



PERÚ

Ministry of  
Economy and Finance

Vice Ministry of  
Finance

General Directorate of  
Indebtedness and Public Treasury

“Decade of People with Disabilities in Peru”  
“Year of Production Diversity and Strengthening of Education”

# MINISTRY OF ECONOMY AND FINANCE

## STRATEGY FOR GLOBAL ASSET AND LIABILITY MANAGEMENT \*

**2015 - 2018**

\* It includes the Annual Indebtedness and Debt Management Program, referred to in Article 14 of Law No. 28563, specifying their policies, objectives and goals, from a long term perspective, which is compatible with the fiscal targets and debt sustainability. The Asset and Liability Management Committee, set forth in the Sixth and Final Order Complementary to Law N° 30116 as the entity that defines the guidelines and actions for an accurate global management of assets and liabilities that are part of the public exchequer (the wider Treasury function), recommended the approval of the Strategy.



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## ASSET AND LIABILITY MANAGEMENT COMMITTEE

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September 30, 2015

## EXECUTIVE SUMMARY

### **Performance to 2014**

**The approved Strategy for Global Asset and Liability Management sets out, in line with the long-term vision, the most relevant principles, policies, objectives and goals for the financial strategy on debt, savings and treasury management.** The Strategy established the framework for the tactical guidelines and general actions for asset and liability management that should be followed by the Treasury and all entities or institutional units comprising the public exchequer (the wider Treasury function). The Asset and Liability Management Committee, chaired by the Minister of Economy and Finance, evaluates and monitors these guidelines and actions.

**The approved guidelines will ensure proper management of assets and liabilities at the three levels of the public exchequer.** Applying these guidelines will ensure that debt, savings and treasury management policies are institutionalized according to international best practices. Looking forward, the Strategy will focus on evaluating progress and achievements annually, taking account of decisions relating to asset, liability and treasury management as well as market structure. In addition, it will incorporate a prospective analysis through long-term scenarios (an exploratory analysis of alternative futures) of the variables with the most direct impact on the sustainability of public finances, which will allow anticipation and design of complementary additional strategic actions in the event that high risks exposures materialize, such as a drop in commodity prices or a rise in US interest rates.

**The Global Asset and Liability Management Strategy continued to be implemented throughout 2014, amid an adverse international financial context.** Bond issuance in domestic currency in emerging countries was affected by uncertainty about the US Federal Reserve monetary policy and a downturn in China's economy. Despite this environment, the Strategy's specific lines of action continued to be developed, with the following achievements:

#### ➤ **In asset management**

- ✓ Improvement of the legal budgetary framework that guarantees establishment of the Liquidity Secondary Reserve.
- ✓ Start of operations of the Ministry of Economy and Finance's auction module for public funds, which helped to reduce the concentration of allocated funds, greater participation of non-bank credit entities, and more transparency in fund allocation, as well as promoting competition between financial entities in raising public funds.
- ✓ Regulations governing the Treasury's role as the Technical Secretary of the Council of Fiscal Stabilization Fund, with the obligation to report in detail inflows and outflows, and the Fund's balance at the beginning and the end of each year.
- ✓ Increase in public credits in soles to other levels of government, through funds obtained in the securities market, in order to finance projects, thereby helping them to mitigate their exposure to exchange rate risk, taking into account that public income is generated in local currency (soles).

#### ➤ **In liability management**

- ✓ In the sovereign bond primary market, the number of entities that participate in regular auctions reached 38 (a 19% increase).
- ✓ Since 2013, better incentives have been given in the Treasury's regular auctions, which averaged a 0,23% discount in price for investors by comparison with the prices in the secondary market the day before the auctions, in contrast to the 0,25% average premium charged by the Treasury for local auctions since 2006.

- ✓ Price discounts to investors in local bond issues (0,23%) have been lower than discounts offered in international issues (1,48% historical average 2012-2015), which leaves room for local market development.
- ✓ The average historical cost for nominal and inflation-indexed bonds has been 6,22%, while the cost of bonds in dollars has been an effective annual interest rate of 6,83%, taking account of the effect of accumulated exchange rate changes from each issue or reissue of the bonds.
- ✓ Treasury bills outstanding increased by 70% compared with 2013, which helped to create a short-term benchmark for risk-free instruments.
- ✓ The number of entities with access to Treasury bills in the primary market regular auctions reached 23 (a 5% increase).
- ✓ The amount of Treasury bills traded in the secondary market increased by 63%, suggesting some initial development.
- ✓ The market in public debt securities reached 7,5% of GDP, above the 6,4% in 2013, as a result of the issue for liability management reasons of S/. 7 000 million of 2024 Treasury bonds, which was recognized as the biggest and most complex bond issue in local currency in international financial markets.
- ✓ In 2014, the total amount of funds raised through regular auctions of Treasury bonds reached S/. 4 252 million (excluding international operations) and with an average demand that was double the referential sum offered.
- ✓ The liquidity of Treasury bonds in the secondary market improved, from an average S/. 2 864 million traded monthly in 2013 to S/. 3 711 million in 2014.
- ✓ The sovereign bonds turnover index, which measures the extent of trading in the secondary market, was more than 1,8 times in 2014, despite the fact that counted trades include only 60% of the ownership transfers made.
- ✓ In 2014, the growing participation of resident investors reduced non-resident investors' participation by 14 percentage points without creating volatility in market interest rates. In fact, in 2014, the yield curve closed at a slightly lower level than in 2013, generating an increase in resident investor participation to 62%.
- ✓ The higher internal debt ratio was reflected in a fall of external debt as a ratio of total public debt from 54% to 50% in 2014.
- ✓ Re-issuing inflation-indexed bonds (VAC bonds) since 2013 (they were first issued between 2004 and 2007), contributed to: (i) increasing by 57% the amount traded, (ii) increasing by 75% the number of participants in the secondary market, (iii) updating the real sovereign yield curve that corporate inflation-indexed bond issues use as a reference, especially those bonds financing major infrastructure projects, and, (iv) identifying inflation expectations and valuing similar bonds that also finance life insurance annuities.
- ✓ The publication weekly of results analysis reports, in compliance with the required national policies improved transparency in the Treasury's regular auctions.
- ✓ Publication of a schedule for the regular auction of Treasury securities to bring greater market predictability.

➤ **In treasury management**

- ✓ Consultancies supported by SECO and the IMF were aimed at improving treasury and tax revenue management, making recommendations to be implemented.
- ✓ The methodology for assessing the counterparty limits that public entities use in government securities auctions was strengthened by implementing an adjusted credit risk rating for exchange risk volatility.
- ✓ The regulations for repo operations with public debt securities were designed in coordination with CAVALI, the Securities Market Regulator, the Banking Supervisor, Insurance and AFP Regulator and different financial entities.

➤ **In market structure**

- ✓ The development of the Government securities market brought positive externalities to the private debt market. As a result: i) private debt in soles increased from 30% to 62% of total private debt for the period 2004-2014, ii) the yield curve maturity was extended (34% of bond issues had a maturity of more than 7 years), iii) the liquidity and market depth increased (the amount traded rose 27% in 2014) and, iv) the inflation-indexed debt market was revitalized (11% of total outstanding is denominated in real soles).
- ✓ A study on the “Diagnosis of the Technological Infrastructure of Public Debt Securities Market Operational Systems in Peru” was completed by the consulting firms BME Innova and International Financial Analysts (AFI). They identified the current situation of each link in the sovereign debt market value chain in soles, and made significant recommendations to deepen its development, and enhance transparency, liquidity, competition and the security of transactions.
- ✓ The Treasury securities’ sales platform to the retail public was launched to achieve one of the main goals in matters of social inclusion: “to reduce geographic and economic barriers so that people could save money by purchasing government securities, regardless of their geographic location or socio-economic level.”
- ✓ The satisfaction of the Investor Relations website target audience continued to improve ([www.mef.gob.pe/tesoro/encuestas.php](http://www.mef.gob.pe/tesoro/encuestas.php)).
- ✓ The operational regulations of the sovereign debt fund were approved and the general framework for its functioning was established, which will generate more dynamism in the Treasury securities market in soles.
- ✓ The Investor Relations Office continues to send the Treasury Indices reports daily to public debt market participants and to publish them on [www.mef.gob.pe/inversionistas](http://www.mef.gob.pe/inversionistas).

**In this context, four out of seven monitoring indicators for the Central Government’s gross debt are in or above the expected range.** The rest of the targets are at levels close to their lower limits, which demonstrates a qualitative improvement in the gross debt structure, based on increased fixed rate debt in soles and benefits flowing from executed debt management operations.

**Assessment of the Central Government’s referential quantitative goals**

| Concept  | Expected range at the end of December 2014 | Final result December 2014 <sup>1/_</sup> |
|--|--|---|
| Percentage in soles in the portfolio                             | 53,5% - 62,9%                              | 51,7%                                     |
| Percentage of fixed rate debt in the portfolio                   | 80,3% - 81,1%                              | 81,8%                                     |
| Percentage of internal debt in the portfolio                     | 51,4% - 60,8%                              | 49,8%                                     |
| Average term to maturity (years)                                 | 12,9 - 14,2                                | 13,0                                      |
| Average term to repricing (years)                                | 11,9 - 13,4                                | 12,0                                      |
| Accumulated amortizations over the next 12 months <sup>2/_</sup> | 5,5% - 4,9%                                | 4,1%                                      |
| Percentage of financial flows in local currency <sup>3/_</sup>   | 82,2% - 88,1%                              | 82,1%                                     |

Source: MEF – DGETP

1.\_/All indicators correspond to Central Government only.

2.\_/Indicator that measures immediate payment pressure.

3.\_/It includes the financing of debt management operations.

**At end of 2014, gross debt and net debt on the Central Government’s financial asset and liability balance sheet were 17,0% and 5,8% of GDP, and 89,7% and 30,4% of total revenue. The Central Government is an institutional unit from an economic point of view whose creditworthiness is subject to evaluation and sovereign risk rating.** Compared with 2013, net debt was larger, principally as a result of a lower growth rate of assets which increased by S/. 6 572 million over the year, compared

to liability growth of S/. 9 477 million, principally reflecting higher sovereign bond issuance. The total annual cost of financial liabilities in soles fell from 10,7% to 8,9%, while the total annual yield of financial assets in soles fell from 4,9% to 4,2%. Net debt costs fell from 5,8% to 4,8%.

**These achievements have been reflected in sovereign risk ratings: four out of five credit rating agencies upgraded Peru's rating to A-.** However, there is still room for improvement when comparing Peru with other countries in the region, such as Brazil, Chile, Colombia and Mexico, and also with OECD countries such as Australia, Canada, Finland and New Zealand which share some similarities with Peru, being commodities producers or small open economies.

### **Financial strategy 2015-2018**

**The Global Asset and Liability Management Strategy includes a prospective analysis as a forward-looking tool to improve the Government decisions about the future.** Under this analysis<sup>1</sup> a set of possible and alternative future scenarios is designed, taking account of past experiences and actual results, as well as the risks and opportunities faced in each alternative future scenario. Based on the possible outcomes of each future scenario, the most challenging and accessible future scenario is built as an aspiration<sup>2</sup>. This future scenario is called "aspirational scenario" because, in order to achieve it, all possible efforts and resources will be pushed to the limit through the planning of objectives, goals and actions. It is worth emphasizing that this prospective analysis is a forward-looking examination, it is neither a projection nor a forecast; instead, it builds the trend for each possible future scenario, chooses and builds the aspirational scenario, and then develops a plan to achieve this selected scenario. Also, it must be taken into account that all future scenarios imply inevitable economic cycles, which lead to the possibility of taking contingency measures to prevent, mitigate and overcome the unfavorable impact of temporary adverse shocks that affect the national economy.

**The evaluated future scenarios include strategic variables and indicators that affect approved guidelines for financial policies.** The analysis defined five exploratory future scenarios with a time horizon of the year 2030<sup>3</sup>. The following five exploratory future scenarios evaluate the performance of the strategic variables:

- ✓ **Optimal future scenario**, it defines an ideal goal for each representative indicator of the selected strategic variables. It is also used to analyze and compare with OECD countries that have better sovereign credit ratings.
- ✓ **Trend future scenario**, it implies not taking any additional action to enhance the performance of each indicator, assuming that the historic pattern continues.
- ✓ **Exploratory future scenario A**, it assumes that Peru has adopted structural changes that help to reduce gaps with OECD countries.
- ✓ **Exploratory future scenario B**, it assumes the effects of a permanent 50% decline in the price of commodities.
- ✓ **Exploratory future scenario C**, it assumes the effects of a sudden rise to 5% in the FED interest rate.

<sup>1</sup> The present prospective analysis is based on the analysis made by the different entities from the Economy and Finance Sector, according to Directive N° 001-2014-CEPLAN, "General Directive on Strategic Planning Process – National Strategic Planning System" approved by Resolution N° 26-2014-CEPLAN/PCD.

<sup>2</sup> Translation note: In this case, the meaning of aspiration is not only the ambition to achieve something, but also to bet that that scenario will be achieved through Government's commitment. That is why in Spanish this future scenario is called "Escenario Apuesta".

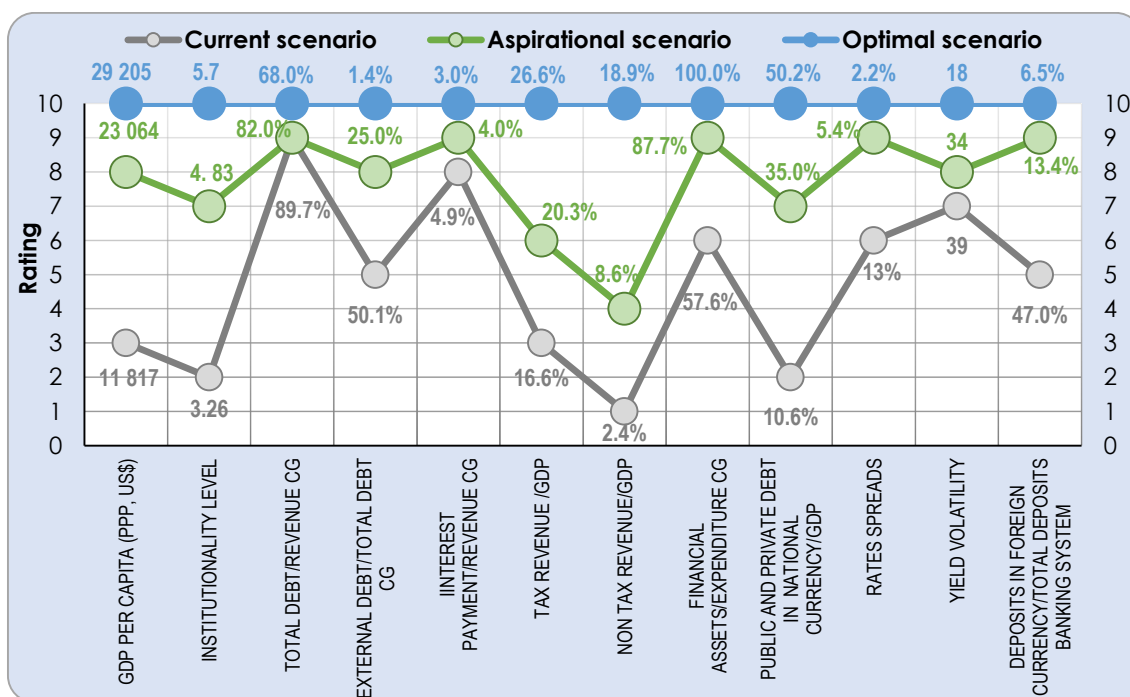
<sup>3</sup> The initial study in coordination with CEPLAN for the whole Economy and Finance Sector also included a time horizon until the year 2030.



### Strategic variables and indicators

| Variable                      | Indicator   |
|-------------------------------|---|
| Gross Domestic Product        | GDP per capita (US\$, purchasing power parity)  |
| Institutional characteristics | Institutional level   |
| Public debt                   | Debt/Revenue CG (%)<br>External debt/Total debt CG (%)<br>Interest payment / Revenue CG (%)                             |
| Public revenue                | Tax revenue CG / GDP (%)<br>Non tax revenue CG / GDP (%)  |
| Public savings                | Financial assets / CG Expenditure (%)   |
| Capital flows                 | Current account balance / GDP (%)   |
| Commodities market            | Commodities prices index <sup>4</sup>   |
| Financial markets development | Government and private bonds outstanding in local currency / GDP (%)<br>Lending and borrowing interest rate spreads (%) |
| Financial stability           | Standard deviation of a 10 year Treasury bond yield (bp)  |
| Financial dollarization       | Bank deposits in dollars / total bank deposits (%)  |
| US monetary policy            | FED reference rate  |

Once the exploratory future scenarios are analyzed and sensitized, a “aspirational scenario” is selected, identifying responses to what might happen in other scenarios (risks and opportunities) and what should be done to avoid deviating and to achieve the desirable future (strategic actions). Taking into account that Peru was invited in 2014 by the OECD to participate in the Programa País, the optimal scenario was analyzed, starting from the current situation of each strategic variable, in order to identify actions that contribute to reaching OECD countries’ standards in terms of public financial asset and liability management. The aspirational scenario sets out a favorable situation with respect to the current scenario, taking into account long-term improvements for the strategic indicators related to the Treasury’s financial asset and liability global management. This will help to achieve a better sovereign credit rating, as long as Peru achieves indicators levels shown by countries with a higher credit rating.



<sup>4</sup> IMF Primary Commodity Prices (2005=100).

**In that sense, the challenge consists in how, under the remit of the Asset and Liability Management Committee, to accelerate and close the gaps and to take opportunities and mitigate identified risks, especially in the context of policy guidelines related to the Treasury's asset and liability management.** The main gaps observed include the small size of the government securities market, the small government securities holdings in the local financial market, the high external debt proportion, and the dollarization of public and private debt, among others. Therefore, as well as the actions related to assets, liabilities, treasury management, and market infrastructure implemented since 2013, and following the policy guidelines on asset and liability management already approved, additional measures to bring the Treasury closer to the aspirational scenario must be taken as follows:

➤ **In asset management**

- a) Approve the criteria and mechanisms for management of the Liquidity Secondary Reserve and explore new sources for financing.
- b) Approve the guidelines and directives for the investment of the Fiscal Stabilization Fund.
- c) Approve the investment criteria for the Sovereign Debt Fund to support price formation.
- d) Auction Treasury fund deposits in coordination with the Central Bank.
- e) Approve policies and criteria to manage all kinds of Treasury deposits and investments within a global asset and liability management.
- f) Train those staff responsible in the three levels of government to improve the implementation of guidelines and criteria to increase the return on their funds and other financial assets.
- g) Make repurchase and resale (repo) operations of government securities in a countercyclical way to provide liquidity and contribute to interest rate stability.

➤ **In liability management**

- a) Increase the supply of Treasury bills to increase participation of the retail market through brokerage firms.
- b) Increase the supply of short-term Treasury bonds for banks, municipal savings and credit banks, insurance companies and mutual funds.
- c) Increase the supply of medium-term Treasury bonds to meet demand from banks, pension funds and non-resident investors.
- d) Maintain the supply of long-term Treasury bonds to meet the needs of pension funds and life insurance companies.
- e) Manage countercyclical and temporary external debt in ways to prevent, mitigate and overcome adverse shocks.

➤ **In treasury management**

- a) Short-term investment of money with buyers and holders of Treasury bonds and bills through repo operations.
- b) Temporary Treasury securities placement with those to whom bonds were not allocated or who could not obtain them in the market through repo operations.
- c) Consolidate financial asset and liability information to monitor institutional policies at all government levels.
- d) Increase the number of electronic payment operations for government obligations.
- e) Implement the fungibility of funds managed by Treasury.

➤ **In market structure**

- a) Weekly update of the sovereign curve and inflation-indexed curve as benchmarks for the local capital markets.



- b) Reduction or elimination of regulatory asymmetries for all participants in the market for sovereign securities.
- c) Improve government securities valuation methodology in line with the progressive development of the market.
- d) Implementation of a guarantee system for the settlement of government securities operations.
- e) Development of a government securities selling platform so that the non-professional retail market increases its domestic savings.
- f) Daily publication of the Treasury Index as a risk-free reference for the market in the long, medium and short-term.
- g) Improve infrastructure technology to develop economies of scale and obtain a lower cost for the retail investor.
- h) Implement an international settlement and clearing system for bonds operations in soles for non-resident investors.
- i) Comply with international norms and standards in all entities that are part of the public exchequer.

### **Expected results**

**To quantify the expected results, four deterministic short-term scenarios were developed, consistent with the 2015-2018 Multiannual Macroeconomic Framework and its fiscal goals and rules.** The purpose of these projections is to measure the impact of the main debt management actions that will be carried out by the end of 2018. These assumptions take into account the economic environment, the financing needed to meet fiscal requirements, and some debt management operations, as well as local and international financial market perspectives that will define access and conditions for new debt issuance.

**Under the baseline short-term scenario economic growth was around 3,0% in 2015.** For the period 2016-2018, GDP growth is expected to recover to 4,7%, principally as a result of larger infrastructure investment and mining production. Additionally, the Central Government's primary balance is expected to converge gradually from -1,4% of GDP in 2015 to -0,9% in 2018. Debt management operations are planned for the next four years in line with actions that will help to accomplish the principles, policies and tactical aims as well as achieving the objective of deepening the government securities market in local currency.

| Baseline scenario                   | 2014  | 2015  | 2016  | 2017  | 2018  |
|-------------------------------------|-------|-------|-------|-------|-------|
| Central Government debt/GDP         | 17,0% | 18,1% | 21,1% | 21,4% | 21,5% |
| Central Government service/GDP      | 1,7%  | 1,7%  | 2,0%  | 1,7%  | 2,1%  |
| Central Government amortization/GDP | 0,7%  | 0,7%  | 0,9%  | 0,6%  | 1,0%  |
| Central Government interest/GDP     | 1,0%  | 1,1%  | 1,1%  | 1,1%  | 1,1%  |

| Gross debt indicators                            | Pessimistic - Optimal<br>at the end of 2018 |
|--|---|
| Percentage in soles in the portfolio             | 49,1% - 65,1%                               |
| Percentage of fixed rate debt                    | 70,1% - 75,8%                               |
| Percentage of internal debt                      | 48,6% - 64,5%                               |
| Average term to maturity (years)                 | 12,6 - 15,6                                 |
| Average term to repricing (years)                | 10,7 - 14,8                                 |
| Accumulated amortization over the next 12 months | 2,8% - 2,7%                                 |
| Percentage of financing flows in local currency  | 60,1% - 81,2%                               |



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**The optimal short-term scenario estimates that the Peruvian economy will register a 3,5% growth, while the pessimistic short-term scenario estimates a 2,5% annual growth.** In the first case, the Central Government's primary balance is expected to converge from a deficit of -1,1% of GDP in 2015 to a surplus of +0,3% of GDP in 2018. In the second case, the Central Government's primary balance will deteriorate gradually to a deficit of -3,5% of GDP in 2018, affecting the expectations of economic agents, private spending (principally the result of fewer and delayed investments), and the timing and amount of debt management operations.

**Finally, we include the 2016 Schedule for the Regular Auction of Treasury Securities.** It sets out the new schedule for regular Treasury bill auctions (four working Tuesdays each month) and Treasury bond auctions (four working Thursdays each month), with issuance of new nominal and inflation-indexed securities, in a context of high volatility in international financial markets as the US Federal Reserve starts to increase interest rates. However, the expected growth of the local economy in the next years will help to increase the demand for government securities in Peru.



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## Schedule for the Regular Auction of Treasury Securities Program

| January 2016 1 |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|
| D              | L  | M  | M  | J  | V  | S  |
|                |    |    |    |    | 1  | 2  |
| 3              | 4  | 5  | 6  | 7  | 8  | 9  |
| 10             | 11 | 12 | 13 | 14 | 15 | 16 |
| 17             | 18 | 19 | 20 | 21 | 22 | 23 |
| 24             | 25 | 26 | 27 | 28 | 29 | 30 |
| 31             |    |    |    |    |    |    |

| February 2016 2 |    |    |    |    |    |    |
|-----------------|----|----|----|----|----|----|
| D               | L  | M  | M  | J  | V  | S  |
|                 | 1  | 2  | 3  | 4  | 5  | 6  |
| 7               | 8  | 9  | 10 | 11 | 12 | 13 |
| 14              | 15 | 16 | 17 | 18 | 19 | 20 |
| 21              | 22 | 23 | 24 | 25 | 26 | 27 |
| 28              | 29 |    |    |    |    |    |

| March 2016 3 |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|
| D            | L  | M  | M  | J  | V  | S  |
|              |    | 1  | 2  | 3  | 4  | 5  |
| 6            | 7  | 8  | 9  | 10 | 11 | 12 |
| 13           | 14 | 15 | 16 | 17 | 18 | 19 |
| 20           | 21 | 22 | 23 | 24 | 25 | 26 |
| 27           | 28 | 29 | 30 | 31 |    |    |

| April 2016 4 |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|
| D            | L  | M  | M  | J  | V  | S  |
|              |    |    |    |    | 1  | 2  |
| 3            | 4  | 5  | 6  | 7  | 8  | 9  |
| 10           | 11 | 12 | 13 | 14 | 15 | 16 |
| 17           | 18 | 19 | 20 | 21 | 22 | 23 |
| 24           | 25 | 26 | 27 | 28 | 29 | 30 |

| May 2016 5 |    |    |    |    |    |    |
|------------|----|----|----|----|----|----|
| D          | L  | M  | M  | J  | V  | S  |
| 1          | 2  | 3  | 4  | 5  | 6  | 7  |
| 8          | 9  | 10 | 11 | 12 | 13 | 14 |
| 15         | 16 | 17 | 18 | 19 | 20 | 21 |
| 22         | 23 | 24 | 25 | 26 | 27 | 28 |
| 29         | 30 | 31 |    |    |    |    |

| June 2016 6 |    |    |    |    |    |    |
|-------------|----|----|----|----|----|----|
| D           | L  | M  | M  | J  | V  | S  |
|             |    |    | 1  | 2  | 3  | 4  |
| 5           | 6  | 7  | 8  | 9  | 10 | 11 |
| 12          | 13 | 14 | 15 | 16 | 17 | 18 |
| 19          | 20 | 21 | 22 | 23 | 24 | 25 |
| 26          | 27 | 28 | 29 | 30 |    |    |

| July 2016 7 |    |    |    |    |    |    |
|-------------|----|----|----|----|----|----|
| D           | L  | M  | M  | J  | V  | S  |
|             |    |    |    |    | 1  | 2  |
| 3           | 4  | 5  | 6  | 7  | 8  | 9  |
| 10          | 11 | 12 | 13 | 14 | 15 | 16 |
| 17          | 18 | 19 | 20 | 21 | 22 | 23 |
| 24          | 25 | 26 | 27 | 28 | 29 | 30 |
| 31          |    |    |    |    |    |    |

| August 2016 8 |    |    |    |    |    |    |
|---------------|----|----|----|----|----|----|
| D             | L  | M  | M  | J  | V  | S  |
|               | 1  | 2  | 3  | 4  | 5  | 6  |
| 7             | 8  | 9  | 10 | 11 | 12 | 13 |
| 14            | 15 | 16 | 17 | 18 | 19 | 20 |
| 21            | 22 | 23 | 24 | 25 | 26 | 27 |
| 28            | 29 | 30 | 31 |    |    |    |

| September 2016 9 |    |    |    |    |    |    |
|------------------|----|----|----|----|----|----|
| D                | L  | M  | M  | J  | V  | S  |
|                  |    |    |    | 1  | 2  | 3  |
| 4                | 5  | 6  | 7  | 8  | 9  | 10 |
| 11               | 12 | 13 | 14 | 15 | 16 | 17 |
| 18               | 19 | 20 | 21 | 22 | 23 | 24 |
| 25               | 26 | 27 | 28 | 29 | 30 |    |

| October 2016 10 |    |    |    |    |    |    |
|-----------------|----|----|----|----|----|----|
| D               | L  | M  | M  | J  | V  | S  |
|                 |    |    |    |    |    | 1  |
| 2               | 3  | 4  | 5  | 6  | 7  | 8  |
| 9               | 10 | 11 | 12 | 13 | 14 | 15 |
| 16              | 17 | 18 | 19 | 20 | 21 | 22 |
| 23              | 24 | 25 | 26 | 27 | 28 | 29 |
| 30              | 31 |    |    |    |    |    |

| November 2016 11 |    |    |    |    |    |    |
|------------------|----|----|----|----|----|----|
| D                | L  | M  | M  | J  | V  | S  |
|                  |    | 1  | 2  | 3  | 4  | 5  |
| 6                | 7  | 8  | 9  | 10 | 11 | 12 |
| 13               | 14 | 15 | 16 | 17 | 18 | 19 |
| 20               | 21 | 22 | 23 | 24 | 25 | 26 |
| 27               | 28 | 29 | 30 |    |    |    |

| December 2016 12 |    |    |    |    |    |    |
|------------------|----|----|----|----|----|----|
| D                | L  | M  | M  | J  | V  | S  |
|                  |    |    |    | 1  | 2  | 3  |
| 4                | 5  | 6  | 7  | 8  | 9  | 10 |
| 11               | 12 | 13 | 14 | 15 | 16 | 17 |
| 18               | 19 | 20 | 21 | 22 | 23 | 24 |
| 25               | 26 | 27 | 28 | 29 | 30 | 31 |

|  |  |
|--|--|
|  | Auction of T-bills in the term of reference for 3 months and 9 months                    |
|  | Auction of T-bills in the term of reference for 6 months and 12 months                   |
|  | Auction of T-bonds 12FEB2018 VAC, 12FEB2021 nominal, 12FEB2040 VAC and 12FEB2055 nominal |
|  | Auction of T-bonds 12FEB2019 nominal, 12FEB2026 nominal, 12FEB2030 VAC and 12FEB2054 VAC |