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TECHNICAL REPORT # 2: THE 2017-2019 MEDIUM-TERM DEBT MANAGEMENT STRATEGY

June 2016

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June 2016

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Glossary of acronyms

AMD	Armenia Drams
BO	Back Office
CBA	Central Bank of Armenia
DBPM	Department of Budget Process Management
DeMPA	Debt Management Performance Assessment
DMFAS	Debt Management and Financial Analysis System
DMP	Department of Macroeconomic Policy
DSA	Debt Sustainability Analysis
FO	Front Office
GDP	Gross Domestic Product
GoRA	Government of the Republic of Armenia
ICD	International Cooperation Department
IMF	International Monetary Fund
MO	Middle Office
MOF	Ministry of Finance
MoFA	Ministry of Foreign Affairs
MoJ	Ministry of Justice
MTDS	Medium-Term Debt Management Strategy
MTEF	Medium Term Expenditure Framework
PDMD	Public Debt Management Department
RA	Republic of Armenia
UNCTAD	United Nations Conference on Trade and Development
WB	Worldbank
USD	United States Dollars

Part I: Comments on the 2017-2019 MTDS.

1. Introduction.

The Medium-Term Debt Management Strategy (MTDS) is a plan governments are putting in place to attain a desired structure of the public debt portfolio in the medium-term, that is to say a period between 3 and 5 years.

Generally, governments are publishing a strategy document every year which specify clear objectives for the management of their debt and explain how these objectives will be met. This is the case in Armenia.

In practice, however, transitions countries like Armenia are facing many challenges to fulfil these objectives and optimizing the structure of government debt. The main challenge is certainly the exposure of government debt to foreign currency risk.

Indeed, the existing portfolio contains 85% of debt denominated in foreign currency, mainly loans granted by multilateral organizations for project financing, and 15% of debt denominated in local currency (of which almost 100% are Treasury securities). As consequence, a shock on the exchange rate can generate an important deterioration of the fiscal stance, as experimented in December 2014 when the Armenia dram lost 15% of its value against US dollar, provoking a surge in the government debt to GDP ratio.

Reducing foreign currency risk is a difficult challenge because the existing structure of the debt portfolio cannot be changed from one day to another, even if government decides to make a lot of efforts to develop the domestic debt market. It is highly improbable to see significant changes by 2019 from that perspective and authorities should be careful to set realistic targets to the strategy.

However, it does not mean that government should not commit himself in defining a desired structure of debt portfolio, which reflects its preferences in terms of cost-risk trade-off, and make what is necessary to go towards this direction in the medium-term.

Instead of that, it seems the MTDS document published by the Ministry of Finance (MOF) is not considered by the authorities as an important decision-making tool and government borrowing behaviour remains largely opportunistic.

This situation is due notably to the lack of integration of external borrowing decisions with the MTDS. Project financing is still in the hands of lines ministries which are, in practice, negotiating loans financial conditions with external creditors and choosing the funding.

As it is the case in many other middle income countries, transferring this responsibility to the Ministry of Finance is not so easy, and the integration of all the debt management functions under a unique entity is difficult to achieve. For this reason, the MTDS could play the role of catalyst and allow all the participants to government borrowing decisions to meet under the same framework (for instance, by creating a high level debt management committee which does not exist at the moment).

But, this would not be enough. The Ministry must ensure domestic debt market participants of its commitment to develop the market and remain consistent with its financing plan along the year. In 2016, government announced net domestic borrowing needs of 42 billion drams, but this amount has been recently revised in order to finance a bigger-than-expected gap in government deficit.

This kind of decision is not in line with international best practices and makes government unpredictable to the eyes of market participants. If this opportunistic behaviour is repeated overtime, it generally translates in higher issuance costs for government. This factor is probably integrated in the bids of market participants to Treasury Securities in the form of a premium asked by investors on yields.

The report is organized as follows:

- Current status and recommendations to improve the MTDS are discussed in the following sections:
  - Current institutional framework of the MTDS, including a description of the implementation process.
  - Possible improvements to technical elements of the Cost-at-risk analysis.
  - General recommendations to improve the design, the implementations and the monitoring of the MTDS.
- **Annex 1** suggests several changes to the current timetable of the preparation, publication and monitoring of the MTDS according to best practices. It is a guidance note for the MTDS process.
- **Annex 2** presents the draft template of the government debt management strategy (2017-2019) proposed by the consultants, following work sessions with the PDMD. This draft contains:
  - objectives and scope of the MTDS
  - debt developments observed in 2015-2016
  - strategy for the period 2017-2019
  - the section on macroeconomic assumptions would need to be drafted, once budget department will submit updated figures on government revenues and expenditures. For the moment, the baseline scenario has been prepared with previous data.

2. CURRENT INSTITUTIONAL FRAMEWORK OF THE MTDS.

2.1. Legal Framework.

The Law on State Debt of 2008 requires government to prepare a *"strategic three-year plan of the Government debt management"* to be published every year (in July) with the Medium Term Expenditures Framework (MTEF)[1]. This is the Medium-Term Debt Management Strategy (MTDS).

By ministerial order, the responsibility to prepare the MTDS lies in the Ministry of Finance and this task is a function of the Middle Office of the PDMD. The document is published under the name of *Government Debt Management Strategy* because the scope of the strategy is limited to Central Government and the external debt of the Central Bank of Armenia (CBA) is excluded from the strategic planning[2].

The main objective of government debt management is *"to ensure permanent possibility of meeting financial demands of the Government, thus reducing the size of debt servicing in the long-term perspective"* and *"Optimizing the structure of the Government debt, considering potential risks"*[3].

Objectives of the MTDS are discussed in details in the draft template of the government debt management strategy (2017-2019) proposed by the consultants, following work sessions with the PDMD, and attached in Annex 2 of the present report.

At the moment, there is no high level committee to evaluate and approve the strategy prepared by the PDMD. But, the Minister of Finance must approve the debt management strategy. Therefore, the MTDS remains a mandatory product of the MOF rather than an outcome of discussions at the cabinet of ministers.

2.2. Current Implementation of the MTDS

The process of elaboration of the MTDS starts each year in April when the Budget Department and the Macroeconomic Department of the Ministry of Finance send to the Middle Office (MO) of the PDMD their forecasts for government revenues, expenditures and deficit and macroeconomic variables such as GDP and inflation. The Inception Report prepared by the consultants offers a detailed description of the process and current timeline of the MTDS[4].

It is worth mentioning the macroeconomic department produces official forecasts of macroeconomic variables for the MTEF, but not of market variables such as interest rates and exchanges rates. Therefore, the PDMD uses forecasts of financial information providers (Bloomberg) and other internal calculations.

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[1] Article 12, paragraph 1 of the Law on State Debt of the Republic of Armenia, 2008.
[2] Article 9, paragraph 4 of the Law on State Debt states that the objectives and the management of the External Debt of the CBA is the responsibility of the CBA and should be set out in the Central Bank Law. Indeed, Central Bank external debt cannot be considered a liability of the government. Although the law defines "State Debt" as the sum of government debt and CBA externa debt, government is not accountable for the second one.
[3] Article 9 of the law on State Debt of 2008.
[4] Please see the Inception Report of the current project "Support to the Public Debt Management Department of the Armenian Ministry of Finance", May 2016, Annex 1, Component 2: Enhancing the capacity of the Middle Office, under the MTDS subsection (pages 23-24-25).

Based on these inputs and the debt service projections made by the Back Office (BO), the MO realize a Cost-at-risk analysis using the IMF/WB toolkit and, for the first time this year, the MTDS document written by the PDMD will result from the outcomes of this Cost-at-risk analysis.

The Cost-at-risk analysis consists in defining and quantifying a set of cost and risk indicators of the debt portfolio to ensure changes in a cost measure, following a shock on financial variables or a deviation from macroeconomic assumptions, will remain in the risk tolerance levels corresponding to government preferences.

After the publication of the MTDS in July with the MTEF, targets indicators of the strategy are monitored on a monthly basis and an evaluation of the MTDS is done in the annual debt report published around April of the following year.

The annex 1 of this report suggests improvements to the process and current timeline of the MTDS.

3. POSSIBLE TECHNICAL IMPROVEMENTS TO THE COST-AT-RISK ANALYSIS

In order to achieve the main objectives of government debt management, the Ministry has to first operationalize these general objectives (Subsection 3.1) and, then, take policy decisions (Subsection 3.2) to comply with these operational targets set in the strategy. There lies the difficulty of preparing a MTDS rather than in the comparison of costs and risks of different strategies (Subsection 3.3).

In fact, consultants worked with the PDMD on running different kind of simulations with the MTDS toolkit and could see staff was comfortable with technical aspects of the tool.

3.1. Target Indicators of the MTDS

There is a trade-off between setting general indicators with large range target values, easy to attain, that do not say much about risk exposure of the portfolio and setting more precise indicators which reduce the marge of manoeuvre of the debt manager for better or worse.

The definition and choice of cost and risk indicators of the MTDS 2017-2019 is discussed in the draft template strategy document available in the annex 2.

In summary, the Ministry focuses its monitoring of the strategy on 2 indicators which are quite general and set large targets ranges:

1. Average time to maturity of the whole debt portfolio with a target range comprised between 8 and 11 years.
2. The share of budget deficit finance by net borrowing from domestic sources (excluding promissory notes) must be at least 25%

These two target indicators are giving information on foreign currency risk and refinancing risk, but not on interest rate risk of the portfolio. One indicator of this dimension could be the share of debt with interest rate to be refixed in 1 year, which represents currently 14,4% of the portfolio.

Furthermore, the indicator of foreign currency risk could be simply the share of debt denominated in foreign currency on total debt. It was 85% in 2015. This level is very high and even with an aggressive domestic issuance strategy, it will hardly diminish below 80% at the end of 2019.

Generally speaking, indicators on the whole debt portfolio are not very informative and target range tend to be large, saying little about the portfolio risks.

As a consequence, modern approach used by advanced Debt Management Offices is to manage different portfolios according to more micro targets.

For example, debt managers could consider different targets for domestic and external debt, even separating inside of these categories market securities and loans financing.

Few suggestions could be:

- **Refinancing risk**: Share of domestic debt (securities) maturing in 1 year below 20%. Currently, it is 17%, but in 2017 it will be 22%. This implies actively managing buybacks and smoothing domestic issuance strategy to control refinancing risk.

- **Interest rate risk:** Percentage of fixed rate external debt above 75% of total external debt. At the moment, this percentage is at 87%, but it could decrease to 75% at the end of 2019 due to the projected increase of multilateral floating rate loans. However, interest rate risk is not a major risk in terms of impact on interest costs and debt to GDP ratio, therefore this indicator is probably not a priority.

- **Foreign currency risk:** Debt denominated in foreign currency represents maximum 70% of total debt. This target seems unrealistic in the current context, because demand for domestic debt is limited. However, the implementation of the pensions reform complemented with measures to slowly dedollarize the Armenian economy would help providing the necessary demand for domestic debt and reduce the high level of foreign currency debt in the portfolio.

- **Foreign currency risk:** Another indicator could be the share of international reserves covering foreign currency interest and principal repayments arriving at maturity.

Finally, it is worth mentioning that the percentage of total debt portfolio with interest rate to be refixed in less than 1 year will jump in 2019. It is currently 14,4%, but it will reach 35% in 2019. The same year the ratio of short-term debt denominated in foreign currency over the international reserves will exceed 30%, against 3,9% currently. This is due to the large amount of the Eurobond maturing in 2020 compared to the total debt portfolio.

In 2019, the strategy would need to explain how the Ministry will manage the Eurobond rollover risk in case of adverse market conditions. There are several ways to manage it, but all come at a cost. For instance, one could pre-finance part of the amount or put in place a standby facility to cover the amount of the Eurobond and use it in case of bad market conditions.

3.2. Strategic decisions to attain debt management objectives

In order to fulfil debt management objectives, the PDMD set a series of operational objectives that could be left outside the MTDS because they might be in conflict with general objectives or simply not under the control of the debt manager:

- Realization and management of lower interest rates. Indeed, the level of interest rate is decided by the market.
- Issue new Eurobonds to finance budget deficit. Issuing new Eurobonds is in contradiction with reducing the size of external debt. Therefore, one could consider rollover current Eurobonds and maintain access to international markets but avoid increasing Eurobonds outstanding amount.
- Development of the retail market and saving bonds will stay marginal in any case compared to the debt management strategy.
- Changes in the legislation or the trading electronic systems, improvements in debt reporting, changes in the selection process of primary dealers are all operational points. They can eventually be discussed in an operational implementation section of the document, but not in the strategy itself.
- Discussions about fiscal policies should be kept outside of the debt management strategy document.

Other suggestions could be to introduce:

- **Inflation linked bonds** (for example 20 years): this could potentially increase investors base and appetite for debt denominated in drams. The simulations tend to show that impact on cost is limited as long as inflation stays under control.

- **Revise domestic debt issuance to increase 10 years benchmark bond volumes**: By changing issuance path (calendar) of 10 years bond, one could probably concentrate issuance on one maturity rather than multiplying maturities around 10 years. Additional work is needed there when we will deal with domestic bond market development.
- **Increase slightly floating rate debt:** Considering concessional terms for multilateral and bilateral loans will shrink, maybe a slight increase in floating rate external debt could be imagined to reduce increasing costs of fixed rate debt.

3.3. Cost-at-risk analysis of different strategies

In total, 6 strategies have been compared with the MTDS toolkit:

1. **Status quo**: An increase of net domestic borrowing to 42 billons in 2016 and 45 billons from 2017 (these are the current anticipated amounts) based on current information of future loan terms for each instrument. This is the strategy preferred.

2. **Aggressive Domestic Issuance:** Double net domestic borrowing amounts, but keep the same proportion for external and domestic instruments. This strategy is more expansive but less risky from a foreign currency risk perspective. Ideally, it should be preferred to strategy 1, but it seems unrealistic strategy.

3. **Index-linked 20 years' bonds**: same as strategy 1, but an additional domestic instrument has been added representing 15% of total domestic issuance. The share of 10 years benchmark bond issuance has been increased to 20%. T-Bills stay at 20% and 20 years fixed at 15%, while 3 years and 5 years issuance have been reduced to 15%. This strategy results in similar cost and risk indicators than strategy 1.

4. **Eurobond issuance in 2017 and 2019:** representing in each one of these 2 years 50% of external debt new borrowing. In addition, net domestic borrowing has been diminished to 10 and 11 billons to take into account the large amount needed to issue on international capital markets. This strategy should be rejected as it increases significantly foreign currency risk and goes against development of domestic market.

5. **Increase in floating rate debt:** Share of multilateral and commercial floating rate debt denominated in USD and Euro has been increased. Strategy has only a marginal effect on cost reduction associated with a slightly higher refinancing and interest rate risk.

6. **Status quo with same Net Domestic Financing (NDF)**: Same strategy as strategy 1, but keeping 38 billons of NDF (like the target for 2015) just to compare effects with the strategy 1.

Usually, it is better to avoid showing results of each strategy in the published strategy document for the sake of clarity. Reader must not be confused and, in the end, it is important to talk only about the strategy selected and not what could have been done instead.

MTDS toolkit has bias toward existing portfolio. It means impact of new borrowing on cost and risk indicators is small compared to current debt flows projections. It is normal, but sometimes it can give the impression that the portfolio is more resilient to shock than it really is.

Change in macroeconomic assumptions often have a bigger impact than changes in market variables. Considering a lower GDP growth and slightly higher government expenditures, cost and risk indicators are deteriorating substantially.

By changing representative instruments in the MTDS toolkit, one can add instruments denominated in euro and in SDR (not only USD) and look at the impact of variation of AMD against both currencies. However, performing this analysis does not change much cost-at-risk analysis because the share of euro denominated debt in the portfolio is low and SDR is mainly composed of USD.

It is possible to make simulations of corner strategies for didactical purposes. Corner strategies are unrealistic strategies which exaggerate changes in the composition of debt portfolio to stress impact on cost and risk indicators.

4. Recommendations and Next Steps

4.1. Recommendations

The following list are preliminary recommendations which should be revised and discussed again during the next mission:

1. **Change the timeline of the elaboration and publication of the MTDS document.** See annex 1 for more details.

2. **Revise and modify target indicators of the strategy.** By the end of this year, when the final version of the MTDS 2017-2019 will be prepared, target indicators could be modified, as discussed in annex 2.

3. **Link the domestic debt borrowing plan to the MTDS prepared at the end of the year.** The borrowing plan is used as an adjusting variable in spite of the objective to develop the domestic debt market and the target indicator which sets a minimum of 25% of domestic debt borrowing.

4. **Link the external debt borrowing plan to the MTDS in order to have a complete financing plan.** In the short-term, this recommendation seems hard to implement, considering line ministries are still undertaking debt management functions, such as the negotiation of loans financing terms for projects. In the end, it is the only way for the strategy which is selected to finance government needs to really become an outcome of the cost-at-risk analysis of the MTDS.

5. **Consider the creation of a high level committee for debt management.** Considering government debt management is currently not centralized under a unique debt management office, the MTDS could be a catalyst for this integration by allowing all the participants to government borrowing to take decisions under the same framework. The debt management committee could be the platform for taking decisions.

6. **External Debt Borrowing and Domestic Debt Issuance amounts should not be given as an input of the MTDS.** They should be the result of the Cost-at-risk analysis that will suggest the financing mix to be presented and discussed in the Debt Management Committee (or the Minister if a Debt Management Committee is not approved). This would be an important change compared to current situation.

7. **An annual borrowing plan should be prepared** based on the strategy selected by the Ministry and published at the same time.

8. **Update the MTDS document with the latest Net Domestic Financing projections**. According to information obtained at the end of the mission, NDF will increase due to lower than expected tax revenues and an increase in deficit gap. Once budget department will send revised figures, the MO should revise the Macroeconomic baseline scenario accordingly (in the MTDS toolkit) and run again simulations.

9. **Financing higher than expected deficit by increasing the total domestic debt issuance amount in the middle of the year is not a good practice**. It changes completely the debt management strategy of the government, but above all, it gives a bad signal to market participants about the predictability of government securities

issuance and the commitment of authorities to their financing plan. In the end, this tends to increase risk premium asked by investors on government securities yields.

10. **This increase of the domestic debt issuance could be presented as an effort of the government to develop the domestic debt market.** But, it would imply to keep similar domestic issuance amounts in the coming years even in the case where government financing needs will diminish or market yields will increase. At the moment, it seems that market absorption capacities are there. Indeed, the demand for Treasury Securities is increasing because CBA has enlarged capital requirements for banks and diminished mandatory reserves requirements, while new foreign investors seem to be interested in entering the market. As consequence, government securities yields went down in the last month supported also by expectations of an interest rate cut decision from the CBA. However, if this trend reverses in the future, the Ministry should avoid opportunistic behaviour and maintain as much as possible sizeable issuance amounts in the domestic market.

11. **In any case, the MTDS will have only a moderate impact on the development of the domestic debt market, many other reforms are necessary**. The implementation of the current pensions reform, the partial de-dollarization of the Armenian economy and measures to facilitate access of foreign investors to domestic securities are essential to increase the size of the market and diversify investors base.

12. **Current small proportion of domestic debt in total government debt makes the increase in domestic securities issuance unlikely to reduce significantly foreign currency risk** of the portfolio in the medium term. As a consequence, government will need to search for other possible hedges to this risk. Increasing international reserves of the CBA or the total size of government financial assets denominated in foreign currency could be used as natural hedges to the foreign currency risk.

13. **Measures to create a domestic currency swap market and increase efficiency of local money market** could complement government efforts to reduce foreign currency risk of government debt portfolio in the long term and, hence, strengthening the resilience of the Armenian economy to drams' depreciation shocks.

4.2. Next steps

- PDMD should read the present report, as well as the annexes, and send their comments to consultants.

- Based on this report and the draft template of MTDS (annex 2), PDMD could revise and modify its target indicators.

- Once the latest budget and macro figures will be received by the PDMD, the MTDS analysis should be updated accordingly and simulations run again. Results should be send to consultants.

- During the mission dedicated to Operational Risk Management (End November/early December), consultants will revise the MTDS document prepared by the PDMD and suggest final modifications to the MTDS 2017-2019. Links with the domestic borrowing plan for 2017 will be discussed. It is up to the PDMD to decide, if they will publish in December or January the MTDS (consultants strongly recommend it).

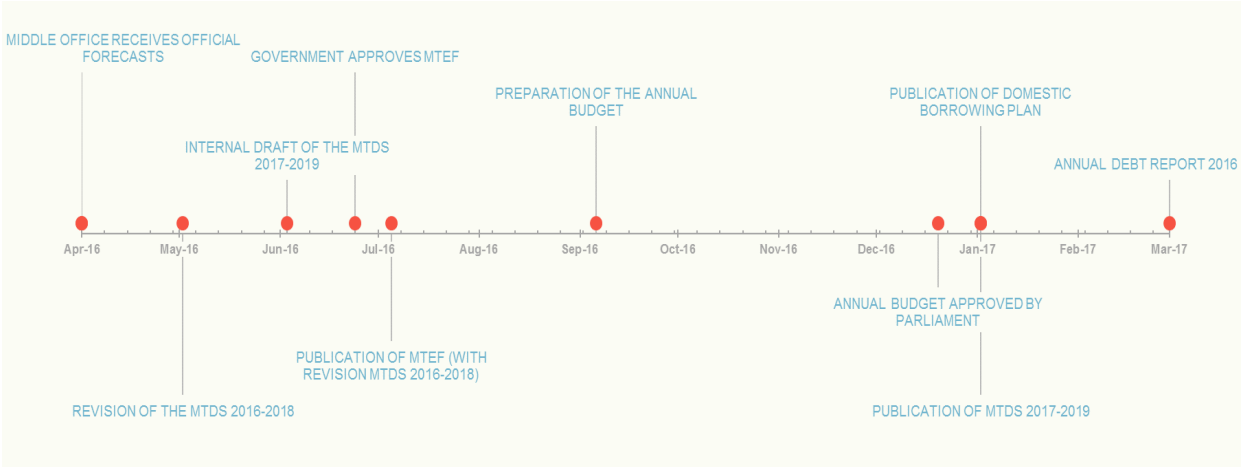
Part II: Medium-Term Debt Management Strategy – Process note

This annex suggests several changes to the current timetable of the preparation, publication and monitoring of the Medium-Term Debt Management Strategy (MTDS) prepared by the Ministry of Finance.

- Generally, the MTDS document is published at the beginning of the year and is complemented with a borrowing plan for the year. It is released with budget documents. For instance, in January 2017, Ministry would release the MTDS 2017-2019.
- The MTDS document is prepared in December by the Public Debt Management Department (PDMD) based on revised figures of the Medium Term Expenditure Framework which are used for the budget preparation.
- A revision of the MTDS could take place in May with information send by the Budget Department and Macro Department in order to publish revised MTDS in July with the MTEF document.

The new timeline would be as follow:

Suggested MTDS timeline



MTDS toolkit – inputs – outputs

The Cost-at-Risk analysis will be made by the Middle Office of the PDMD using the MTDS toolkit of the IMF and World Bank (Excel Spreadsheet).

The following inputs are necessary (to be sent to the MO by the end of November and in April for the MTDS revision):

1. Cash flows projections of the existing government debt portfolio. Prepared by the Back Office with data extracted from the DMFAS system and excel spreadsheet for domestic debt.
2. External Debt new borrowing terms and conditions. Prepared by the Back Office based on information received from Creditors (Multilateral and Bilateral).
3. Budget forecasts for the next 3 years with Government revenues and expenditures, primary deficit, interest expenditures, gross financing needs and other relevant information (Budget Department).
4. Macroeconomic assumptions for the next 3 years with GDP, inflation, international reserves and other relevant information (possibly exchange rate and interest rates

forecasts - Macro Department). If exchange rate and interest rates forecasts are not prepared by the Macro Department, the MO can use financial information providers (Bloomberg) or calculate forward curves and exchange rates forecasts based on the Excel spreadsheet presented by the EU consultants.

Based on these inputs, the MO will complete the MTDS toolkit with the following elements:

1. Shocks scenarios on exchange rates and interest rates. Shock scenarios on Macro variables could be simulated by changing Macro assumptions in the spreadsheet and saving the file under another name.

2. Alternatives new borrowing Strategies to be introduced in the Strategy sheet.

MTDS toolkit outputs will be analyzed by the MO:

1. Cost and risk indicators of the existing portfolio.

2. Cost and risk indicators for the selected strategy and alternatives strategies under baseline scenario and shock scenarios.

Prepare MTDS document and publish

Once strategy has been presented, revised and approved by the Debt Management Committee, the MO can prepare the MTDS document to be published in January.
The same process will take place before the preparation of the mid-year review of the strategy.
An Ex-post evaluation of the MTDS 2017-2019 could be realized each year in the Annual Debt Report (March 2018) or with the revision of the MTDS (July 2018).
Of course, monitoring of the main target indicators of the MTDS could be done through a table of the monthly debt bulletin.

Part III: Government Debt Management Strategy 2017-2019

Appendix

RA Government Decree
N723-N of July 7, 2016

2017-2019 GOVERNMENT DEBT MANAGEMENT STRATEGY OF THE REPUBLIC OF ARMENIA

Content

- Introduction,
- Objectives and scope of the RA Government Debt Management Strategy,
- The developments observed in Government debt management from the beginning of 2015 to June 2016,
- 2017-2019 RA Government Debt Management Strategy
  - Macroeconomic assumptions and key risks factors,
  - Benchmark indicators and measures to be implemented,
  - State Budget deficit financing
  - Cost and risk analysis of the Government debt existing portfolio,
  - Selection of the debt management strategy,
  - Cost and risk analysis of the selected strategy,
  - Sensitivity analysis,
  - Conclusions.
- Appendix.

Introduction

The *RA Government Debt Management Strategy* sets out the plan for attracting the necessary borrowings to finance the state budget deficit defined by the RA Legislation and by the Economic Development Programs of the RA Government. The strategy also responds to the objective of the Ministry of Finance to manage prudently the risks associated with the government debt portfolio. It is published annually and contributes to the predictable and transparent management of the government debt.

Government debt management strategy clarifies the borrowing policy including Government debt management benchmark indicators, goals and programs, identifies the Government debt management risks, as well as outlines the principles, baselines and implemented measures under which the Government will not put the fiscal policy sustainability at risk.

Debt management plays an important role in the public finance management process especially in the middle or low income countries, where, with limited resources, the Government has to borrow to implement the fiscal policy contributing to the economic growth.

The Ministry of Finance applies a Cost-at-risk analysis, using among others the approach developed by the WB and IMF, in order to formulate the desired composition of Government debt portfolio., The analysis allows determining the portfolio indicators of costs and risks and assessing the possible impact of shocks on the debt portfolio. In the process of drafting the strategy, restrictions of the RA Government debt management like the absorption capacity of the domestic debt market or the limited access to external concessional borrowing were taken into account.

Generally, the RA Government debt management strategy presents the best option between possible costs-risks trade-offs under the baseline scenario and several shocks scenarios. The selection of the strategy is based on the principles of meeting financial needs with acceptable costs and risks and ensuring government debt sustainability in the long run.

Objectives and scope of the RA Government Debt Management Strategy

The RA Government debt management strategy is developed in line with the RA Law "On State Debt" of 2008 that regulates the relations concerning the RA state debt and is aimed at ensuring efficient and transparent organization of public debt management process.

The law on State Debt specifies “The main objective of the Government debt management shall be ensuring permanent capacity of meeting financial demands of the Government, thus reducing the size of debt servicing in the long-term perspective.”
The following objectives of the Government debt management are also defined in the law: a) optimization of the structure of the Government debt, considering potential risks, b) coordination of public debt management and fiscal policies.

In other words, the objective of the debt management strategy can be described as achieving a desired composition of the debt portfolio that minimizes the borrowing costs without increasing risks significantly.

The scope of the strategy is limited only to the RA Government debt and the analysis does not include the RA Central Bank’s external debt. Indeed, the law stipulates that the CBA is responsible to define debt management objectives for the debt assumed on behalf of CBA. .

The developments observed in Government debt management from the beginning of 2015 to June 2016

- At the end of 2015, the ratio Government debt/Previous Year GDP reached 46.1%. Such level of debt burden stayed within manageable level and didn't exceed the 50% target specified in the RA law "On State Debt".
- As a result of management of the Government debt the average time to maturity benchmark indicator was within the defined 8-11 years range: amounting to 9.7 years at the end of 2015.
- Net domestic borrowing (excluding promissory notes) financed only 4,4% of State Budget Deficit against the minimum target of 25% set as benchmark indicator. This low percentage is due to the issuance of a Eurobond denominated in US dollars in March 2015 that increased substantially borrowing from external sources.
- On March 26, 2015, 10 years Eurobonds were issued with nominal value of USD 500 million, with 7.15% coupon and semiannual coupon payments. At the same time USD 200 million from the proceeds were channeled to buy back the part of USD 700 million Eurobonds issued on September 30, 2013.
- The RA Government continued cooperation with the creditors providing concessional loans. The benchmark indicator for concessionality of new loan agreements was set up to 30% as a result of mutual agreement between the Republic of Armenia and IMF. However, in 2015, the average level of concessionality was only 19%, due to the issuance of the Eurobonds in March. Issuance was agreed with the IMF mission. It should be mentioned that while assessing the degree of concessionality of new loans, along with the loans, the grants are also taken into consideration.
- The Ministry of Finance of the RA suspended regular allocations of GS in the first quarter of 2015, as a result of the absence of demand for Government securities (GS) due to instability in the financial market at the end of 2014. Since April, the possibility to borrow from the domestic market has been recovered. The Ministry of Finance has implemented a bond switch program in February-March 2015 which helped considerably the recovery. The large proceeds received from the issuance of Eurobonds upset the initial plan of financing AMD 40 billion of the state budget deficit through GS... However, according to the yearly results, AMD 15.56 billion of the deficit was finally financed through Government Securities.
- In 2015, GS allocated amount reached AMD 144.8 billion in nominal value, of which the proceeds amounted to AMD 127.1 billion; the amount of GS redeemed and bought back summed AMD 111.5 billion and AMD 31.1 billion interest payments was made.

- In 2015, disbursements from external loans amounted to USD 409.9 million, while during that period principal repayments of external loans totaled to USD 60.9 million and interest payments made up USD 45.4 million.

2017-2019 RA Government Debt Management Strategy

Macroeconomic assumptions and key risks factors

Macroeconomic indicators used in developing debt strategy should be consistent with the forecasted macroeconomic framework applicable to developing the fiscal policy. Therefore, Government strategy is based on the macroeconomic forecasts that are consistent with the macroeconomic estimates of 2017-2019 MTEF.

Realistic macroeconomic forecasts are important inputs of cost and risk analysis , as the deviations from macroeconomic assumptions can essentially change the level and direction of cost and risk indicators. For example, a lower GDP growth or significant increase of the budget deficit may substantially deteriorate the cost and risk indicators.

The indicators on which the 2017-2019 Government debt management strategy is based are presented in the following table:

Table 1: Indicators underlying 2017-2019 RA Government debt management strategy (AMD billion)

	2017 Forecast	2018 Forecast	2019 Forecast
GDP (nominal)	5,551.3	5,919.4	6,372.0
State budget revenues	1,196.5	1,286.8	1,390.3
State budget primary expenditures	1,243.3	1,284.5	1,371.9

In the recent years, RA Government debt management strategies were implemented in a difficult environment and were subject to the impact of negative factors conveyed from the external world. Particularly, in a context of continuously decreasing foreign remittances, at the end of 2014 the monetary rules were tightened for a long time in order to restore the stability in the RA financial market and to restrain the inflationary expectations, which had its own immediate impact on the domestic debt market.

Since the end of 2015 the monetary policy has had expansionary tendency, and at the beginning of 2016 the CBA considered appropriate to continue easing monetary rules. This was notably expressed by several cuts to the refinancing rate.

Benchmark indicators and measures to be implemented

- As of December 31, the RA Government debt/Previous Year GDP ratio will not exceed the 60% threshold defined by the article 5 of the law "On State Debt". Forecasts indicate that during the whole period 2017-2019, Government debt/Previous Year GDP ratio would exceed 50%, therefore according to RA Law "On State Debt" (article 5, point 7), State budget deficit cannot exceed 3% of the average GDPs of the past 3 years, starting from 2018.

Table 2: 2016-2019 RA Government debt indicators

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
RA Government debt (AMD billion)	2,408	2,649	2,785	2,976
in % to GDP	44.3	47.7	47.0	46.7
in % to Previous Year GDP	49.5	50.3	50.2	50.3

- In the medium and long-term, with the targeted change of the structure and composition, as well as the significant increase in the number of market participants, the share of the state budget deficit financed from the domestic sources will increase. It will tend to reduce the foreign exchange risks, as well as will lay the ground in the financial market for using new instruments (floating, index linked, targeted and so on) and for further development of the market.
- The Government will continue its efforts aimed at improving the electronic system of placement of Government bonds, their buybacks and exchange. Appropriate communication channels will be established to ease the entrance of foreign investors into the domestic market.
- The Government will accumulate financial resources and build up buffers, in case of negative developments in the local security market. Pension and insurance reforms will increase market appetite for GS and give government more flexibility to finance budget deficit from domestic sources.

- The selected strategy does not contemplate any new Eurobonds issue at the moment. However, in the medium-term, government reserves the right to issue new Eurobonds if it is appropriate. For instance, that could be the case if negative impact from the external environment increase risks associated with the implementation of the fiscal policy. The Legislation regulating debt operations will be reviewed in accordance with the best international practice.
- One of the most important factors of efficient debt management is transparency; therefore Government will regularly and openly report on its activities to investors and general public.
- The Ministry of Finance will continue buybacks and exchange of GS with the view to smooth debt repayment schedule and contribute to the development of the secondary market.
- The Ministry of Finance has taken measures to consolidate the numbers of issuances of GS and increase the volumes of outstanding GS with the objective of increasing bonds liquidity.
- Highlighting the development of the retail market of GS, actions will be taken to enlarge the scope of investors of saving bonds. In this respect, along with the actions directed to enhancing the confidence towards the Government, public awareness activities will be activated among investors, as well as electronic system for retail sale of GS will be introduced.
- Cooperation with foreign creditors will be continued and deepen giving the preferences to cooperation with the creditors offering loans with concessional terms, free exchangeable currency and fixed interest rates.
- The Ministry of Finance will evaluate the possibility to convert floating interest rates loans into fixed ones in line with the procedures established by foreign creditors.
- In the medium-term, Government will make efforts to maintain the concessionality level of new external loans to an average benchmark level of 30%, as it was agreed with IMF.
- The Ministry of Finance set the following benchmark indicators for the RA Government debt portfolio:

Table 3: 2017-2019 RA Government debt management benchmark indicators

	Benchmarks
Refinancing risk	
Average Time to Maturity	8 – 11 years
The share of GS maturing in the next year (at the end of the year)	maximum 20%
Interest rate risk	
The share of fixed rate debt in the total debt	at least 80%
Exchange rate risk	
The share of domestic debt in the total debt	at least 20%

State Budget deficit financing

For 2017-2019, State budget deficit was financed in the following manner:

Table 4: 2017-2019 State budget deficits financing (AMD billion)

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
State budget deficit financed by net borrowings	183.1	184.2	129.0	185.0
Of which:				
Domestic net borrowings (without promissory notes)	42.0	45.0	45.0	45.0
Share, (%)	22.9	24.4	34.9	24.3
External net borrowings	141.1	139.2	84.0	140.0
Share, (%)	77.1	75.6	65.1	75.7

Cost and risk analysis of the Government debt existing portfolio

Regarding the costs of government debt, the following indicators have been used to measure them: a) Weighted average interest rate of existing portfolio, b) Interest payments as percentage of state revenues, c) share of interest payments in GDP.

At the end of 2015 the weighted average interest rate of existing portfolio indicator (ratio of current year debt interest amount to the debt stock at the end of the previous year) made up 3.9%. For external debt, the average interest rate was 2.5%, driven by the high proportion of concessional loans. This interest rate is going to increase in the future, as the international organizations are diminishing the amount of concessional lending to Armenia. The average

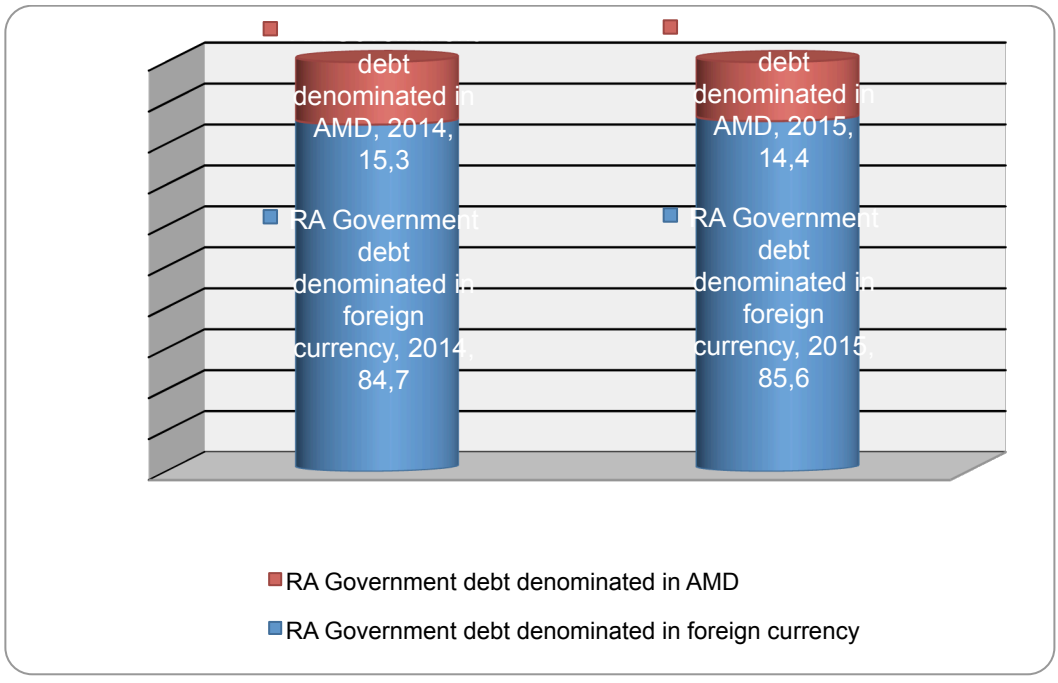
interest rate of domestic debt reached 11.0% after the surge recorded at the end of 2014 due to the exchange rate shock.

In 2015, Government interest payments amounted to AMD 74.1 billion, which represents 6.3% of state budget revenues and 1.5% of GDP.
Both indicators denote a moderate cost of borrowing for the Government. However, both indicators are increasing and will probably continue to do so in the medium-term.

Risk management is one of the significant prerequisite of efficient public debt management. The objective of risk management is to avoid unpredicted losses and provide continuity of operations.
Among market risks associated to the existing debt portfolio, exchange rate risk is the most important. The exchange rate risk is mainly measured by the following two indicators: a) share of debt denominated in foreign currency in the total debt, b) share of short-term current debt denominated in foreign currency compared to CBA's international reserves (Current debt is defined as the sum of repayments and interest payments).

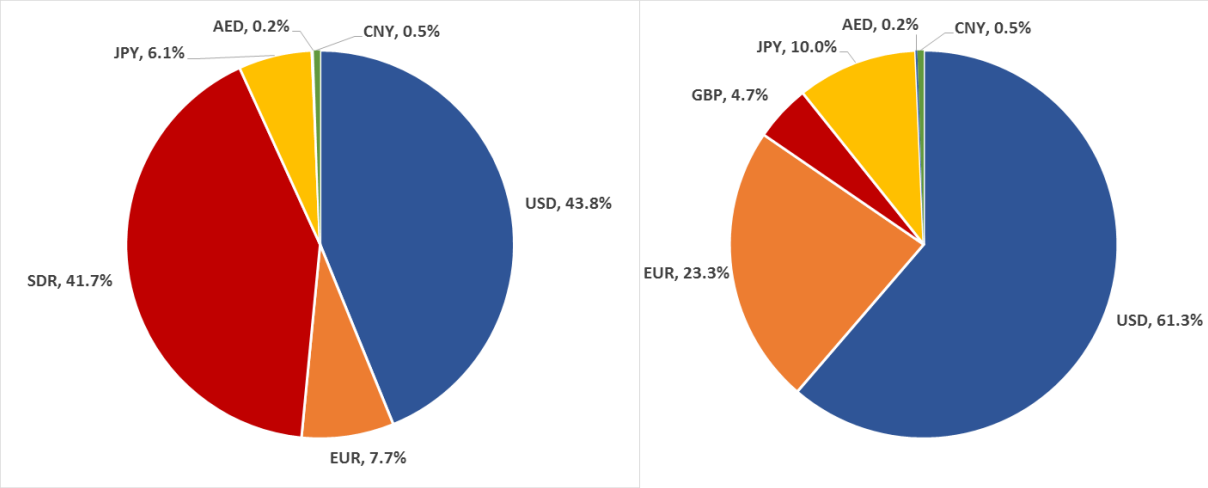
Current Government debt portfolio is exposed to a high exchange rate risk, due to the high proportion (85.6%) of debt denominated in foreign currency as of December 31, 2015.

Chart 1: The percentage of Government debt denominated in AMD and foreign currency in 2014-2015



The currency composition of the government debt portfolio is presented below. The chart on the right shows the currency composition of the portfolio after redistribution of the SDR:

Chart 2: RA Government foreign currency debt structure at the end of 2015



The big share of foreign currency debt is a consequence of the prevalence of bilateral and multilateral borrowings in the debt portfolio. These instruments are usually characterized by long maturity, concessional terms and fixed interest rates. In 2015, the share of short-term current debt (redemption and interest payments) denominated in foreign currency compared to the international reserves has increased mainly due to the Eurobonds buyback, and reached 23.2% against 7.4% in 2014 (excluding Eurobonds buyback, the indicator would be 10.3%).

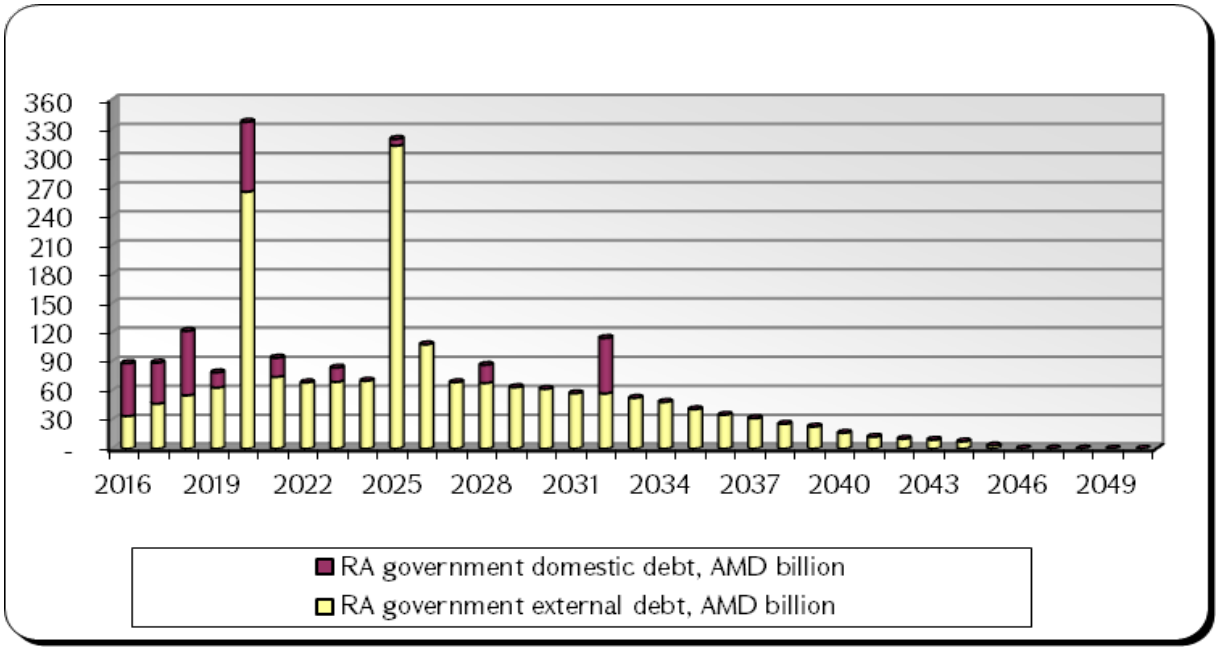
Regarding refinancing risk, the following three indicators have been mainly used to asses it: a) size of the debt portfolio maturing within one year, b) average time to maturity (ATM) of portfolio, c) redemption profile of the Government debt portfolio.

. The portfolio is exposed to a low refinancing risk, considering only 4% of the debt is maturing within one year as of December 31, 2015. But, this is due to the low percentage (1.8%) of external debt maturing within 12 months. Refinancing risk is higher when the domestic debt portfolio is isolated, with 14.8% of securities maturing within one year.

As of December 31, 2015 the average time to maturity indicator made up 9.7 years, as a result of the big share of external long term loans. Moreover, the external debt portfolio has an ATM of 10.4 years, while the domestic debt portfolio has an ATM of 5.9 years. This indicator confirms the moderate refinancing risk of existing portfolio

An additional assessment of refinancing risk can be done through the redemption profile, where the big redemption volumes in 2020 and 2025 are driven by the maturity of two Eurobonds that respectively comprise 71.7% and 75.7% percent of the redemption amounts.

Chart 3: Government debt maturity profile as of December 31, 2015 (AMD billion)



As of the end of 2015 repayments of government external debt extend over to 2050, and repayments of domestic debt - over to 2032.

Finally, three indicators are considered to measure interest rate risk: a) share of fixed interest rate debt in the total debt, b) percentage of the debt portfolio with interest rates to be re-fixed in the next year, c) average time to re-fixing (ATR) defined as a measure of weighted average time until all the principal payments in the debt portfolio become subject to a new interest rate.

89.5% of RA Government debt is with fixed interest rate, where 87.4% of external debt and the whole domestic debt are with fixed interest rate. Considering this situation, the rise of portfolio costs following a potential increase of floating interest rates would be limited.

Nevertheless, 14.4% of RA Government debt is subject to re-fixing during 2016 and contains moderate interest rate risk.

At the end of 2015, the Average time to re-fixing indicator was 8.4 years confirming the moderate refinancing risk of the portfolio. That is smaller than the average time to maturity of the portfolio because 10.5% of the debt portfolio is composed of floating interest rate instruments and is also subject to re-fixing during 2016.

The result of the government existing debt portfolio cost and risk analysis shows that the debt portfolio is mostly subject to exchange rate risk. From the refinancing perspective, there are also some risks concerning to the domestic debt redemption profile, where the big share of the domestic debt redemptions is concentrated in the coming three years.

Selection of the debt management strategy

In order to reduce RA Government debt management main risks (especially the exchange rate risk of the debt portfolio), the increase of the share of domestic debt in the total debt is considered an essential long-term objective.

The share of the Government external debt is quite large in contrast to the countries with comparable international rating.

Table 5: The comparison of volumes of the Government external debt of the peer's countries at the end of 2015

	Armenia	Georgia	Macedonia	Albania	Moldova
The share of Government external debt	83,5%	78,5%	61%	41%	16%

Consequently, the cost of shifting part of external debt into domestic debt could be quite high for Armenia. Furthermore, refinancing risk will increase in case of replacing external debt with domestic debt, because domestic debt instruments have much lower tenors than external loans. However, refinancing risk is currently moderate and should not be too difficult to manage.

Cost and risk analysis of the selected strategy

Based on macroeconomic assumptions presented above, cost indicators of the Government debt will be higher at the end of the forecasted period.

Table 6: The projections of the cost indicators of the Government Debt portfolio

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
The weighted average interest rate of Government debt portfolio (%)	4.52	4.49	4.46	4.56
Interest payments as percentage of Government revenues (%)	8.42	9.04	9.19	9.14
Interest payments as percentage of Government expenditures (%)	7.3	8.0	8.4	8.5
The share of interest payments in GDP (%)	1.85	1.95	2.00	1.99

During the first half of the projected period the outstanding debt will grow faster than the GDP, increasing Government Debt/GDP ratio, which was 44.2% at the end of 2015. The average interest rate of the Government debt will be 4.56% at the end of the projected period. In 2019, the share of interest payments in GDP will be 1.99% showing a slight increase compared to the beginning of the projected period. The reason for such limited increase of costs is the dominance of multilateral debt in the existing debt portfolio during the projected period.

For risk management, priority is given to the management of refinancing, interest rate, exchange rate and operational risks.

Exchange rate risk

The share of domestic debt in total debt should increase in the medium term and get closer to benchmark target (20%).

Table 7: Share of domestic debt and FX debt in total debt

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
Domestic debt / Total debt (%)	17.7	18.2	19.1	19.6
Government FX debt / Total debt (%)	84.2	83.7	82.6	82.0

In the medium term, the volume of the domestic net borrowings within the state budget deficit financing increases provoking a decrease of the share of FX debt at the end of 2019, which is expected to fall to 82.0% against 85.6% at the end of 2015. However, the exchange rate risk will remain the main factor of risk of the Government debt portfolio in the coming years.

Table 8: 2016-2019 RA Government FX debt structure

(percent)

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
USD	47.8	50.5	52.9	55.8
SDR	38.0	35.5	33.1	30.1
EUR	8.1	8.2	8.6	9.1
JPY	5.4	5.2	4.8	4.3
AED	0.2	0.1	0.1	0.1
CNY	0.6	0.5	0.5	0.5

If SDR exchange rate, which represents a basket of five currencies, is distributed according to each currency shares in the basket - USD – 41.73%, EUR – 30.93%, GBP – 8.09%, JPY – 8.33% and CNY – 10.92%, Government FX debt structure will be the following:

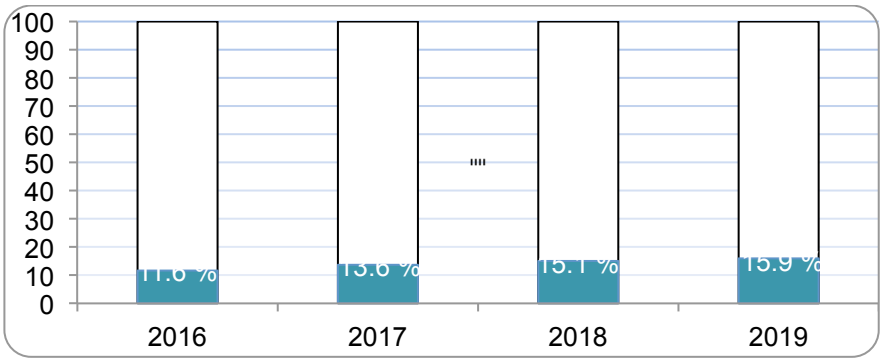
Table 9: 2016-2019 RA Government FX debt structure after separation of SDR

(percent)

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
USD	63.6	65.3	66.7	68.4
EUR	19.9	19.2	18.8	18.5
GBP	3.1	2.9	2.7	2.4
JPY	8.6	8.1	7.5	6.8
AED	0.2	0.1	0.1	0.1
CNY	4.7	4.4	4.1	3.8

In order to manage efficiently and reduce exchange rate risk of the portfolio, it is possible that in the future the debt managers will apply various approaches of hedging (for example, using foreign exchange swaps). Hedging would reduce portfolio exposition to FX risk, in a context of slightly higher pressure on Central Bank foreign reserves, as shown by the small rise in the share of Government current FX debt compared to the CBA FX reserves.

Chart 4: Share of Government FX current debt in foreign reserves of the Central Bank (%)



Refinancing risk

Refinancing risk arise from Government debt service amounts to be paid in the near future and from possible adverse developments in the international and domestic capital markets. When it prepares Bonds issuances, Government takes care of smoothing repayment schedule and mitigating refinancing risk. For instance, two instruments used by government to mitigate refinancing risk are buybacks and benchmark bonds issuance where allocations of Treasury Bonds are concentrating on the maturity days of reference government securities.

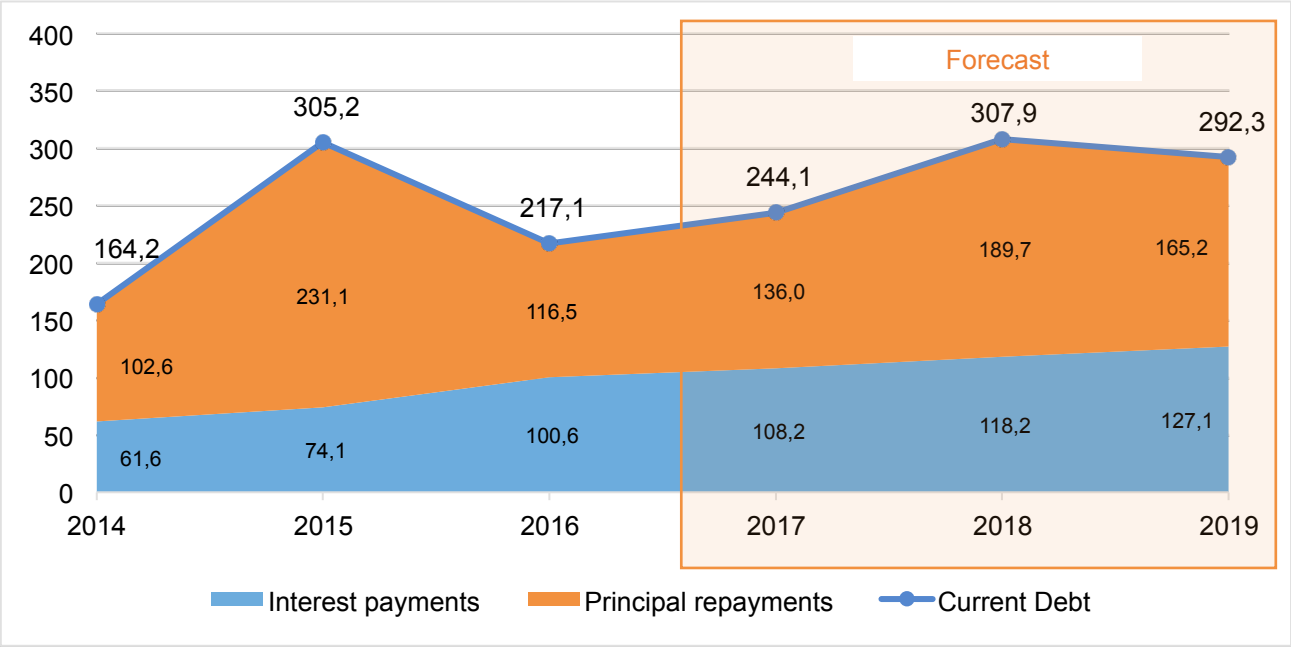
Table 10: 2016-2019 Refinancing Risk Indicators of Government debt

	2016 forecast	2017 forecast	2018 forecast	2019 forecast
Average time to maturity of Government debt (ATM) (year)	9.3	9.1	8.5	8.0
Average time to maturity of Government external debt (year)	10.0	9.7	9.1	8.5
Average time to maturity of Government domestic debt (year)	6.1	6.1	6.0	5.7
The share of Government debt amortizing within 1 year (%)	4.6	5.4	5.1	14.0
The share of Government external debt amortizing within 1 year (%)	2.3	2.7	3.0	12.9
The share of Government domestic debt amortizing within 1 year (%)	14.8	17.8	13.6	18.6

The average time to maturity indicator of the Government debt will decrease to 8 years by the end of 2019 . This is due to the Eurobonds maturing in 2020 and 2025 which represent an important part of the debt portfolio. As their redemption year approaches, the ATM decreases.
Furthermore, Armenia has upgraded to the status of middle-income country, according to the World Bank classification, following the recovery of the economy. Consequently, the international donor organizations and foreign countries started gradually offering stricter lending terms and reduced amounts of concessional funds. Despite limited access to concessional borrowing, the ATM indicator will not change significantly during the forecasted period and will remain within defined Benchmark range. From that perspective, refinancing risk is estimated to be moderate.

RA Government current debt indicator, which is the sum of the principal repayments and interest payments during a year, is presented below.

Chart 5: 2014-2019 RA Current debt (billion AMD)



The RA Government current debt indicator decreases in 2016 and rises again during the period 2017-2019.

Table 11: RA Government current debt by instruments

(billion AMD)

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
RA Government current debt by instruments, of which	217.1	244.1	307.9	292.3
External loans and credits	66.6	84.6	108.1	117.7
Interest	31.3	36.5	40.9	44.2
Amortization	35.3	48.1	67.3	73.5
Government bonds in local currency	119.4	127.9	168.2	143.0
Interest	38.2	40.0	45.8	51.3
Amortization	81.2	87.9	122.4	91.7
Government bonds in foreign currency	31.1	31.6	31.6	31.6
Interest	31.1	31.6	31.6	31.6
Amortization	-	-	-	-

The share of the Government debt maturing within one year increases significantly and reaches to 11,7% at the end of 2019. This is the consequence of the Eurobonds maturing in 2020. The Government will try to reduce this risk before 2019 using cash flow management tools.

Interest rate risk

More attention should be paid to the risks associated with interest rate, because part of the funds recently borrowed are bearing interest rates determined by market conditions rather than concessional terms. From the strategic perspective, the objective of the interest rate risk management is to ensure such kind of Government debt structure, where the changes of the interest rates in the financial markets would have less impact on the level of forecasted interest payments.

The interest rate risk of the Government debt is slightly worsening during the forecasted period but it remains under control. Indeed, the share of the fixed rate debt decreases up to 80.6% at the end of 2019. Although government will issue more fixed rate domestic debt, the outstanding amount of government securities remains small compare to external debt. Hence, the terms and conditions on new multilateral loans – a bigger part of these new loans will be with floating interest rates – have a greater impact on the share of fixed rate debt in the portfolio

Table 12: Weights of floating and fixed interest rate loans within Government debt during 2016-2019 (%)

	2016 budget program	2017 forecast	2018 forecast	2019 forecast
RA Government Debt,	100.0	100.0	100.0	100.0
of which				
Fixed Interest Rate	85.5	84.6	82.8	80.6
Floating Interest Rate	14.5	15.4	17.2	19.4
Government External Debt	100.0	100.0	100.0	100.0
of which				
Fixed Interest Rate	82.4	81.2	78.7	75.8
Floating Interest Rate	17.6	18.8	21.3	24.2
Government Domestic Debt	100.0	100.0	100.0	100.0
of which				
Fixed Interest Rate	100.0	100.0	100.0	100.0
Floating Interest Rate	0.0	0.0	0.0	0.0

Consequently, the share of the debt to be re-fixed within one year will also increase and this proportion will soar to one third of government portfolio in 2019 because of the Eurobond maturing in 2020.

Table 13: The Interest rate risk indicators of Government debt during 2016-2019

	2016 forecast	2017 forecast	2018 forecast	2019 forecast
Average time to re-fixing of RA Government debt (years)	7.4	7.1	6.4	5.7
Average Time to re-fixing of RA Government external debt (years)	7.7	7.3	6.5	5.7
Average Time to re-fixing of RA Government domestic debt (years)	6.1	6.1	6.0	5.7
The share of RA Government debt re-fixing within 1 year (%)	18.9	20.7	22.1	33.2
The share of Government external debt re-fixing within 1 year (%)	19.8	21.4	24.1	36.8
The share of Government domestic debt re-fixing within 1 year (%)	14.8	17.8	13.6	18.6

Operational risk

Operational risk can result from external events, technologies, or inadequate staffing, organization and processes. Managing efficiently operational risk requires a sound framework including secure technological solutions and adequate document management. For instance, it is necessary to ensure a backup system for debt recording and accounting database in order to ensure database integrity, timely and accurate execution of debt obligations, and continuation of the business processes in case of major disruptions. In order to mitigate operational risks, the Ministry is committed to further develop its procedures to strengthen information flows between public debt management units and improve regulations of the debt management main functions.

Sensitivity analysis

The cost and risk analysis performed heretofore was based on the macroeconomic and fiscal forecasted indicators and represents the baseline scenario of the RA Government debt management strategy. The deviations of the market variables from the baseline scenario

after simulating different shocks and the impact of shocks on cost and risk indicators are presented below.

Exchange rate

The RA Government debt portfolio is exposed to a significant exchange rate risk. Applying a 30% depreciation shock of AMD against USD in 2017, the Government debt to GDP ratio would reach to 57.4% at the end of 2019, which is 10.7 percentage points higher compared to the baseline scenario.

1% deviation of USD, EUR, JPY, GBP, AED exchange rates against the projected rates will lead to AMD 23.2 billion average annual change in external debt during 2017-2019. The table below presents the impact of 1% deviation of each of these currencies on Government external debt.

Table 14: The impact of 1% FX change to AMD on the Government external debt (AMD billion)

	2017	2018	2019
Government debt/GDP change (%)	0.40	0.39	0.38
Total	22.17	23.01	24.41
of which			
USD	14.5	15.4	16.7
EUR	4.3	4.3	4.5
GBP	0.6	0.6	0.6
JPY	1.8	1.7	1.7
AED	0.03	0.03	0.02
CNY	0.97	0.95	0.92

Interest rate

Considering a shock on international interest rates, such as an increase of 250 basis points of the interest rates of external borrowing, the impact on the government debt portfolio would remain moderate, because the Government debt/GDP ratio would increase only by 0.1 percentage point compared to the baseline scenario and would reach to 46.8% at the end of 2019.

Such a shock could raise not only the interest rates of FX funds, but also the domestic debt market yield curve.

Considering an extreme shock on the external debt interest rates provoking a parallel increase of 500 basis points of the main international yield curves, which has a very low probability of occurrence, the Government Debt/GDP ratio would reach to 47.4% at the end of 2019, increasing by 0.7 percentage points compared to the baseline scenario . In terms of Government debt service, such kind of significant shock would increase the Interest Payments/GDP ratio by 0.65 percentage points at the end of 2019. Below are presented the impacts of 1 percentage point increase of floating interest rate debt and 1 percentage point increase of the domestic interest rates.

A change of 1 percentage point of the floating interest rates (6 months US Libor and the 6 months Euribor) would lead to USD 8.6 million average annual change in external debt service during 2017-2019. The impact of an increase of 1pp of the 6M US Libor and the 6M Euribor on the Government external debt service during the forecasted period would be the following:

Table 15: The impact of 1 percentage point change of floating interest rates on the Government external debt service

(million USD)

	2017	2018	2019
Change of the indicator of Government external debt interest payments/State budget own revenues (without grants), %	0.30	0.32	0.35
Total	7.3	8.5	10.0
of which			
6 months US Libor	6.8	8.0	9.3
6 months Euribor	0.5	0.5	0.7

In the domestic market an upward shift of the yield curve by 1 percentage point would lead to an increase of the domestic debt service by an average AMD 1.3 billion annually in the forecasted period.

Table 16: The impact of 1 percentage point change of the domestic interest rates on the Government domestic debt service

	2017 forecast	2018 forecast	2019 forecast
Change of the indicator of Government domestic debt interest payments/State budget own revenues (without grants), %	0.12	0.09	0.09
Change of the Government domestic debt interest payments, billion AMD	1.4	1.2	1.3

The sensitivity analysis allows making a conclusion that a shock on the exchange rates would have much more impact on the Government debt portfolio than a shock on the interest rates. This is due to the big share of the foreign currency debt in the Government debt portfolio and the prevalence of fixed rate debt.

Conclusions

The results of the government debt portfolio cost and risk analysis show that the debt portfolio is mostly subject to exchange rate risk. Consequently, government took the view that debt management strategy should reinforced development of domestic securities market, taking into account the limitations of the domestic market. To this end, the amount of deficit financing through domestic net borrowings has been increased and projected to AMD 45 billion for each year during 2017-2019.

It is important to mention that the measures, carried out only in the government debt management area, are not sufficient to substantially improve the government domestic debt market. For the development of the domestic debt market and investor base, it is also necessary to continue reforms in the other segments of the financial market (pension, insurance, etc).

In the medium-term, Government would continue implementing measures for smoothing debt maturity profile and reducing refinancing risk. For example, Ministry will use liabilities management tools such as pre-financing large reimbursement by constituting cash buffers, implementing buybacks and debt switches, contract contingent credit lines with multilateral organizations.

To ensure an efficient management of Government debt portfolio, the risks inherent to the portfolio should be carefully identified and monitored. For this reason, Government debt management strategy defines benchmark targets aiming at keeping exchange rate, interest rate and refinancing risks under control. Of course, benchmarks targets are defined taken into account the environment constraints specific to public debt management in Armenia.

Appendix

2014-2015 RA Government debt actual indicators, 2016 state budget planned indicators and 2017-2019 forecasted indicators

Table 17: The main indicators of RA Government debt during 2014-2019 (billion AMD)

	2014 actual	2015 actual	2016 budget program	2017 forecast	2018 forecast	2019 forecast
Government Debt	1,900.6	2,225.9	2,408.5	2,649.1	2,784.7	2,976.1
In % to previous year GDP	41.7	46.1	49.5	50.3	50.2	50.3
By residency						
Government domestic debt	311.7	368.4	426.2	481.6	533.0	584.3
Government external debt	1,588.9	1,857.5	1,982.2	2,167.6	2,251.7	2,391.8
By instruments						
External loans and credits	1,275.3	1,420.4	1,554.3	1,733.0	1,817.0	1,957.0
Domestic loans and credits	1.9	-	-	-	-	-
Government bonds in local currency	289.9	320.8	380.2	431.9	483.7	535.4
Government bonds in foreign currency	332.5	483.8	473.4	480.6	480.6	480.6
Domestic Guarantees	1.0	1.0	0.6	3.6	3.4	3.1
Interest payments	61.6	74.1	100.6	108.2	118.2	127.1
Interest payments / State budget expenditures (%)	5.0	5.3	7.3	8.0	8.4	8.5
Interest payments / State budget own revenues (without grants) (%)	5.5	6.5	8.4	9.3	9.4	9.2
Interest payments / GDP (%)	1.28	1.47	1.85	1.95	2.00	1.99

Table 18: Government Bonds during 2014-2019

	2014 actual	2015 actual	2016 budget program	2017 forecast	2018 forecast	2019 forecast
Government bonds in local currency, AMD billion	289.9	320.8	380.2	431.9	483.7	535.4
In % to GDP	6.0	6.4	7.0	7.8	8.2	8.4
By ATM						
Up to 1 year	56.6	54.7	57.0	86.4	96.8	107.1
1-5 year	134.1	149.0	209.1	211.5	236.8	262.2
More than 5 year	99.2	117.1	114.0	134.0	150.1	166.1
Average interest rate (%)	13.5	14.0	13.9	13.5	13.0	12.9
ATM (days)	2,003	2,065	2,075	2,021	2,014	2,025
Government bonds in foreign currency, USD million	700.0	1,000.1	1,000.1	1,000.1	1,000.1	1,000.1
In % to GDP	6.9	9.6	8.7	8.7	8.1	7.5
Average interest rate (%)	6.3	6.9	6.9	6.9	6.9	6.9
ATM (years)	5.8	7.0	6.0	5.0	4.0	3.0

Table 19: Government Loans and Credits during 2014-2019

	2014 actual	2015 actual	2016 budget program	2017 forecast	2018 forecast	2019 forecast
Government Loans and Credits, USD million	2,689.1	2,936.2	3,283.2	3,605.8	3,780.7	4,071.9
In % to GDP	26.5	28.2	28.6	31.2	30.7	30.7
By residency						
External loans and credits	2,685.1	2,936.2	3,283.2	3,605.8	3,780.7	4,071.9
Domestic loans and credits	4.0	-	-	-	-	-
By type of Creditor						
Multilateral creditors	2,257.6	2,489.2	2,759.1	3,070.7	3,169.4	3,330.2
Bilateral creditors	411.2	423.9	500.8	511.7	588.7	720.8
Commercial banks	20.3	23.2	23.3	23.4	22.6	20.9
Average interest rate (%)	1.5	1.6	2.2	2.3	2.4	2.4
ATM (years)	11.9	11.6	11.1	10.9	10.4	9.8

2017-2019 RA Government external debt projections were based on the following assumptions:
- 1 SDR=1.409 USD, 1 EUR=1.141 USD, 1 JPY=0.009 USD, 1 AED=0.272 USD, 1 CNY=0.155 USD (source: CBA),
- USD 6 months LIBOR - 2.5%, 6 months EURIBOR - 0.5%.