMPONENTS**



## The role of derivatives in managing of the rate-risk/cost trade-off for 2014

The bond issuing policy must be managed with continuity, predictability and transparency, taking into account the preferences and absorption capacity of the investor public. The capital market structure does not allow for accommodating any issuer need: there are objective limits on securities demand that may not allow for making portfolio modifications according to the magnitude and timing desired. In addition, each bond issuing policy creates over time a medium-/long-term maturities profile that represents an objective constraint for subsequent issuance activity. Any misalignment between the portfolio structure (as made possible by the capital market) and operational objectives can be corrected with the use of derivatives. The 2008 document jointly drafted by experts at the OECD, the IMF and the World Bank outlines that practice adopted by many sovereign debt managers, emphasising that "The implementation of the debt strategy may include the use of derivatives to separate funding decision from the optimal portfolio composition decision, reduce the cost of borrowing, and manage risks in the portfolio (in particular interest rate refixing risk and refinancing risk)."[17]

Accordingly, the use of derivatives[18] as authorised by Article 3 of the Framework Decree has also contributed to the achievement of the general operational objectives dictated by Article 2 of the decree, namely, the containment of the overall borrowing cost and the protection against market and refinancing risks over the medium/long term, on the basis of available information and market conditions.

As in previous years, the activity in derivatives was needed to complement issuance activity for the achievement of public-finance objectives in managing the debt, and more precisely, in 2014, it needed to contribute to the general objective of at least stabilising the average refixing period and lengthening the financial duration of the debt.

These objectives were established against the backdrop of a particularly complex market framework, which was affected by both the consequences of the sovereign debt crisis in Europe in 2011-2012, and the delineation of new and significant constraints on the banking system imposed by the regulatory authorities. These constraints required the Treasury's bank counterparties on derivatives contracts to secure additional coverage or to make available additional regulatory capital in order to cover the credit risk connected with the contracts.

As a result, the Treasury was in a position where it had to reconcile the pursuit of the objective to lengthen or stabilise duration and the ARP, with the respect of the objective market constraint as represented by the need to prevent excessive exposure from compromising the Government Bond Specialists' capacity to carry

[17] *"The implementation of the debt strategy may include the use of derivatives to separate funding decision from the optimal portfolio composition decision, reduce the cost of borrowing, and manage risks in the portfolio (in particular interest rate refixing risk and refinancing risk)". - OECD (2008) "Use of Derivatives for Debt Management and Domestic Debt Market Development: Key Conclusions".*

[18] Pursuant to the 2005 Budget Law (Law No. 311 of 30 December 2004), certain derivatives contracts were executed with reference to public entity mortgage receivables transferred to the Treasury from the budget of the Cassa Depositi e Prestiti, following the transformation of the latter into a joint-stock company (Article 5 of Decree-Law No. 269 of 2003 – a decree attached to the 2004 Budget law - converted, with amendments, by Law No. 326 of 2003). The notional amount of these contracts is just over 2 per cent of the Treasury's entire derivatives portfolio, as shown in detail in Table VI.8 (Chapter VI). These contracts are not included in public debt management, and accordingly, are not addressed in this Report.

out their activity at auction and on the secondary market[19]. The focus on this constraint continued in 2014, with the Treasury having to act so as to prevent compromising the Specialists' capacity to cover debt auctions in any given market condition; the ongoing changes in the regulatory framework actually led to significant restrictions of the banks' activity with respect to non-collateralised exposure, thereby reducing the intermediaries' effective capacity to subscribe the securities issued on a regular basis and without difficulty, and to quote the subscribed securities on the secondary market.

The functional characteristics of the three types of transactions used for the Treasury's debt portfolio management are summarised hereunder.

- Cross-currency swaps (CCS) are used for synthetically transforming liabilities generated by bond issues denominated in foreign currency into euro-denominated liabilities (without any change to the foreign-currency denominated security purchased by the investor), so that exchange-rate risk is eliminated for the Treasury and it becomes possible to make a direct comparison between the cost of the financing obtained on the international markets with the cost of the domestic borrowings. As evidenced in Chapter II.1. the international issuance programme allows for diversifying the base of institutional investors holding Italy's public debt and obtaining cost-competitive conditions vis-à-vis those for the domestic debt.

- Interest-rate swaps (IRS) entail an exchange of flows, and as a rule, in the case of the State, the payment of a fixed rate against the receipt of a variable rate, usually on long maturities. This exchange yields a lengthening of the financial duration of the debt, and the underlying logic is the hedging against a possible increase in interest rates, from the standpoint of overall portfolio management. Over time, this option has been justified by the need to manage the portfolio cost/risk trade-off, and the reasoning is easily inferable based on the fact that rates have generally risen across the board in the event of crises in the past, increasing uncertainty and market volatility and making the placement of the medium-/long-term securities more difficult and costlier. As a result, the Treasury has sometimes been forced to increase the use of short-term securities (more specifically, BOTs), which have also entailed higher interest rates. By setting a long-term borrowing rate and receiving the variable rate in exchange, the IRS therefore contribute to mitigating rate risk.

[19] Article 4 of the 2014 Framework Decree also required that the risks related to any counterparty default on transactions in derivatives instruments be mitigated by consummating the transactions only with investment-grade financial institutions – also taking into account the ratings given by the main rating agencies - and entering into collateralised netting agreements (Credit Support Annexes) with the counterparties. In any event, the draft of the law on which the latter provision was based (in relation to collateral) was not implemented definitively until the passage of the 2015 Stability Law.

– Finally, receiver swaptions[20] have a similar role (lengthening of the financial duration and mitigation of interest-rate risk), though they are rounded out by potential cash benefits from the sale of an option. The options sold by the Treasury provide the contractual counterparty with the right to enter into an interest-rate swap at a future date at pre-established conditions, against payment at the time the contract is consummated, of a premium in favour of the Treasury. The IRS generated by the exercise of the receiver swaptions sold, like those in which there is no option sold, are generally medium-/long-term swaps in which the Treasury, in the event of the counterparty's exercise of the option, pays a fixed rate from a specified date and receives a variable rate. The swap created by the option sale is consummated if the market conditions at the date of the exercise of the option are favourable to the Treasury's counterparty (interest rates have fallen with respect to the performance expected by the market at the time of the consummation of the contract); the IRS generated by the exercise of the option, if any, is nonetheless a type of insurance for the Treasury in the medium/long-term.

## Monitoring credit risk related to transactions in derivatives

The Treasury's derivatives counterparties are normally selected among the Government Bond Specialists, whose role is described in Chapter II. The transactions must be documented through an International Swaps and Derivatives Association (ISDA) Master Agreement that specifies applicable law. The Treasury safeguards its contractual position in the ISDA agreements by requiring that disputes, if any, with the counterparties will be settled according to Italian law and under the jurisdiction of the Court of Rome.

Transactions in derivatives are carried out exclusively with counterparties meeting specific requirements in terms of a high level of reliability, with particular reference to the ratings given by the main rating agencies. The credit risk generated by the contracts is furthermore continuously monitored and kept within a maximum limit of credit exposure admissible with respect to each individual counterparty. The absorption of this limit is based on the calculation of the market value of each contract – if positive for the Treasury – that represents the cost that the Treasury would have to sustain in order to allow a new party to replace the original counterparty in the contractual obligations, were the latter to become insolvent.

For this purpose, a precautionary amount is added to the market value, in relation to the notional value, the type and the maturity of the contract.

[20] A receiver swaption is an option sold/acquired to/by a counterparty that gives the buyer the right, at a future date, to enter into a swap in which the buyer will pay a variable rate and receive a fixed rate on a specific notional amount.

## Objective 1: means for implementation

### Issuing decisions with respect to domestic and foreign securities

In consideration of the objectives in terms of average life, duration and ARP as outlined above and as a result of the results coming from analysis of the cost/risk trade-off (which identified four categories of efficient portfolios among the seven analysed), the issuing policy for 2014 needed to aim for achieving, to the greatest extent possible, the structure of the category 2 portfolios mentioned above. This implied that the issuing policy for 2014 needed to be consistent with that for 2013, except for a scaling down of the BTP Italia issues, the regular introduction of the 7-year nominal BTP so as to take the pressure off the 3- and 5-year segment, and the reduction of BOTs, offset over time by greater issues of nominal BTPs with 10-, 15- and 30-year maturities.

More specifically, the objective for the 2014 issues, consistent with the content of the Public Debt Management Guidelines for 2014, can be summarised as follows:

- reducing the BOT issues compared with 2013 (including through the lowering of the quantity offered for this category of securities in the reopenings reserved for the Specialists), guaranteeing regularity to the 6- and 12-month maturities and maintaining the maximum flexibility for the quarterly or flexible BOT, issued only in the event of specific cash needs;
- maintaining an essentially stable flow of CTZ issues, and therefore, considering the sizeable maturities during the year, arriving at year end with a lower stock in terms of both absolute value and as a percentage of the total securities outstanding;
- partially reducing the issues on the 3- and 5-year BTP segment in order to free up room for 7-year issues, which, as from 2014, were to be issued regularly on a monthly basis; the 7-year point on the government securities curve was to be absorbed, in part, by fewer issues of the BTP Italia:
- increasing, on a basis compatible with demand, the volumes issued of 10-, 15- and 30-year nominal BTPs, including through the issuance of new benchmarks;
- maintaining continuity on issues of CCTeu and BTP€i, with consequent reduction of the stock outstanding of the former, and a slight increase of the latter, in view of the maturity of a security originally issued with a 10-year duration;
- significantly reducing the outstanding amounts of each BTP Italia issued, ensuring at least two issues per year, but changing the placement procedure so as to be able to ration the quantity offered to institutional investors;
- evaluating the opportunity for introducing new instruments indexed to Italian inflation, having considered the positive performance in terms of the cost/risk trade-off for the portfolios for which real securities were swapped out in favour of issues indexed to Italian inflation (see category 4);
- returning to issuing on the USD market, in view potentially strong demand, with expansion of the investor base and hedging of the exchange-rate risk via cross currency swaps, subject to the availability of a bilateral system of guarantees (Credit Support Annex (CSA)) for the containment of the costs;
- satisfying the demand of leading institutional investors through issues of securities through the MTN Programme, in response to specific requests and

with a financing cost below that for similar domestic instruments, thereby avoiding negative repercussions on the normal issues placed publicly.

### Other debt management transactions

As in previous years, non-recurring debt exchanges, the repurchase of government securities and transactions in derivatives could also be used for achievement of the aforementioned objectives.

The debt exchanges and the repurchases are public debt management tools aimed at containing refinancing risk, by remodelling the maturity profile and also favouring the liquidity and the efficiency of the secondary government securities market. Unlike ordinary issuance activity, the execution of these transactions does not follow a pre-set calendar, but depends on the Treasury's specific needs and market conditions. Participation in the non-recurring transactions is normally reserved for the Government Bond Specialists.

More specifically, the repurchase transactions are operations through which the Treasury reimburses government securities outstanding in advance of maturity. The financial resources used for this purpose may be drawn from the Liquidity Account or the Fund for the Amortisation of Government Securities, if this has been funded. This Fund holds as deposits the resources earmarked for debt reduction, which is effected through the repurchase of government securities on the market or through the reimbursement of the securities at maturity (reimbursement that allows for reducing the issues for related renewal). Repurchase transactions may be executed through a Bank of Italy auction or through bilateral agreements.

Instead, the debt exchanges consist of the issuance of a security against the simultaneous repurchase of one or more securities outstanding. They are thus transactions entailing a swap between government securities having different maturities, which may favour containment of the refinancing risk. For these transactions, the Treasury may use the Bank of Italy auction system or the electronic trading system.

In view of the concentration of maturities forecast for the years of 2015 and 2017, the Guidelines for 2014 indicated that the Treasury was planning to carry out non-recurring transactions with greater frequency with respect to previous years.

It is also noted that the execution of these transactions is always dictated by the conditions prevailing on the secondary market and, for repurchases, by the balances in the Liquidity Account and the Fund for the Amortisation of Government Securities. Such aspects are also considered in selecting the means for the execution of the transactions, among those described above (auction, electronic trading system and bilateral transactions).

Finally, the activity in derivatives, having considered the aforementioned market constraints with regard to the opening of new positions, were to be limited to hedging through cross currency swaps for any new foreign-currency denominated issues, on the condition that it would be possible to put into effect a bilateral guarantee mechanism for the exposure to the credit risk in relation to the contracts (Credit Support Annex (CSA)). Indeed, in the absence of CSA, a market situation marked by strong perception of the credit risk and by regulatory costs would make

it difficult to find counterparties, and would make any new foreign-currency denominated issues hedged in euro both costly and inefficient.

It has also been necessary to monitor the portfolio of derivatives in effect and to intervene with respect to the structure of certain positions, if it were to be possible to contribute to the achievement of objective 1. Any such intervention would also need to take into account the budget constraints for the Specialists as a result of the economic cycle and developments in the regulatory framework.

## III.4 OBJECTIVE 2: MONITORING AND MANAGEMENT OF THE LIQUIDITY ACCOUNT AIMED AT STABILISING THE BALANCE

### The Liquidity Account for the Treasury service

In 2007, the Ministry of the Economy and Finance initiated a process to reform its liquidity management, so as to be able to improve the capacity to forecast the Treasury's flows and the related balances. The project – known as Operations on Behalf of the Treasury (OPTES) – was also adopted to satisfy the needs of the European Central Bank (ECB), which called for easing monetary policy through efficient management of the liquidity balances held by public entities at the Bank of Italy[21].

Such liquidity balances are mainly held in the Liquidity Account, the account held by the Treasury at the Bank of Italy for the collections and payments made as part of the State treasury service. The balance of this account is essentially the sum of all accounts opened with the State Treasury, with the sole significant exception of the account entitled the Fund for the Amortisation of Government Securities.

The Liquidity Account is governed by Article 5, Paragraph 5 of Decree of the President of the Republic No. 398 of 30 December 2003 (Consolidated Public Debt Act (CPDA)). In line with EU regulations, which prohibit the central banks of the Member States from granting any type of financing to the governments, the Account cannot carry a debt balance.

The balance of the Liquidity Account is highly volatile due to both the number of entities moving funds through the State Treasury and the significance of certain cycle flows (that are normally monthly). More specifically, tax revenues have a strong impact on collections, and are normally concentrated in a few days in the second half of the month.

The disbursements of pensions, mostly on the first day of the month, have a strong impact on payments. The maturities of government securities may also cause strong fluctuations in the Liquidity Account balance.

The difficulties detected in trying to forecast the Treasury's collections and payments, and containing the effect thereof in order to limit the Liquidity Account's volatility have prompted the adoption in recent years of a specific strategic objective: the monitoring and management of the Liquidity Account aimed at

[21] The ECB has repeatedly pointed out that the deposits held by governments at the central banks of the Eurosystem represent one of the so-called "autonomous factors" that influence the liquidity conditions of the European banking system, even though they are not directly controlled by the ECB.

stabilisation of the balance. Resulting regulatory measures have been introduced and activities have been implemented to allow for achieving this objective.

The Operations on Behalf of the Treasury (OPTES) programme was further developed with the "Public Finance and Accounting Law" (Law No. 196 of 31 December 2009), with Article 47 providing for the application of a ceiling on the Liquidity Account's interest-bearing balance, so as to provide an incentive to the Treasury to transfer its liquidity and employ it on the money market. Pursuant to the aforementioned law, the Ministry and the Bank of Italy entered into a special agreement ("OPTES Convention"), committing to hold a daily target balance in the Liquidity Account at an agreed level close to zero. The OPTES Convention also provides for the monitoring of the Liquidity Account, as well as the execution of transactions on the money market and the Treasury's option of also investing the liquidity in restricted deposits at the Bank of Italy for a pre-determined maturity and amount, so as to facilitate the predictability of the balances, as requested by the monetary-policy authorities.

## Objective 2: means for implementation

As indicated previously, the implementation of the strategic objective of monitoring and managing the Liquidity Account occurs through two operational objectives assigned to the Public Debt Directorate, which – as also defined in the General Directive for the administrative action and management of the Ministry of the Economy and Finance – regard:

1. The Treasury's liquidity management aimed at stabilising the balance of the Liquidity Account, by means of careful monitoring of the account and the use of cash management instruments;
2. The monitoring of the credit risk connected with liquidity management aimed at stabilising the balance of the Liquidity Account.

### Liquidity management

Liquidity management – or cash management – consists of daily transactions aimed at ensuring an adequate level of liquidity, in relation to the multiple collections and payments of the State Treasury. This activity is strictly linked to public debt management, and represents the mechanism for reconciling the issuance of medium-/long-term securities and the daily fluctuations of the Liquidity Account. More specifically, cash management is done through the Operations on Behalf of the Treasury (OPTES), which, pursuant to the aforementioned directive - consists of the monitoring of the Treasury balances and flows and the execution of money-market transactions.

The monitoring is based on a continuous exchange of information between the MEF and the Bank of Italy, with forecasting and final data related to all of the collections and payments through the accounts held at the State Treasury and with the consequent estimation of the Liquidity Account's balance[22]. The information

[22] The exchanging of forecasts carried out as part of the OPTES programme are handled by the State General Accounting Department, the Department of the Treasury and assigned units of the Bank of Italy.

flows are updated repeatedly during each business day, with the purpose of estimating the Liquidity Account's balance of the end of each day; the MEF's and Bank of Italy's liquidity forecasts also include longer term scenarios consistent with monetary-policy needs, which are shared on a weekly basis.

The use of cash management instruments instead entails transactions in which the Treasury normally employs its liquidity, through daily auctions and possible bilateral transactions on the money market and restricted deposits placed with the Bank of Italy. The Treasury's liquidity therefore consists not only of the balance in the Liquidity Account, but also the balances of the aforementioned restricted deposits and the balances in relation to the daily OPTES transactions with financial intermediaries.

Specifically, the Operations on Behalf of the Treasury (OPTES) programme currently provides for the execution of auctions, used for employing or securing liquidity on the money market with a normal duration of one business day (overnight), and bilateral transactions for short-term or very short-term liquidity management.

Both types of transactions are used for managing the most volatile and irregular part of the liquidity, and they are executed only with institutions selected by the Treasury and placed on OPTES counterparties, in accordance with pre-established credit limits.

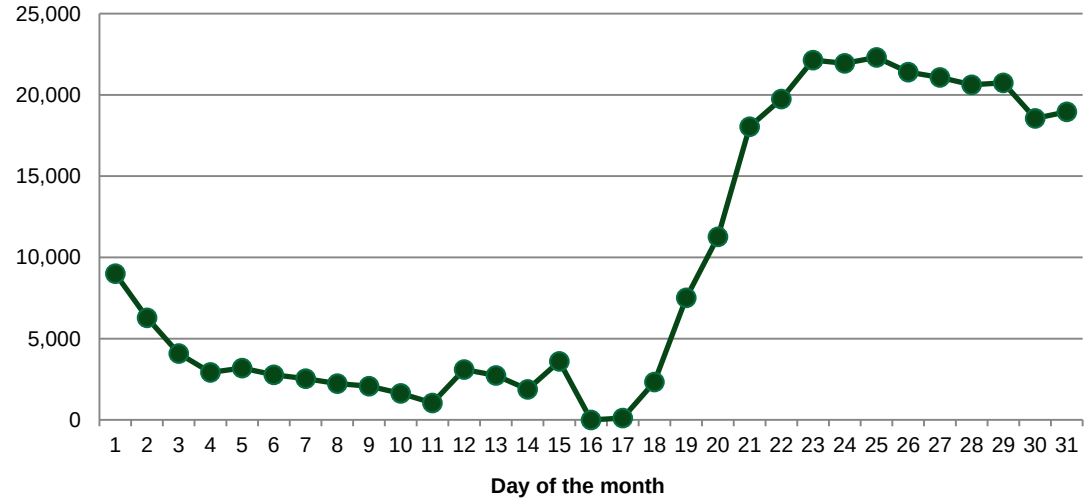
The restricted deposits held with the Bank of Italy are instead used for employing the more stable component of the liquidity balance. In accordance with the OPTES Convention and the orientation of monetary policy, these deposits are subject to specific constraints that make them less flexible with respect to the usual money-market instruments and that make them preferable for the investment of liquidity for longer maturities.

### Limitations and critical factors for achieving the objective

As indicated, the need to stabilise the Liquidity Account's balance is based on critical situations in relation to the volume and significance of the State Treasury's flows. These flows dovetail with the trend of the borrowing requirement, and depend on collections and payments, which cause sizeable cyclical fluctuations in the Treasury's liquidity, both during each year and during individual months.

The impact of the treasury flows is so significant that it may entail, at times, changes of billions of euros in the liquidity balance over the course of a few days. For example, the following chart shows the average monthly trend of the liquidity balances observed in 2013: if the minimum monthly balance , which is normally seen on the sixteenth or seventeenth day of the month, is pegged at zero (so as to simplify the analysis), it is possible to note the fluctuations in the balances of liquidity on the other days.

**FIGURE III.3: AVERAGE INFRA-MONTHLY CHANGES OF TREASURY LIQUIDITY: VARIATIONS COMPARED WITH THE MONTHLY MINIMUM –2013 (€ mn)**




As illustrated, there is an increase of more than €20 billion, which occurs on average between the seventeenth and twenty-third days of the month, while there is a decrease of approximately €10 billion on the first day of the month. As indicated previously, the respective changes in the balance are mainly attributable to collections of tax revenues and the payment of pensions.

The Treasury's liquidity also depends on the trend of the issues and maturities of government securities. With further reference to previous graph, the decreases observed at mid-month and the start of the month were influenced by the reimbursement of medium-/long-term securities; these maturities occur only in certain months, but, when they occur, they entail the payment of several billion euros in a single day.

The volumes of Italy's public debt and the Treasury flows described are therefore such as to require the maintenance of a sizeable liquidity cushion, aimed at facilitating the fluctuations of the balances and at prudently addressing any unexpected movements.

The pursuit of the objective of stabilising the Liquidity Account's balance is therefore a difficult undertaking, especially if considered together with the Public Debt Directorate's other objective to focus on the cost/risk profile of the public debt.

The achievement of a stable balance is actually only possible by tackling its daily fluctuations through daily transactions for employing or tapping liquidity on the money market – transactions that the Treasury carries out as part of its cash management. Taking into account the massive liquidity held for the prudential purposes outlined above, and the need to maintain simultaneously a Liquidity Account balance close to zero (in order to facilitate monetary policy), the Treasury must necessarily hold huge quantities with financial intermediaries, which nonetheless is not without risks.

### Monitoring credit risk connected to liquidity management

The second operational objective linked to stabilising the Liquidity Account's balance regards the monitoring of credit risk connected to liquidity management.

In this regard, the previously mentioned Ministerial Decree of 25 October 2011 establishes that participation in the OPTES transactions is reserved for Government Bond Specialists and the counterparties belonging to the same corporate group of a Specialist.

The Treasury may admit other counterparties who are selected on the basis of structure- and reliability-related criteria, including creditworthiness and capitalisation and other criteria useful for ensuring the efficiency of the transactions. For this latter category of counterparties, the subsequent Decree of the Director General of the Treasury dated 28 November 2011 provided that the Treasury must consider, for the purpose of admission to the transactions, the credit ratings assigned by the leading rating agencies (among those agencies that assign ratings pursuant to the EU Regulations (CE) No. 1060/2009 of 16 September 2009 and subsequent amendments) and key solvency indicators, such as regulatory capital and the solvency coefficient of the banking group to which the potential counterparty belongs.

In addition, the liquidity transactions carried out through bilateral negotiation may be consummated with public institutions or entities that manage the liquidity of the Member States of the European Union, and with entities set up as part of the measures to safeguard the stability of the Euro Area in which the Republic of Italy is a participant.

The activity of managing the risk on the OPTES transactions thus entails verifying the criteria for admissibility, and the assignment of credit limits to each counterparty, that are applied to the transactions for employment of the Treasury's liquidity. These limits are determined on the basis of several of the cited risk parameters (credit rating, capital and solvency), differentiated according to the categories of intermediaries described above, and they are regularly monitored and updated in relation to the trend of the parameters over time.

# IV. TREND OF GOVERNMENT SECURITIES MARKET IN INTERNATIONAL MARKET FRAMEWORK

## IV.1 MONETARY POLICIES IN INDUSTRIALISED COUNTRIES

In 2014, the conventional and non-conventional monetary-policy decisions of the central banks of the world's leading economic blocs represented one of the most important focal points of the macroeconomic trends at a global level, and influenced the performance of the global bond markets. Highly industrialised countries confirmed, and in some cases increased, the commitment to guaranteeing ample liquidity on the markets, so as to support a fragile macroeconomic framework resulting from both (i) the loss of momentum in global growth and the heightening of certain geopolitical tensions and (ii) increased risks of economic recovery and the worsening of inflationary expectations at the level of individual economies. In any event, when looking at the various areas, it is evident that the respective central banks were faced with significantly different phases of the economic cycle in 2014.

### USA

In view of the general improvement of the growth prospects in the United States, the Federal Reserve (FED) once again discussed, and then announced, the tapering of the monthly purchases of financial assets, first and foremost of which were government securities (the Quantitative Easing Programme developed in three different phases, the first of which was inaugurated in 2009). For effect of this tapering, this purchase programme was down to USD 15 billion per month by September 2014, whereas its definitive conclusion was announced at the FED's meeting on 29 October. However, in confirming the importance of maintaining significant liquidity within the economic system, the target interval for the Federal Funds rate (the reference rate for the FED's monetary policy) was left at 0.00%-0.25%.

Despite the tapering and the subsequent announcement in October of the actual end to the purchase programme, the U.S. Treasury securities market witnessed a reduction of interest rates on longer term maturities; this was due to both (i) expectations about inflation, which reflected rates below the FED's medium-/long-term targets, and (ii) increased investor demand (and not only domestic) for yields amidst a global scenario of very low interest rates. Instead, yields on shorter maturities experienced a pronounced rise in the second half of the year, for the effect of the expectations that the FED would increase interest rates.

The other aspect that marked 2014 was the unprecedented volatility of the Treasury market, which peaked on 15 October, when rates on these securities plunged by more than 25 basis points in a matter of minutes, only to recover to prior levels some hours later.

## Japan

In 2014, the Bank of Japan (BOJ) also continued the quantitative easing inaugurated in April 2013, announcing a further expansion of its programme, with the objective of achieving an annual increase in the monetary base equal to approximately JPY 80,000 billion. In view of this target, the BOJ expanded the programme of purchasing government securities, also increasing the average duration of the securities purchased.

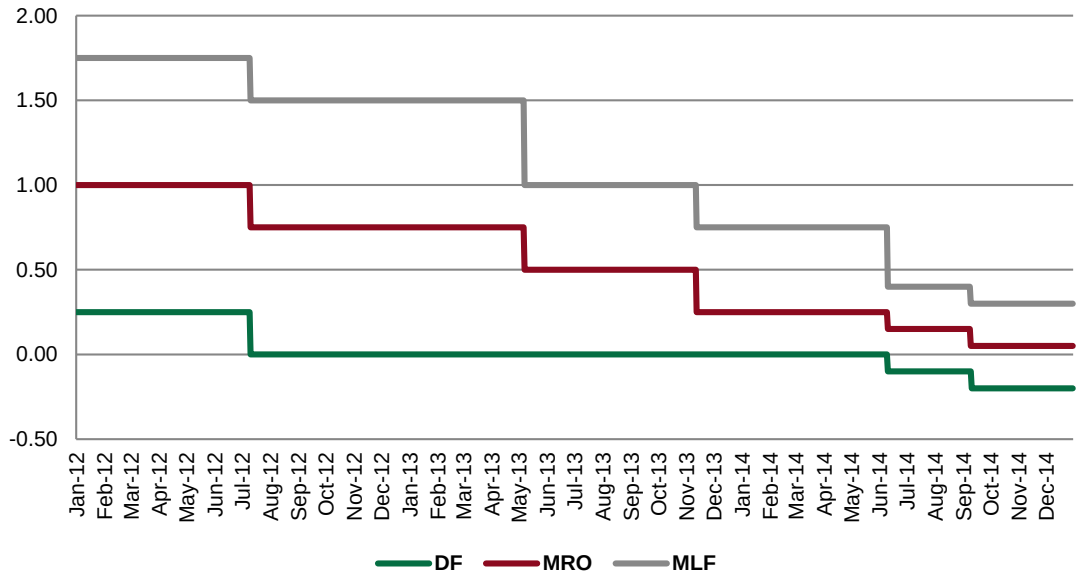
Together with other factors (the decidedly negative economic cycle accentuated by the increase in taxation on consumption that was later postponed to 2016, the general reduction of global interest rates and the continuing expectations of inflation pegged at a level far below the BOJ's 2% target), the policy adopted by the BOJ had an impact on the shape of the government yield curve, triggering a particularly pronounced reduction of the yields on longer maturities.

## Euro Area

The European macroeconomic trend in 2014 was still weaker than expected, with a slowdown in growth and more importantly, a decrease in inflationary expectations. The cautious optimism that seemed to prevail on the markets during the first months of the year was abandoned in May when the disappointing growth data for the first quarter and the trend of Euro Area inflation prompted expectations of immediate ECB intervention to contend with the significant decline in inflation and the downward revision of related expectations. In effect, the ECB Management Board intervened on two occasions in 2014, using conventional monetary-policy instruments and lowering the Euro Area reference rates in both cases.

On 5 June, a 10-basis point reduction was announced for interest rate on the main refinancing operations (MRO), bringing it to 0.15%; at the same time, revisions were made to the two rates that represent the monetary-policy corridor, with the marginal lending facility (MLF) rate lowered to 0.40% and, more importantly, the deposit facility (DF) reduced to a negative value (-0.10%) for the first time. The trend of the ECB's policy rates is summarised in Figure IV.1, which shows that the DF remained consistently at close to zero from mid-2012 (despite the various decisions to cut it in recent years) until the revision in June 2014.

**FIGURE IV.1: ECB MONETARY POLICY: INTEREST RATE CORRIDOR 2012-2014 (rates in %)**




The setting of the DF rate in negative territory was accompanied by new ECB measures that applied the same rate to certain liquid balances held by financial institutions and the governments of the Member States of the Eurosystem. Indeed, on 5 June, the ECB also adopted decisions and strategies[1] to remunerate the balances exceeding financial institutions' minimum mandatory reserves at the rate of zero or at the rate on deposits, if negative. Similarly, these measures also entailed the application of a zero rate or a rate not greater than the DF rate – if negative – on the balances held by governments with national central banks that exceed a pre-set threshold close to zero[2].

The setting of a negative monetary-policy rate of reference for the first time had rather significant consequences for the liquidity of the Euro Area, as further discussed in the next section of this Report; the impact on the Treasury's liquidity management activity is instead reviewed in Chapter VI.

Simultaneous with these decisions, the ECB announced the adoption of non-conventional measures, consisting of longer term financing transactions, known as Targeted Longer-Term Refinancing Operations (TLTRO). This programme, which is aimed at supplying credit to the non-financial private sector, provides for quarterly auctions for two years, starting from September 2014. The liquidity granted through the TLTRO transactions may be reimbursed by the intermediaries after 24 months and in any event, no later than September 2018; each counterparty has access to a financing in proportion to the amount of loans already disbursed to the non-financial private sector of the Euro Area (with exclusion of the real estate mortgages for households).

[1] Decision ECB/2014/23 of 5 June 2014 "on the remuneration of deposits, balances and excess reserves" and Guideline ECB/2014/22 of 5 June 2014 "which modifies the Guideline ECB/2014/9 on the management of national assets and liabilities by the national central banks."

[2] This threshold is equal to the higher of €200 million and 0.04% of GDP of the Member State in which the national central bank is headquartered.

This measure is aimed at improving the monetary-policy transmission mechanism (which is still marked by a high level of segmentation between the different European countries, due to the disparity of rates applied by financial institutions to loan customers) by facilitating the conditions for the disbursement of credit to the real economy and simultaneously facilitating economic recovery and the achievement of levels of inflation in line with the ECB targets.

At a meeting on 4 September, the ECB Board decided on an additional 10-basis point cut for all reference interest rates, with the MRO pegged close to zero (0.05%), and the deposit facility reduced further (-0.20%).

As of the same date, the ECB announced the start-up in October 2014 of two programmes to purchase financial assets: one related to asset-backed securities, on the basis of which the Eurosystem can acquire securities issued credit securitisations in the non-financial private sector of the Euro Area, and the other related to bonds guaranteed and issued by monetary financial institutions domiciled in the Euro Area.

Finally, the ECB Management Board repeatedly affirmed its commitment to using other, non-conventional instruments, if that were to be necessary to deal with the risks related to an excessively lengthy period of low inflation.

These statements were specifically emphasised on 4 December, when it was announced that the longer term refinancing transactions, together with the programmes for purchasing securitised assets and guaranteed bonds, would be used during 2015 for increasing the assets on the ECB's balance sheet to the magnitude seen at the start of 2012. The press conference also included an announcement of the intention to accelerate the technical planning of other measures, that would be adopted promptly, if needed. These announcements suggested the imminent possibility of a start-up of a broad quantitative easing programme that would include direct purchases of government securities issued by the Member States of the Euro Area.

## IV.2 EURO AREA MONEY MARKET

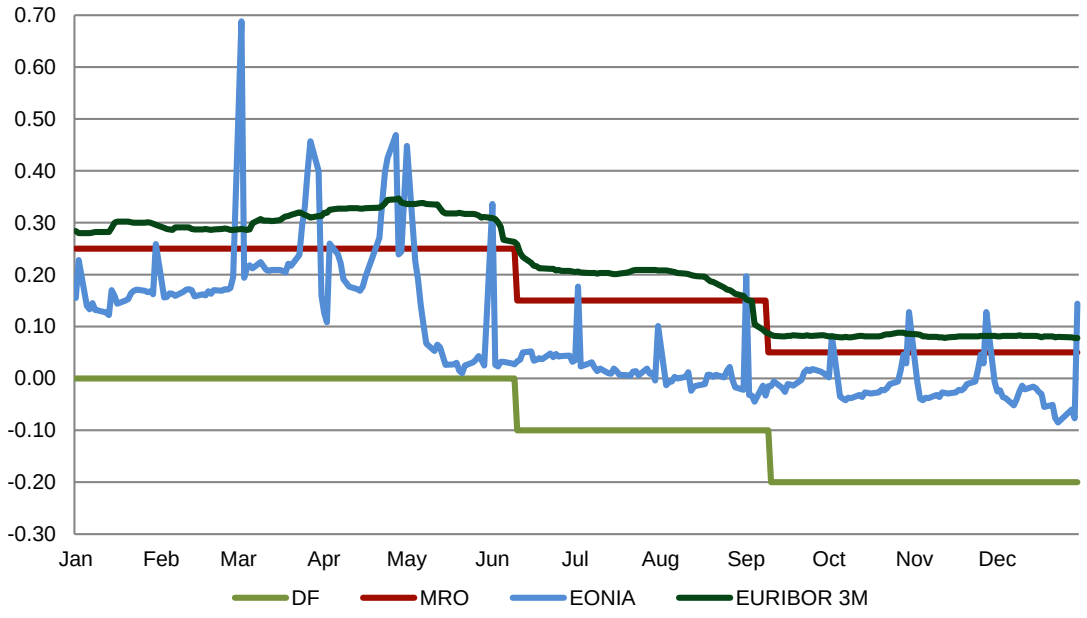
As indicated in the previous section, the ECB's monetary policy significantly impacted the trend of the money market and, as a result, the Treasury's liquidity management.

During the first months of the year, it appeared that demand for liquidity was recovering, while trading on the Euro Area money market was showing a trend toward normalisation. The situation was partly due to the fact that intermediaries, starting in January and February 2014, were able to repay the ECB for amounts borrowed through the 3-year LTRO transactions executed respectively in December 2011 and February 2012; many banks capitalised on this opportunity for the early retirement of their LTRO borrowings, going directly to the market to cover any liquidity needs.

However, the market's liquidity situation drastically changed following the monetary-policy measures adopted on 5 June 2014. Aside from cutting the reference rates for the sixth consecutive time (confirming the ongoing decline since the end of 2011), the ECB adjusted the DF rate, which had been left at zero during the three previous reductions, pegging it at a negative value for the first time.

Accompanied by the non-conventional measures described in the previous section and put into place for the purpose of improving the effectiveness of the monetary-policy transmission mechanism, such decisions prompted a sharp decline in market rates. The trend evidenced in Figure IV.2 hereunder shows an abrupt decline as of May, when the Euro OverNight Index Average (EONIA) rapidly fell to zero in response to the outcome of the ECB's previous monthly meeting, with market intermediaries thus prepared for an imminent reduction in yields. The chart also plots the 3-month EURIBOR rate, which represents a constructive indicator of the money market in the short term, and seems to replicate the trend of the MRO rate; the 3-month Euribor rate is nonetheless positioned at higher average levels, and declines in advance of the MRO reduction in September.

**FIGURE IV.2: TREND OF THE KEY MONEY MARKET RATES IN 2014 (rates in %)**




The EONIA rate was negative on several occasions as from the end of July, and then was firmly positioned below zero as of September, the month when ECB rates were further lowered by 10 basis points and the first auction was held for the new Targeted Longer-Term Refinancing Operations (TLTRO). The outcome of the auction was less than the market expected, especially if compared with the success of the 3-year LTRO in 2011-2012; this might be partly attributable to the Comprehensive Assessment of the European banking system taking place during that period.

The Comprehensive Assessment carried out by the ECB concluded at the end of October 2014, and may have prompted certain intermediaries to postpone participation in the TLTRO, as suggested by the more successful outcome of the auction in December.

All things considered, the monetary-policy intervention led to excess liquidity in the system, which drastically depressed liquidity demand, including in consideration of a still sluggish macroeconomic framework. This situation is also confirmed by the trend of the EONIA rate, which, rather than converge toward the

main rate for ECB transactions (MRO), fell to a lower position, often getting substantially close to the floor of the corridor, as represented by the DF rate.

Accordingly, though not having prompted the hoped-for immediate increase in liquidity, the non-conventional monetary-policy measures of 2014 contributed to the ongoing decline of interest rates (with positive effects for the bond markets, discussed hereunder), including in light of the position taken by the ECB, which, as indicated, stated its readiness to adopt additional instruments, if they were to be necessary.

## IV.3 EURO AREA BOND MARKETS

In the final months of 2013, the signs of improvement of the U.S. economy prompted a positive reaction on the part of the Euro Area markets. Considering the deceleration of growth in China, the FED's announcement of tapering started to fuel fears about the economic cycle of the emerging markets, and as a result, the markets witnessed a sizeable outflow of capital from those markets toward the Euro Area markets.

As of February 2014, market yields exhibited a marked downward trend that continued until May, especially after the publication of Euro Area inflation data and the consequent growing expectations of ECB intervention to stem the decline in the inflation rate. This downward trend, which was initially seen on yields on 10-year issues, was gradually extended, albeit to a more limited extent, to short-term maturities, and favoured the recovery of a more traditional curve with respect to the term structure of market rates. In addition to the decline in yields in absolute terms, the shrinking of yield differentials between the government securities of the various Euro Area issuers indicated a rebound in investor confidence with respect to those Euro Area countries that had experienced greater tensions in prior periods.

Instead, as of May, the markets witnessed an increase in volatility in view of both the growing political crisis in Ukraine, and the run-up to the European elections (with the outcome potentially compromising the process of reform in the peripheral countries). Another factor of uncertainty took shape with the publication of growth figures for the first quarter, with reference to both the Euro Area as a whole and the individual countries (with Italy's results falling short of the forecasts). In any event, after the announcement of the election results, especially those in Italy, this uncertainty partially subsided, with the yields on government bonds moving back to the levels reported at the start of May.

Furthermore, the yield curve levelled off for the effect of the pronounced decline across the entire 5-/30-year segment.

The cyclical trend worsened at both an international level (due to the loss of the momentum of growth in the leading emerging countries) and the Euro Area (where the second-quarter data confirmed the slowdown in inflation and economic activity). Against this backdrop, the markets witnessed growing demand for German bunds (considered a safe haven), with yield on the 10-year security hitting a new historic low (0.74%) at the start of September. The worsening of rates on the peripheral markets was nonetheless limited, partly due to the indications of the ECB, following the announcement on 4 September, to employ non-conventional

monetary-policy instruments to contend with the deflation and the low growth mentioned above.

Between October and the end of the year, the sluggish economy and fears about the announced political elections in Greece led to a new round of instability on the European government securities markets, especially for the peripheral countries. The surge in rates was nonetheless quickly absorbed, and yields were once again descending, falling to even lower levels on growing expectations of the ECB intervening directly on the secondary government securities market for the Euro Area (see Figure IV.3 in the next section).

In 2014, the economic trends and the response of the intermediaries active in the government securities market served to highlight an important development, namely, the change in liquidity conditions for the European government securities markets. Market liquidity[3] is a very intuitive aspect for intermediaries, but it is difficult to define it and summarise it through a single measurement. Concisely stated, it tends to define the capacity of market participants to buy and sell quantities of securities, including significant quantities, both rapidly and with minimum impact on the price of the securities themselves. Generally, the most widely used parameters for the measurement of market liquidity are securities trading volumes, bid/ask spreads, and market depth, calculated by analysing the quantities that intermediaries associate with the bid/ask offers for a given security. It is possible to say that liquidity conditions are sufficient in the presence of significant trading volumes, very limited bid/ask spreads, and significant depth.

These parameters were rather solid in 2014 on the European government markets, with levels unquestionably better than in the previous years, and in some cases, almost at pre-crisis levels. In any event, the element of difference compared with the period prior to the start of the international financial crisis is the observations that, when absorbing important economic, financial or political data (the so-called market movers), the market reacts with very sudden, intensely increasing movements that generate particularly significant increases in volatility. In other words, the market makers and dealers in the European government securities markets no longer seem to be able, as they did in the past, to absorb the buy/sell flows generated by external factors, thereby inevitably unloading a significant part thereof on the market, and thus contributing to expanding price fluctuations and making them more frequent, with the effect of increasing the average volatility of the securities' prices.

[3] A concept that is related, though not to be confused with, liquidity in terms of monetary mass controlled by central banks, which is discussed in the previous sections of this Report, and also refers to the Treasury's liquidity management.

## IV.4 TREND OF THE MARKET OF THE ITALIAN GOVERNMENT SECURITIES

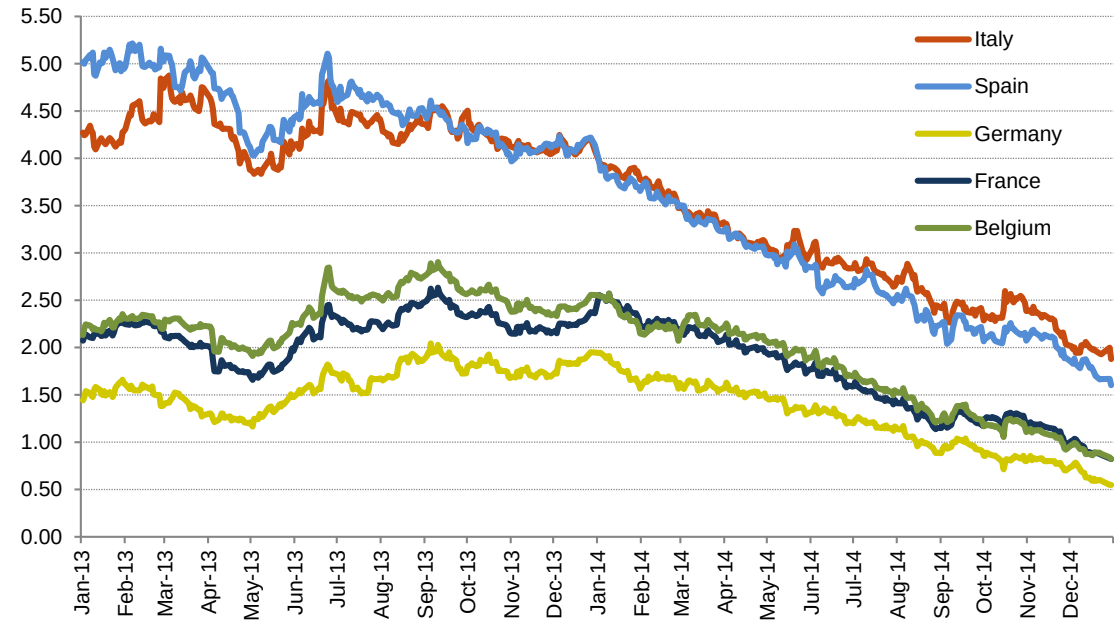
### Trend of the yield curve

Although largely influenced by the movements seen in the European sovereign bond markets, the Italian government securities market stood out for several peculiarities in 2014. Despite a continuing difficult economic framework (resulting from low domestic and Euro Area growth) and other factors causing tensions on the international financial markets, the market for Italian public debt had an undoubtedly positive year on balance in 2014.

The main development on the secondary government securities market was the sizeable reduction of interest rates across the entire range of maturities offered by the Treasury.

As to the trend of interest rates, it is important to emphasise that the declining trend was not only due to the reduction in yields that was common to all of the debt instruments of European sovereign issuers – including the higher rated core countries (see Figure IV.3), but more importantly it was due to the decrease in yield differentials between Italian debt and the debt of the core countries.

**FIGURE IV.3: TREND OF EUROPEAN GOVERNMENT SECURITIES YIELD CURVE– 10-YEAR MATURITY (rates in %)**




The general decline in interest rates in the Euro Area, as already indicated, was triggered by the uncertain macroeconomic situation (limited economic growth and significantly lower expectations about inflation) and by the ECB's initiatives which entailed multiple injections of liquidity into the financial system in order to contend with deflationary pressure.

Alongside the decrease in European rates, the market scenario in 2014 also included a significant reduction in the spread between rates on Italian securities

and those on securities issued by the core countries, and more specifically, the spread with respect to rates on German securities. Although occurring across the entire curve, the spread reduction was most evident in the medium-/long-term segment, and more specifically, 5- and 10 year maturities. The reduction of the spreads can essentially be linked to an improvement in investor perceptions of Italy credit risk. In other words, with rates declining across the board, investors shifted their investments into instruments – such as BTPs – that still presented yield differentials deemed appealing.

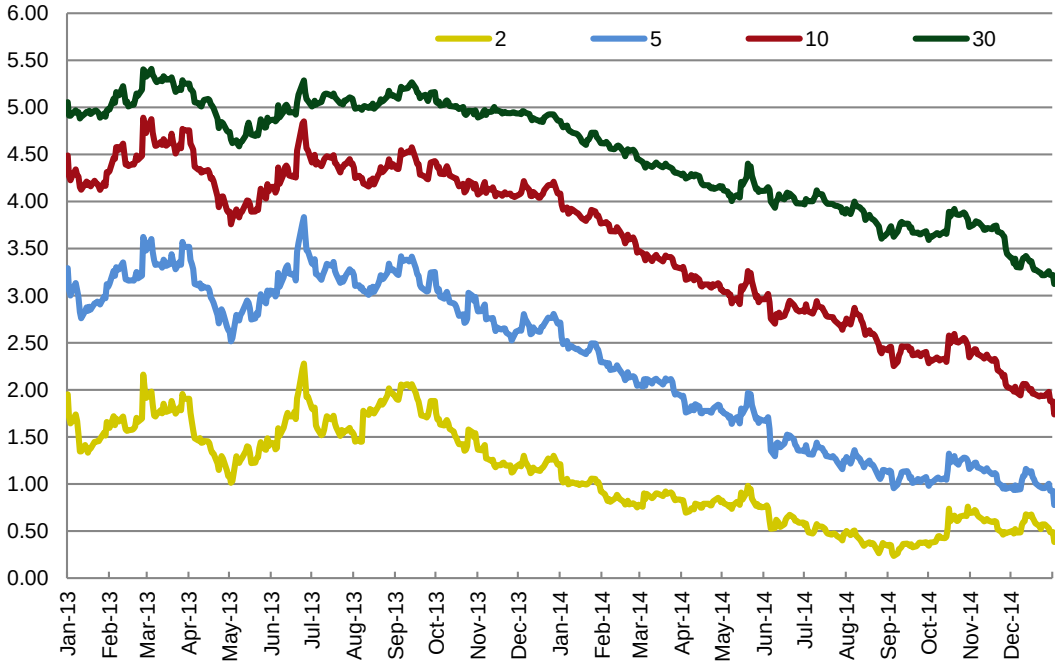
The improvement in the perception of Italy risk was further justified by the improvement of certain conditions on the domestic front, especially with regard to public finance, and, to a growing extent throughout the year, with regard to the real economy. Following Italy's exit from the Excessive Deficit Procedure in 2013, the progress in terms of public finance adjustment was continued against the backdrop of a series of reforms of the economic, administrative and institutional system that were perceived by international investors as a valid contribution to sustainability of the public debt. Within this framework, Italy has continued to benefit from the significant reduction of systemic risks within the Euro Area. Such reduction is the by-product of numerous measures adopted by the various European authorities, including the ECB, in order to get beyond some of the main criticalities of the Monetary Union architecture emerging from 2010 onwards, one of which is the creation of the European Banking Union.

The Italy-Germany spread for 10-year maturities (Figure IV.4) was essentially cut in half, going from approximately 210 basis points in January 2014 to approximately 120 basis points at the end of 2014.

**FIGURE IV.4: BTP-BUND YIELD DIFFERENTIAL ON 10-YEAR BENCHMARK, 2013-2014 (basis points)**


As noted previously, the reduction of the rates on Italian government securities (Figure IV.5) was particularly significant on intermediate maturities in 2014, following a similar trend in 2013 with respect to short-term maturities. Instead, the decrease on long-term issues was less proportional, although still significant (the yield on the 30-year security went from 4.85% in January 2014 to 3.20% at the end of 2014).

**FIGURE IV.5: MARKET RATES ON GOVERNMENT SECURITIES – 2-/5-/10-/30-YEAR ISSUES (rates in %)**

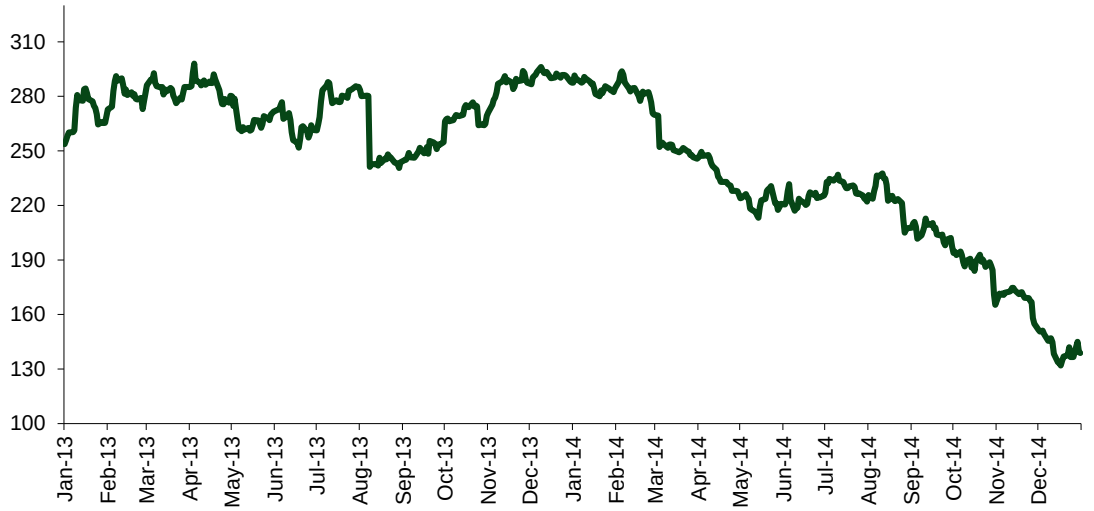



The improvement of the perception of Italy credit risk is also reflected by the spreads on Italian government bond asset swaps[4] against Euribor, which narrowed significantly across all maturities. The spread on the 3-year security was equal to +44 basis points at the end of 2014 compared with +107 basis points in December 2013, whereas, at the long end of the curve, the spreads for the 10-year and 30-year issues were +109 basis points and +196 basis points, respectively, compared with +190 basis points and +208 basis points of the end of the preceding year.

In 2014, the 2-/10-year segment of the government securities yield curve also levelled out (Figure IV.6), with the magnitude and continuity both exceptional during the entire year; the intensity of the trend was due to the decrease in yields and the consequent repositioning of investor portfolios in longer term maturities.

[4] The asset swap is a summary measurement of the difference between a security's yield and the money-market rates (mainly Euribor or EONIA in Europe).

**FIGURE IV.6: YIELD DIFFERENTIAL BETWEEN 10- AND 2-YEAR GOVERNMENT SECURITIES (basis points)**




As shown by the analysis of the graphs, the descending rate trend throughout 2014 did not exclude brief, and at times sudden and intense, upward shifts, with abrupt increases in the volatility of the securities' prices.

Such events were most evident in the second half of May, in early August and in mid-October. All such developments can probably be explained by macroeconomic, financial or political events: in May, the negative interpretation of the publication of Italian GDP and the imminent European political elections, whose outcome was feared to be uncertain; in July, the geopolitical tensions in relation to Ukraine, with negative repercussions on EU trade with Eastern Europe; in October, the political uncertainty in Greece, the perception of continuing unsatisfactory growth in the United States and in Europe, and the geopolitical tensions that showed no signs of abating. In any event, the scenario showed that fewer and fewer market intermediaries (market makers) appeared capable of responding to significant events and/or news by absorbing temporary demand-supply imbalances and containing volatility, and were thus unable to contribute to market resilience during periods of stress. Another factor increasingly affecting the markets is the behaviour of large institutional investors (including the more opportunistic investors such as hedge funds), who, on various occasions, all took on the same positioning for long periods during the year; as such, every significant and sudden change of perspective produced a very significant imbalance between buy and sell flows that inevitably translated into a massive hike in the prices of securities and therefore, yields. This situation, as already described for the European markets in general, also impacted the Italian government securities market, albeit with effects generally more modest than those experienced in other European countries.

## Secondary market trend

A very significant development in Italian debt management, which gained momentum in 2014, was the improvement of the operational conditions for the secondary government securities market. Even though the trading and pricing of the securities were gradually and steadily normalised in 2013, following the very acute crisis and instability of 2011-2012, the trend grew stronger in 2014, with a further increase in the volumes traded and a higher quality of quotation activity across the entire range of instruments offered by the Treasury. This result was unquestionably aided by the significant reduction of volatility (vis-à-vis the immediately preceding years), so that intermediaries were able to increasingly consider the secondary market as a primary venue for the execution of their portfolio strategies; the reduced volatility also facilitated the large-scale return of international investors, whose renewed interest in Italian debt, following the 2011-2012 crisis, had already resulted in quantitatively important signs in 2013.

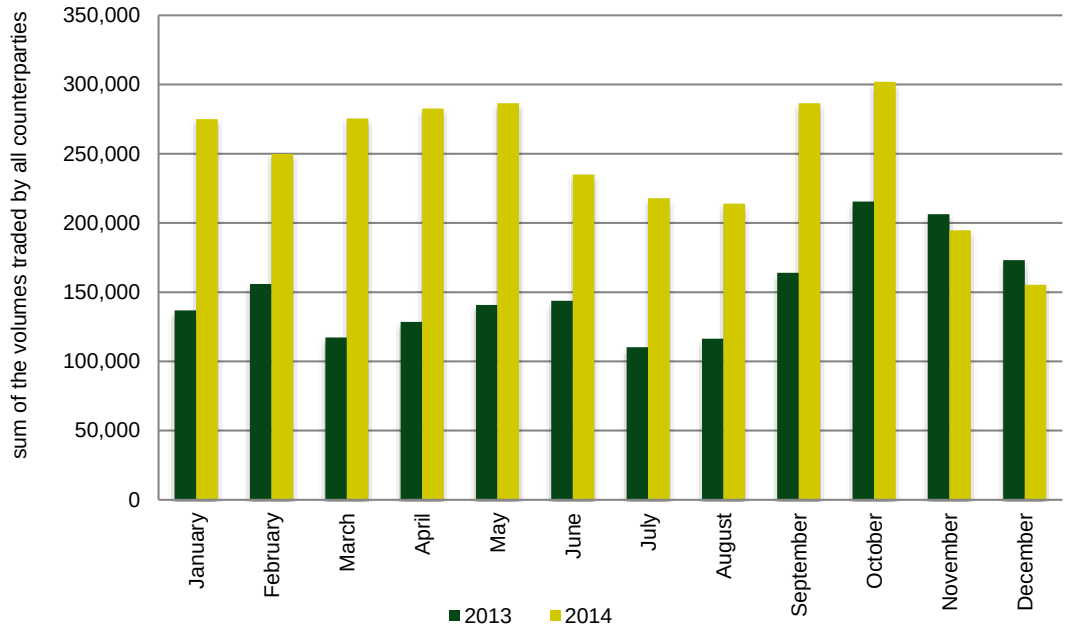
### Wholesale market and related contribution of Government Bond Specialists

As indicated in Chapter II, the regulated MTS Italia is the platform on which the Treasury currently monitors and evaluates the Government Bond Specialists' activity on the secondary market, and this platform thus represents the point of reference for analysing the changes in the trading of Italian government securities.

### Spot segment

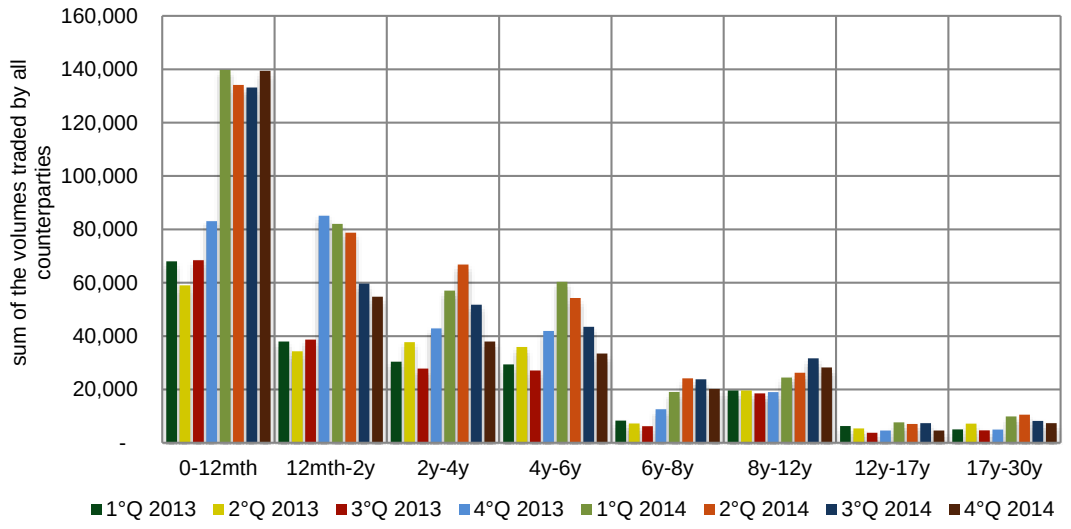
In 2014, the increase of the volumes traded on the platform was particularly evident during the entire first half of the year, and carried on through October, until decelerating anew to the 2013 levels in the final two months of the year (Figure IV.7). However, a decrease of trading toward year end is by now a confirmed trend that has grown more pronounced in recent years, and is mainly reflective of the decisions of market intermediaries to trim their exposure to government securities well in advance of closing their financial statements, so as to consolidate the results obtained at a given date. Such decisions have also been prompted by the regulatory new measures at a European and international level. In addition, the sluggish macroeconomic framework and fears related to the announcement of political elections in Greece also contributed to producing phases of instability on the BTP market. The rate increases were nonetheless reabsorbed rapidly, and liquidity, especially with respect to 10-year maturities, remained at good levels, partly due to growing expectations of the ECB's direct intervention on the Euro Area secondary government securities market, through a possible programme of quantitative easing.

**FIGURE IV.7: MONTHLY VOLUMES TRADED ON MTS PLATFORM (€ mn)**




Turning to the individual segments (Figures IV.8 and IV.9), the increase in volumes traded was especially evident across all short-term maturities (BOTs and BTPs with near term maturities) and, to a lesser extent, on the intermediate segment (between 6 and 12 years of residual life). The sharp reduction of rates also led to a drop in the interest rates on shorter maturities (more than 1 year and up to 6 years).

**FIGURE IV.8: QUARTERLY VOLUMES TRADED ON MTS, BY SEGMENT (€ mn)**




The long-term nominal BTP segment benefited from the return of liquidity as did all other segments of the curve, especially in the first half of the year. In any

event, while the aforementioned microeconomic and market criticalities manifested with the approach of the fourth quarter only partially influenced the short- and medium-term segments of the curve, the 15- and 30-year segments instead witnessed a withdrawal of liquidity on the market, both in terms of volumes traded (Figure IV.9) and more importantly, in terms of the bid/ask spread (Figure IV.10).

**FIGURE IV.9: QUARTERLY VOLUMES TRADED ON MTS PLATFORM, BY MATURITY (€ mn)**

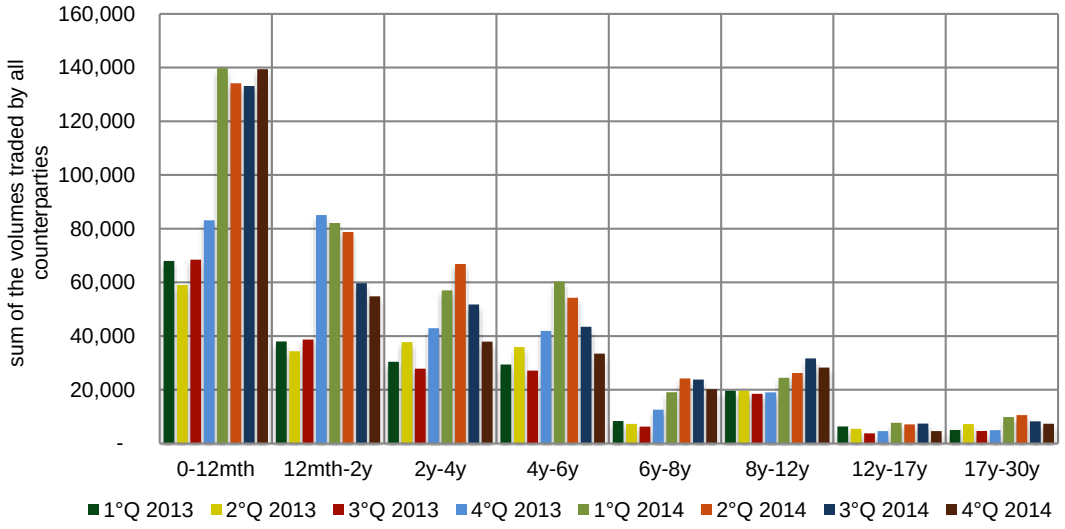
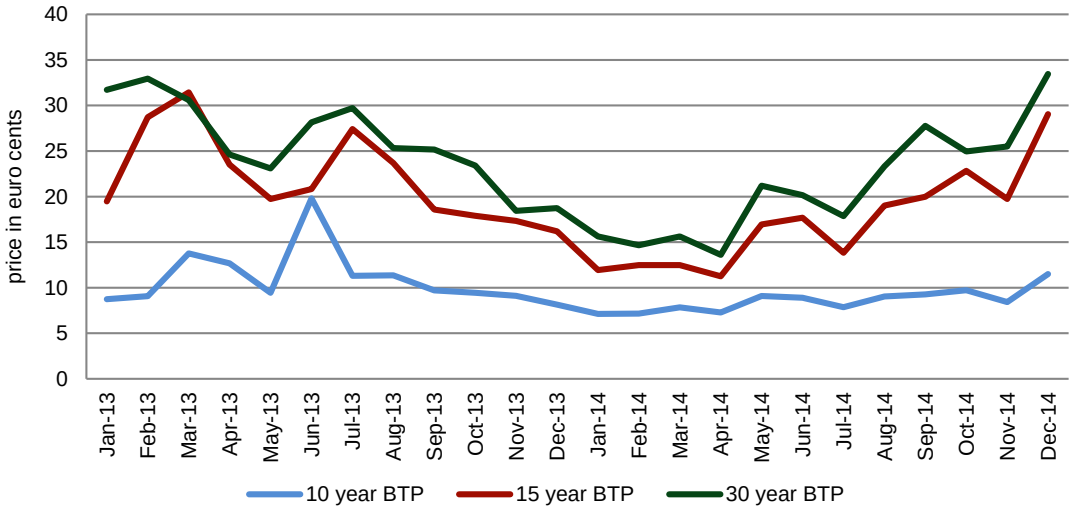



**FIGURE IV.10: BID-ASK DIFFERENTIAL ON 10-, 15, AND 30-YEAR BTPS, BENCHMARK SECURITIES, AS REPORTED ON THE MTS PLATFORM**



With reference to the impact on liquidity of the introduction of new European and global regulations, a first analysis[5] would seem to indicate a framework marked, on the one hand, by a change in the business model adopted by intermediaries, and on the other hand, by an objective increase of the constraints on providing liquidity to the securities. With reference to the business model, various intermediaries are slowly shifting from a business based on margins mainly derived from dealing (intermediation margins) to a broker-oriented approach focused on advisory services and distribution of the securities to final investors, which represent less risky activities with far lower capital requirements. This observation is based on a series of elements, including: the considerable increase in volumes traded on (i) the BTP futures market, which has taken on a key role for dealer transactions, and (ii) the BtC platforms described in Chapter II, which operate with the request-for-quotes (RFQ) mechanism[6]. On the other hand, many of the regulations introduced in recent years have significantly increased capitalisation requisites for various financial market intermediaries, and this seems to have had a detrimental effect on the liquidity of those segments that are not capable of providing adequate remuneration vis-à-vis the cost necessary for raising the additional capital.

Finally, in 2014, the secondary market activity effectively returned to normal for the CCT/CCTeu and the BTP€i, two segments that, for some aspects, had remained at a standstill in 2013, albeit against a backdrop of overall improvement. In the former case, bank treasuries and money-market funds exhibited a strong revival of interest, particularly on the domestic market, whereas with the BTI€I, there was a steady increase of participation by both domestic and foreign investors. This return of foreign investors proved highly significant, especially considering that their flight in the most acute phase of the sovereign debt crisis in 2011-2012 turned out to be particularly destabilising for the inflation-indexed segment, which has manifestly been marked by lower volumes and liquidity compared with nominal fixed-rate securities.

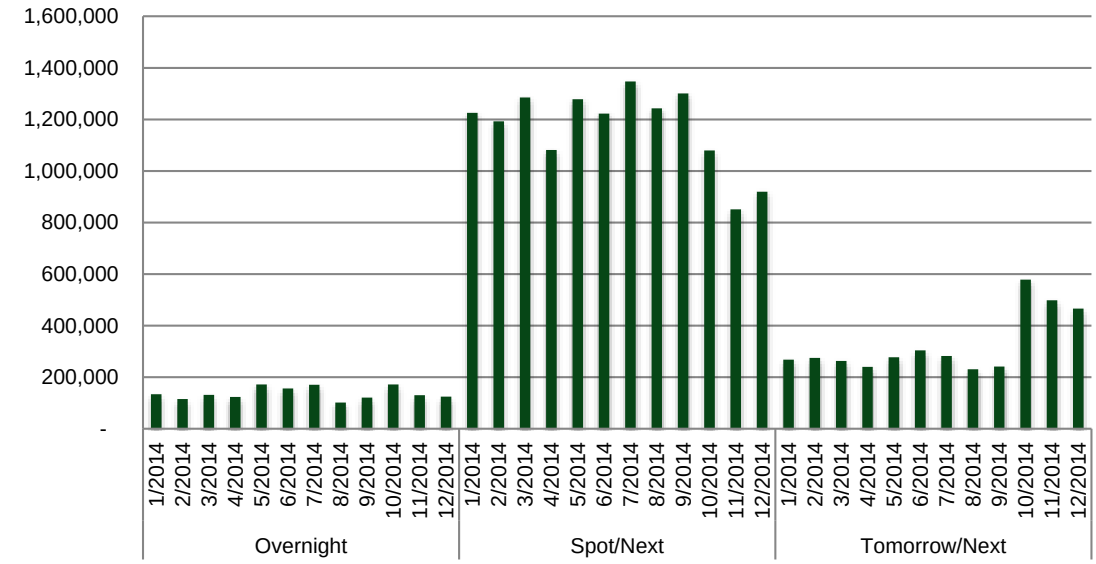
[5] Pages 56-57, Report on Financial Stability No. 2, 2014, Bank of Italy.

[6] On these platforms, which are dedicated to trading between the dealers and final institutional investors, prices are electronically input "at the request" of the investors interested in buying or selling a certain quantity of a security. Accordingly, unlike the markets for dealers with quotation obligations, such as the MTS Italia (where all of the quotations can be directly executing by electronically "striking" a bid/ask price, the quotations on the RFQ markets are only executed when there is a request to which a given number of dealers commits to respond, by displaying a price from time to time that will then be accepted by the investor (based on the attractiveness of the price or on the dealer with whom the investor is interested to finalise the trade).

### Repo segment

In 2014, the repo market again continued to play a fundamental role in contributing to the orderly execution of market-making activity on the cash market. The volumes traded on the MTS electronic platform and over the counter (OTC) experienced no significant changes compared with 2013. However, with settlement shifted to T+2[7], the market witnessed a shift in the activity from spot/net contracts to tomorrow/next contracts (Figure IV.11).

**FIGURE IV.11: MONTHLY VOLUMES TRADED BY CONTRACT MATURITY ON MTS PLATFORM (€ mn)**

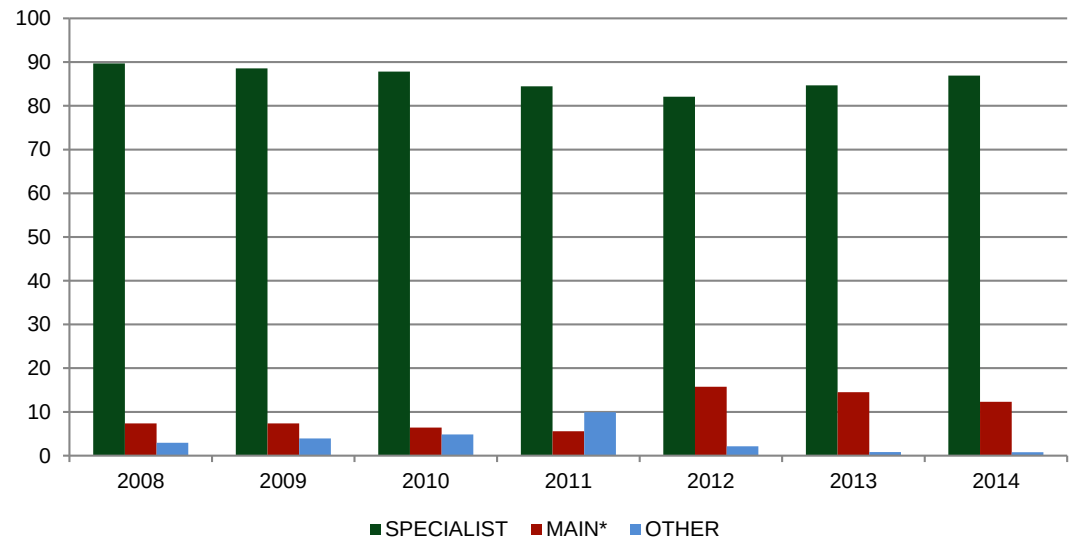



### Government Bond Specialists on the platform used for evaluation

The weight of the Specialists, valued in terms of volumes traded to total volumes traded on the MTS platform, is very significant, and has remained almost constant at around 90% since 2008.

[7] The change of settlement to T+2 as from 6 October 2014 was done as part of the measures aimed at removing cross-border settlement barriers at a European level, and was designed to increase the efficiency of the related process and the harmonisation in view of the migration to T2S (the new, ECB integrated European platform for managing securities settlement), while also reducing counterparty risk. In addition, European regulation on centralised management (Central Securities Depository Regulation – CSDR, EU Regulation No. 236 of 2012 and subsequent modifications) provides that the settlement of market transactions must occur, at the latest, within the second day subsequent to execution.

**FIGURE IV.12: ANNUAL VOLUMES TRADED BY SPECIALISTS ON MTS PLATFORM (percentages)**




*) Leading intermediaries that are not also Government Bond Specialists. The leading intermediaries commit to formulating buy and sell offers on the secondary government securities market on a continuous basis; the Specialists have more stringent market-making obligations, that also regard the primary market.

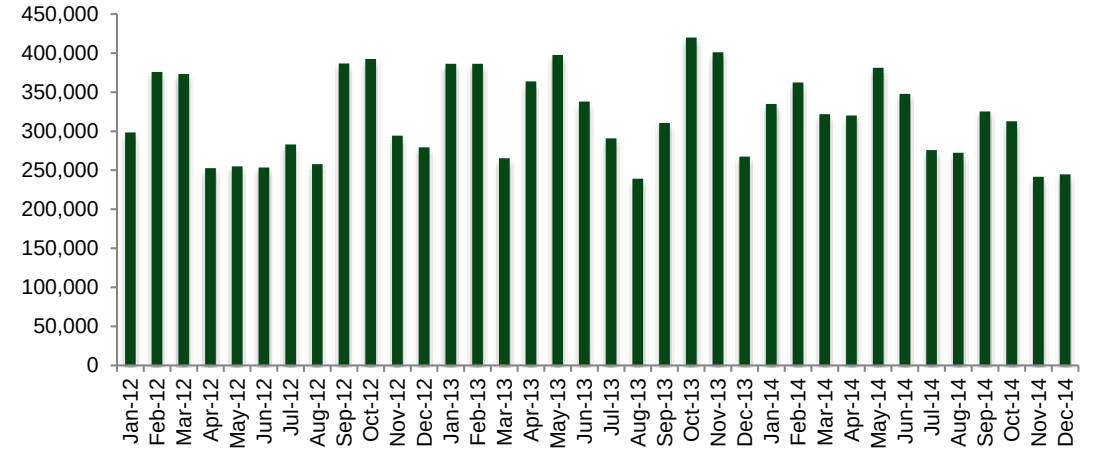
## Specialists' trading activity with investors

### *Volumes traded*

As indicated in Chapter II, the Treasury monitors the activity of the Government Bond Specialists, by also using platforms other than those selected. Such monitoring is indirect, since the data are not acquired from the platforms, but directly by the Specialists through standardised and harmonised data aggregation models on a European scale ("Harmonized Reporting Format" (HRF)). As from 2014, such models contain information about all of the individual trades done by the Specialists, with an indication, for each of the trades, of the security, quantity, counterparty country, counterparty type, and the platform or means for negotiation.

For 2014, unlike the performance of the MTS cash segment, the aggregate of all of the other platforms (electronic and other) and the other trading venues reflected a marginal recovery in the volumes traded in the first months of the year compared with the lows of December 2013, but they nonetheless also reflected levels slightly below the average for the full year of 2013. In the second half of 2014, the decline continued, with volumes in the final two months hitting levels below those in the previous two years – equalled only on one occasion during the month of August 2013 (Figure IV.13).

**FIGURE IV.13: MONTHLY VOLUMES TRADED BY SPECIALISTS ON PLATFORMS OTHER THAN MTS (€ mn)**

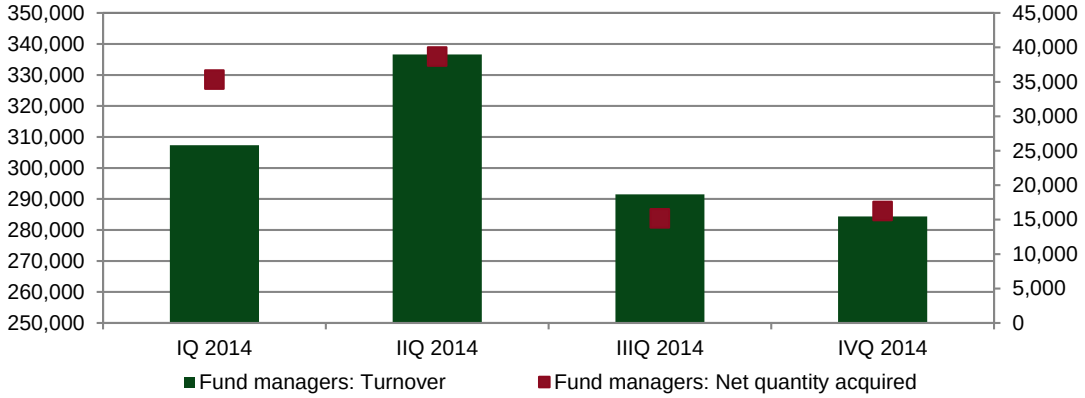


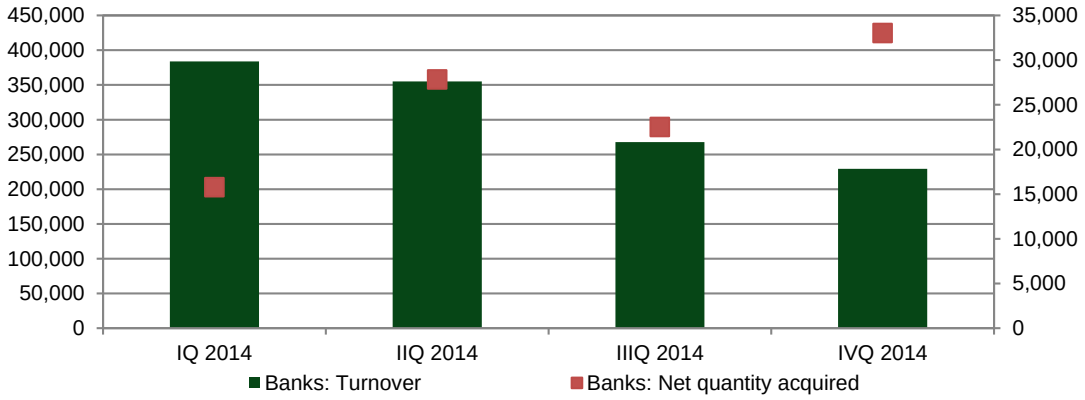

### *Trades by types of counterparties*

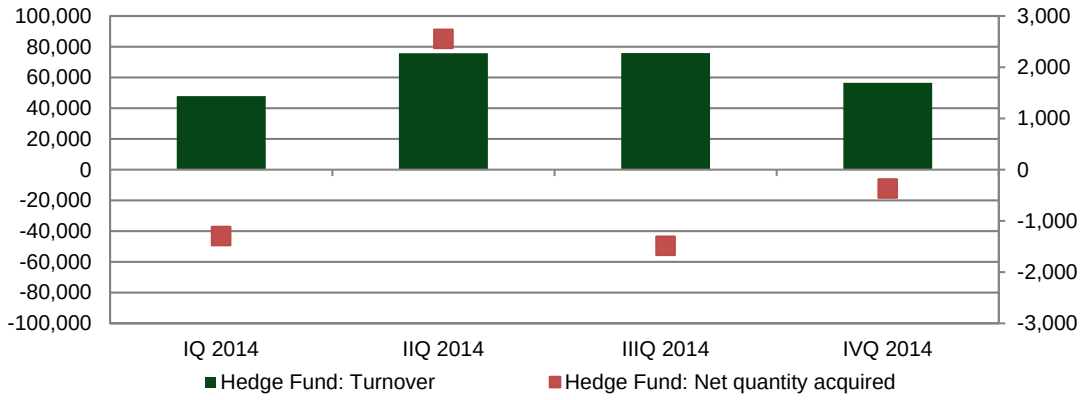
The data acquired through the HRF, especially as from 2014, have a significant value as they allow for carrying out in-depth analyses about trends with respect to investors in government securities. Through the aggregation of the data contained in these reports, the Treasury is able to monitor trends by segment, geographic area, investor type, liquidity on the different platforms, and so forth. Naturally, the lack of historical data in this regard (granularity only as from 2014) currently limits their use for more detailed statistical analyses.

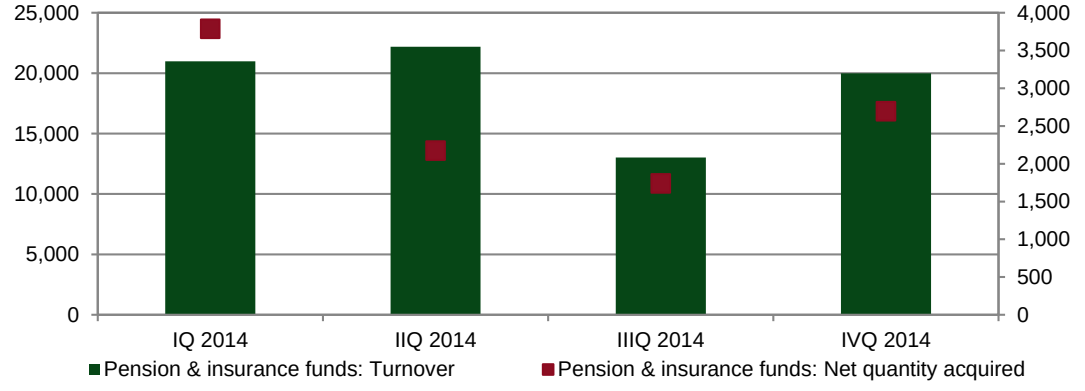
With reference to demand by investor type, the charts below illustrate the trend of absolute volumes and net quantities (purchases less sales) traded by the main investor categories (banks, investment funds, pension/insurance funds, and hedge funds) with the Specialists. As shown by Figure IV.14, the main investors in government securities were banks (even though showing a conspicuous decreasing trend throughout 2014) and fund managers, followed, for absolute volumes, by hedge funds and pension/insurance funds. In terms of the net quantity traded, the main buyers were fund managers, followed by banks and pension/insurance funds. Instead, hedge funds were net sellers of government securities in 2014.

**FIGURE IV.14: QUARTERLY VOLUMES TRADED BY SPECIALISTS BY TYPE OF COUNTERPARTY (€ mn) FUND MANAGERS, BANKS, PENSION FUNDS, INSURANCE COMPANIES, HEDGE FUNDS**



### *Trades by geographic area of counterparty residence*

With regard to the analysis of the trend of demand by geographic area (subdivided into two categories: Italian and foreign investors), the data clearly show the two categories' different contribution to volumes traded (see Figure IV.15).

Italian investors dramatically reduced absolute volumes traded, going from approximately €450 billion in the first quarter of 2014 to approximately €250 billion in the fourth quarter, while for foreign investors, the decrease was only €10 billion, with the balance at €358 billion in the fourth quarter.

In any event, in terms of net quantity acquired, Italian investors continue to provide an important contribution, which has shown no signs of contracting, ranging between €25 billion and €35 billion each quarter. Instead, the purchases by foreign investors were more erratic, and more specifically, very strong in the first two quarters of 2014 (between €30 billion and €40 billion), then falling significantly in the second half of the year to between €10 billion and €15 billion.

**FIGURE IV.15: QUARTERLY VOLUMES TRADED BY SPECIALISTS BY TYPE OF GEOGRAPHIC RESIDENCE OF THE COUNTERPARTY (€ mn)**

### *Trend of the BTP futures market*

The BTP futures market was reintroduced in 2009 by Eurex, a German trading platform specialising in the organisation of this type of market. After debuting with the 10-year maturity, the platform introduced the futures on the 3-year BTP in 2010, and that on the 5-year BTP in 2011. Despite the presence of contracts with three different maturities, the most significant and most traded contract is by far that for the 10-year maturity.

Each contract has a unit value of €100,000 and the price may vary by units of 0.01 per cent (value equal to €10 euro).

The contract has a quarterly maturity, on the tenth day of the month of reference. The value of the contract is linked to the trend of the underlying asset, which is made up of a basket of securities (so-called deliverables, since they are those that can be delivered at maturity) whose residual life, for the 10-year contract, must be between 8.5 years and 11 years, and may include securities with an outstanding balance at least equal to €5 billion and original maturity no greater than 16 years.

The BTP Futures market, especially in recent years, has taken on a vital role for market intermediaries, including investors, such as hedge funds, and more importantly, market makers. Using this instrument, intermediaries can neutralise (or at least reduce) risk exposure by taking reverse positions with respect to the exposure taken on the cash market. As shown by the results of analysis of the BTP futures contract on 10-year maturities, both trading volumes and open interest[8] increased substantially in 2014, especially prior to the auctions or on days when the markets were particularly volatile.

Although rather limited until 2013 (when the use of futures was not so widspread), the aforementioned trend in 2014 probably led to transmitting greater volatility to the cash market. In any event, this futures-to-cash market transmission mechanism (and vice versa) is currently only the target of observation and analysis (considering the different characterstics of the two markets), and it has not yet been possible to draw any certain conclusions in this regard.

[8] Open interest represents the number of futures contracts not yet closed at a specific moment in time. It can therefore be defined as the sum of all open long or short positions in the market at a given time. Open interest differs from the value of the daily transaction volume, the latter of which may be different as a result of day trading. An increase or decrease in open interest does not supply any information about the trend of prices, but only indicates strengthening or weakening of trading activity.

# V. PUBLIC FINANCE FRAMEWORK

## V.1 TREND OF THE STATE SECTOR BORROWING REQUIREMENT

Government securities are issued both for repaying maturing debt, and for covering the State Sector cash balance (requirement), as represented by the sum of the State budget balance and the balance derived from treasury flows.

In 2014, the State Sector cash balance was a deficit equal to €74,907 million, a figure that exceeded the estimates made at the end of 2013. The increase stemmed from (i) receipts and payments results that were slightly different from the forecasts at unchanged legislation, and (ii) more importantly, the State's commitment to the settlement of trade payables, as increased in quantitative terms by Decree-Law No. 66 of 2014.

The deficit was nonetheless lower than that for 2013 by €5,510 million. The improvement was due to the increase in the balance in relation to financial transactions (+€6,385 million) and capital account transactions (+€4,792 million), whereas the current account balance was lower (-€5,667 million).

The financial transactions in 2014 were influenced by the absence of the disbursements made in 2013 for the subscription of the capital increase of the European Investment Bank (EIB) and the Ministry of the Economy and Finance's purchases of the "new financial instruments" issued by Banca Monte Paschi di Siena[1]. In addition, the final capital subscription in 2014 for the European Stability Mechanism (ESM)[2] was half of that paid in 2013, while a decrease was also registered in the outlays in favour of the fund dedicated to local entities for the liquidity to pay the public administration trade debt[3].

The reduction of the capital account payments was due to a contraction in the amount of transfers in favour of the public administrations.

The reduction of the current balance is firstly due to the decrease in tax receipts, taking into account reimbursements and offsets. More specifically, the decrease refers to corporate income taxes (with certain banks and insurance companies not required to make payments for 2013 and prepayments for 2014 as a result of the increase in the prepayments for 2013, which amounted to 130 per cent of the taxes due[4]) and personal income taxes; a reduction was also seen in the collections of the regional taxes on productive activity from the private sector (the result of (i) a lower balance paid in 2014 for the effect of the higher prepayments made in 2013, and (ii) a lower tax rate on the 2014 prepayments[5]).

[1] Decree-Law No. 95 of 6 July 2012, converted with amendments by Law No. 135 of 7 August 2012.

[2] Law No. 116 of 23 July 2012.

[3] Decree-Law No. 35/2013 converted by Law No. 64/2013; Decree-Law No. 102/2013 converted by Law No. 124/2013; Decree-Law No. 66/2014 converted by Law No. 89/2014.

[4] Decree-Law No. 133 of 30 November 2013, converted with amendments in Law No. 5 of 29 January 2014.

[5] Decree-Law No. 133 of 30 November 2013, converted with amendments in Law No. 5 of 29 January 2014 and Article 2 of Decree-Law No. 66 of 24 April 2014, converted with amendments in Law No. 89 of 23 June 2014.

In addition, there were increases in transfers from households, due to higher collections of gaming receipts by the former Independent Adminstration of State Monopolies, as settled in 2014 with reference to the year of 2013. Instead, the level of EU financing was lower in 2014 when compared with 2013[6]. Current account payments incorporated reductions in spending on personnel (due to limits on turnover and salary/wage freezes) and in the transfers to local entities and public utility companies. Instead, current transfers to households were higher (+€4,122 million), partly due to the €80 bonus payment[7].

After personnel expenditure and transfers, interest expenditure figured as the largest component of current expenditure of the State Sector cash budget, amounting to €79,645 million in 2014, for an increase of approximately €800 million compared with 2013. The increase is the by-product of higher expenditure on government securities (approximately +€3.5 billion), and a reduction of expenditure on the current treasury accounts for entities other than the State Sector (approximately -€2.6 billion)[8].

**TABLE V.1: STATE SECTOR: CONSOLIDATED CASH ACCOUNT (data in € mn)**

| | 2013 | 2014 |
|---|---|---|
| Current receipts | 519,720 | 516,308 |
| *including: Interest income* | *1,050* | *1,394* |
| Capital account receipts | 3,166 | 3,721 |
| **Total receipts** | **522,886** | **520,029** |
| Current payments | 554,052 | 556,307 |
| *including: Interest expenditure* | *79,872* | *81,039* |
| Capital account payments | 26,791 | 22,554 |
| **Total payments** | **580,843** | **578,861** |
| **Financial accounts: Net primary balance** | **20,865** | **20,813** |
| Net interest expenditure | 78,822 | 79,645 |
| **Financial accounts: Net balance** | **-57,957** | **-58,832** |
| Financial accounts | -22,460 | -16,075 |
| **Primary balance** | **-1,595** | **4,738** |
| Final receipts | 525,481 | 521,853 |
| Final payments | 605,898 | 596,760 |
| **State Sector balance** | **-80,417** | **-74,907** |

[6] It should nonetheless be noted that the year of 2013 benefited from delayed EU payments as of December 2012, with the crediting of large sums in the first months of 2013.

[7] Decree-Law No. 66 of 24 April 2014, converted with amendments in Law No. 89 of 23 June 2014.

[8] This reduction is also due to the 2013 payment to Cassa Depositi e Prestiti S.p.A. (the entity whose account is the largest within the Treasury) of interest amounting to approximately €1.71 billion, accrued for 2012, and thus computed at a higher interest rate.

## V.2 MATURITIES, ISSUES, AND COVERAGE OF THE STATE SECTOR BORROWING REQUIREMENT

### Maturities and reimbursements

In 2014, the volume of the government securities maturing amounted to €391,747 million, and was thus only marginally above that for €387,673 million maturing in 2013.

For the short-term segment, the maturities came to €198,490 million (inclusive of €198,010 million of BOTs and €481 million of commercial paper), a balance well below the €229,211 million for 2013, with the difference due to the strategic reduction of the use of short-term debt instruments.

For the medium/long-term segment, the maturities equalled €193,257 million (inclusive of €190,690 million of domestic issues and €2,567 million of foreign issues), whereas the reimbursements for 2013 totalled €158,462 million (inclusive of €154,748 million of domestic securities and €3,714 million of foreign securities). CTZ reimbursements had a significant weight within total maturites in 2014, when compared with the prior year.

When also considering (i) the repurchases through the Liquidity Account and swap transactions, net of those managed with the resources of the Fund for the Amortisation of Government Securities, and (ii) the MEF reimbursements of the principal on the postal warrants, the total reimbursements for 2014 were equal to €399,809 million.

### Issues

In 2014, the amount of government securities issued[9] came to €455,300 million, which was approximately 4.6 per cent lower than the €477.343 million placed in 2013. On the domestic market, the volume of securities issued amounted to €453,569 million, compared with €476,188 million in the previous year.

In the short-term segment, issues amounted to €182,407 million of BOTs inclusive of €90,472 million of annual securities and €91,934 million of 6-month securities. There were no issues of quarterly BOTs or flexible BOTs (non-standard maturities), given the already sizeable liquidity held by the Treasury.

When also including swap transactions, the total issues of securities for the year amounted to €463,364 million.

Net issues [10] for the year, namely, the coverage in terms of cash guaranteed by government securities, totalled €70,517 million, which were thus approximately €4.4 billion lower than the State Sector's final cash balance. On the other hand, at the end of 2014, various payments of such cash balance translated into cash flows within the State Treasury, such as the funding via the postal system done by the Cassa Depositi e Prestiti S.p.A. with respect to the instruments for which it is responsible (an inflow of approximately €4.6 billion), the interest on the mortgage

[9] The aggregate is calculated by settlement date of the placement, and not the auction date.

[10] Net issues are calculated by subtracting the maturities from the value of the issues (valued at net proceeds), except for BOTs that are valued at nominal value. CTZ maturities are valued at net proceeds since the interest component is already included in the State Sector borrowing requirement.

payables of local government that is booked to the State and the remuneration of the account held by the Cassa Depositi e Prestiti S.p.A. at the Treasury (for a total of approximately €6.8 billion). Considering that certain revenue accounts already booked to the cash balances of previous years (such as certain portions of EU subsidies) were transferred to the Treasury as of 2014 only, the Treasury's available liquid balances at the end of 2014 were approximately €9 billion higher than at the end of the preceding year.

This result was, at least in part[11], purposely achieved by the Treasury with the decision not to reduce the net issues of government securities in proportion to the generation of additional cash as mentioned above. The decision was made with the dual objective of managing the refinancing risk in view of the significant forthcoming maturities for 2015 and contributing to the containment of the cost of financing, in view of the decrease in market interest rates on government securities in the final months of 2014 (see charts in Chapter IV).

**TABLE V.2: ISSUES*, MATURITIES AND COVERAGE OF STATE SECTOR BORROWING REQUIREMENT (data in € mn)**

| | 2014 |
|---|---|
| Nominal issues | 463,364 |
| Issues at net proceeds | 470,326 |
| Reimbursements | 399,809 |
| **Net issues (a)** | 70,517 |
| **Cash flows included in the State Sector cash balance held by the Treasury (b)** | **13,413** |
| **Total coverage (a+b)** | **83,930** |
| **State Sector cash balance (c)** | **74,907** |
| **Change in the balance of the Treasury Liquidity Account as of 31-12-2014 vs 31-12-2013 (a+b-c)** | 9,023 |

*) Calculated for the entire year with the criterin of settlement dat, and not the auction date.

## V.3 PUBLIC SECTOR BORROWING REQUIREMENT

The Public Sector borrowing requirement (balance), which largely coincides with the general government borrowing requirement[12], is the aggregate of reference for explaining the change in the level of the total general government debt that is determined during any given year. The Public Sector borrowing requirement is computed starting from the State Sector borrowing requirement (which is governed by the same cash accounting and classification criteria), and then adding, with adjustments for consolidation, if needed, the cash balances of all of the entities making up the general government.

[11] The net issues for the year also took into account the need for sufficient funding for the restructuring of the Regions' liabilities – as provided by Article 45 of Decree-Law No. 66 of 201, as subsequently amended and converted into law. Such restructuring was ultimately postponed to 2015.

[12] The two aggregates are calculated on the basis of the same account classifications, but they differ because of the criteria with which the privatisations proceeds are booked. In addition, the Public Sector balance is calculated by the State General Accounting Department (MEF) with respect to its components (receipts and payments), whereas the general government balance is computed by the Bank of Italy from the standpoint of coverage, namely, the quantities of new liabilities issued.

In 2014, the Public Sector borrowing requirement totalled €68,950 million (4.3 per cent of GDP), thus decreasing by €4,298 million compared with the balance for 2013[13] (€73,248 million, 4.6 per cent of GDP). In comparison with the preceding year, the decrease in the borrowing requirement in 2014 is largely attributable to the contraction of final payments, countered by a more modest decrease in final receipts. Final payments declined by approximately €6,500 million, inclusive of lower capital account payments and lower payments on financial transactions.

The interest expenditure included in the Public Sector cash balance totalled €83,949 million, rising by approximately €500 million against the comparable figure for 2013.

**TABLE V.3: PUBLIC SECTOR: CONSOLIDATED CASH ACCOUNT (data in € mn)**

| | 2013 | 2014 |
|---|---|---|
| Current receipts (a) | 759,112 | 759,564 |
| Capital account receipts | 7,207 | 6,513 |
| Financial account receipts | 3,665 | 1,712 |
| **Final receipts (b)** | **769,983** | **767,789** |
| Current payments (c) | 781,990 | 787,170 |
| *including: interest expenditure (d)* | 83,497 | 83,949 |
| Capital account payments | 46,512 | 41,271 |
| Financial account payments | 14,729 | 8,299 |
| **Final payments (e)** | **843,231** | **836,740** |
| **Current account balance (a-c)** | -22,878 | -27,606 |
| **Primary balance (b-e+d)** | 10,249 | 14,999 |
| **Balance* (b-e)** | -73,248 | -68,950 |

*) The balance may not agree with the differences in the components due to the effect of rounding.

## V.4 DEBT OF THE PUBLIC ADMINISTRATIONS AND DEBT-TO-GDP RATIO

As a result of revisions to nominal GDP made by ISTAT on 23 September 2015[14] and the revision of general government debt by the Bank of Italy [15], the debt-to-GDP ratio for 2013 came to 128.8 per cent, which is approximately 0.3 percentage points above the level reported in the EFD of April 2015.

As a result of similar revisions, the final debt-to-GDP ratio for 2014 was 132.3 per cent, or 0.2 percentage points above the figure contained in the 2015 EFD and in the 2015 EFD Update, which, in turn, needs to be compared with the forecast of 131.6 per cent in the 2014 EFD Update, that was confirmed in the Draft Budgetary Plan for 2015. The main factor underlying this result is the "spillover" effect of the lower level of GDP in 2013 (equal to almost 0.7 percentage points), given that (i)

[13] The Public Sector borrowing requirement for 2013 is consistent with the figure published in the EFD of April 2015. The update following revisions of final data will be published in the 2016 EFD in April.

[14] See ISTAT press releases "GDP and general government borrowing – 2012-2014" dated 2 March 2015, "Update of the estimates of national accounts for 2014" dated 24 April 2015 and the "National economy accounts" dated 23 September 2015.

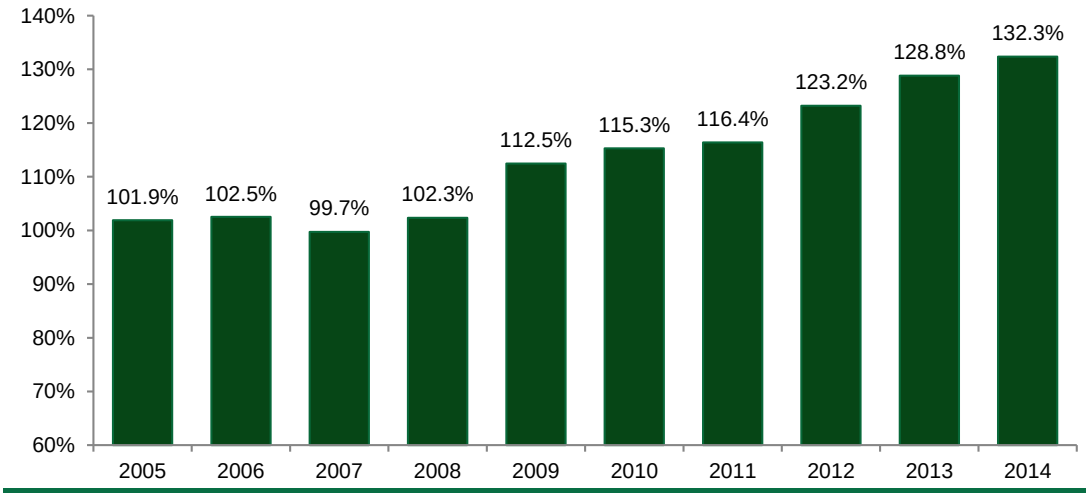
[15] Supplement to the Public Finance statistical bulletin, Borrowing Requirement and Debt No. 53 of 14 October 2015.

actual nominal growth in 2014 was not significantly different from that forecast in those documents (0.4 per cent versus the forecast of 0.5 per cent), and (ii) the nominal value of the debt stock (equal to €2,135,902 million), despite including an increase of €1,829 million due solely to the accounting effect of new EUROSTAT regulations about the booking of swaps originating from the exercise of swaptions[16], was actually below the forecast by approximately 0.3 per cent of GDP.

It is noted that the forecasts of the State Sector borrowing requirement for 2014 and the borrowing activity for the year took into account the need for the funding of (i) liquidity advances to local entities (to be used for the payment of trade debt) and (ii) the restructuring of the debt of the Regions. In any event, a portion of the liquidity advances was deferred to 2015, while the restructuring of regional debt was entirely postponed until 2015. Given the growth of the cash balance due to these circumstances, as already evidenced in the previous section of this Report, the Treasury was able to effect a buyback of government securities at year end for a nominal value of just over €4 billion. On the other hand, the debt exchange activity contributed to reducing the final level of the debt by more than €1 billion, given that securities were issued at prices significantly above those on the securities repurchased through this type of transaction.

Finally, it should be noted that, in line with the September 2014 forecasts, the final value of the debt at the end of 2014 was also determined by the use of the Fund for the Amortisation of Government Securities, which funded reimbursements of maturing securities for just over €4 billion (approximately 0.25 per cent of GDP)[17], making it possible to decrease the annual issues by a similar amount.

**FIGURE V.1: TREND OF DEBT-TO-GDP RATIO, 2005-2014**




[16] Regulations going into effect on 1 September 2014.

[17] These resources are mostly due to inflows coming from the reimbursement of the so-called 'Monti bonds' effected by Monte dei Paschi di Siena, for the planned amount of €3 billion for 2014.

## V.5 NET BORROWING

As calculated on an accrual basis pursuant to harmonised criteria at a European level defined by ESA 2010, general government net borrowing[18] for 2014 was approximately €49 billion, with an increase of approximately €1.7 billion against the comparable figure for the preceding year. The ratio between net borrowing and GDP hit the target of 3 per cent, in line with the value indicated in the 2014 EFD Update presented in September 2014.

Given the ongoing decline in interest rates, the decrease in interest expenditure (accrual basis) in 2013 was a continuing phenomenon in 2014. Spending on interest amounted to €75 billion, falling by 3.6 per cent compared with 2013. The ratio of interest expenditure to GDP amounted to 4.6 per cent, which was below the 4.7 per cent estimate indicated in the 2014 EFD Update.

**TABLE V.4: KEY PUBLIC FINANCE AGGREGATES (data in € mn)**

| | | 2013 | 2014 |
|---|---|---|---|
| Net borrowing | | -47,307 | -49,038 |
| | *% of GDP* | -2.9 | -3.0 |
| Public debt | | 2,069,692 | 2,135,902 |
| | *% of GDP* | 128.8 | 132.3 |
| Interest expenditure | | 77,879 | 75,043 |
| | *% of GDP* | 4.8 | 4.6 |
| Primary balance | | 30,572 | 26,005 |
| | *% of GDP* | 1.9 | 1.6 |
| *GDP* | | 1,606,895 | 1,613,859 |

## V.6 RECONCILIATION BETWEEN REQUIREMENT AND BORROWING

The reconciliation between general government net borrowing and the Public Sector borrowing requirement is prepared by the Ministry of the Economy and Finance, and allows for representing the monetary offset of the economic transactions of the general government account.

The reconciliation[19] between the Public Sector borrowing requirement and general government net borrowing is done by working with the following:

- The financial accounts;
- The cash-accrual difference;
- The reclassification of transactions;
- The statistical discrepancy.

More specifically, the financial assets accounts (receivables collection, granting of loans, equity investments and conferrals, and so forth) are a component of the borrowing requirement, but they are not considered in the calculation of the

[18] See ISTAT press releases "National Economic Accounts" of 23 September 2015 and the "Notification of general government net borrowing and debt pursuant to the Maastricht Treaty" of 21 October 2015.

[19] See ISTAT press release "Notification of general government net borrowing and debt pursuant to the Maastricht Treaty" of 21 October 2015.

net borrowing, which books only transactions of an economic nature; for the reconciliation of the two aggregates, they must therefore be subtracted from the Public Sector borrowing requirement in order to come up with general government net borrowing. In 2014, the financial asset transactions had a value of €10,256 million.

In the general government account, transactions are quantified in accordance with accrual accounting principles, whereas the accounting for the Public Sector account is done on a cash basis. The cash-accrual difference reflects the different timing for the booking of the income/expenditure transactions, and represents the changes in trade receivables/payables or receivables/payables arising from timing differences in monetary regolarisation. In 2014, this difference amounted to €9,819 million.

As already mentioned, the classification of the individual transactions by economic and financial categories for the general government account is done pursuant to the ESA 2010 definitions and regulations, whereas the calculation of the Public Sector borrowing requirement occurs in accordance with public accounting rules. The accounting reclassifications amounted to -€716 million for 2014.

Finally, the statistical discrepancy is a residual amount, and represents the aggregate of the differences between the borrowing requirement and net borrowing, due to factors other than those described above; this is mainly to be attributed to the use of different information sources in the calculation of the two aggregates, and for 2014, the discrepancy amounted to €553 million.

**TABLE V.5: RECONCILIATION BETWEEN PUBLIC SECTOR BORROWING REQUIREMENT AND NET BORROWING OF THE PUBLIC ADMINISTRATIONS (data in € mn)**

| | 2013 | 2014 |
|---|---|---|
| **Public Sector borrowing requirement** | **-72,986** | **-68,950** |
| Financial accounts including in the Public Sector borrowing requirement | 13,775 | 10,256 |
| Cash-accrual difference | 11,687 | 9,819 |
| Reclassifications of transactions | 1,336 | -716 |
| Statistical discrepancy | -1,119 | 553 |
| **General government net borrowing** | **-47,307** | **-49,038** |

# VI. PUBLIC DEBT MANAGEMENT IN 2014

## VI.1 ACTIVITY IN GOVERNMENT SECURITIES ON THE DOMESTIC AND FOREIGN MARKETS

The Treasury's issuing policy was mainly oriented toward the pursuit of a slowdown in the decline in the average life of the debt, and toward managing exposure to the main market risks (interest-rate and refinancing risks), while also prioritising the regularity and predictability of the issues. This posture was embraced so as to ensure the refinancing of the debt and to permit the reduction of the cost of the debt over the long term. Obviously, the decisions were inevitably influenced by the framework previously outlined, inclusive of the effect of numerous macroeconomic factors (economic growth worldwide and in the Euro Area, inflationary trends, the performance of key monetary variables and credit conditions) and market factors (such as the trend of rates on government securities, the spread versus Germany, and the liquidity of the financial system).

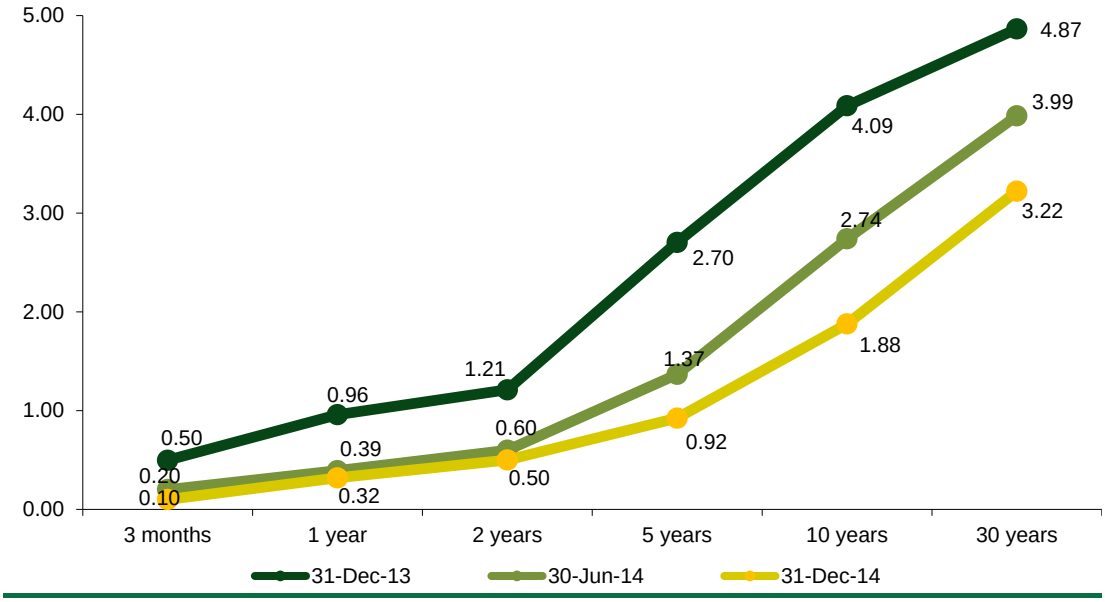
Following the turbulence that affected most of 2011 and 2012, the secondary and primary markets for Italian government securities started to move toward normalisation in 2013, and continued more firmly on this path in 2014

The improved market conditions resulted not only in a decrease in the cost of the issues, but also a change in the mix of demand, and a full return to normal operations in the segments most adversely impacted during the most acute phase of the crisis, namely, the BTP€i and CCT/CCTeu segments.

With more specific reference to the decrease in the cost of the issues, the Treasury financed itself in 2014 at a weighted average cost of 1.35 per cent, a very low level from an historical perspective, achieved in a year in which the total medium-/long-term issues (maturities of more than 1 year) were slightly higher than the historical average (although still below the levels of 2013). The Treasury was able to benefit from the level and configuration of the yield curve, with significant issuing activity across all longer term maturities: aside from the 10-year issues, regular monthly auctions were held for 7-year maturities, the 15-year nominal security was relaunched, and a continuous presence was ensured for the 30-year maturity, with various reopenings of the benchmark. On the other hand, with the improvement of market conditions, the Treasury was also able to pursue the process of curtailing shorter term issues in 2014, in line with the strategy of stabilising or lengthening the average life and the financial duration of the debt.

With respect to the mix of demand, the very low level of interest rates from an historical perspective was a factor that prompted many investors, including foreign investors, to rebalance their portfolios, with a greater weighting given to the longer maturities of nominal BTPs.

**FIGURE VI.1: GOVERNMENT SECURITIES YIELD CURVE, 2013-2014**




The third important aspect affecting debt management in 2014 was the complete normalisation of the market for the BTP€i and CCTeu securities indexed to Euro Area inflation, two segments that had already recovered in 2013 in terms of performance, volumes traded and domestic/international investor interest, but that further improved in 2014.

With reference to the BTP€i, the Treasury not only increased the supply by launching a new 10-year security (that had been expected for some time), but it also went back to issuing across the real rate curve, inclusive of a 30-year issue that had been precluded for several years.

The CCTeu moved back in line with the market values for equivalent fixed-rate BTPs and, in many cases, the securities being issued performed better than the BTPs with a similar maturity. This was a sign of the return of investor interest (particularly from domestic institutional investors) that the Treasury favoured by increasing the supply and gradually lengthening the maturity at issuance to the 5-/7-year range, as provided by the Guidelines (the final security issued in 2014 had a maturity of almost 6.5 years).

Another element favouring issuing activity was the increase of liquidity on the secondary market, especially on the electronic platforms, and specifically on the regulated MTS Italia, partly due to the more systematic participation of foreign investors.

The normalisation of the primary market was also evident through the return to a limited use of off-the-run securities, the reopenings of which regarded two BTPs with residual life of 20 and 23 years, and one CCTeu with a 4-year residual life. Again in 2014, the off-the-run issues (with respect to both mid- and end-month auctions) were managed with flexible timing, so as to improve the operation of the secondary government securities market or to satisfy specific needs of demand.

## Domestic securities

### BOT

As outlined in Chapter III, the key operational objectives for the short-term segment were consistent with the strategy to stabilise the average life of the debt and not to excessively burden the already significant maturities expected for 2015, and as such, they involved the containment of issues (as already initiated in 2013), so as simultaneously to guarantee adequate liquidity to the BOTs on the secondary market, and to satisfy customer demand at the related auctions.

For this purpose, the Guidelines provided that the BOT issues for the year would be done regularly for the 6- and 12-month maturities only, without prejudice to the Treasury's option of also issuing quarterly or flexible securities, in case of specific cash needs. Furthermore, the percentage of the reopenings reserved for Specialists was cut to 10 per cent (from 15 per cent in 2013) of the quantities offered at ordinary auction as from the first auction with settlement in 2014. The scheduling of the auctions was instead left unchanged, with annual BOTs offered at mid-month (possibly flanked by 3-month securities) and 6-month BOTs offered month end.

Accordingly, in 2014, a total of €182,407 million of BOTs was issued, with a reduction of 16.5 per cent compared with the €218,366 million of 2013. The net issues were negative for both the 6-month security (-€8,191 million), and the 12-month security (-€7,412 million), for a total BOT reduction equal to approximately €15,603 million. During the year, the mix of BOT issues was thus slightly rebalanced, with a proportionally greater decrease in the 6-month security (historically representing the highest amounts at auction), due also to the need to provide more liquidity to the instruments that are used for indexing the CCT (coupons linked to 6-month BOTs), but with the aim of simultaneously controlling the issues of the 12-month security, in order to prevent exacerbating the mentioned concentration of maturities in 2015.

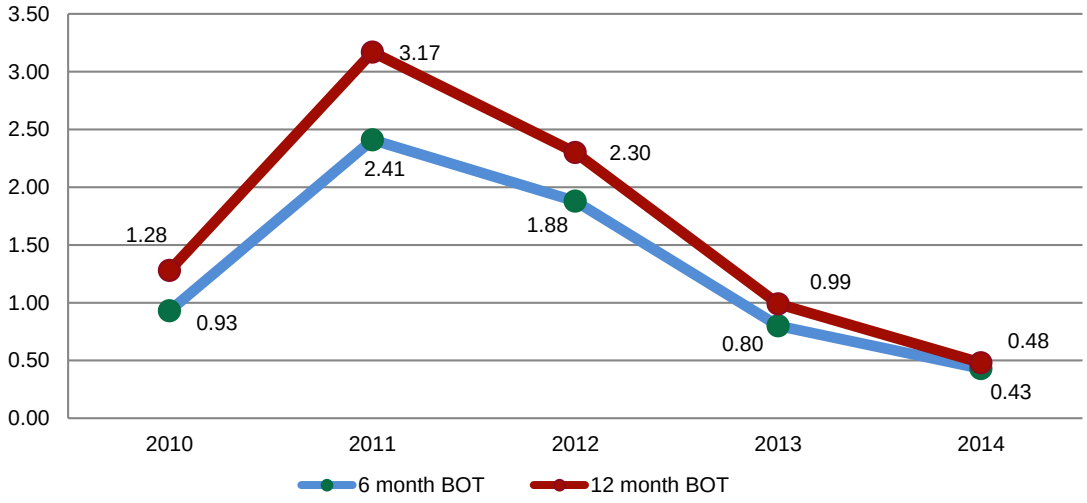
The significant decrease of the issues on the short-term segment was also facilitated by the fact that it was possible (due to the Treasury's considerable liquidity balance during the year) to avoid reliance on discretionary instruments and instruments with a shorter term; indeed, there were no quarterly BOTs, nor flexible BOTs issued in 2014.

The total amount of BOTs outstanding was thus cut by approximately €15 billion, and at year end, accounted for 7.04 per cent of total government securities outstanding, consistent with the objective defined in the Framework Decree, which pegged the aggregate at between 5 per cent and 15 per cent. Comparing this figure with the value observed at the end of previous years, it is possible to see a descending trend compared with 8.19 per cent in December 2013, and 9.22 percent at the end of 2012, in line with the strategic reduction of the short-term segment that began in 2013.

Banking counterparty demand at auction remained high for the entire year, as shown by the bid-to-cover ratio, that averaged 1.64 for the 6-month BOT and 1.65 for the annual security, compared with 1.55 and 1.54, respectively, in 2013. The higher bid-to-cover ratio is probably the result of the aforementioned reduction of the amounts offered on average, which more than offset the sizeable reduction in yields making the instruments less attractive.

The decreasing trend of short-term rates continued, facilitated by the ECB's accommodating monetary-policy measures and greater investor confidence in Italian securities. The positive performance of the government securities market and the money market was thus also reflected in the average interest rate on allotment of the BOTs auctions; for 2014, these rates equalled 0.48 per cent for the 12-month BOT and 0.43 per cent for the 6-month BOT, which were much lower than in previous years and consistent with the reduction seen since 2011.

**FIGURE VI.2: AVERAGE AUCTION ADJUDICATION RATE FOR 6- AND 12-MONTH BOTS –2010-2014 (rates in %)**

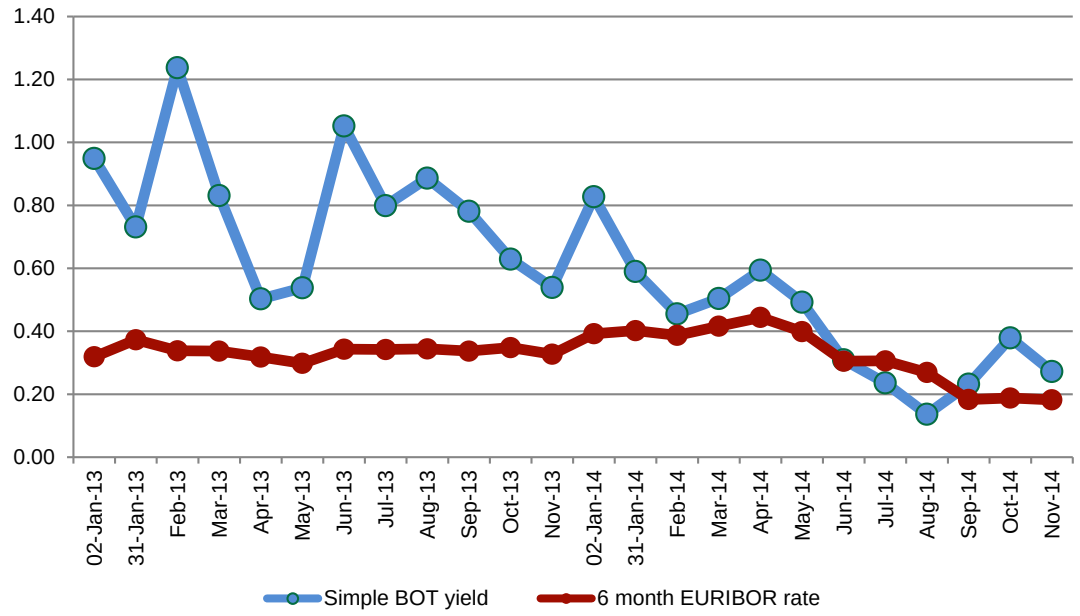



More specifically, the 6-month BOT hit an historical low at the auction at the end of August (0.136 per cent), and then rose slightly during the final auctions for the year. A similar trend can be observed for the annual BOT, whose yield bottomed out at the mid-September auction (0.271 per cent), and then climbed higher in subsequent auctions, though still remaining at an historically lower level through the end of the year.

During the year, the yields on the BOTs auctioned also tended to converge more than the interbank market rates for similar maturities (Euribor). This can be easily observed in Figure VI.3 below, which compared the weighted average rate at the auctions of 6-month BOTs for the years of 2013 and 2014, with the corresponding EURIBOR rate published on the same day.

The figure also shows how the the trend of the two yields was much more uniform compared with the preceding year: the two curves tend to overlap and to intersect, with an evident return to a negative BOT-EURIBOR spread in some months thereby signalling the improved investor perception regarding the risk on short-term Italian government securities, including in relation to the money market of reference.

**FIGURE VI.3: YIELD AT ISSUANCE OF 6-MONTH BOT AND COMPARISON WITH EURIBOR RATE –2013-2014 (rates in %)**



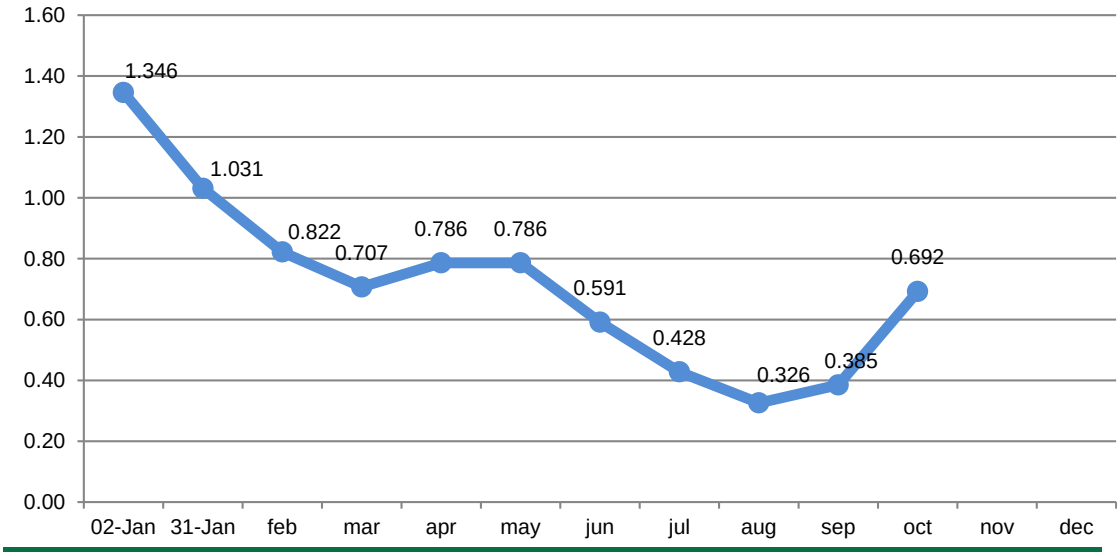

## CTZs

A total of €32,969 million of CTZs with a 24-month maturity was issued in 2014, with a reduction of 13.6 per cent compared with the €38,157 million issued in 2013. The amount of securities reimbursed came to more than €56 billion, or well above the €23 billion that came due in 2013; the difference reflects the issuing policy in 2012, which had focused on placement of more securities with a maturity in 2014. Such dynamics, together with strategy to ease up on the issues of shorter term maturities, caused a decrease in the stock of CTZs outstanding and the ratio of those outstandings to the total debt. At the end of 2014, the outstanding balance had fallen by approximately 31 per cent (a decrease of €23,676 million), with the CTZs representing 2.96 per cent of the stock of the government securities, compared with 4.44 per cent at the end of 2013.

The bid-to-cover ratio at auction was fully satisfactory, ranging between a low of 1.42 at the end of August with an offering of €3 billion, and a high of 2.02 at the end of March, with an offering of €2.5 billion. Moreover, the variance of CTZ volumes auctioned was minimal, considering that the related amounts ranged between the low at the end of July (€2,250 million) and the high at the end of April (€3,500 million).

The yields at issuance steadily decreased from the start of the year until March; a slight correction in April and May was then followed by a continuing descent toward the low of the year in August, with a rate of 0.326 per cent. A new, significant increase then occurred in tandem with the general rebound of yields caused by the abrupt movements of U.S. Treasuries as of mid-October.

**FIGURE VI.4: YIELD AT ISSUANCE OF CTZs – 2014**




## BTPs

With reference to nominal BTPs, the Treasury attempted to ease up on the gross issues of securities with a shorter term maturity by (i) leveraging the new 7-year instrument, which was offered on a regular basis, including for the purposes of ensuring its adequate liquidity and satisfying demand, and (ii) exploiting the configuration of the nominal yield curve in order to place large quantities of securities with a longer term maturity.

In the 3-year segment, the securities outstanding contracted by approximately 8 per cent compared with 2013, for the combined effect of the reduced volumes issued and the sizeable reimbursements, with net issues negative for more than €9 billion.

Instead, for the 5-year segment, the net issues were positive for more than €22 billion, given the high amounts placed and maturities that were approximately half of those for the three-year segment.

The 7-year security, the most recently inaugurated maturity, was integrated into the monthly auction programme in 2014, following a first syndicated placement settled on 16 October 2013. With the broad-based, positive feedback from investors, the 7-year segment effectively became a benchmark on the Italian yield curve. The issues were placed through ordinary auction with discretionary determination of the price, at the same time as the mid-month auctions of other medium-/long-term maturities. The first 7-year security (BTP 16/10/2013 - 01/05/2021, with annual coupon of 3.75 per cent) was offered at the end of May and its outstanding balance reached €18.4 billion.

The auction settled on 16 June marked the debut of the BTP 15/06/2014 - 15/12/2021, with coupon of the 2.15 per cent, whose outstanding balance amounted to €14.8 billion at the end of 2014.

The BTP with 10-year maturity was again the benchmark for the entire nominal yield curve, with both total issues and the weight thereof on the stock of the government securities outstanding remaining in line with the data for recent years.

In the segments beyond 10 years, the improved conditions allowed for consolidating the 2013 results, and realising appropriately regular placements. Specifically, the Treasury proceeded with the roll-out of a new 15-year BTP, and guaranteed a continuous presence on the 30-year maturity with various reopenings of the benchmark.

In launching new, more intrinsically complex securities, or securities with more sector-specific demand, the Treasury opted for issuing through a syndicate of banks affiliated with a group of Government Bond Specialists, headed by four or five lead managers for each transaction, with the other Specialists participating as co-lead managers. The selection of the banks to serve as the lead managers of a syndicated issue is based on numerous factors: first, the position in the ranking of overall performance of the Specialists' activity with regard to all primary- and secondary-market segments; second, the specific capacity of penetrating the market segment in which the individual transaction is placed; and third, the quality of the observations made about the opportunities, means, and timing for the transaction and the pricing techniques proposed for the issuance. Where compatible with the successful outcome of the transaction, a rotation criterion is applied on a residual basis.

In January 2014, the placement of the BTP 01/03/2014 – 01/03/2030, with coupon of 3.50 per cent, was done through syndicate made up of five lead managers (Deutsche Bank, HSBC France, JP Morgan, Monte dei Paschi di Siena, and Royal Bank of Scotland) and the other Government Bond Specialists as co-leads. Some €7 billion was issued against demand of €20.4 billion, with the participation of more than 300 investors. The charts that follow indicate the allotment quotas by type of investor and their geographic residence.

**FIGURE VI.5: BTP 1 MARCH 2030 – DISTRIBUTION BY INVESTOR TYPE**

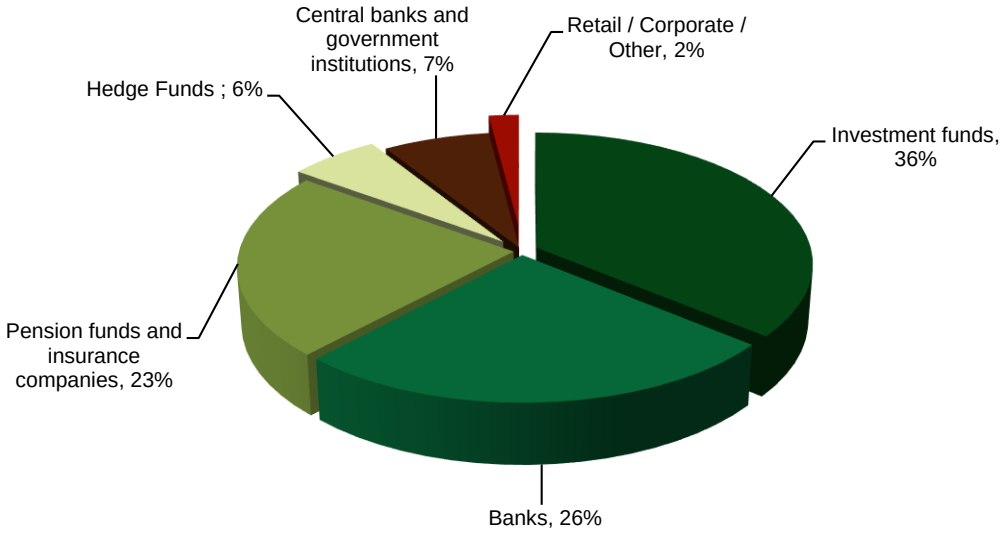
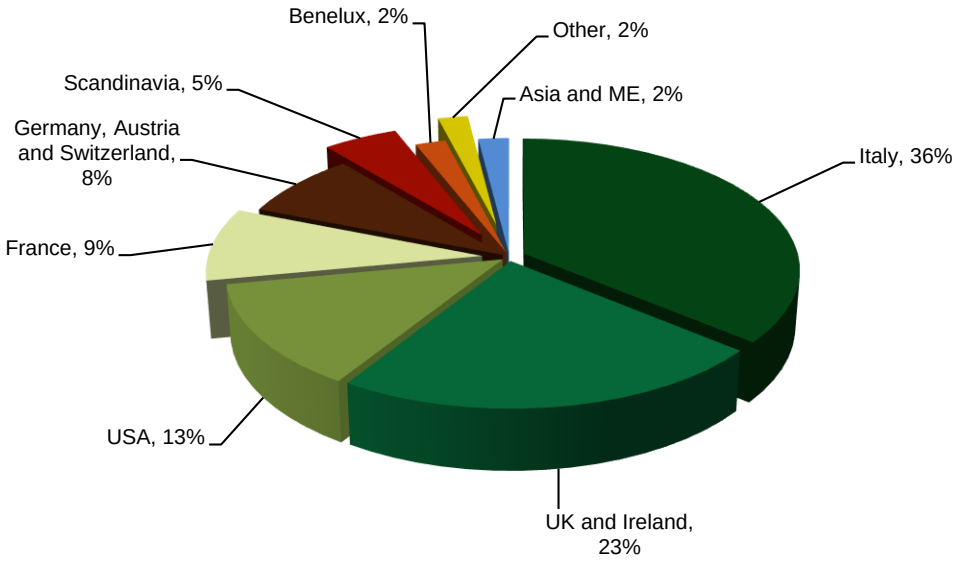


**FIGURE VI.6: BTP 1 MARCH 2030 – GEOGRAPHIC DISTRIBUTION**




The new 15-year security was offered through November, with the outstanding balance at year end equal to €12.8 billion.

In the 30-year segment, the Treasury did not introduce a new benchmark, since the on-the-run security had not yet reached an outstanding balance so as to ensure sufficient liquidity on the secondary market. Furthermore, given the conditions for the segment, it did not appear that the market would be highly receptive to the launch of a new benchmark. In any event, the Treasury guaranteed regular issues, thereby contributing to improving the liquidity conditions for the longest term securities. Indeed, the BTP 01/03/2013 – 01/09/2044, with coupon of 4.75 per cent, which had been inaugurated through a syndicate on 22 May 2013, was reopened on four occasions for a total amount of €5,725 million, bringing its outstanding balance to just under €15 billion.

The yields at issuance of the nominal BTPs declined markedly across all maturities between 5 and 15 years. Compared with the final auctions of 2013, the largest reduction regarded the 5-year rate, which fell by a good 195 basis points. The decrease on the 7-year maturity was from 3.76 per cent to 1.74 per cent, while the yield on the 10-year BTP fell by a good 193 basis points, from 4.01 per cent at the end of 2013 to 2.08 per cent at the final auction settled in December 2014. In addition, in the last months of 2014, the yields on the 3- and 5-year issues were yielding less than 1 per cent.

The bid-to-cover ratios at auction were consistently satisfactory, ranging between a low 1.25 at the auction at the end of February of a €3,750 million tranche of the 10-year security launched in January, and a high of 1.66 at mid-September auction of the 3-year BTP, placed for €2,457 million. Although the quantity offered is a factor that contributes, as a rule, in an inversely proportional manner to the

bid-to-cover ratio, sometimes a more or less favourable market climate plays an even more significant role.

**FIGURE VI.7: YIELDS AT AUCTION ON BTPs WITH MATURITY BETWEEN 3 AND 10 YEARS - 2014**

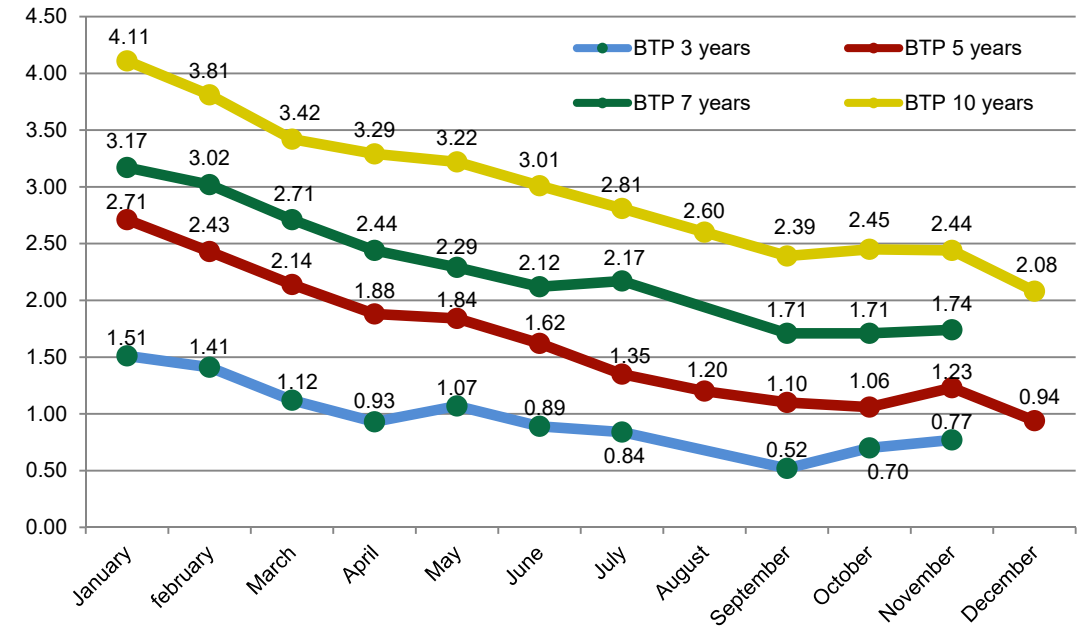
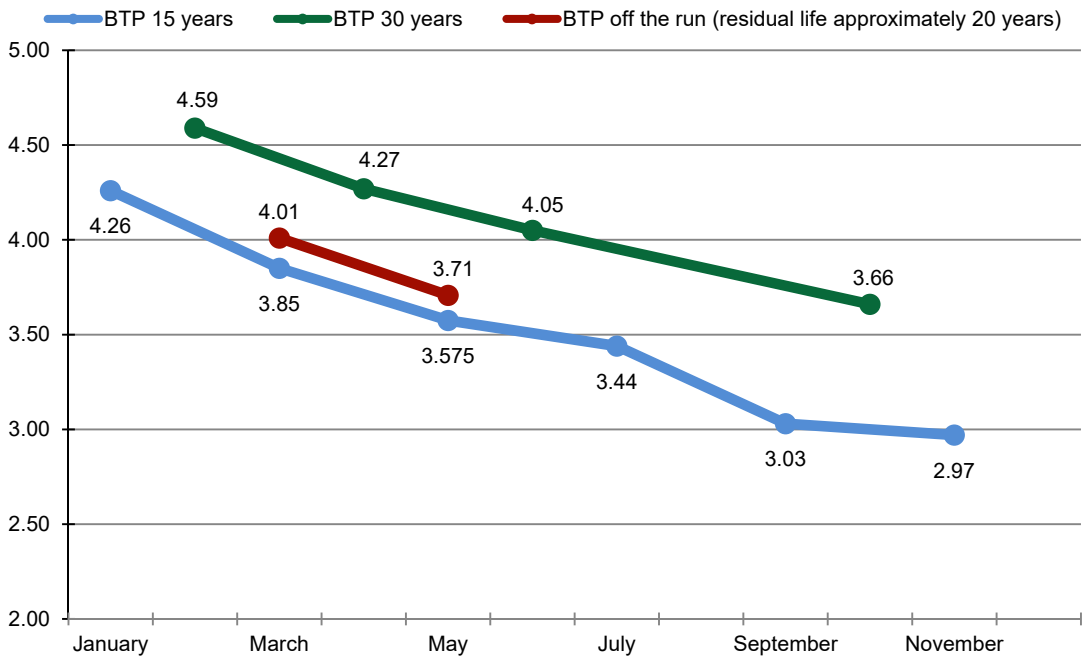



**FIGURE VI.8: YIELDS AT AUCTION ON LONG-TERM BTPs - 2014**



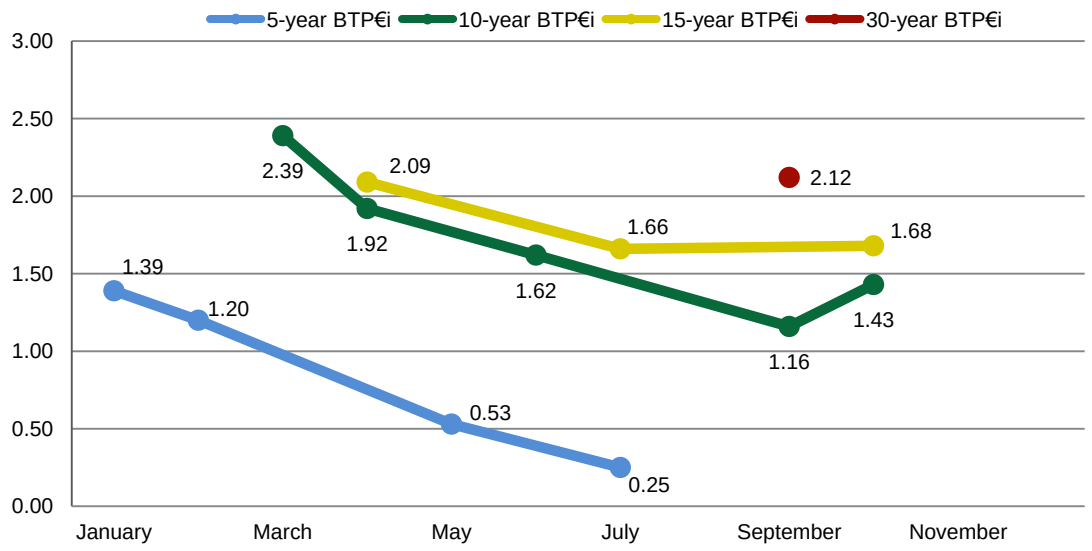
Altogether, the gross issues of nominal BTPs were approximately €171,184 million, inclusive of off-the-run securities and net of the swaps, with an increase of 14 per cent compared with the €150,066 million of 2013. Specifically, placements included: €38,046 million in the segment up to three years, €41,709 million in the 3-/5-year segment, €28,180 million in the 7-year segment, €39,064 million in the 10-year segment, €16,482 million between 11 years and 15 years and, finally, €7,701 million between 16 years and 30 years.

The outstanding balance of the nominal BTPs increased in 2014 by €80,459 million. In percentage terms, these securities represented 67.56 per cent of the government securities stock, rising by 2.33 percentage points compared with 2013.

### Inflation-indexed securities: BTP€i and BTP Italia

In the indexed segment, the Treasury placed both the BTP€i (the security indexed to European inflation, excluding tobacco products, whose capital revaluation is paid upon redemption of the security), and the BTP Italia (the financial instrument indexed to Italian inflation (consumer price index, excluding tobacco products, for households headed by manual labourers and clerical workers), whose capital revaluation is paid semi-annually via coupon).

**FIGURE VI.9: YIELDS AT AUCTION ON BTP€i - 2014**




With reference to the BTP€i, the gross issues in 2014 had a nominal value of €14,488 million, with an increase of +34.7 per cent compared with the €10,757 million issued in 2013. Much of this increase stemmed from a syndicated placement in March of a new 10-year benchmark maturing on 15 September 2024; the syndicate was led by five specialist banks (Banca IMI, Barclays, Citigroup, Goldman Sachs and Société Générale). The transaction covered an allotment of €4,500 million, against total demand of approximately €11.4 billion. The distribution by investor type reflects both qualitative and geographic diversification, with 35.4 per cent allotted in Italy and a broad base of international participation (see the following charts).

**FIGURE VI.10: BTP€i 15 SEPTEMBER 2024, DISTRIBUTION BY INVESTOR TYPE**

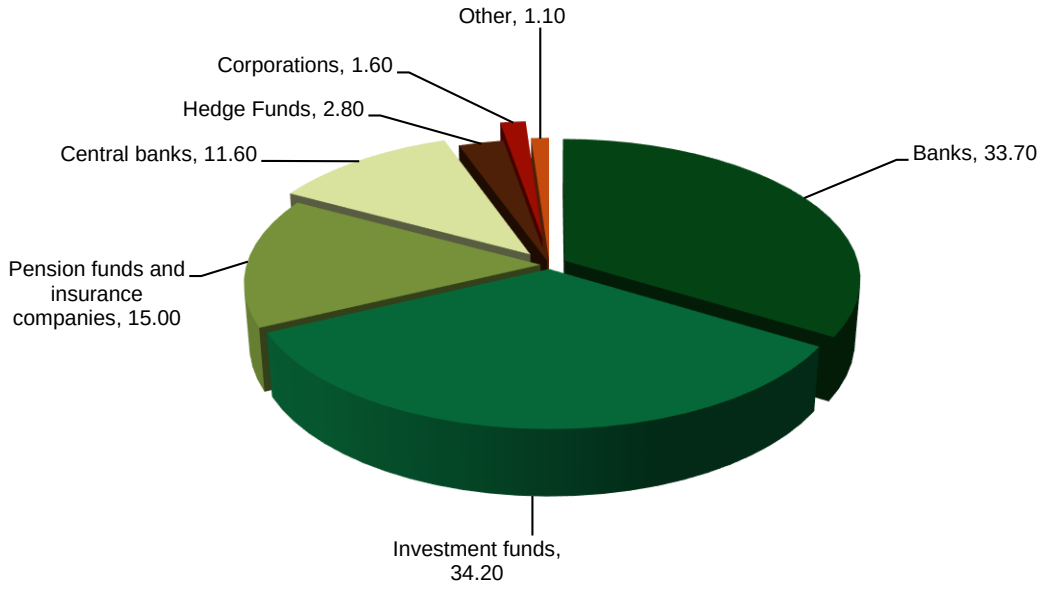
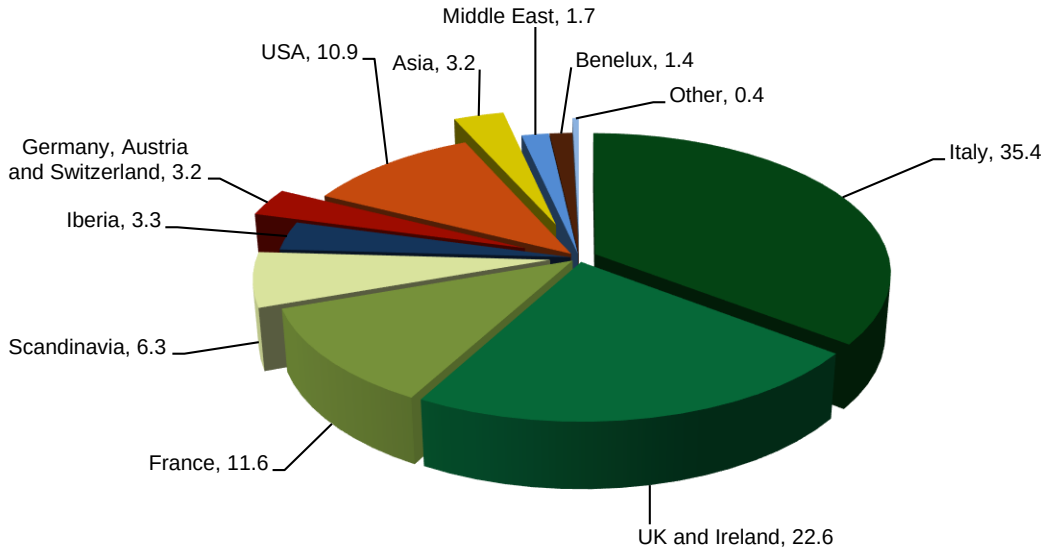



**FIGURE VI.11: BTP€i 15 SEPTEMBER 2024, GEOGRAPHIC DISTRIBUTION**




The placements for the entire year included €4,170 million in the 5-year segment, €8,256 million in the 10-year segment, €1,536 million in the 15-year segment, and €525 million in the 30-year segment.

The bid-to-cover ratios for the BTP€i auctioned were higher than the comparable ratios for other securities, ranging from low of 1.81 to a high of 2.81. However, the inverse correlation between the amount issued (which was much smaller than that for nominal BTPs), and the cover ratio proved to be very strong.

It is also noted that the Treasury moved back into the 30-year segment after a four-year absence, placing €525 million of the BTP€i 15/09/2009 – 15/09/2041, with

a real coupon of 2.55 per cent. The outstanding balance of the security was thus close to €7 billion at the end of 2014.

In the inflation-indexed segment, there were two new BTP Italia offered with duration of six years, as compared with the four-year maturity for the other BTP Italia issues. Placement procedures were modified to differentiate between investor categories. While continuing to offer the security on the MOT (Borsa Italiana's screen-based market for placement of bonds and government securities), the Treasury provided for two phases of distribution: the first open predominantly to the retail investor category, with exclusion of specific investors (institutions resident abroad, qualified counterparties and professional clients), whereas on the final day of the placement period, distribution was limited to investors not admitted to the first phase.

For the sixth BTP Italia issue (23/04/2014 – 23/04/2020, with definitive real annual coupon rate of 1.65 per cent), Banca IMI S.p.A. and UniCredit S.p.A. took orders for a total amount of €20,565 million.

During the first phase of the placement (14-16 April 2014), some 170,217 contracts were settled for a countervalue of €10,068 million, 50 per cent of which had a unit value of less than €20,000 and 80 per cent of which had a unit value of under €50,000. The investor base was balanced, with both individuals (physical persons) and private-banking clients, with approximately 95 per cent of these investors coming from the Italian market.

During second phase of placement, when the Treasury exercised the option of early closing, the number of contracts was 1,054, with a countervalue of €10,496 million, 55 per cent of which was subscribed by banks and approximately 30 per cent of which was subscribed by asset managers and investment funds. Smaller allotments were made to central banks and official institutions (12 per cent), and insurance companies and corporations (3 per cent). On the final day of placement, the geographic diversification was broad, although Italian investors subscribed a large share of approximately 76 per cent of the countervalue for this phase, and foreign investors took the remaining 24 per cent (most of which went to European intermediaries, though Asian investors took an appreciable 6.4 per cent).

Despite the strong investor interest in this placement and a very favourable market backdrop, the time limit on the second phase (reserved for institutional investors) was not sufficient to keep the final size of the issue at the more limited levels sought by the Treasury.

As a result, during the second planned issue for the year (20-23 October 2014), the Treasury introduced an allocation mechanism for the second phase of the placement (which was again reserved for institutional investors and limited to the final day of the placement). More specifically, according to this mechanism, the bids taken during this phase were to be satisfied entirely or by applying a pro-rata mechanism in the event of bids exceeding the maximum amount that the Treasury was prepared to issue; the Treasury provided that such maximum amount would be announced following the taking of orders. For this seventh issue of the BTP Italia, the orders were booked through BNP Paribas and Monte dei Paschi di Siena. For the BTP Italia 27/10/2014 - 27/10/2020, whose issue amounted to €7,506 million, the definitive real annual coupon rate was set at 1.25 per cent.

More specifically, during the first phase (20-22 October), some 82,642 contracts were booked for a countervalue of €4,573 million, including subscriptions from private-banking clients (59 per cent) that were higher than those from individual investors (41 per cent). With reference to geographic distribution, the issue went almost completely to domestic retail investors.

During the second phase (opened and closed on 23 October), the number of contracts amounted to 359 for a countervalue of €2,933 million, with approximately 61 per cent going to banks and financial institutions, 22 per cent to asset managers and 17 per cent to insurance companies and corporations. It was not necessary to apply the aforementioned allocation mechanism. The placement of the security in this phase went predominantly to Italian investors (96 per cent) with the balance going mostly to foreign investors in Europe.

Overall, the indexed segment had outstandings (revalued for inflation) of €224,797 million at the end of 2014, compared with €199,942 million at the end of 2013. The balance thus grew by 12.42 per cent over the 12 months, and reached 12.61 per cent of the stock of government securities at the end of 2014 versus 11.61 per cent at the prior year end.

For the BTP€i, the outstanding balance (revalued for inflation) was down by €3,125 million compared with 31 December 2013, with the change due to the September 2014 reimbursement of €18,360 million on a 10-year security. In percentage terms, the BTP€i amounted to 7.31 per cent of total of the government securities, compared with 7.75 per cent for 2013.

Instead, the stock of the BTP Italia grew by €28,071 million, and represented 5.30 per cent of the total outstandings at the end of 2014.

### CCTeu

In the variable-rate segment, the CCTeu made further improvement consistent with 2013, in terms of both performance and volumes traded on the secondary market. During 2014, CCTeu yields gradually aligned with those on the nominal BTPs with equivalent maturity. In view of the growing interest of investors (including both domestic and international institutions and retail investors), the Treasury augmented the supply, and gradually lengthened the maturity through issuance of new securities within a 5-/7-year range. More specifically, the final CCTeu placed in 2014 was opened with a maturity of more than six years. With the normalisation of this segment, the Treasury was also able to confirm a monthly placement schedule so as to provide liquidity to the market, with the related auctions held at month end in tandem with the issues of nominal 5- and 10-year BTPs.

The bid-to-cover ratios for the CCTeu were satisfactory, and fluctuated within a limited range (between a low of 1.31 and a high of 1.59), which reflected a certain sensitivity to the magnitude of the issues.

In 2014, the maturities of variable-rate securities amounted to approximately €26 billion, or €12 billion more than the amount reimbursed in 2013. In view of the volume of maturities, the net issues for the year were -€5,566 million, notwithstanding a roughly €5 billion increase in gross issues. This change contributed to the objective of reducing the debt's exposure to interest-rate risk. Indeed, during 2014, the total outstanding balance of the CCT[1] and CCTeu was decreased by an amount corresponding to the net issues, and the percentage of variable-rate securities within the mix of the government securities came to 6.68 per cent of the stock at the end of 2014, compared with 7.24 per cent in 2013.

### Characteristics of demand at auction for nominal BTPs in terms of geographic residence

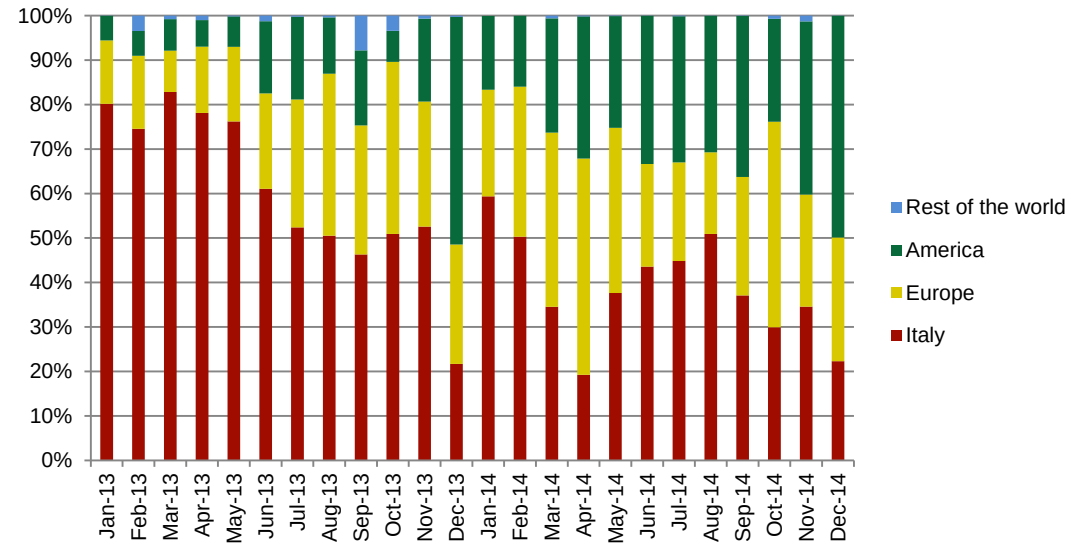
Again in 2014, the bulk of the placements via auction of the nominal BTPs (more than 95 per cent) was subscribed by Government Bond Specialists. Most of these subscriptions refer to orders that the Specialists received from their institutional clients during the phases immediately preceding or immediately following the closing of the placement.

When analysing these orders on a monthly basis, it is rather evident (see Figure VI.12) that foreign demand rose structurally in 2014 when compared with 2013, thus following a trend that began to take shape in late 2013. This change most definitely contributed to improving market conditions and the cost of the issues described in Chapter IV. In any event, the foreign presence was not uniform, but appeared instead inevitably influenced by market developments occurring throughout the year. Worth noting more specifically is the gradually increasing presence of foreign investors during the first months of the year and the interruption of that trend from May to August, when the markets witnessed greater volatility and tensions. Foreign investor presence once again firmed in the final quarter of the year.

Looking at the mix of foreign demand, the most significant development in 2014 was the growing role of investors resident in the U.S., who played a fundamental role in the expansion of the foreign investor base in 2014. Moreover, looking at changes during the year, it is interesting to note that U.S. demand was less elastic than European demand with respect to market trends in the second and third quarters of the year. Taking the 2013-2014 two-year period as a point of reference, it is nonetheless quite evident that the European investor presence returned to structurally more solid levels.

[1] As from 2010, the CCT has no longer been issued on a regular basis, but only to bolster the secondary-market liquidity of the securities outstanding.

**FIGURE VI.12: MIX BY GEOGRAPHIC ORIGIN OF ORDERS PLACED BY SPECIALISTS IN GOVERNMENT SECURITIES AT AUCTIONS OF NOMINAL BTPs (2013-2014)**




### Characteristics of demand at auction for nominal BTPs in terms of counterparty type

An analysis of the orders that the Specialists receive from their institutional clients immediately prior to or immediately after the closing of a placement is also useful for breaking down the trend by the type of clientele interested in purchasing government securities at auction.

As shown by Figure VI.13, the main type of clientele in 2014 was investment funds (consistent with 2013); on average, such funds accounted for approximately 45 per cent of institutional demand at auction. It is not only the size in terms of the average percentage of their participation that is important, but also the stability and the continuity of their monthly participation.

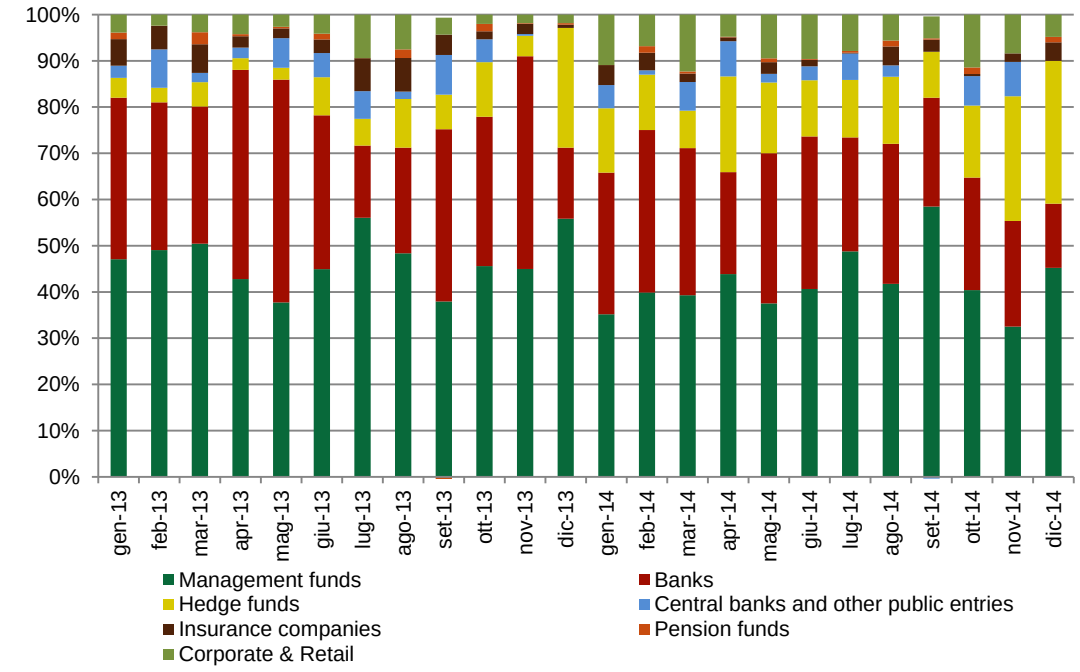
The second-ranking segment in terms of demand at auction is the banking segment (inclusive of orders coming from primary dealers, investment banks, commercial banks, and orders coming from the separate and independent portfolios of banks participating in the auction), which accounted for approximately 24 per cent of demand in 2014. In any event, the participation of this customer segment at auction fell significantly, starting in 2013, when it accounted for approximately 30 per cent of demand on average for the year (including peaks of 45 per cent). Instead, the aforementioned average of 24 per cent incorporates an average of 20 per cent for the second half, and a low of 12 per cent in December. The fall in bank participation is indicative, to a certain degree, of a broad reduction in the banks' capacity to absorb government securities and to maintain them in their portfolios. This trend seems partially attributable to the new regulatory framework that, with capitalisation held constant, makes it costlier for banks to hold government securities. The effects thereof are illustrated in detail in Chapter IV.

The reduction in bank participation was flanked by a corresponding increase in demand from hedge funds, whose average share of demand doubled from 7 per cent in 2013 to 14 per cent in 2014.

This development was undoubtedly aided in 2014 by the very positive performance of government securities in the final months of the year, when the market was considerably influenced by expectations about the ECB's non-conventional monetary-policy measures aimed at bolstering inflationary expectations. The activity of the hedge funds was thus part of a mounting trend that strongly conditioned the market, particularly in the final quarter of the year.

The residual, albeit important, contributions to demand came from pension funds and insurance companies, central banks and other public institutions, that respectively accounted for approximately 3-4 per cent of total demand.

**FIGURE VI.13: MIX BY TYPE OF COUNTERPARTY OF ORDERS PLACED BY SPECIALISTS IN GOVERNMENT SECURITIES AT AUCTIONS OF NOMINAL BTPs (2013-2014)**




## Non-recurring debt-exchange and repurchase transactions

As announced in the Guidelines for 2014, the Treasury was significantly active in non-recurring swap transactions and the repurchase of government securities during the year, with the main aim of limiting the maturities concentrated in the years of 2015 and 2017.

In addition to facilitating management of refinancing risk, these transactions allowed for reaching other objectives, such as the improvement of the liquidity and the efficiency of the secondary market.

As in the past, a special emphasis was placed on selecting the securities involved in the non-recurring transactions. The securities selected for issuance were those for which the market had expressed strong demand and those for which further liquidity was needed. At the same time, the preference for buying securities went to those with prices below or near par, so as to maximise, where possible, the debt-reduction impact.

Additional selection criteria for the securities to be repurchased were: high outstanding balance or maturity during months when reimbursements were high, especially during the years of 2015 and 2017. In assessing the possibilities of making use of non-recurring transactions, the Treasury obviously considered general conditions on the secondary market (both spot and forward markets) and the analyses of Government Bond Specialists, the only participants in these transactions. Specifically, the Treasury executed four debt exchange transactions in 2014 (one each in February, May, June and September), compared with a single transaction in 2013; a single repurchase transaction was executed in December 2014.

As indicated in Chapter III.3, the debt exchange transactions consist of issuing a security against the simultaneous repurchase of one or more securities outstanding. All transactions of this type in 2014 were executed through the electronic trading system, which is a more flexible instrument than the Bank of Italy auctions, and has therefore proven more suited to the market volatility caused by financial crisis. With the electronic trading system, the Treasury is able to operate through the regulated secondary market platform (MTS Italia)[2], thereby guaranteeing a window within which to execute the transaction. The execution is therefore continuous, which provides for the possibility of issuing the same security at different prices, selecting the bids anonymously submitted by intermediaries, on the basis of conditions prevailing on the market during the transaction[3].

The four debt exchange transactions in 2014 entailed the offer through issuance of four BTPs, two maturing in 2018, one maturing in 2022 and another maturing in 2023. The repurchase of securities maturing in 2015-2017, against the issuance of BTPs with a longer residual life, also meant these transactions would slightly extend the average life of the debt, consistent with the objective of containing refinancing risk. The securities repurchased by the Treasury were mainly BTPs (67 per cent of the total acquired), and CCTeu and CCT (the remaining 33 per cent).

In each swap, the prices of the securities issued (which were well above par and above the prices of the securities withdrawn from the market) were such as to lessen the burden of future maturities to an extent greater than the burden of the securities issued (as illustrated in Table VI.1), with an appreciable benefit also in terms of reducing the debt stock (by approximately €1,022 million).

[2] In this regard, the Treasury makes use of a special IT console, which operates through a specific section of the MTS (Treasury operations).

[3] In the debt exchange transactions, the Treasury sets the price of the securities to be purchased (at the start of the transaction), and the intermediaries participate by bidding prices and quantities of the securities being issued, matching them with a specific security to be purchased as part of the swap.

**TABLE VI.1: SUMMARY OF DEBT EXCHANGE TRANSACTIONS IN 2014 (nominal amounts in € mn)**

| Settlement Date | Security Issued | | Securities Purchased | | Amount | Amount |
|---|---|---|---|---|---|---|
| | Type | Maturity | Type | Maturity | Issued | Purchased |
| 20/02/2014 | BTP | 2018 | BTP and CCTeu | 2015 and 2017 | 2,500 | 2,565 |
| 26/05/2014 | BTP | 2018 | BTP, CCT and CCTeu | 2015 and 2017 | 2,334 | 2,463 |
| 25/06/2014 | BTP | 2022 | BTP and CCTeu | 2015 and 2017 | 2,231 | 2,555 |
| 20/10/2014 | BTP | 2023 | BTP and CCTeu | 2015 and 2017 | 1,000 | 1,504 |

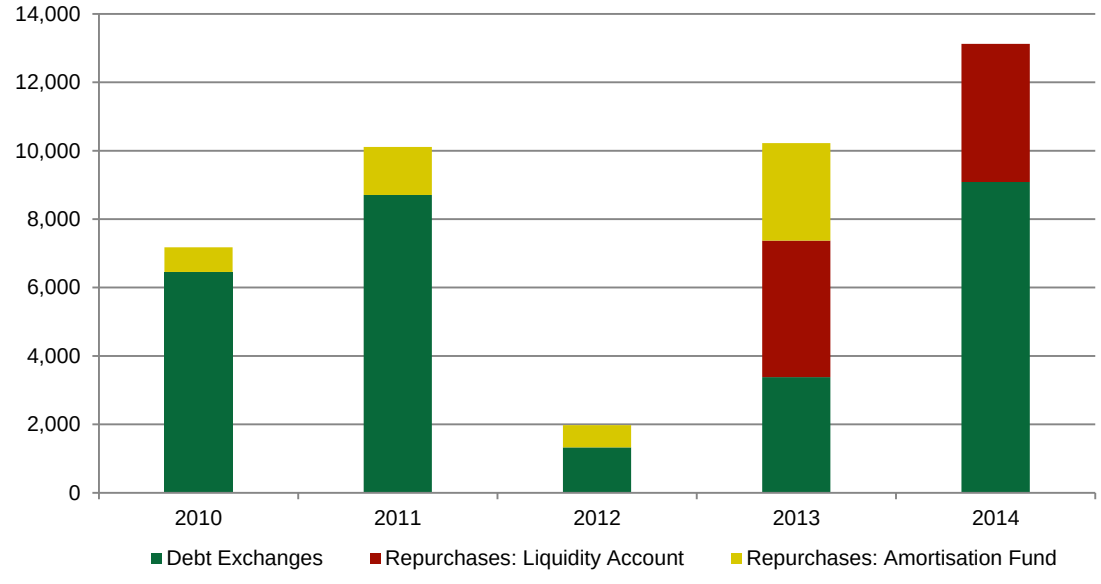
In December, the Treasury effected a repurchase transaction, making use of the large balance of liquidity in the Liquidity Account. The transaction was executed through a Bank of Italy auction, and regarded three BTPs and two CCTs, all with maturities between 2015 and 2017, for a total nominal amount repurchased equal to approximately €4,036 million.

**TABLE VI.2: SUMMARY OF REPURCHASE TRANSACTIONS IN 2014 WITH CHARGE AGAINST THE LIQUIDITY ACCOUNT (nominal amounts in € mn)**

| Settlement Date | Securities Purchased | | Amount |
|---|---|---|---|
| | Type | Maturity | Purchased |
| 05/12/2014 | BTP and CCT | 2015, 2016 and 2017 | 4,036 |

Through the aforementioned non-recurring transactions, the Treasury was able to repurchase government securities outstanding for a total of just over €13 billion, compared with the approximately €10 billion acquired in 2013. The chart below highlights the significant amount of the Treasury's activity in 2014 for these types of transactions; this was possible partly due to better market conditions that took shape during the year.

**FIGURE VI.14: AMOUNT REPURCHASED THROUGH NON RECURRING TRANSACTIONS – 2010-2014 (nominal amounts in € mn)**



In 2014, there were no market repurchases made using the resources of the Fund for the Amortisation of Government Securities. These resources were instead used in July and November for the partial reimbursement at maturity of two BTPs, for a total of €4,064 million. These transactions contributed to the reduction of the debt, since they allowed for reducing the reimbursements charged against the Liquidity Account and, consequently, they translated into fewer issues for renewing the maturing securities.

**TABLE VI.3: REIMBURSEMENTS AT MATURITY IN 2014 WITH CHARGE AGAINST THE AMORTISATION FUND (nominal amounts in € mn)**

| Settlement Date | Security Reimbursed | | Amount |
|---|---|---|---|
| | Type | Maturity | Reimbursed |
| 01/07/2014 | BTP | 2014 | 393 |
| 17/11/2014 | BTP | 2014 | 3,671 |

## Foreign securities

### Commercial Paper

During the first half of 2014, the Treasury issued ten commercial paper notes for a nominal value of approximately €481 million (amount at settlement date). All ten notes were denominated in foreign currency, with the USD accounting for eight notes (approximately €402 million) and the GBP for the remaining two (approximately €78 million). With reference to the maturities of the notes, the majority (75 per cent) came due in three months, whereas the remainder (25 per cent) came due in six months. At issuance, the notes were converted into euro through hedging derivatives. All of the commercial paper transactions were concentrated in the first five months of the year, when the Treasury's total cash needs had not yet been completely defined; later, when it became clear that there would be no additional needs, the Treasury opted not to act on the other bids received.

### Global and MTN programmes

The conditions in the financial markets in 2014 did not allow for the international issuance of global bonds. Indeed, although demand was very strong on the USD market, the costs of hedging foreign-exchange risk in absence of a bilateral guarantee system (Credit Support Annex (CSA)) on cross-currency swaps would have made the cost of the global bonds significantly higher than that of financing on the domestic market.

Instead, the Treasury completed two private placements through the MTN programme in 2014. In both cases, the securities issued were indexed to European inflation (HICPxT), using the same indexing mechanism as that for the BTP€i. The first issue in January was a bond for a total amount of €250 million, with maturity on 24 January 2044 and a real coupon of 2.97 per cent.

The issue allowed for meeting a specific institutional investor's need for this maturity, and an arbitrage transaction that reduced the cost of the borrowing by 5 basis points compared with the domestic security (BTP€i maturing September 2041).

The second private placement, which was done in the second half of the year, was a 14-year maturity (15 September 2028) for a total of €1 billion, and a real coupon of 1.51 per cent. The entire amount was placed with an individual institutional investor, and satisfied a specific request for the stated maturity. In this case, too, the Treasury was able to finance itself at a cost that was 5 basis points lower than that for a theoretical domestic security with a similar maturity (calculated by interpolating the BTP€i rate curve).

## VI.2 DERIVATIVES PORTFOLIO MANAGEMENT

Considering the objectives outlined in Chapter III.3 and the advantages accruing to the Treasury as a result of the reduction of its exposure to bank counterparties (see above), there were no new contracts opened during the year. Instead, six pre-existing contracts were modified (restructured or extinguished), including: four cross-currency swaps, one swaption, and one interest-rate swap, for a total notional amount of just under €8.4 billion. In addition, another two swaptions were exercised by the counterparties, thereby generating two new interest-rate swaps.

The six changes to the derivatives portfolio during 2014 were made in view of i) exceptionally low interest rates in 2014, and ii) the needs to simplify and reduce the credit risk associated with the contracts.

Indeed, the steady decline of market rates seen in 2014 produced an increase in the duration of the debt portfolio and the already existing hedging, while also providing the conditions for the activation of new interest-rate swaps at a fixed rate through the exercise of options previously sold by the Treasury.

In addition, the containment of the credit risk of bank counterparties (as outlined in Chapter III.3) served to maximise intermediary activity at the public debt auctions, thus minimising the probability that the auctions would not be covered, and on the secondary market. The non-coverage of the auctions could indeed generate incalculable damages, putting the Treasury's future access to the financial markets at risk and causing a run-up in the cost of the debt. Aside from that, bank counterparties normally cover their credit exposure through purchasing credit default swaps (CDS) with respect to the Republic of Italy creditworthiness. The purchases tend to be reflected in the pricing of the CDS, increasing the related credit spreads, and influencing the spreads paid by the newly issued debt. Accordingly, it is in the Treasury's interest that the portfolio is managed with incentives for counterparty behaviour that are functional to reducing the cost of placing the public debt.

The Treasury fully expected the exercise of the two swaptions mentioned above in view of an option expiration date in 2014 and the extremely low market interest rates. The two options were effectively exercised at maturity. With reference to the other swaption mentioned, the conditions were amended and the duration of the position for the Treasury was lengthened by postponing the option exercise date, extending the maturity of the underlying swap, and proportionally reducing

the fixed rate that the Treasury would pay in the event of an exercise on an increased notional amount. The changes were put into place through the repurchase of the original swaption, financed with the sale of the new swaption, with the mentioned duration and rate.

The four cross-currency swaps (CCS) modified in 2014 included two transactions closed following the exercise of the bilateral early-extinction clauses on the part of the bank counterparties.

One of the transactions entailed partial hedging (for a notional amount of USD 1 billion) of a USD 2 billion bond with maturity in 2033, that had a negative mark-to-market for the Treasury in the amount of approximately €254 million; such amount was paid to the counterparty at the time the transaction was closed. The hedging was then reinstated with another counterparty, but in a more flexible form, providing for the revision of the notional amount at the time of each coupon payment, and on the basis of market rates. Indeed, since this is still a long position, the costs of hedging in the absence of collateralisation with CSA would be excessive.

Instead, the second transaction referred to the hedging of a 30-year GBP 250 million security, and the Treasury, in a creditor position, collected approximately GBP 75 million. This appears symptomatic of the considerable impact of the new rules for the prudential oversight of intermediaries, since the bank counterparty considered it more advantageous to close out the contract and to pay the value of the position, instead of keeping the swap in the portfolio by acquiring new coverage and sustaining the related costs. Considering the difficulty of re-hedging the position and the limited amount of the bond that continued to be exposed to exchange-rate fluctuations, the Treasury opted temporarily not to hedge the foreign-currency exposure.

The other two cross-currency swaps and the interest-rate swaps modified in 2014 had been effected with a single counterparty, and were part of an overall restructuring transaction, based on bringing the mark-to-market value to zero for the two CCS associated with two foreign-currency denominated bonds (JPY and USD, respectively) with a very short residual life (maturities of June 2015 and September 2016, respectively). The two transactions both had a positive market value for the Treasury, and this value was used for closing out much of the notional of an interest-rate swap, with a 2035 maturity, that had been executed in the past with the aim of lengthening the duration. This interest-rate swap, which still had a long residual life, had ended up having an especially burdensome impact on the bank counterparty's regulatory capital, contributing to weakening the bank's capacity of effectively contributing to supporting the primary and secondary markets for government securities.

Since this transaction reduced the bank's credit exposure to the Treasury, it was possible to obtain value (to the benefit of the State) in defining the pricing levels for the two restructured CCS. In addition, in balancing the costs and risks (including, among the latter, the bank's more limited capacity to sustain, in the terms described, a significant overall credit exposure to the Treasury), the preference went to reducing the interest expenditure for the Treasury (a near certainty in the next few years) and the easing of the credit exposure for the bank counterparty, instead of maintaining a greater duration on the individual transaction. Moreover, as indicated, the derivatives portfolio nonetheless experienced an overall increase in its financial duration during the year.

## VI.3 ISSUING DECISIONS AND OTHER DEBT MANAGEMENT TRANSACTIONS IN RELATION TO OBJECTIVE 1

### The final mix of the portfolio of issues for the year

The objective in terms of the mix of the portfolio of the issues throughout the year (as illustrated in Chapter III) was very successfully achieved with respect to the BOT and BTP Italia issues. In the BTP segment, the introduction of the 7-year maturity made it possible to increase the average life of the new issues in the segment, albeit with an intensity that was less than forecast. On the other hand, with reference to maturities over 10 years, whether nominal or indexed to inflation, the market conditions made impossible to achieve an increase in volumes in line with the planned targets. If the lower yields actually drove investor demand into longer maturities, the shift, at least in Italy's case, was mainly from the 3-/5-year segment to the 7-/10-year segment, although with a certain impact also on the 15-year maturity. The market's greater structural volatility, the greater intrinsic risk of the instruments with a long duration, and the uncertainty about a possible turnaround in the declining trend of interest rates (which ultimately did not occur) were the factors that contributed to moderating investor interest in very long maturities.

More specifically (see Table VI.4):

- The amounts of BOTs issued were down both in terms of absolute value and as a percentage of total issues, going from approximately 46 per cent in 2013 to 40 per cent of 2014;
- The share of CTZs descended only slightly, going from 8 per cent to 7 per cent, but, in absolute value terms, the issues were down by approximately €5 billion;
- The 3-year BTPs issued remained stable compared with 2013 (approximately 8 per cent), while the share of the 5-year maturity rose slightly, going from 8 per cent to 10 per cent; the share of the 7-year maturity rose significantly (to 7 per cent) due to the regularity of the issues at auction, after the introduction of the maturity via a syndicated transaction in October 2013;
- The issues on the long-term nominal BTP segment (10, 15 and 30 years) remained stable at around 14 per cent;
- In the CCTeu and BTP€i segments, the overall issues were increased, and the share of these securities in relation to the total issues rose slightly, going from 2.2 per cent to 3 per cent for the BTP€i and from 4 per cent to 5 per cent for the CCTeu;
- The reduction of the BTP Italia segment was significant, with the issues declining by more than €11 billion in 2014, and the share of total issues falling from 8 per cent to less than 6 per cent.

**TABLE VI.4: MIX OF 2013-2014 ISSUES IN ABSOLUTE VALUE (in € mn) AND AS A PERCENTAGE, INCLUSIVE OF DEBT EXCHANGE TRANSACTIONS**

| | 2013 Issues | % of total | 2014 Issues | % of total |
|---|---|---|---|---|
| Mini BOT | 8,500 | 1.8% | 0 | 0.0% |
| 3-month BOT | 3,000 | 0.6% | 0 | 0.0% |
| 6-month BOT | 108,951 | 22.7% | 91,934 | 19.8% |
| 12-month BOT | 97,885 | 20.4% | 90,472 | 19.5% |
| Commercial Paper | 155 | 0.0% | 481 | 0.1% |
| **Total short term** | **218,491** | **45.5%** | **182,887** | **39.5%** |
| CTZ | 38,157 | 7.9% | 32,969 | 7.1% |
| CCTeu | 19,544 | 4.1% | 24,452 | 5.3% |
| 3 year BTP | 38,553 | 8.0% | 38,046 | 8.2% |
| 5-year BTP | 40,722 | 8.5% | 46,543 | 10.0% |
| 7-year BTP | 5,000 | 1.0% | 30,411 | 6.6% |
| 10-year BTP | 41,960 | 8.7% | 40,064 | 8.6% |
| 15-year BTP | 16,966 | 3.5% | 16,933 | 3.7% |
| 30-year BTP | 10,175 | 2.1% | 7,250 | 1.6% |
| 5-year BTP€i | 5,902 | 1.2% | 4,170 | 0.9% |
| 10-year BTP€i | 3,687 | 0.8% | 8,256 | 1.8% |
| 15-year BTP€i | 1,167 | 0.2% | 1,536 | 0.3% |
| 30-year BTP€i | 0 | 0.0% | 525 | 0.1% |
| BTP Italia | 39,328 | 8.2% | 28,071 | 6.1% |
| Foreign | 1,000 | 0.2% | 1,250 | 0.3% |
| **Total medium/long term** | **262,162** | **54.5%** | **280,476** | **60.5%** |
| **TOTAL** | **480,653** | | **463,364** | |

The market analyses done during the year showed no possibility for the Treasury to open a real securities segment indexed to Italian inflation as an alternative to the BTP Italia, with an indexing mechanism similar to that used for the BTP€i.

In view of these results with reference to domestic debt issues, it was not possible to return to issuing USD-denominated securities as had been hoped, for the reasons outlined above.

## The mix of the securities stock at year end

Consistent with the previous year, the mix of the debt by instrument (when considering all domestic and foreign securities) continued to reflect a declining trend in the short-term and variable-rate components, against an increase in the medium-/long-term and fixed-rate components.

Overall, with respect to the end of December 2013, the structure of the debt at 31 December 2014 showed a decrease in the share of BOTs, as well as a decrease, albeit more modest, in the share of variable-rate securities (CCT and CCTeu). Instead, the stock of nominal BTPs increased, going from 65.23 per cent to 67.56 per cent of the total. Within the BTP segment, the share of securities with residual life of more than 5 years grew in 2014, partly due to the introduction of three new benchmarks on each of the 7-, 10- and 15-year maturities, and a regular presence in offering the 30-year security launched in 2013.

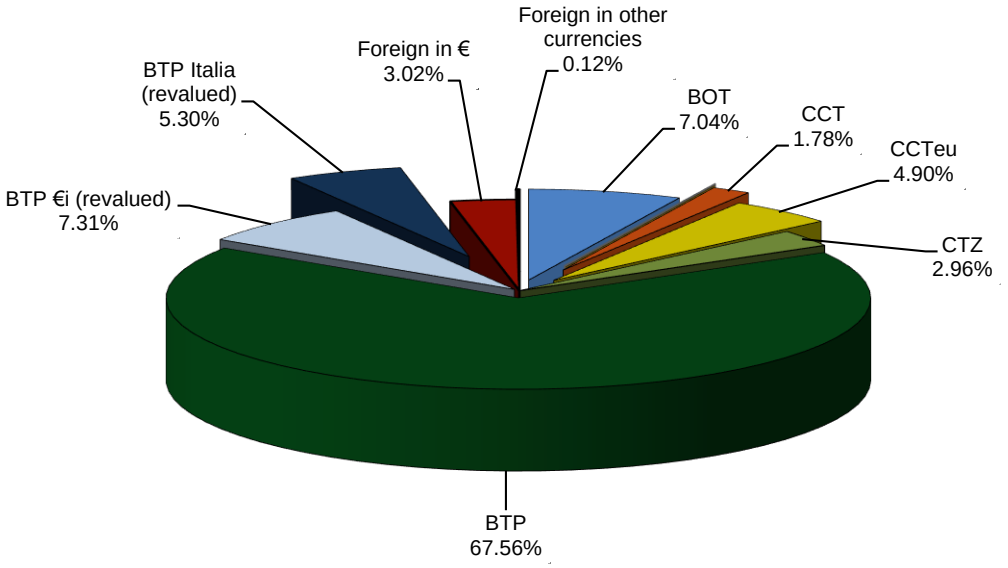
In line with the Treasury's forecasts, the component linked to the European HICP (BTP€i) experienced a slight decrease with respect to 2013. Instead, the share

of the BTP Italia was higher, going from 3.85 per cent at the end of 2013 to 5.30 per cent at the end of 2014 (in revalued terms).

Taken altogether, the segment of securities indexed to inflation remained virtually stable in 2014 as a percentage of the total debt, amounting to 12.6 per cent versus the 11.6 per cent for 2013. The stability was consistent with the Treasury's portfolio strategies that were aimed at controlling total exposure to inflation.

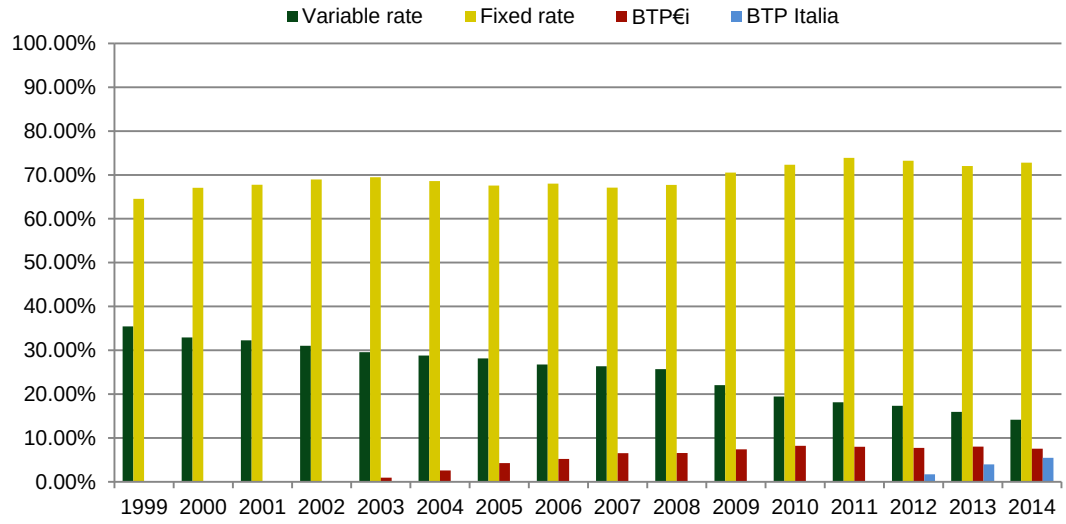
As in recent years, the ratio of foreign securities to total debt decreased slightly, going from 3.30 per cent in 2013 to 3.14 per cent in 2014.

**FIGURE VI.15: MIX OF THE STOCK OF GOVERNMENT SECURITIES AT 31 DECEMBER 2014**




As in 2013, the buyback transactions at auction and the debt exchange transactions described above had an influence on the structure of the debt stock at the end of 2014. With reference to aggregate domestic securities only, Figure VI.16 shows the trends illustrated thus far: the slight decrease of the variable-rate component and the component linked to the European HICP, the continuing importance of the fixed-rate component, and the increase in the component linked to Italian inflation, as a result of the BTP Italia programme.

**FIGURE VI.16: STRUCTURE OF THE STOCK OF DOMESTIC GOVERNMENT SECURITIES**




## Exposure to refinancing risk and interest-rate risk

Tables VI.5 and VI.6 summarise the exposure of the government securities stock to interest-rate and refinancing risk, reflecting the effects of the choices made in terms of issuing policy during 2014. As shown by these indicators, the magnitude of such risks is essentially in line with objective 1 illustrated in Chapter III.

**TABLE VI.5: AVERAGE LIFE OF THE GOVERNMENT SECURITIES STOCK (in years)**

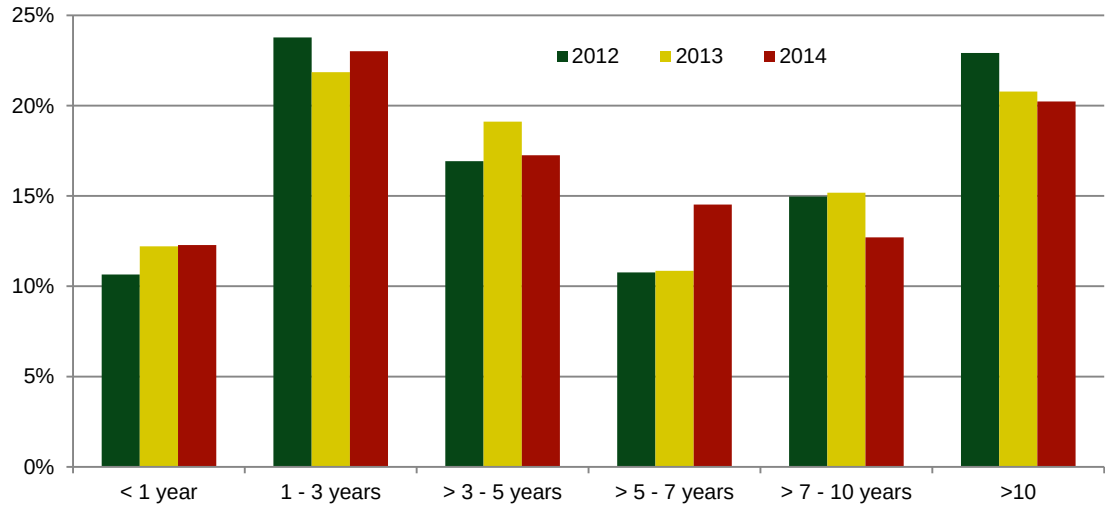
| | 31/12/2012 | 31/12/2013 | 31/12/2014 |
|---|---|---|---|
| Domestic securities | 6.48 | 6.29 | 6.26 |
| Foreign securities | 10.26 | 10.62 | 10.16 |
| **Stock of government securities** | **6.62** | **6.43** | **6.38** |

With reference to refinancing risk, it should be noted that the overall average life of all government securities was equal to 6.38 years at 31 December 2014, and thus only slightly below the comparable figure at 31 December 2013 (6.43 years). Therefore, the phase of reducing the average life that began in 2011 was essentially concluded in 2014.

Looking at the two-year trend of the structure by maturity of the stock of government securities (see Figure VI.17), it is possible to note a sizeable increase in 2014 in the share of securities with a residual life of between 5 and 7 years. This is due to the combination of several particularly significant factors that were illustrated earlier in greater detail: the introduction of the regular offering at auction of the 7-year, the lengthening to 6 years of the BTP Italia's duration, and, although to a lesser extent, the gradual lengthening of the CCTeu maturity. Instead, the modest increase in the segment with residual life of between one and three years is mainly due to the enormous success of the BTP Italia issues in 2012 and 2013, which, with their original 4-year maturity, were classified by residual life in this segment at the end of 2014.

Finally, despite the positive market climate (which prompted a rebound in institutional investor interest in longer term maturities) and the significant reduction of BOT issues, the percentage of securities with a residual life of less than one year remained constant, while the percentage for a residual life of more than 10 years was slightly lower. This evidence shows the significance of the outstanding debt stock, which has the effect of reducing the overall average residual life, compared with what could be obtained through the market's absorbing new issues.

**FIGURE VI.17: MATURITIES BY RESIDUAL LIFE, 2012-13-14***




*) The stock of the securities indexed to inflation takes into account the revaluation of the principal coming due at the end of each year. The securities denominated in foreign currency are valued after the cross-currency swaps.

Instead, with reference to interest-rate risk, it is noted that the value of the financial duration of the stock of government securities at 31 December 2014 was significantly higher than at the end of 2013, going from 4.74 years to 5.26 years. This is specifically due to the pronounced reduction in the general level of interest rates. The related objective set out in Chapter III was accordingly achieved. On the other hand, the average refixing period (ARP) with reference to the same aggregate went from 5.44 years at the end of 2013 to 5.38 years at the end of 2014, thus reflecting a substantial slowdown in its decline (in 2013, the ARP decreased by 0.15 years), which was also in line with objective 1 set out in Chapter III.

**TABLE VI.6: TREND OF DURATION AND ARP IN 2012-14 IN RELATION TO THE GOVERNMENT SECURITIES STOCK (in years)**

| | Duration | | | ARP | | |
|---|---|---|---|---|---|---|
| | 31/12/2012 | 31/12/2013 | 31/12/2014 | 31/12/2012 | 31/12/2013 | 31/12/2014 |
| Domestic securities | 4.67 | 4.73 | 5.25 | 5.51 | 5.35 | 5.30 |
| Foreign securities, before derivatives | 5.53 | 4.97 | 5.46 | 7.57 | 8.02 | 7.70 |
| Government securities stock | 4.71 | 4.74 | 5.26 | 5.59 | 5.44 | 5.38 |

Derivatives portfolio management during 2014 was carried out in respect of the objectives assigned and by taking into account the existing constraints, as set out in Chapter III.

The derivatives portfolio contributed to lengthening the overall duration of the debt during 2014. Compared with the data illustrated in Table VI.6 for the stock of government securities, Table VI.7 shows that the total duration at the end of 2014 rose to 5.77 years from the 5.18 years at 31 December 2013. Similarly, the derivatives portfolio also contributed to lengthening the average refixing period of the debt: at the end of 2014, the overall ARP, post derivatives, was 5.97 years, which was virtually stable when compared with the 6.05 years computed at 31 December 2013.

In order to measure the contribution of derivatives to lengthening of the overall duration and the overall ARP, the derivatives referring to the foreign issues were precisely attributed to the related underlying securities, so as to reflect the financial characteristics of the combination of the securities and of the derivatives to which they refer; instead, for the stock of domestic debt, the derivatives were attributed to the BOT and CCT segments[4] on a basis consistent with the strategy to protect the debt from the risk of rising interest rates as described in Chapter III. The derivatives that refer to domestic debt provide for the macro-hedging of rate risk on the component of the portfolio indexed to money market interest rates.

**TABLE VI.7: TREND OF DURATION AND ARP IN 2012-14 IN RELATION TO THE GOVERNMENT SECURITIES, AFTER DERIVATIVES (in years)**

| | Duration | | | ARP | | |
|---|---|---|---|---|---|---|
| | 31/12/2012 | 31/12/2013 | 31/12/2014 | 31/12/2012 | 31/12/2013 | 31/12/2014 |
| Domestic securities, post derivatives | 5.32 | 5.18 | 5.77 | 6.22 | 5.95 | 5.89 |
| Foreign securities, post derivatives | 5.94 | 5.36 | 5.86 | 8.54 | 8.93 | 8.55 |
| Government securities stock, post derivatives | 5.34 | 5.18 | 5.77 | 6.30 | 6.05 | 5.97 |

The comparison of the duration at the end of 2014 with that at the end of 2013 shows an increase of slightly more than seven months (mostly due to the trend of the market variables) which is essentially the same for government securities before and after derivatives.

The mark-to-market of the derivatives portfolio was a negative value of €29.4 billion at 31 December 2013 and €42.6 billion at 31 December 2014. Considering only the derivatives referring to the debt[5] (see Table VI.8), the market value was negative by €28.8 billion at the end of 2013 and €42 billion at the end of 2014. The mark-to-market of the stock of government securities without derivatives for the same period went from approximately €1,815.6 billion to approximately €2,027.2 billion. The difference between the market value and the nominal value of the stock of the government securities, which was equal to approximately €109 billion at the

[4] In the past, the planning documents, and more specifically, the EFD and the Stability Programme, reported a duration generated by the IT system used by the Public Debt Directorate, which was based on a criterion of separating the derivatives portfolio from the securities portfolio. As such, the actual impact of the derivatives portfolio on overall duration (which is obviously a weighted average of the duration of the individual instruments) was underestimated since it did not take into account the hedging function (whether with respect to individual securities or a portfolio) of the derivatives in place, using the sum of the value of securities and derivatives as the denominator. Given the purposes of this report, the final calculation was revised so as to represent the actual impact of the derivatives portfolio on the debt stock from the standpoint of hedging rate risk.

[5] The derivatives executed with reference to the mortgages receivable (pursuant to the 2005 Budget Law) have been excluded in this case.

end of 2013, was €257 billion at the end of 2014, with an increase of approximately €148.5 billion.

The pronounced deterioration of the value of the derivatives portfolio in 2014, which is proportionally greater than that seen with respect to the debt before factoring in derivatives, is the direct consequence of the insurance provided by derivatives. The derivatives portfolio has been used by the Treasury to contribute to hedging interest-rate risk on the debt, and accordingly, it has had a financial duration and an average refixing period that are well above those for the underlying debt, so much so that it increases the average values of those aggregates (and in line with stated objectives) even though the value of the stock of the derivatives is modest in percentage terms when compared with the securities stock.

The pronounced decline of interest rates in 2014 thus necessarily had a greater effect on the derivatives portfolio (in proportional terms) than it did on the underlying debt.

More specifically, with reference to the derivatives portfolio, the approximate €13 billion deterioration of market value in 2014 can be attributed to the fall in the euro swap curve, which was very distinct beyond 10 years; the portion of the curve between 10 and 20 years (to which the portfolio is particularly exposed) experienced a reduction of more than 140 basis points (1.40 per cent).

**FIGURE VI.18: EURO SWAP CURVES**

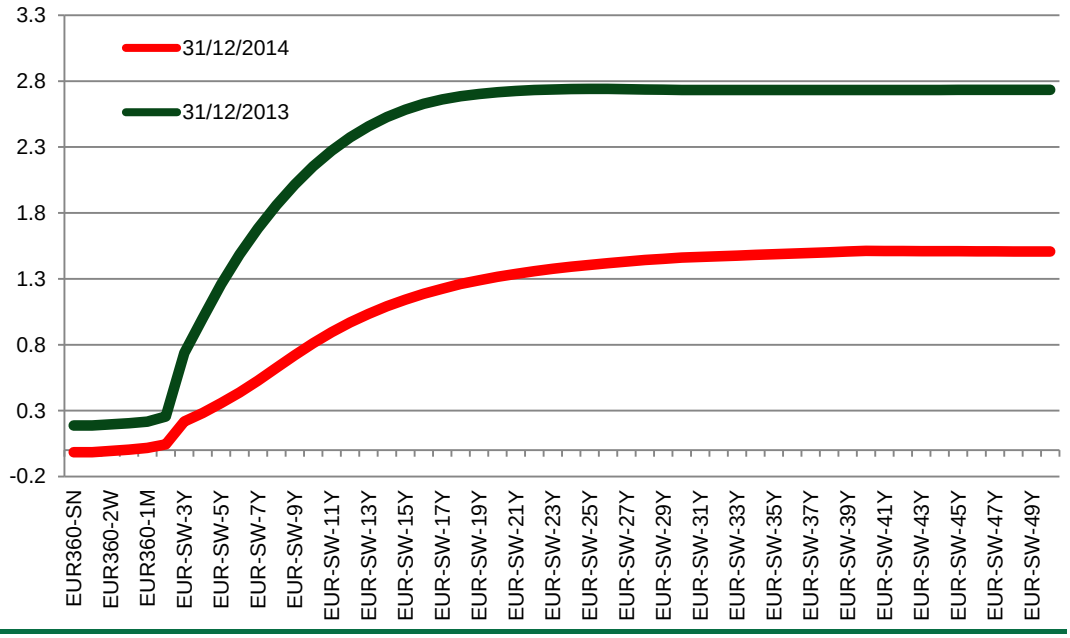



Table VI.8 shows the notional and market values of the various segments of the portfolio of derivatives instruments. With regard to the derivatives on the debt, the cross-currency swaps refer to the issues denominated in foreign currency, while the IRS for hedging purposes refer to the issues of euro-denominated securities as part of the MTN programme. In addition, the IRS for the purposes of duration include all positions referable to strategy of protection from a rise in interest rates, which, in some cases, entail the sale of receiver swaptions in association with the IRS, as illustrated in Chapter III. The IRS ex-ISPA include all derivatives associated with the

liabilities of the company, Infrastrutture S.p.A., which were assumed by the Treasury as provided by the 2007 Budget Law. The stand-alone receiver swaptions, namely, those not related to pre-existing IRS, are included in the swaption category.

The table also reports the values in relation to derivatives on assets and the overall portfolio.

**TABLE VI.8: DERIVATIVES PORTFOLIO – 2013-2014 (data in € mn)**

| | 31/12/2013 | | | | 31/12/2014 | | | |
|---|---|---|---|---|---|---|---|---|
| **Derivatives on debt** | | | | | | | | |
| | **Notional** | **In %** | **MTM** | **In %** | **Notional** | **In %** | **MTM** | **In %** |
| Cross-currency swaps (CCS) | 22,127 | 13.51% | -640 | 2.22% | 21,329 | 13.37% | 1,093 | -2.60% |
| Interest-rate swaps (IRS) for hedging purposes | 12,290 | 7.51% | 336 | -1.17% | 12,309 | 7.71% | 643 | -1.53% |
| Interest-rate swaps (IRS) for duration purposes | 106,313 | 64.93% | -23,813 | 82.64% | 102,948 | 64.51% | -33,087 | 78.66% |
| IRS ex-ISPA | 3,500 | 2.14% | -834 | 2.89% | 3,500 | 2.19% | -1,524 | 3.62% |
| Swaptions | 19,500 | 11.91% | -3,863 | 13.41% | 19,500 | 12.22 | -9,188 | 21.84% |
| Total derivatives on debt | 163,730 | 100.00% | 28,814 | 100.00% | 159,586 | 100.00% | -42,064 | 100.00% |
| Government securities outstanding | 1,722,705 | | | | 1,782,233 | | | |
| Derivatives on Debt/Government Securities | 9.50% | | | | 8.95% | | | |
| **Derivatives on assets (2005 Budget Law)** | | | | | | | | |
| | **Notional** | | **MTM** | | **Notional** | | **MTM** | |
| Interest rate swaps (IRS) | 3,988 | | -579 | | 3,454 | | -586 | |
| **Total derivatives portfolio** | | | | | | | | |
| | **Notional** | **In %** | **MTM** | **In %** | **Notional** | **In %** | **MTM** | **In %** |
| Derivatives on debt | 163,730 | 97.62% | 28,814 | 98.03% | 159,586 | 97.88% | -42,064 | 98.63% |
| Derivatives on assets | 3,988 | 2.38% | -579 | 1.97% | 3,454 | 2.12% | -586 | 1,37% |
| Total derivatives instruments | 167,718 | 100.00% | 29,393 | 100.00% | 163,040 | 100.00% | -42,649 | 100.00% |

N.B.: The mark-to-market (MTM) value does not include the statistical calculations made by the Bank of Italy for the purpose of the publication of the financial accounts.

With reference to the derivatives instruments on the debt (thus excluding the positions assumed on mortgages receivable pursuant to the 2005 Budget Law), the following two graphs show the trend of the notional value year by year, starting from 31 December 2013 and from 31 December 2014 through the final maturity of the portfolio (2062), under the assumption of the exercise of all of the receiver swaptions present in the portfolio. After 2048, the final year in which an IRS with a sizeable notional value (€1 billion) matures, there is only one position referring to a security within the MTN programme, with a notional value of €250 million, which will expire in 2062. Most of the maturities, in terms of notional value, are concentrated in the early years (through 2019). With further reference to notional value, the derivatives portfolio is reduced by 50 per cent as from 2023.

**FIGURE VI.19: PROJECTED TREND OF NOTIONAL VALUE OF DERIVATIVES PORTFOLIO ASSUMING EXERCISE OF SWAPTIONS (data in € mn)**

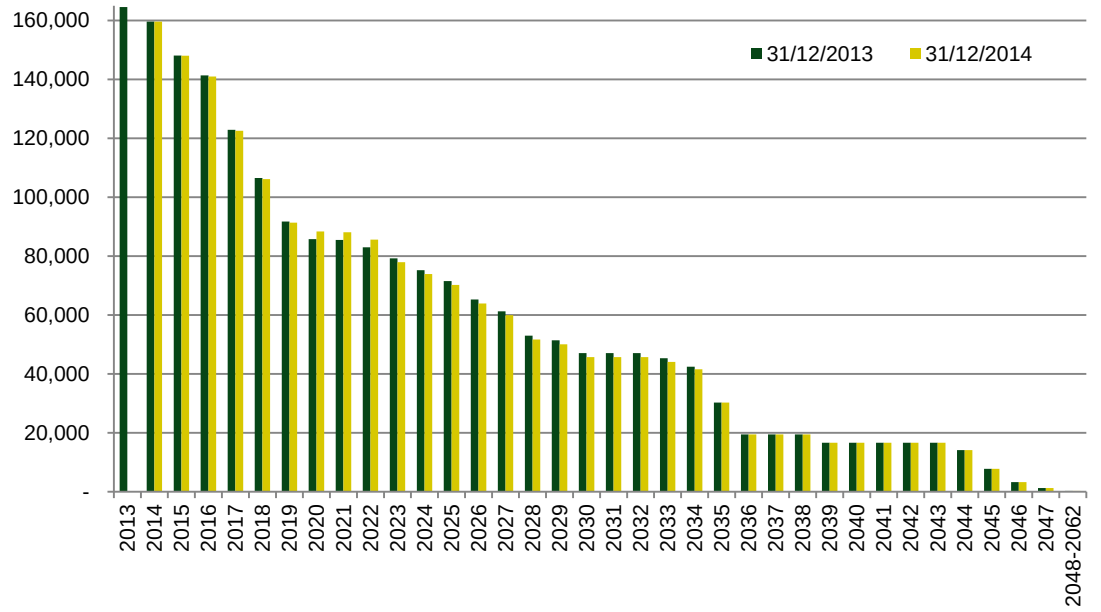
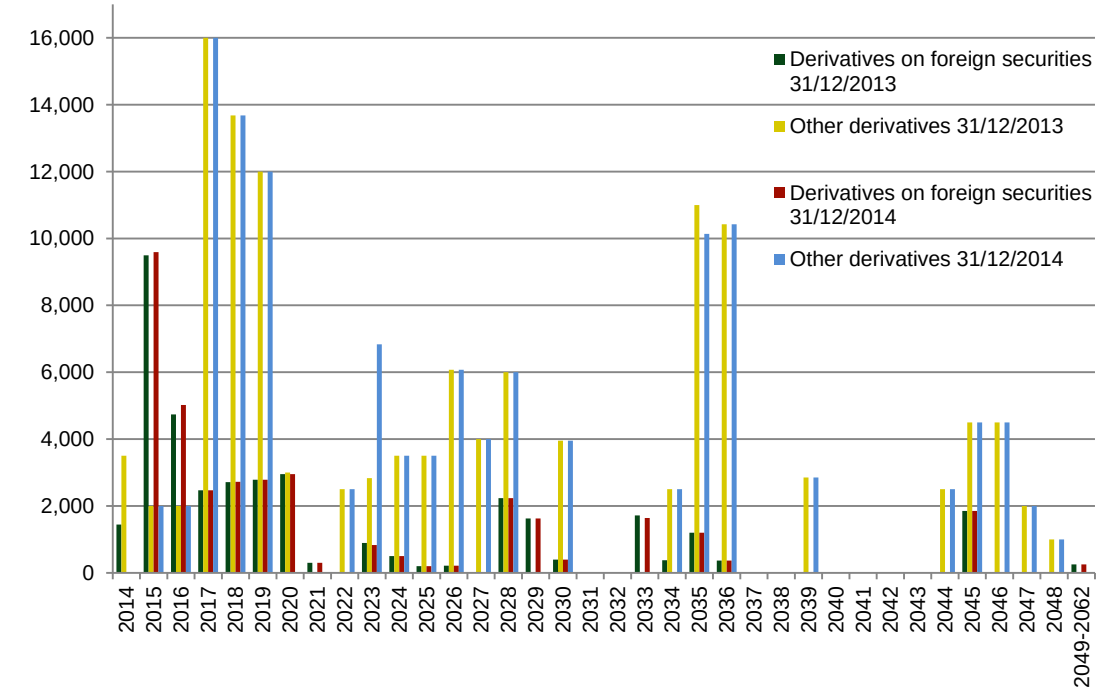


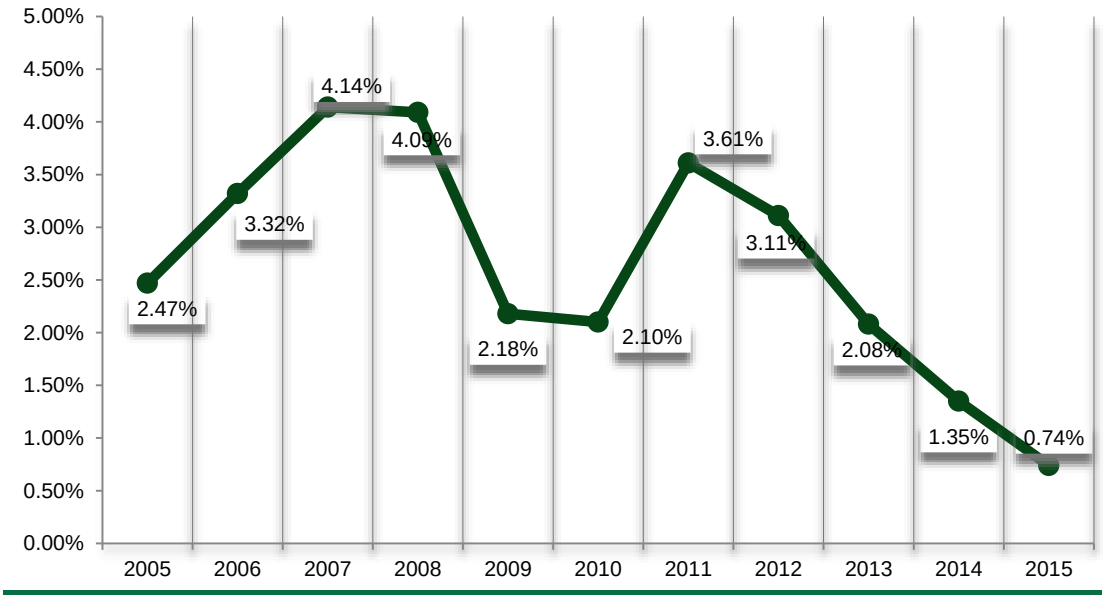

**FIGURE VI.20: STRUCTURE PER MATURITY OF NOTIONAL VALUE OF OF DERIVATIVES PORTFOLIO ASSUMING EXERCISE OF SWAPTIONS (data in € mn)**



## The cost of the debt

The weighted average cost of the new issues declined further in 2014, falling to 1.35 per cent from 2.08 per cent in 2013. The decrease in market rates illustrated in Chapter IV was thus a more significant factor than the gradual rebalancing of the issues toward longer maturities, which normally have higher rates at issuance.

**FIGURE VI.21: COST AT ISSUANCE OF GOVERNMENT SECURITIES – 2005-2014 (rates in %)**




The average cost of the debt, calculated as the ratio between the cash interest generated by government securities in year *t* to the stock of government securities in year *t-1*, was equal to 3.70 per cent in 2014 compared with 3.73 per cent in the preceding year.

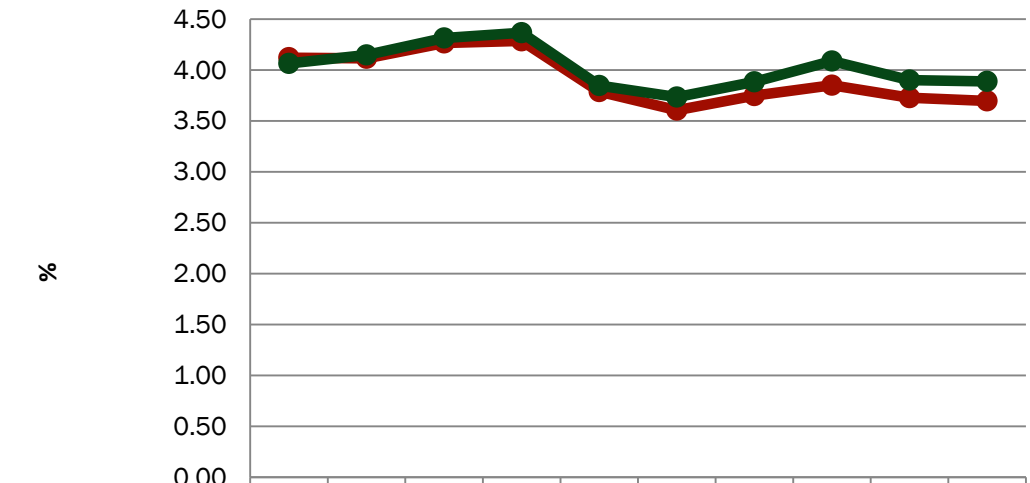
Taking into account the overall impact of the transactions in derivatives, the figure rises to 3.89 per cent for 2014, with an increase of 0.19 per cent substantially in line with that for 2013 (equal to 0.17 per cent) and with the forecasts at the start of the year.

Indeed, the effect produced by the derivatives (using simulation assumptions consistent with the rest of the estimates) was taken into account in the preparation of the public finance forecasts contained in the planning documents and in the State budget forecast. Similarly, all of the final data incorporate the effects of amounts collected or expended as a result of transactions in derivatives.

The difference in cost between the debt portfolio before and after derivatives represents the marginal cost sustained by the Treasury in order to obtain a longer duration, and therefore, greater coverage of the risk of higher interest rates, vis-à-vis what would be possible through the sole use of bond issues.

Finally, the average cost of the transactions in derivatives for managing the duration of the domestic debt stock was equal to 4.54 per cent at the end of 2014; as of the same date, the domestic debt stock without derivatives with a coupon cost of more than 4.54 per cent was equal to €422 billion.

**FIGURE VI.22: AVERAGE COST OF GOVERNMENT SECURITIES STOCK, BEFORE AND AFTER DERIVATIVES – 2005-2014 (rates in %)**




| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|
| pre-derivatives | 4.12 | 4.11 | 4.27 | 4.29 | 3.79 | 3.61 | 3.75 | 3.85 | 3.73 | 3.70 |
| post-derivatives | 4.06 | 4.15 | 4.31 | 4.37 | 3.85 | 3.73 | 3.88 | 4.09 | 3.90 | 3.89 |

## VI.4 TREASURY'S LIQUIDITY MANAGEMENT

The year of 2014 was different from previous years for the high volumes of available liquidity, with the Treasury thus employing considerable quantities of funds on the market. As indicated in Chapter IV, the Treasury encountered an adverse monetary-policy and market scenario, with a surplus of liquidity and short-term rates near zero or even below zero.

As described in detail in Chapter III, the Treasury's liquidity management occurs through the Operations on Behalf of the Treasury (OPTES), which are aimed at stabilising the balance of the Liquidity Account. This activity is inclusive of the monitoring of the treasury balances and flows, through a continuous exchange of information between the MEF and the Bank of Italy and the use of cash-management instruments. Such instruments include daily auctions and bilateral transactions (for employing or tapping liquidity) carried out with selected counterparties, and restricted deposits held by Treasury at the Bank of Italy.

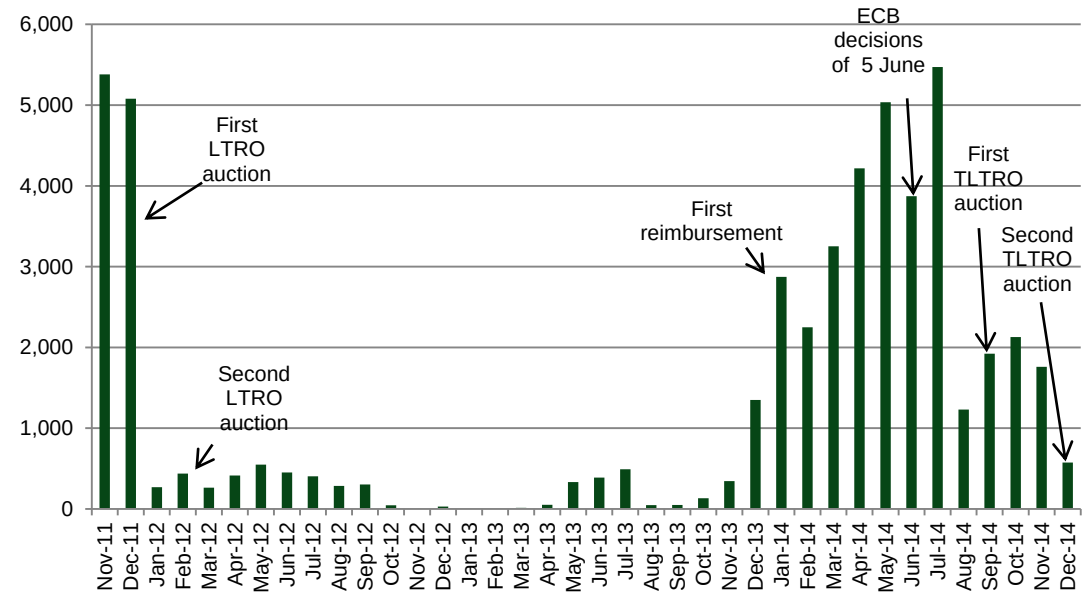
### Operations on Behalf of the Treasury (OPTES) and market framework

In the first months of the year, the OPTES were well received by the market, with growing demand for liquidity on the part of bank counterparties; the amounts allotted through auction and the related weighted average rate rose continuously through the month of May 2014 (see Figures VI.23 and VI.24). With this activity, together with the ongoing use of bilateral transactions and the opening of restricted deposits, the Treasury was able to employ almost all of its liquidity and to maintain

Liquidity Account balance of close to zero, consistent with the target agreed by the MEF and the Bank of Italy in the OPTES Convention.

The situation radically changed as from June, when changes in the market and in monetary policy made it more difficult to employ liquidity, with an immediate and significant impact on the distribution of the Treasury's available balances.

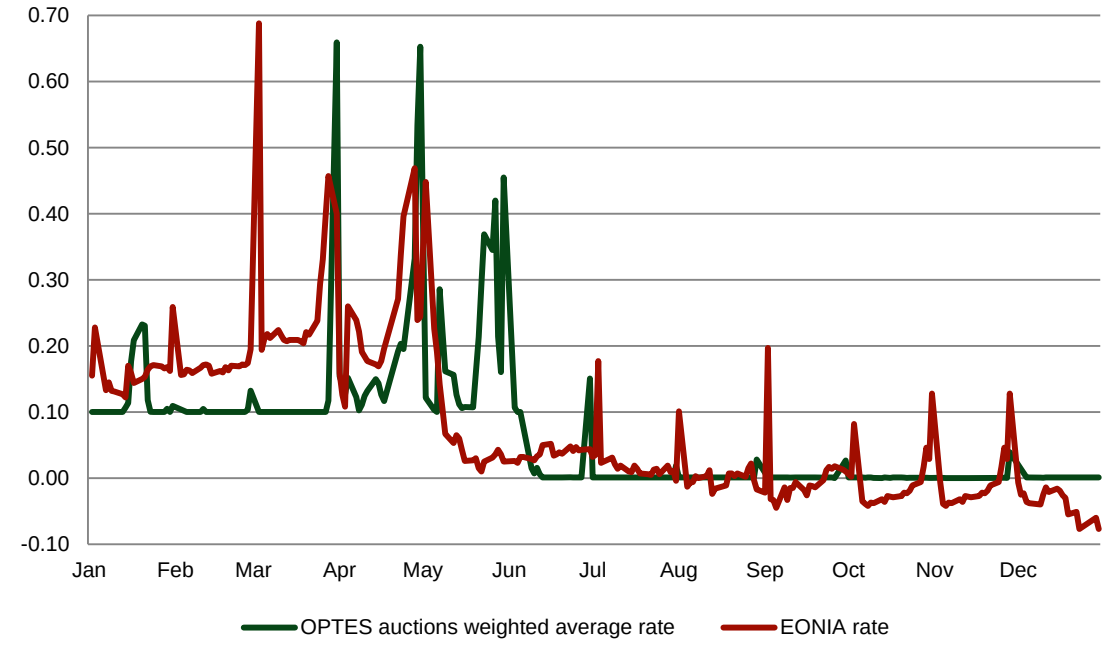
**FIGURE VI.23: AVERAGE USE AT DAILY OPTES AUCTIONS (in € mn)**




In plotting the relationship between the average employment of liquidity at the Treasury auctions and several key developments with regard to monetary policy, Figure VI.23 shows the evident return of market demand as from December 2013. In this regard, it is useful to note that participation in the OPTES auctions was facilitated by the prepayment of funds obtained through the ECB's two LTRO (3-year) refinancing transactions – an option that many banks within the Euro Area exercised during the early months of 2014. The average volumes employed at auction by the Treasury (with overnight maturity) had drastically fallen as from January 2012, right after the first LTRO transaction in December 2011.

The Treasury's liquidity management is highly dependent on monetary policy, as confirmed with the ECB's intervention in 2014. The previous chart highlights the impact of the ordinary and non-conventional measures adopted in June, with the consequent drop in demand (particularly in August) and, later, the effects of the statements of the ECB Governing Council in the final month of the year, which oriented intermediaries toward expectations of additional expansionist measures (related, as indicated, to a probable broad quantitative easing programme).

**FIGURE VI.24: TREND OF OVERNIGHT MONEY MARKET RATES AND RATES AT OPTES AUCTIONS IN 2014 (rates in %)**




The impact of monetary policy is also evident from the trend of interest rates, as already discussed in Chapter IV. Figure VI.24 shows, for example, both the EONIA rate (market reference for overnight maturities) and the weighted average rate at the 2014 OPTES auctions when there was participation (as indicated, these auctions have the same overnight maturity). The disparity between the first and the second half of the year is very obvious, with the decrease of money-market rates, followed by a similar trend in the yields at the liquidity auctions which was associated with the lower level of participation as previously described.

It is also easy to see from the previous chart how the weighted average yield on the OPTES auctions often levelled off at the minimum rate accepted by the Treasury during such transactions, namely, zero as from June. The Treasury's cost/risk assessment in this regard (with a preference of avoiding market transactions at negative rates) can partly explain the weaker participation as from August, when the EONIA rate started to fluctuate regularly at levels below zero.

## Impact of the new monetary-policy measures

The favourable market scenario in the first months of 2014 was thus radically modified following the ECB's adoption of new monetary-policy measures on 5 June, as discussed in detail in Chapter IV. The OPTES were significantly impacted by these measures because the measures not only entailed a reduction in the rates of reference, but the ECB (with Decision ECB/2014/23 and Guideline ECB/2014/22) changed the system for government deposits held at national central banks, penalising the balances held by Treasury with the Bank of Italy and providing a disincentive for the placing of restricted deposits with the central bank.

The ECB provided for the application of a zero rate, or the deposit facility rate, if negative, to the excess balances held by governments at national central banks, specifying that the regulation would apply to all forms of government deposits, and thus included not only the Liquidity Account, but also the Fund for Amortisation of Government Securities, restricted deposits and other minor accounts, with all of the balances subject to the immediate application of negative interest rates. Indeed, as of 5 June, the ECB set the deposit facility rate at a negative figure for the first time (-0.10 per cent as of 11 June, which was reset to -0.20 per cent as from 10 September), thereby immediately penalising government deposits that exceeded a certain pre-set threshold near zero[6].

Accordingly, the monetary-policy measures put into place on 5 June 2014 not only had a significant impact on market conditions, but they also caused a major change in the regulatory framework within which the Treasury manages its liquidity. This made it necessary to amend the Consolidated Public Debt Act (CPDA), with the aim of bringing national regulations in line with European regulations and facilitating the deployment of liquidity within the new framework[7]. A legislative bill formulated and later ratified by Article 1, Paragraph 387 of the 2015 Stability Law (Law No. 190/2014) has explicitly provided that the management of the Liquidity Account is to be carried out in relation to monetary-policy trends. Said legislation also provided for different management of the Fund for the Amortisation of Government Securities, transferred from the Bank of Italy to the Cassa Depositi e Prestiti[8].

From an operational perspective, the new monetary-policy measures resulted in the Treasury's closing out its restricted deposits with the Bank of Italy as of June; such deposits had been used until then for investing the Treasury's more stable liquidity and balancing limited demand from the market. Thereafter, the Treasury increased the liquidity offered through auction and bilateral transactions, so as to contain both the Liquidity Account's balance and the application of negative interest rates to the related amounts.

In this regard, it is noted that the mentioned Guideline ECB/2014/22 dated 5 June amended the monetary-policy measures issued by the ECB only a few months earlier, with Guideline ECB/2014/9 of 20 February 2014. More specifically, with the previous guideline, the ECB had provided a transitory measure whereby the computation of the threshold allowed excluded the time deposits held by the public administrations at national central banks; this would have allowed the Treasury to continue to employ its liquidity in restricted deposits at the Bank of Italy, without limits on balances, until 30 November 2015. In any event, as indicated, this provision was unexpectedly abolished by the June guideline, which imposed the immediate application of the new rules for all forms of government deposits, making it inopportune for the Treasury to open any new restricted deposits.

[6] As indicated in Chapter IV, this threshold is equal to the greater of €200 million and 0.04 per cent of the GDP of the Member State in which the national central bank is located. For Italy, the amount was around €600-650 million in 2014, and therefore, very close to nil, especially if compared with the tens of billions of available liquidity held by the Treasury.

[7] More specifically, it was necessary to amend Article 5, Paragraph 5 of the CPDA, which, as indicated in Chapter III, governs the Liquidity Account.

[8] In this regard, see the amendments made to Article 44 of the CPDA and several articles thereafter in relation to the Fund for the Amortisation of Government Securities.

The charts below provide a breakdown of the average uses of liquidity at month end with respect to the first and second halves of the year, with the omission of the month of June, when the monetary-policy reforms were adopted.

**FIGURE VI.25a: AVERAGE LIQUIDITY STOCK AT MONTH END – JAN-MAY 2014**

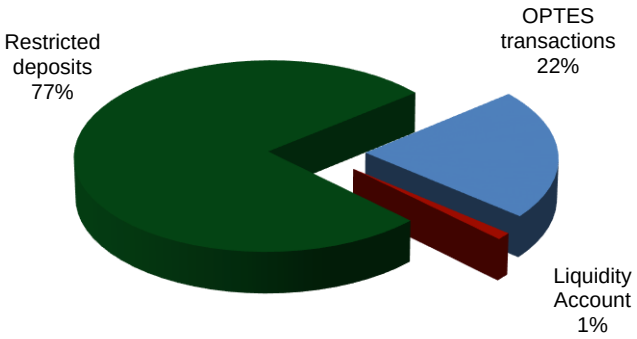
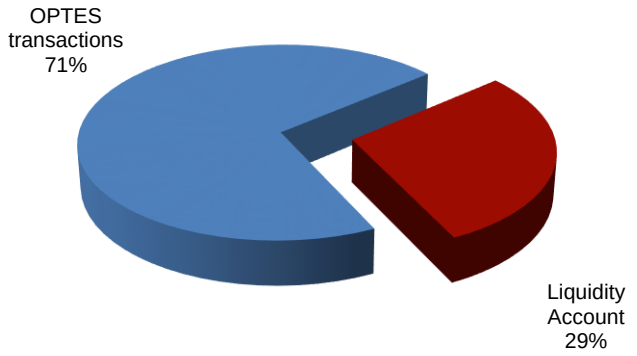



**FIGURE VI.25b: AVERAGE LIQUIDITY STOCK AT MONTH END – JUL-DEC 2014**




As it can be easily seen, the new regulatory framework resulted in conspicuous increases in the portion of liquidity employed through market transactions and in the balance of the Liquidity Account, given the impossibility of opening new restricted deposits.

As shown by the effects observed above, the ECB, through the measures concerning reference rates and the non-conventional intervention in 2014, seems to have achieved its objective of creating conditions favourable to an excess of liquidity on the market, in line with expansionist monetary policy.

### Summary data about cash management in 2014

Notwithstanding the changing market framework (which was particularly unfavourable in the second half of the year), the OPTES in 2014 entailed volumes that were well above those in the immediately preceding years (as shown by Figure VI.23). Through the OPTES auctions, the Treasury was able to employ approximately €730 billion in the overnight maturity (more than 90 per cent of which was allotted in the morning auctions, with the residual amounts allotted in the afternoon auctions); during 2013, for example, it was possible to employ only €64 billion through auction.

In 2014, a considerable part of the liquidity was also invested in bilateral transactions; this form of investment amounted to an average of €20 billion at month end. The OPTES bilateral transactions have an average duration of 13 days.

Finally, as indicated, through the end of June 2014, another part of the liquidity (averaging €48 billion at month end) was invested in restricted deposits in Bank of Italy, with an average maturity of 32 days.

In view of the Treasury's sizeable liquidity, there were no OPTES funding transactions carried out in 2014.

## VI.5 MONITORING AND MANAGEMENT OF THE LIQUIDITY ACCOUNT IN RELATION TO OBJECTIVE 2

Chapter III described in detail the strategic objective of "monitoring and managing the Liquidity Account with a view toward stabilising its balance" ("objective 2"), which was included in the General Directive for the MEF's administrative action and management for the year of 2014. It was also noted that this strategic objective was made up of two operational objectives that regarded liquidity management aimed at stabilising the balance of the Liquidity Account, through careful monitoring of the account and the use of cash-management instruments, and the monitoring of credit risk related to liquidity management so as to stabilise the balance of the Liquidity Account.

As indicated recurrently in the previous sections of this report, the aforementioned activities of account monitoring, cash management and risk management are the essence of the OPTES programme.

### Monitoring of the Liquidity Account

In 2014, the MEF and the Bank of Italy intensified their commitment to continuously improve the quality of the forecasts of the treasury flows[9].

Accordingly, the MEF and the Bank of Italy continued on a daily basis to exchange forecast and final data related to the receipts and payments that go through the accounts held by the State Treasury, and to estimate the Liquidity Account balance.

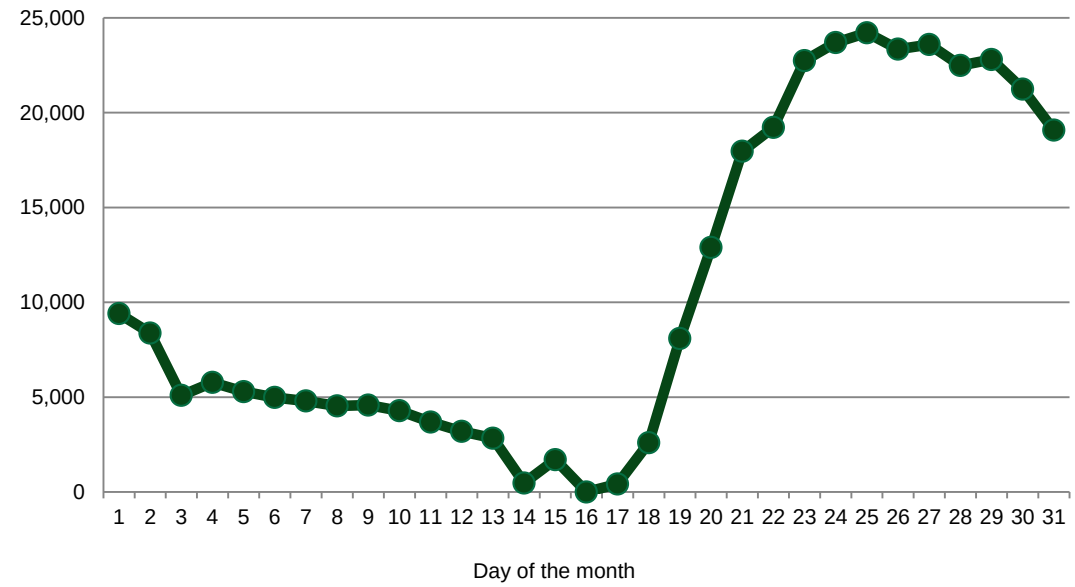
[9] It is noted that these information flows are handled by the State General Accounting Department, as well as by the Department of the Treasury and the related offices of the Bank of Italy.

This monitoring was extended to several other minor accounts, which, although they are outside of the treasury service and normally have limited balances, are part of the aggregate of government deposits, as provided by the ECB measures outlined on 5 June.

In addition to the data exchanged on a daily basis (which are updated regularly throughout each business day with the aim of estimating the account balance at the close of the business day), the liquidity forecasts of the MEF and of the Bank of Italy also make use of regular weekly flows. As indicated, these information exchanges regard longer term scenarios, whose duration is consistent with the needs of monetary policy.

The significance of the Liquidity Account monitoring and management is discussed in detail in Chapter III and, more specifically, illustrated in Figure III.3, which shows the significant volatility of the account during an average month in 2013. The same chart is shown below with reference to 2014, so as to highlight how the critical receipts/payments trend was even more evident in 2014, when the disparity between minimum and maximum liquidity balance for the month climbed to exceed €24 billion on average. This chart pegs the minimum monthly balance (which is normally on the sixteenth day of the month) at zero in order to highlight the cyclical infra-monthly changes in the balance of the Treasury's liquidity.

**FIGURE VI.26: AVERAGE INFRA-MONTHLY CHANGES IN TREASURY LIQUIDITY: VARIATIONS COMPARED WITH MONTHLY MINIMUM – 2014 (in € mn)**




As indicated, these changes are mostly attributable to receipts related to tax revenues in the second half of the month, and to payment of pensions on the first day of the month. Such movements are rounded out by Treasury issues, and more especially, the maturities of government securities, which sometimes contribute to the considerable decrease during the first 15 days of the month.

In order to mitigate the fluctuations described above, it would be appropriate not only to use cash-management instruments, but also to adopt regulations that would allow for matching the days when the Treasury gets most of its receipts, with

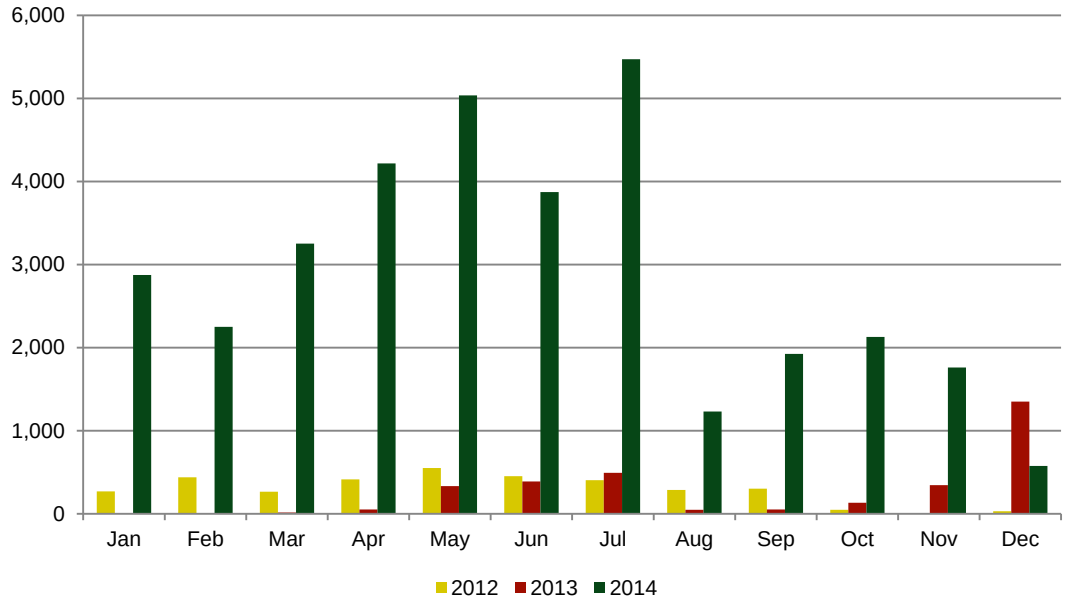
the days on which it makes most of its payments, so as to reduce the daily net changes that require the Treasury to hold a sizeable liquidity reserve.

## Cash management

The use of cash-management instruments to stabilise the Liquidity Account balance has been discussed previously in this report, including in relation to the monetary-policy and market situation.

As indicated, the scenario that took shape in 2014 also had an effect at a regulatory level, including, amongst other things, by removing the possibility of setting up new restricted deposits at the Bank of Italy. But even more significant were the effects on money-market liquidity demand, which rapidly crumbled in the second half of the year.

**FIGURE VI.27: AVERAGE USE AT DAILY OPTES AUCTION – 2012-2014 (in € mn)**




The previous Figure VI.27 nonetheless shows how the year of 2014, notwithstanding the liquidity excess of the final months, was a hallmark in the Treasury's capacity to employ liquidity through OPTES auctions, whose volumes were well above those for the previous two years.

This was partly due to the Treasury's daily commitment of holding daily auctions during the morning trading of all the business days of the year, flanking those auctions with afternoon auctions on days when there was significant liquidity demand from OPTES counterparties.

The Treasury also placed a particular emphasis on setting the minimum rate accepted at such auctions, and intervened throughout the year by adjusting the rate to the market situation, on a basis consistent with its cost/risk assessments.

The Treasury used market transactions to a greater extent than in previous years because the transactions also served for employing, at least partially, the

more stable base of available liquidity that had previously been held in restricted deposits. This caused a marked increase in both the liquidity offered at the auctions, and the loans made through bilateral transactions.

## Monitoring credit risk related to liquidity management

In the changing market framework of 2014, the management of the credit risk also played an important role for the OPTES programme. Indeed, during the year, the Treasury felt it appropriate to slightly revise the risk parameters, adopting risk-management criteria more comparable to the criteria adopted by the ECB in managing guarantee instruments.

This favoured the participation of the counterparties at the liquidity auctions, making it possible to offset, at least partially, the lower demand that was seen in the final months of the year.

## Results achieved in 2014

As already indicated, the liquidity management in the first months of 2014 was similar to that of previous years, although it was carried out in a volatile market that nonetheless appeared to be improving. As a result, the Treasury was easily able to employ its balances on the market and with the Bank of Italy, and consequently stabilised the Liquidity Account balance at a level near zero.

More specifically, pursuant to the OPTES Convention signed by the MEF and the Bank of Italy in 2011, the Account's target balance at the close of the business day was set at €800 million, and this value was achieved, with close approximation, on 87 per cent of the days between January and May 2014[10]. In addition, in that period, the average shift from the target balance was extremely limited (less than 3 per cent of the balance). These impressive results are also visible from the data in Table VI.9, which shows the total balance of the Treasury's liquidity at the end of each month in 2014, with the related distribution by type of usage (Liquidity Account, restricted deposits and market transactions).

[10] Reference is made to the days when the target balance was reached with a shift of less than 5 per cent. All calendar days of the first five months of the year are considered with the sole exclusion of the holiday on 1 January.

**TABLE VI.9: LIQUIDITY ACCOUNT AND USES OF TREASURY'S LIQUIDITY MONTH END IN 2014 (in € mn)**

| Month | Liquidity Account Balance | Restricted Deposits | OPTES Liquidity Transactions | Treasury's Total Liquidity |
|---|---|---|---|---|
| January | 817 | 42,000 | 14,372 | 57,189 |
| February | 812 | 49,500 | 13,785 | 64,097 |
| March | 824 | 44,000 | 16,518 | 61,342 |
| April | 807 | 62,000 | 13,970 | 76,777 |
| May | 843 | 74,000 | 16,771 | 91,614 |
| June | 44,189 | 17,000 | 43,500 | 104,689 |
| July | 62,322 | 0 | 46,800 | 109,122 |
| August | 33,449 | 0 | 48,350 | 81,799 |
| September | 5,704 | 0 | 45,100 | 50,804 |
| October | 22,540 | 0 | 46,200 | 68,740 |
| November | 9,636 | 0 | 55,900 | 65,536 |
| December | 7,740 | 0 | 38,000 | 45,740 |

In any event, the data in the previous table clearly demonstrate the effects of the new monetary-policy and market scenario developing due to the mentioned events in 2014, and the resulting radical change in the management of the Treasury's liquidity as from June. The difference between the first and the second halves of the year is once again evident, with the zeroing out of the restricted deposits held at the Bank of Italy and the consequent increase in the balance held in the Liquidity Account.

As already pointed out, the ECB's accommodating monetary policy and the disappointing economic recovery resulted in a situation in which most intermediaries had excess liquidity that they could not manage to employ on the money market. This situation also affected the Treasury's huge liquidity balance that could not be absorbed by the system, due to both adverse market conditions, and cost/risk assessments that made it preferable to hold part of the liquidity on account with the Bank of Italy. It is furthermore useful to note that money-market rates were negative with increasing frequency in 2014, as shown, for example, by the EONIA rate from the end of July; this accordingly also penalised the employment of liquidity on the market.

The aforementioned effects were in line with the new orientation of European monetary policy, which was aimed at creating conditions favourable for economic growth, including by facilitating the transfer of the liquidity to the market and therefore, outside of the national central banks, thereby reinforcing the prohibition of financing governments, with penalties on deposits through the application of negative interest rates to excess balances[11]. Although this backdrop did not bode well for the employment of liquidity, it was overall favourable to public debt management; indeed, the decrease in yields made it possible to save considerably on the outlays for interest on government securities, with a benefit that more than offset the adverse impact on available liquidity.

[11] The penalties applied to excess government deposits held at national central banks can also be extended to the balances that fall within the threshold set by the ECB. Indeed, as of 1 December 2014, the ECB established that the return on such balances could be no higher than the EONIA rate, which, as indicated, has often been negative.

The observations are particularly apropos for a country such as Italy, which has a sizeable volume of securities maturing and being issued. The reimbursements of government securities (most of which were concentrated in the second half of 2014) were actually the reason for the Italian Treasury's maintenance of a high liquidity balance, as seen in the previous Table VI.9, especially during the middle part of the year[12].

In this regard, Chapter III of this report has already noted ambitious nature of achieving the objective of stabilising the Liquidity Account balance, especially when viewed in conjunction with the other strategic objective of public debt management, which focuses on the cost/risk profile and thus requires an adequate margin of liquidity in the Liquidity Account. It is useful therefore to emphasise that the two objectives need to be interpreted and evaluated together.

Despite the changing conditions in 2014, the Treasury pursued objective 2 by committing to the stabilisation of the balance during the entire year, adopting all of the management and monitoring measures described above.

More specifically, in 2014, the monitoring of the Liquidity Account yielded satisfactory results, as confirmed by a good forecasting capacity that was not yet affected by the higher volatility of the balances of the second half. Indeed, the variance between the available balances estimated by the MEF during the weekly data exchanges with the Bank of Italy and the actual data were around 10-15 per cent, compared with the daily changes used as the basis for the estimation. Furthermore, the variance falls to an average of 2 per cent, if measured against the value of the Treasury's liquidity held on the day to which the forecast refers. This allowed for stabilising the balance (between estimates and final data), even though at levels that were higher than in previous years.

In addition, the results achieved with the daily cash-management activity are demonstrated by the lower level of liquidity held in the Liquidity Account, as seen in the final four months of the year and detectable in the previous Table VI.9 (which, as indicated, refers to month-end balances).

The measures adopted in 2014 for efficient management of the Treasury's liquidity also incorporate the changes in reference regulations introduced at year end with the 2015 Stability Law, as outlined above. This harmonisation with EU regulations will also regard secondary regulations, with a revision to the OPTES Convention, part of which has already been automatically amended by the ECB decisions.

[12] In addition, during 2014, it was necessary to hold a higher-than-normal liquidity reserve, in order to cover the payment of the certain, liquid and enforceable payables referenced in Decree-Law No. 35 of 8 April 2013, which was converted into Law No. 64 of 6 June 2013, with amendments.

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