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PUBLIC INVESTMENT MANAGEMENT ASSESSMENT

January 2019

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FISCAL AFFAIRS DEPARTMENT

Republic of Armenia

Public Investment Management Assessment

Yugo Koshima, Arturo Navarro, Vahram Janvelyan, John Zohrab, Imran Aziz, and Armine Aydinyan

Technical Report | August 2018

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F I S C A L A F F A I R S D E P A R T M E N T

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ACRONYMS

ABL	Annual Budget Law
AMD	Armenian Drams
BSL	Budget Systems Law
CIS	Commonwealth of Independent States
e-GP	Electronic government procurement system
EEU	Eurasian economic unit/treaty
FAD	Fiscal Affairs Department
GDP	Gross Domestic Product
GFMIS	Government Financial Management Information System
GFSM 2014	Global Financial Statistics Manual
GG	General Government
GP	Government Program 2017-2022
IFI	International Financial Institutions
LM	Line Ministries
MoF	Ministry of Finance
MoEDI	Ministry of Economic Development and Investments
MoTAD	Ministry of Territorial Administration and Development
MoTCIT	Ministry of Transportation, Communications and Information Technology
MTEF	Medium-term Expenditure Framework
MUD	Ministry of Urban Development
NCO	Non-commercial Organizations
NPP	Nuclear Power Plant
PBB	Program-Based-Budgeting System
PC	Public Corporations
PDS	Armenian/Prospective Development Strategy
PIU	Project Implementation Unit
PPL	Law on Procurement
PPP	Public-Private Partnerships
PSRC	Public Services Regulatory Commission
SDP	Sustainable Development Program
SFR	Statement of Fiscal Risk
SOE	State-owned Enterprises
SPMD	State Property Management Department
TPP	Thermal Power Plant
TSA	Treasury Single Account

PREFACE

A technical assistance mission from the Fiscal Affairs Department (FAD) of the International Monetary Fund (IMF) visited Yerevan, Armenia during the period June 27–July 10, 2018 to conduct a Public Investment Management Assessment (PIMA). The mission was led by Yugo Koshima, and consisted of Arturo Navarro (both FAD), John Zohrab (Regional Advisor), Vahram Janvelyan (local IMF Office), Imran Aziz (short-term expert), and Armine Aydinyan (World Bank).

The mission met with Mr. Atom Janjughazyan, Minister of Finance; Mr. Karen Brutyan, First Deputy Minister; Ms. Lala Ananikyan, Head of the Budget Process Management Department; Mr. Zhirayr Titizyan, Head of the Operations Department; Mr. Sergey Shahnazaryan, Head of the Public Finance Management Methodology Department; Ms. Greta Adamyan, Deputy Head of the Macroeconomic Policy Department; Ms. Emma Ghaytanjyan, Deputy Head of Budget Execution Reporting Department; Mr. Artak Marutyan and Mr. Artur Hambardzumyan, Deputy Head and Division Head of Public Debt Management Department; Mr. Vahagn Arsahkyan, Head of Capital Expenditure Division; and other senior officials from the Ministry of Finance.

The mission also met with Mr. Artashes Tarlamazyan and Mr. Armen Melik-Israelyan, Department Heads of the State Property Management Department; Mr. Artak Baghdasaryan and Ms. Marina Minasyan, Department and Division Heads of the Ministry of Economic Development and Investments; Mr. Armen Manukyan and Ms. Narine Avetyan, Department Heads of the Ministry of Territorial Administration and Development; Mr. Stepan Mnatsakanyan, President of the State Statistical Committee; Mr. Vardan Martirosyan, the Ministry of Energy and Natural Resources; Mr. Gurgen Tadevosyan, Deputy Head of Armenian Road Directorate; Mr. Ashot Babayan, Department Head of the Ministry of Urban Development; Mr. Mikayel Soghomonyan, Deputy Head of the Public Services Regulatory Committee; Mr. Karen Arustamyan, Department Head of the Audit Chamber; Mr. Tigran Sargsyan, Department Head of the Municipality of Yerevan and other senior officials of the government ministries and agencies.

The mission would like to express its appreciation for the open discussions and courtesy extended by the authorities. The mission also thanks Ms. Yulia Ustyugova, IMF Resident Representative in Armenia; and Resident Representative Office staff members in particular Ms. Marina Aleksanyan for their excellent support to the mission's work. The mission would also like to express its appreciation to Mr. Arthur Aroustamov and Ms. Shushan Avagyan for their excellent translation services.

EXECUTIVE SUMMARY

Armenia's public capital stock is on a declining path. Public capital stock declined from 160 percent of GDP in 2000 to 62 percent of GDP in 2017. Public investment has remained low at approximately half of that invested by regional peers since 2012.[1] This can be explained—to some extent—by a faster growth of recurrent spending at the expense of capital expenditure. As a result, Armenia ranks the mid-range of comparator countries in terms of the public capital stock. For the last three years, public investments have started to pick up through large energy and road projects, but this has been unable to reverse the declining trend of public capital stock.

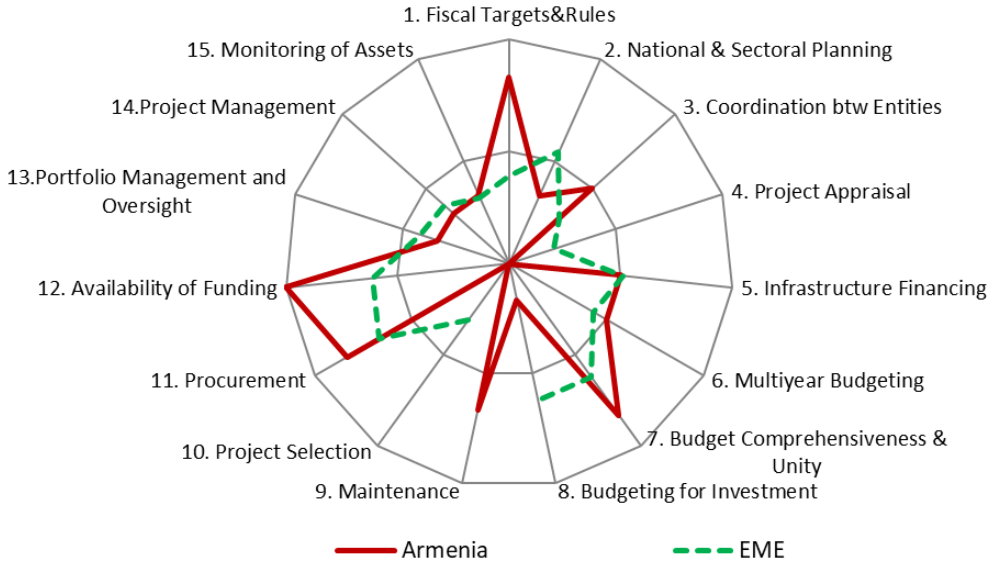
Significant gaps exist in the efficiency of public investments, both in terms of physical outputs and quality. While physical outputs of education and water sector infrastructures are higher than the regional average, the low level of Armenia's roads and electricity generation per capita stand out when compared to regional peers. Survey indicators of the perception of infrastructure quality have improved, but other indicators (such as loss of water in a distribution network and number of electricity outage) show the quality of infrastructure deteriorating in some sectors. These physical and quality indicators estimate, respectively, efficiency gaps of 36 and 24 percent, which underscores the need for more efficiency in how investment is targeted.

An increasing reliance on external financing for major investment projects is posing challenges for the public investment management. The share of external financing for public investment projects has risen from 21 to 63 percent of total capital expenditure in the past ten years and is now the dominant modality for public investment. This has been driven predominantly through loan financing and has accelerated from 2014 as several major projects have been initiated. However, there remain several weaknesses in the institutional framework for budgeting and managing such major projects. The budget execution for externally financed projects has swung from under-execution by 60 percent of the original budget in 2013 to over-execution by 267 percent of the original budget in 2017.

This report evaluates the quality of Armenia's public investment institutions in the planning, budgeting, and implementation stages of public investment management (PIM). Its assessment is summarized in Figure 0.1 below. Armenia's PIM Institutions score at the same level as the average of emerging market economies on aggregate. Armenia performs better than other emerging market economies in areas of fiscal rules, budget comprehensiveness and availability of funding. However, a notable feature is the under-performance of key institutions that span across the project cycle. The lowest scores are centered around the project appraisal, budgeting for investment, and project selection.

[1] "Public investment" in this report is defined as gross fixed capital formation of the general government. In case of Armenia, this includes capital expenditure of the State and community budgets.

Figure 0.1 Design of Public Investment Management Institutions



In a context of limited fiscal space, the scaling up of public investments will require the prioritization of efforts to introduce reforms in the following areas in need of urgent action. Table 1 provides a summary of these areas and where reform areas should be targeted:

- **At the planning stage:** National and sectoral strategies do not effectively guide public investment decision due to the inconsistencies in project information and the absence of resource envelop constraints. In addition, major projects are not selected by using systemic appraisal techniques across different funding sources and project implementers.
- **At the allocation stage:** The Ministry of Finance (MoF) has no power to reprioritize projects that are overshooting total costs, which are undermining the reliability of the MTEF. Budget allocations for capital projects are not credible because their appropriations are not binding. There is no centralized project pipeline nor selection criteria for major projects, selection of which is driven by the availability of financing, not the projects' viability.
- **At the implementation stage:** An e-procurement system has not been integrated into the GFMIS and the capacity of procurement officers are yet to be strengthened. Project implementation plans can be modified significantly throughout a year, limiting the government ability to control the project implementation; and the mandate of the Audit Chamber is yet to be fully shifted from the compliance control to the audit function.
- **Cross-cutting issues:** The MoF's Capital Expenditure Division covers only domestically financed projects and has limited resources for scrutinizing and controlling major, externally financed projects.

Table 1. Armenia: Summary Assessment

Phase/Institution			Strength	Effectiveness	Rec. #	Reform Priority
A. Planning	1	Fiscal principles or rules	**High:** There are permanent fiscal rules for the central government and separate community debt limits.	**Medium:** The new fiscal rules provide an effective anchor for fiscal policy, but the MTFF is not credible.		Medium
	2	National and sectoral plans	**Medium:** Project cost information included in planning documents is not constrained by resource envelops; and project-specific performance targets are not mentioned.	**Low:** Planning documents do not guide investment decisions, because planning horizons or project costs are not consistent across different documents or with the MTEF envelop.	1	High
	3	Coordination between entities	**Medium:** Rule-based capital transfers are introduced, but communities' projects funded by own revenue are not formally coordinated.	**Medium:** Communities' capital expenditure funded by own revenue are limited to small capital repairs.		Medium
	4	Project appraisal	**Low:** There is no standardized requirements or methodologies for project appraisal.	**Medium:** Domestic projects are subject to rigorous costing and technical appraisal, but major externally financed projects are not selected based on systematic appraisals.	2	High
	5	Alternative infrastructure financing	**Medium:** A level of competition varies across markets; the PPP framework is yet to be developed; and PCs investment plans are scrutinized but not published.	**Medium:** The new PPP law is being prepared to codify the PPP policy framework, but PCs' Investment plans are not credible.		Medium
B. Allocation	6	Multi-year budgeting	**Medium:** Multiyear ceilings are not binding on capital expenditure; there is no publication of total project costs.	**Low:** Multiyear ceilings do not provide a credible anchor; the baseline projections are distorted by implementation problems of largest projects.	3	High
	7	Budget comprehensiveness and unity	**High:** Disclosure of capital expenditures in the budget document is comprehensive and uses functional and program classifications.	**High:** Capital expenditure by General Government units outside the budget sector is minimal.		Low
	8	Budgeting for investment	**Low:** Total project costs are not published in the budget documents; there is no mechanism to protect funding of ongoing projects.	**Low:** Total costs of some major projects have overshot; ongoing projects in some program were given no allocation in the original budget.	4, 7	High
	9	Maintenance funding	**Medium:** Standard methodologies exist for capital and recurrent maintenance projects in many, but not all, sectors.	**Medium:** Maintenance funding is well protected during the budget execution but is not growing as fast as capital spending for new projects.		Medium
	10	Project selection	**Low:** There are no selection criteria or process for selecting major projects; and no project pipeline exists.	**Low:** Externally financed projects are selected without being assessed against criteria or reviewed by a central agency.	2, 5	High
C. Implementation	11	Procurement	**High:** The electronic tools are open and transparent; all procurement related documents are publicly open; the meetings of Appeal Board are transparent.	**Medium:** The use of non-competitive process is declining, but the cost estimation is not realistic; analytical reports of complaints are yet to be improved.	6	Medium
	12	Availability of funding	**High:** Almost all payments for general government capital expenditure are covered by the TSA.	**High:** There have been no significant cash release problems since the impact of the global financial crisis in 2009.		Low
	13	Portfolio management and oversight	**Medium:** Reporting of physical and financial progress is in place; reallocation can be made between projects; but ex-post reviews of major projects are not regularly conducted.	**Medium:** Reallocation does not alter original allocation significantly, while the MOF has limited power to control implementation of major projects.		Medium
	14	Project implementation	**Medium:** There are no common rules and procedures for project adjustments; the ex-post audits have been undertaken for some projects on an ad-hoc basis.	**Low:** No central agency has the mandate for reprioritization of projects facing implementation problems; the Audit Chamber is yet to be fully transformed from the Control Chamber.	3, 7	High
	15	Management of public assets	**Medium:** Asset registers are fragmented but updated regularly; there is no reporting of capital stock.	**Medium:** The quality of some asset registers is being improved.		Medium

To address these weaknesses, the recommendations in this report prioritize the eight actions at the key stages of the project cycle and for the MoF's capacity development. A summary of recommendations is provided in Table 2 and to implement these recommendations, a proposed action plan is provided in Appendix I.

Table 2. Armenia: Summary of Recommendations

Recommendations	Inst.	TA needs
A. Planning Sustainable Levels of Investments		
Improve the hierarchical structure of investment strategy documents to: (i) define consistent planning horizons; (ii) ensure consistency of project information, and; (iii) include resource envelop constraints.	2	Yes
Develop a unified appraisal methodology to ensure comparability across all major projects regardless of financing sources or implementers.	4, 10	Yes
B. Allocating Investments		
Establish the MoF's power to challenge the project cost estimate baselines and require reappraisal of the projects for reprioritization when their budgets are persistently under- or over-executed.	6, 14	Yes
Amend the Budget System Law to establish restrictions on in-year adjustments to capital expenditure.	8	
Establish a project selection process based on a "gateway" approach, where the central agency has a veto on all major projects at the project concept and appraisal stages, together with a centralized pipeline of projects, which have been ranked and selected.	10	Yes
C. Implementing Investments		
Improve the system and capacity for public procurement associated with capital projects	11	Yes
Establish a constraint on in-year changes in project implementation plans and complete the transformation of the Audit Chamber from the Control Chamber	8, 14	
D. Cross-Cutting Issues		
Establish in the MoF a dedicated unit covering all domestic and externally financed projects, in order to ensure that projects are consistently appraised and selected prior to funding negotiations and inclusion in the budget.	-	Yes

I. PUBLIC INVESTMENT IN ARMENIA

A. Total Public Investment and Stock of Capital

1. The sharp decline in public investment spending from 2010 has left investment flows at levels below regional comparators. Capital stock has been on a downward trend for most of the past two decades, except between 2007 and 2010, when public investment increased substantially, even beyond the comparator average level. However, the injection of public investment was cut short by the 2007 financial crisis. In recent years, investment spending has picked up, largely through increased spending on externally funded energy and roads projects, including the North South Road and M6 Highway. However, as at 2015, investment flows remain approximately 2 percent lower than other countries in the region and levels of capital stock are in the mid-range of comparator countries (Figure 2).

Figure 1. Public Investment and Capital Stock[1/]
(Percent of GDP)

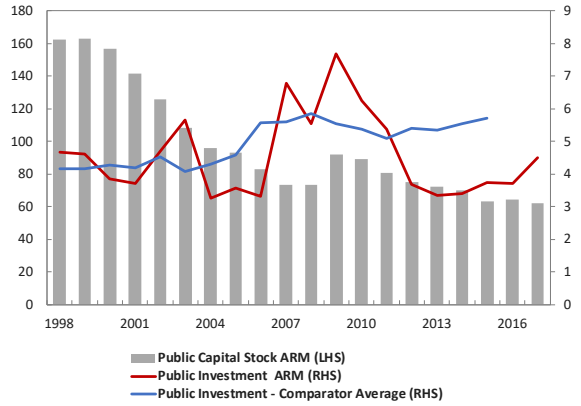
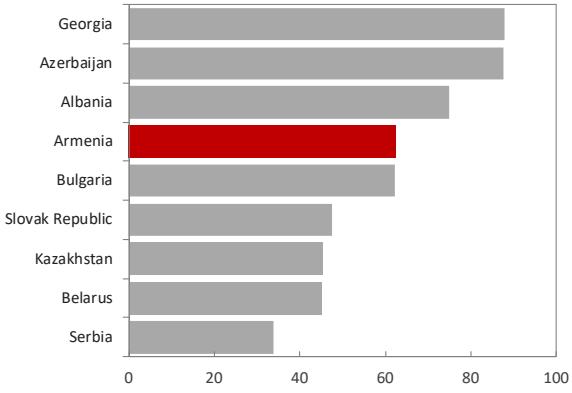


Figure 2. Public Capital Stock, 2015
(Percent of GDP)



Sources: IMF WEO, National Budget Implementation Reports (2007–17) and IMF staff calculations.
1/Latest available data of comparator avarage is for 2015.

2. The expansion in public investment spending coupled with rigidities in current spending have led expenditures to outstrip revenue growth and widen the budget deficit. From 2009 to 2012, both recurrent and development spending were reduced by about 2 and 4 percent of GDP respectively. Recurrent spending has grown since at a faster rate than development spending, whilst revenue growth has remained largely unchanged throughout. Consequently, from 2012, the budget deficit has more than tripled to almost 5 percent of GDP in 2016, which is the joint second highest level within the Commonwealth of Independent States (CIS).[2] Despite the above trend, current and capital spending in Armenia remains lower than the average for comparator countries of the CIS (Figure 4).

[2] Kazakhstan is at the same level of Armenia with Tajikistan the highest. The deficit figures in the April 2018 World Economic Outlook database are lower than the projected figures in the July 2017 Article IV report, which project the overall balance at 5.6 of GDP for above the line items.

Figure 3. Expenditures, Revenues and the Deficit
(Percent of GDP)

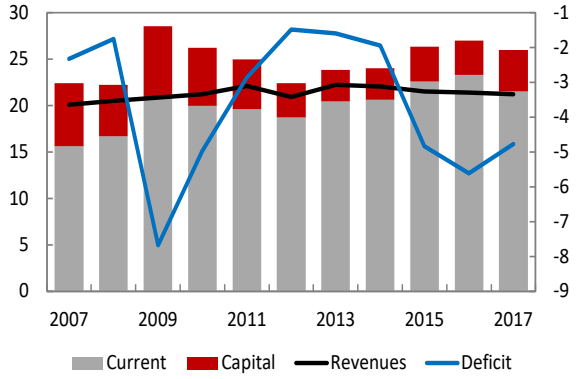
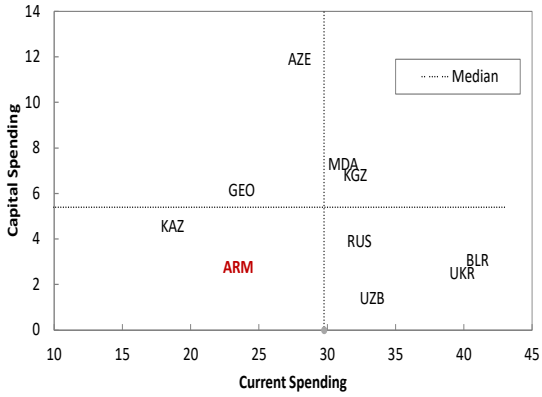


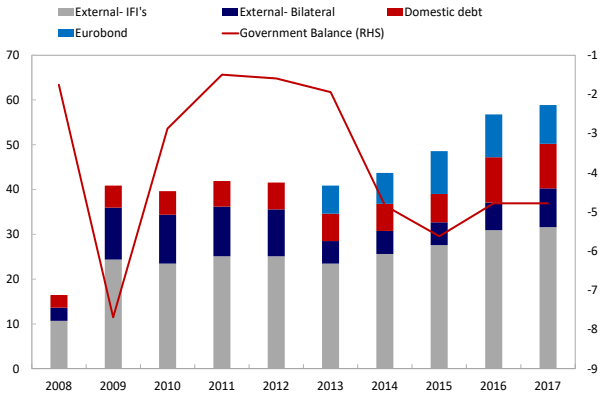
Figure 4. Current vs. Capital Spending Average 2011–15
(Percent of GDP) [1/]



Sources: IMF World Economic Outlook Database 2018, Budget Implementation and Community Budget Reports (2007-2017) and IMF staff estimates.
1/ ARM = Armenia, AZE = Azerbaijan, BLR = Belarus, GEO = Georgia, KAZ = Kazakhstan, KGZ = Kyrgyz Republic, MDA = Moldova, RUS = Russia, UKR = Ukraine, UZB = Uzbekistan.

3. Increased public investment has been largely financed by external borrowing, which, together with an exchange rate depreciation, has led to growing debt levels. Aggregate state debt rose from 17 percent of GDP in 2007 to 58 percent of GDP in 2017 (Figure 5).[3] Borrowing for investment purposes is predominantly done through external borrowing and equates to 25 percent of GDP in 2017. This places an increased onus on project appraisal and cost-benefit analysis so that the social and economic benefits of the investments outweigh the financing costs of borrowing.

Figure 5. Debt and Deficit
(Percent of GDP)



Source: Ministry of Finance Annual Debt Reports (2007-2017) and IMF World Economic Outlook.

[3] Aggregate state debt includes Government debt, government guaranteed debt and central bank external debt

B. Composition and Financing of Public Investment

4. Externally financed public investment accounts for almost two thirds of total public investment (Figure 6), the bulk of which is loan financing (Figure 7**).** The share of external financing for public investment projects has risen from 21 to 63 percent in the past ten years and is now the dominant modality for public investment. Loan financing accounted for an average of 90 percent of total externally funded projects from 2007–17.

Figure 6. Public Investment by Source of Financing
(Percent of total public investment)

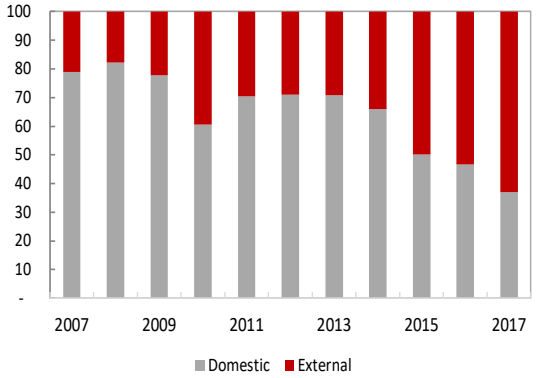
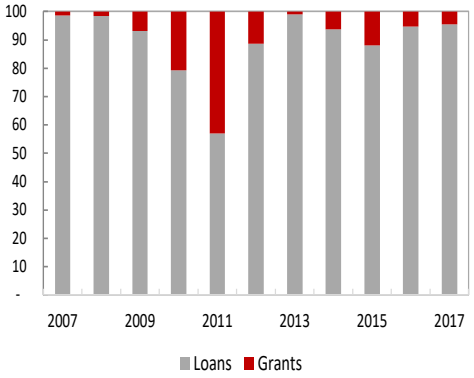


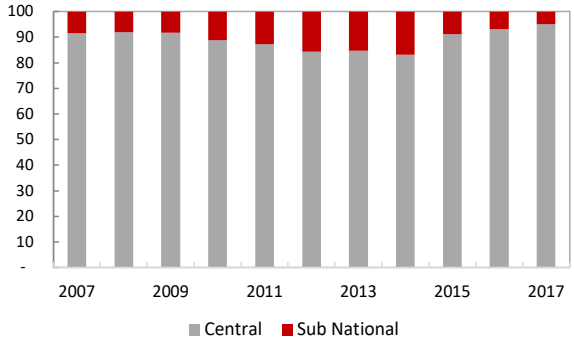
Figure 7. Loans and Grants
(Percent of total externally financed projects)



Source: Budget Implementation and Community Budget Reports (2007–17).

5. The level of public investment implemented by subnational governments has averaged 11 percent of total public investment over the past ten years. Since 2014, the share of development spending at the community level has decreased from 17 percent to 5 percent of total public investment spending in 2017 (Figure 8).

Figure 8. Public Investment Spending by Level of Government
(Percent of total investment)



Source: Budget Implementation and Community Budget Reports (2007–17).

6. Externally financed investment has been volatile with a broad swing from under execution to over spending, whilst domestically funded investment has consistently over spent from 2010. External projects spent an average of 66 percent of their budget from 2010-

2014 and 195 percent from 2015 to 2017, which in part reflects efforts to inject capital into the economy following lower than planned economic growth. Domestically funded projects (including extrabudgetary accounts) have spent 150 percent of their original budget from 2010 (Figure 9). In both cases appropriation levels have been exceeded due their open-ended nature (for externally financed projects) or through use of the reserve fund (for domestically financed projects).[4] As a result, budget execution rates in Armenia (measured by the absolute forecast error) are almost ten percentage points higher than its nearest regional comparator (Figure 10).[5]

Figure 9. Budget Execution
(Percent of budget spent)

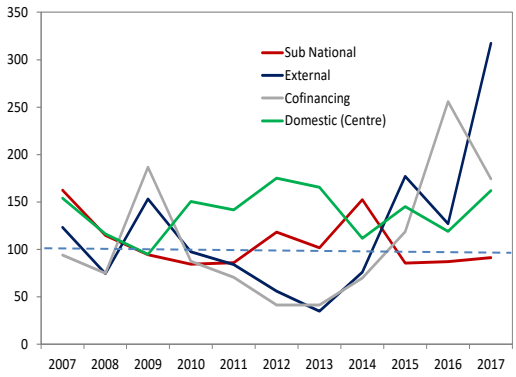
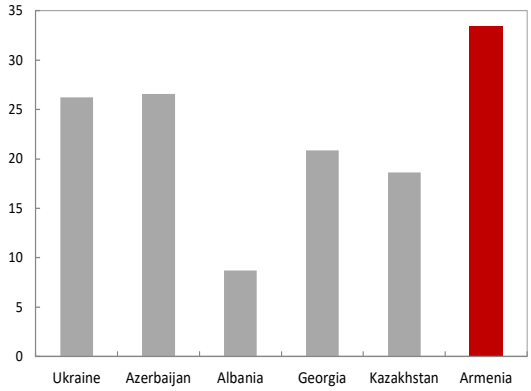


Figure 10. Comparison of Budget Execution
(Average of the absolute forecast error, 2010–14)



Source: Budget Implementation and Community Budget Reports (2007–17).

7. Overspending of the capital budget in 2017 was driven by defense, general public services and economic affairs (Figure 11). The defense and general public services were overspent on both domestic and externally funded sources in a range of subsectors. The road sector drove the overspending in the economic affairs function (Figure 12).[6]

8. Spending on economic infrastructure and social sectors is lower in Armenia than the CIS Average, whereas spending on defense and general public services is higher (Figure 13 and Figure 14).[7] This could be a contributory factor towards the lower output and access indicators for energy, roads and health, which are discussed in Section II below. In Armenia, the bulk of spending on social infrastructure is decentralized at the community level, who rely primarily on own source revenues. However, given that sub-national spending on infrastructure accounts for only 5 percent of total public investments (see Figure 8), the current social spending composition in the state budget may not be sustainable.

[4] Institution 8 provides more in-depth analysis of this.

[5] The absolute forecast is reflected as the absolute value of the difference between forecast and actual investment. This measure does not distinguish between over and under spending.

[6] Much of this was a result of overspending on the North-South corridor, which is analyzed in greater depth under institution 6.

[7] The latest available data for the CIS is 2015 and 2017 is used for Armenia.

Figure 11. Budget and Outturns by Function, 2017
(Billions of Dram)

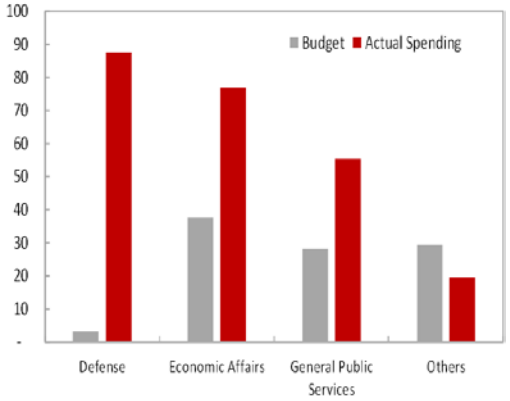
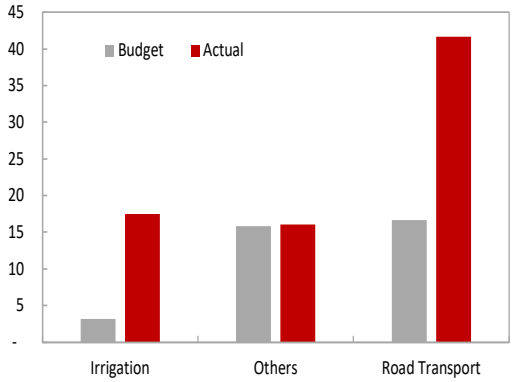


Figure 12. Budget and Outturns by Sub Sector of Economic Affairs, 2017
(Billions of Dram)



Source: Budget Implementation and Community Budget Reports (2007–17).

Figure 13. Public Investment by Function, 2017
(Percent of total public investment)

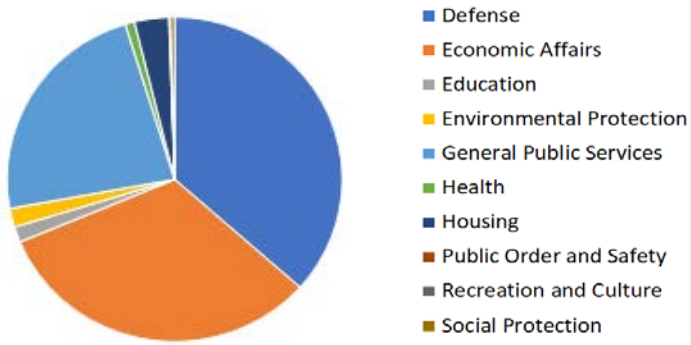
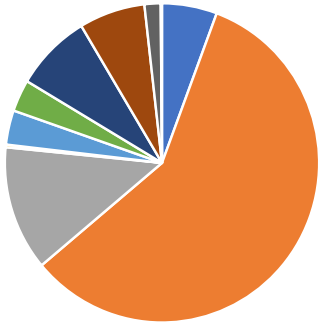


Figure 14. CIS Public Investment by Function, 2015
(Percent of total public investment)

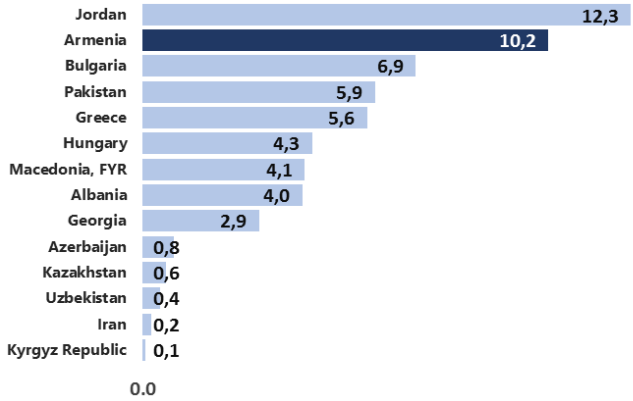


Sources: Budget Implementation Report, 2017 and OECD.

9. PPP capital stock represent a sizeable proportion of GDP. There are currently four public-private partnerships (PPPs) operating in Armenia. According to the IMF's Fiscal Transparency Evaluation, a size of the investment commitments was 10.2 percent of GDP in 2016, which ranks Armenia highly compared regional peers (Figure 15). [8]

[8] These are Armenian Railways, Zwartnots Airport, Yerevan, Veolia Water/Sewerage Services and Shirak airport. The IMF FTE provides more information on the type and financing arrangements of these four projects.

Figure 15. PPP Capital Stock in Different Countries, 2014
(Percent of GDP)



Source: IMF public investment database, IMF FTE mission estimates. Data for Armenia for 2016.

10. Capital stock of public corporations (PC) have averaged 7 percent of GDP over the past three years (Figure 16). The two largest energy PCs (Nuclear Power Plant (NPP) and Yerevan TPP) account for approximately half of the total capital stock of the PC sector. The newly created GEOCOSMOS public corporation in the defense sector also accounts for 30 percent of the total fixed assets in 2017.[9] PCs' capital investments are predominantly financed by on-lending from the State budget. The level of on-lending has raised in recent years due to the new energy sector projects including Gyumri-2 substation, the life-extension of NPP, and Vorotan hydroelectric power station. Capital stock of PCs will be further increased on the completion of these projects. The budget execution of on-lending for PCs' capital investments experienced a broad swing from under execution to over spending (Figure 17).

Figure 16. SOE Fixed Assets and On-Lending
(Percent of GDP and Billions of Dram (RHS))

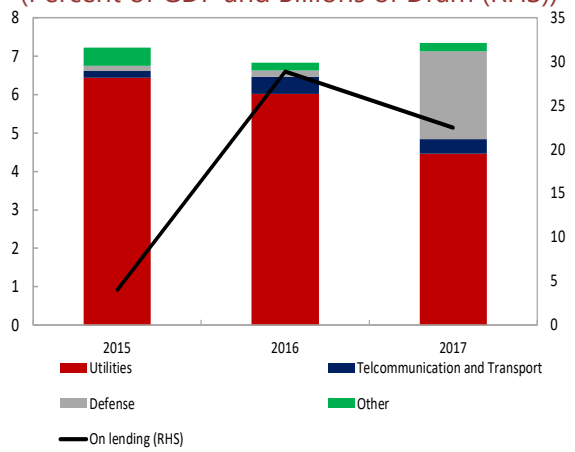
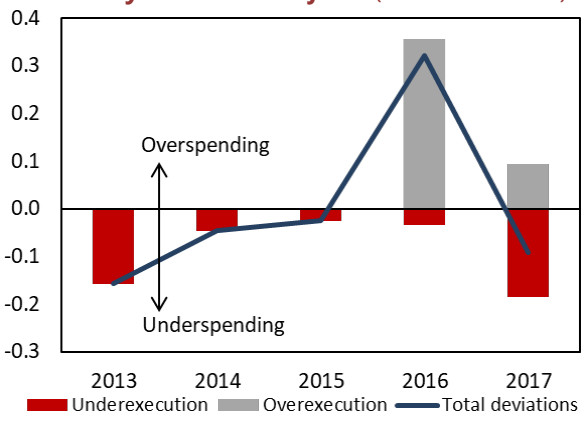


Figure 17. Budget Variation of On-Lending for Externally-financed Projects (Percent of GDP)



Source: SPMD Annual Monitoring Reports and BudgetSource: Budget Implementation Reports.
Implementation reports (2015–17).

[9] Estimations are based on the 142 entities monitored in the SPMD annual report

II. EFFICIENCY AND IMPACT OF PUBLIC INVESTMENT

11. The quality of Armenia's infrastructure and citizens' access to services is generally lagging behind regional comparators, though this varies across sectors (Figure 18). Indicators for health, energy and roads perform significantly lower than peers. For roads, this is driven by the low coverage of rural roads, which cover 3000 Km (almost 40 percent of the road network) and need considerable maintenance and upgrading.[10] Strains on electricity generation are attributed to aging infrastructure and financial difficulties of the major national power generators to sustain sufficient profit levels to reinvest in newer and more efficient means of production. For example, some thermal power plants (TPP) have not received investment for over 45 years.[11] Access indicators relating to education outperform comparator countries, whilst access to treated water is broadly equal.

12. Perceptions of infrastructure quality have increased from 2007 and outperform regional peers. These have declined from 2014, due to declining perceptions in energy supply. Armenia's rating on the World Economic Forum's overall infrastructure perceptions survey shows an improvement from 2.9 to 4.3 from 2007 to 2015 (Figure 19). The same figure shows that perceptions have begun to decline from 2014, which is attributed to a reduced score for electricity supply[12]. The perception of infrastructure quality appears to be correlated to public investment spending, rising sharply from the mid-2000s, but tailing off as public investment spending slowed from 2009 and declining from 2014.

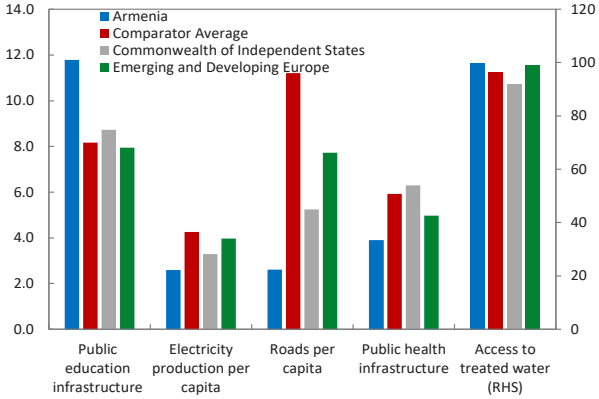
13. Other quality indicators suggest that service provision is constrained compared to other European and regional comparators. Figure 20 compares levels of water loss in Armenia versus other major European and regional countries in 2015. Figure 21 shows the percentage of firms that recorded electrical outages for the previous year. Both examples illustrate that Armenia compares relatively poorly in the region.

[10] Government Decision N873 on a strategy for the financing of national roads, 2015.

[11] The Hrazdan TPP uses 40 percent more gas per KWH produced compared to newer alternatives and outages per transmission line are 2.5 times higher than average well performing utilities in Europe and the US (Armenia Power Sector Policy Note, World Bank 2014).

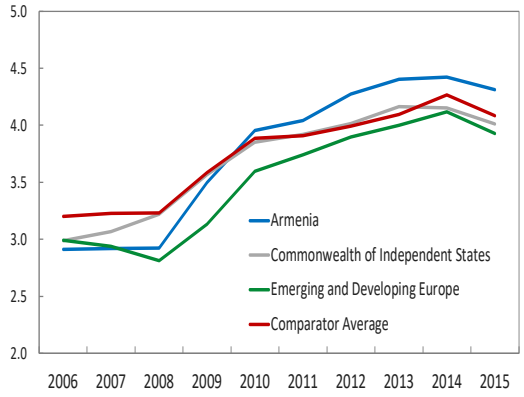
[12] The scale is from 1 to 7. Based on the 2017 survey results, the electricity supply score has reduced from 5.1 in 2014 to 4.8 in 2017.

Figure 18. Measures of Infrastructure Access and Service Delivery, 2015



Source: World Bank World Development Indicators [1/]

Figure 19. Perceptions of Infrastructure Quality



Source: World Economic Forum

Note: Left hand axis: Public education infrastructure is measured as secondary teachers per 1,000 persons; electricity production per capita as thousands of KWh per person; total road network as km per 1,000 persons; and public heath infrastructure as hospital beds per 1,000 persons. Right axis: Access to treated water is measured as the percent of population.

Figure 20. Rates of Water Loss, 2015
(Proportion loss of water system input volume)

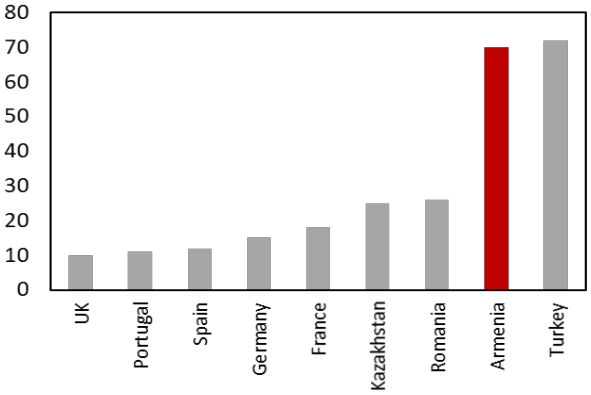
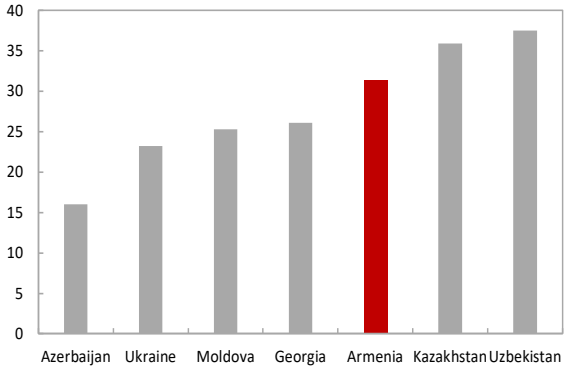


Figure 21. Firms Experiencing Electrical Outages
(Percent of Firms)



Source: EC Water Distribution Network Report 2013, Kazakhstan State Performance Report 2014, Audit Chamber report, and World Bank World Development Indicators.

14. The above trends are reflected in Armenia's investment efficiency, which is lower compared to other countries at the output level, but scores better on quality. Taking the measures of infrastructure output—infrastructure access and quality—and mapping them against the public capital stock shows an investment efficiency frontier (Box 1).[13] Armenia's

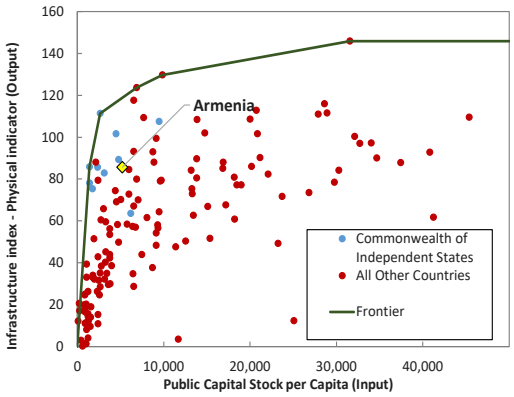
[13] The infrastructure "output" aggregates indicators of access to and quality of infrastructure with quality weighted at 50 percent, and each of the infrastructure access indicators given an equal weighting within the remaining 50 percent. The frontier is the line joining the most efficient countries at progressively higher spending levels. See IMF, 2015, *Making Public Investment More Efficient* for more details.

efficiency frontier at the output level (Figure 22) reflects an output efficiency gap of 36 percent (Figure 23), which is larger than the main comparator groups. The assessment of the quality frontier (Figure 24) reflects an efficiency gap of 24 percent (Figure 25), which is smaller than an output efficiency gap, reflecting the improvements to the perception of infrastructure quality, but remains at the same level as the comparator countries.[14]

Box 1. The Investment Efficiency Frontier

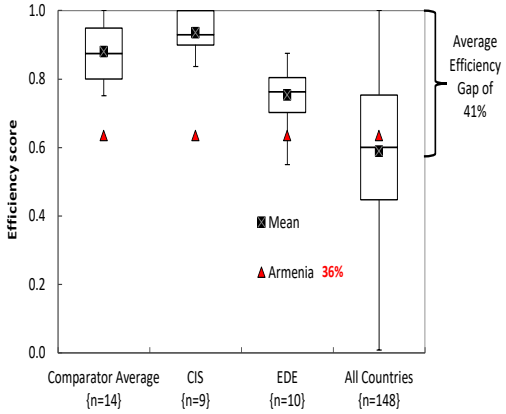
This frontier follows the path of the countries that deliver the highest level of infrastructure outputs for the lowest amount of infrastructure investment over time. Where a country sits relative to that frontier provides a measure of its efficiency in converting infrastructure spending into infrastructure outcomes. The vertical distance below the frontier represents the efficiency gap.

Figure 22. Efficiency Frontier (Physical Indicators)



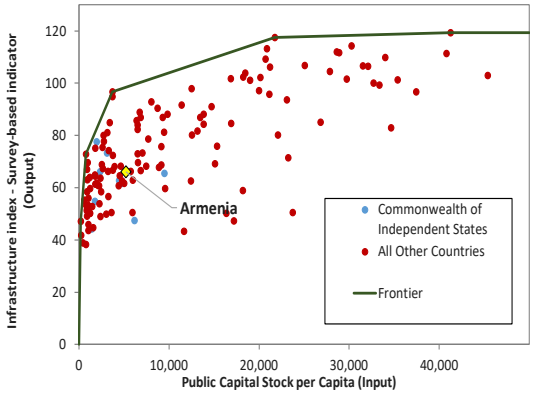
Source: IMF Staff Estimates

Figure 23. Efficiency Gap (Physical Indicators)



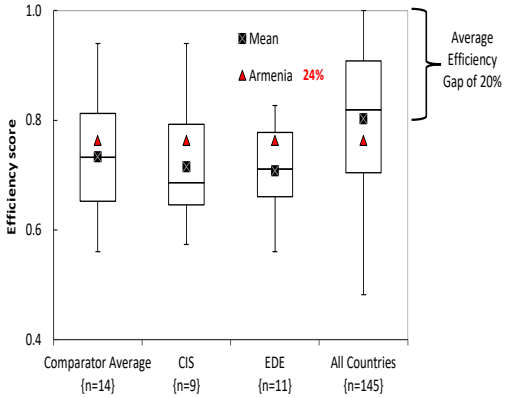
Source: IMF Staff Estimates

Figure 24. Efficiency Frontier (Quality)



Source: IMF staff estimates.

Figure 25. Efficiency Gap (Quality)



Source: IMF staff estimates.

[14] The other quality indicators reflected in Figures 20 and 21 do not form part of the quality efficiency score.

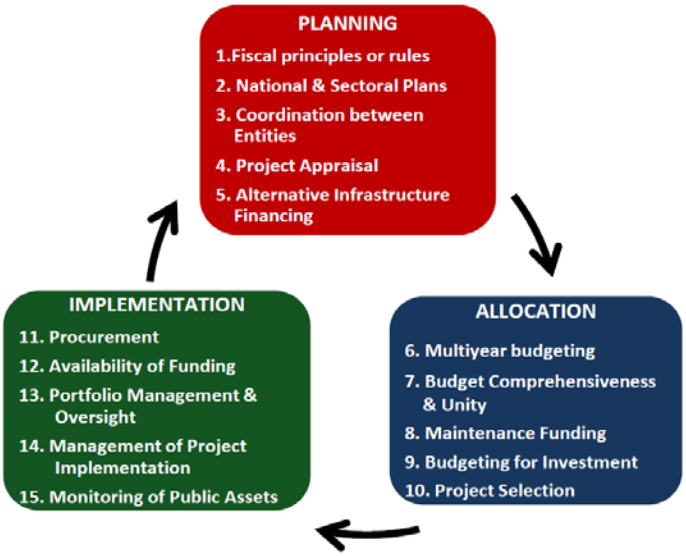
III. PUBLIC INVESTMENT MANAGEMENT INSTITUTIONS

A. The PIMA Framework

15. The IMF has developed the Public Investment Management Assessment (PIMA) framework to assess the quality of the public investment management of a country. It identifies the strengths and weaknesses of institutions and is accompanied by practical recommendations to strengthen them and increase the efficiency of public investment.

16. The tool evaluates 15 "institutions" involved in the three major stages of the public investment cycle (Figure 26). These are: (i) planning of investment levels for all public-sector entities to ensure sustainable levels of public investment; (ii) allocation of investments to appropriate sectors and projects; and (iii) delivering productive and durable public assets.

Figure 26. PIMA Framework Diagram



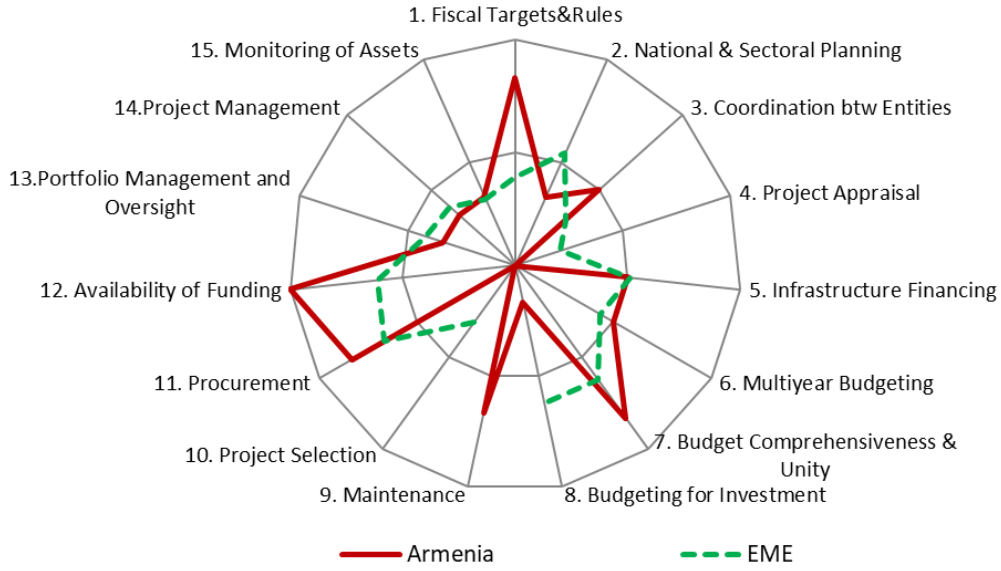
17. Each dimension is assessed against institutional design and effectiveness. "Design" refers to the objective facts indicating that appropriate organizations, policies, rules and procedures are in place. "Effectiveness" refers to the degree to which the intended purpose is being achieved or there is a clear useful impact. Both are scored on a scale of high, medium, or low, which provide a diagnostic guide to where reform priorities should be targeted over the short and medium term, based on specific conditions and challenges facing Armenia.

B. Overall Assessment

18. Armenia's PIM Institutions perform generally well on aggregate to other countries that have undertaken PIMAs, but underperforms on eight key institutions (see Figure 27). Six institutions equal or outperform the scores of emerging market economies, while the lowest

scores are centered on the phases of the project cycle; project appraisal, budgeting for investment, and project selection.

Figure 27. Design of Public Investment Management Institutions



19. The following sections provide the detailed assessment for Armenia's public investment management institutions. Each institution is provided an aggregate score for institutional design, shown in Figure 27, and for effectiveness, followed by the supporting evidence of how these scores were derived.

C. Investment Planning

1. Fiscal principles or rules (Design— High; Effectiveness—Medium)

20. The new fiscal rules, which target the central government debt sustainability, are providing an effective anchor for Armenia's fiscal policy. The previous fiscal rules, which were in place until 2017, did not play an adequate role in economic stabilization. The previous rules included the debt ceiling of 60 percent of GDP together with the debt brake of 50 percent of GDP; when the debt brake was triggered, the deficit was required to be below 3 percent of GDP. They did not provide adequate mechanisms to implement counter-cyclical fiscal policy and increase public investments. When the debt brake was triggered in 2016 (see Figure 5), a large downward adjustment of the deficit in the original 2017 budget was achieved mainly by cutting capital expenditure. With the recommendations of the FAD Technical Assistance mission, the amendments to the Budget System and State Debt Laws replaced the

Table 3. Armenia: Corrective Measures under the New Fiscal Rule

Debt	Expenditure Path		Action Plan
	Capital	Current	
> 40%		--	No
> 50%	Cannot be less than deficit	Increase limited to long-term growth rates	Yes
> 60%		Increase limited to long-term growth rates and level to revenue collection (exc. debt service)	Yes

Source: mission

previous rules with a ceiling on the central government debt of 60 percent of GDP and corrective mechanisms that prioritize capital expenditures (Table 3).[15]

21. Several other measures are planned to be introduced to further the fiscal rules system. In line with the IMF recommendations, the government plans to introduce a decree that will set specific ceilings on growth of aggregate current expenditures and require preparation of a debt reduction program as part of the MTEF.

22. Community (subnational government) borrowing limits are defined in the Budget System Law, and the outstanding borrowing is minimal.[16] Community borrowing from a source outside the general government is subject to the MoF approval and limited to infrastructure development purposes. Total debt servicing expenditures may not exceed 20 percent of the revenues earmarked for capital expenditure in any year. Borrowing to finance current expenditure is also subject to the approval of the MoF and is limited to in-year borrowing from the central government or other communities for the purposes of cash management. Currently, there is only one outstanding external loan taken by a community.[17]

23. The medium-term fiscal framework is presented in the MTEF prior to the preparation of the State budget. The fiscal projections in the MTEF are broken down to recurrent and capital expenditure and each program and ongoing and new project. However, as discussed in Institution 6, the medium-term ceilings of the MTEF face challenge in accurately planning capital spending for a medium term.

2. National and sectoral plans (Design - Medium; Effectiveness - Low)

24. Armenia has developed a variety of national and sectoral planning documents that aim to define its development strategies from a long, medium and short-term perspective. At the national level, the existing strategies include (i) the Prospective Development Strategy (PDS) for 2014–25; (ii) the Government Program (GP) for 2017–22; and (iii) the Annual Action Plan for 2018. Additional planning documents are prepared by the line ministries to determine sector specific strategies, as well as by the communities in the form of regional development plans.[18] All these documents are published in government websites and includes projects implemented by PCs or through PPPs.

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[15] Debla-Norris et. al. "*Republic of Armenia – Upgrading Fiscal Rules*" (2017).

[16] Articles 30(1) and (2) of the Budget System Law.

[17] In 2017, Yerevan City entered into a financing agreement with the European Investment Bank for the Yerevan Energy Efficiency project. The amount of the loan is EUR 7 million.

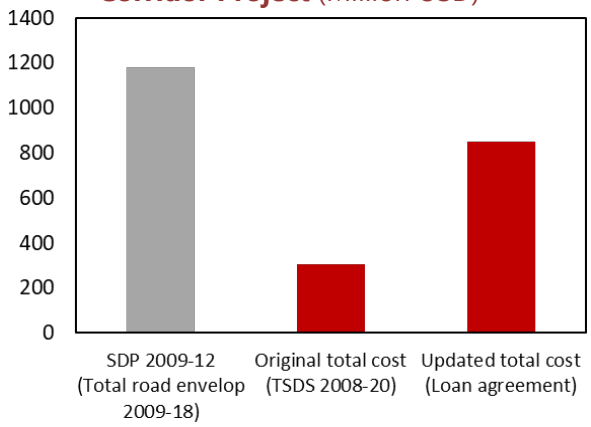
[18] Examples of sectoral and communal documents include the Energy Strategy of Armenia: Accomplishments, Challenges, Next Steps, the Armenian Transport Sector Development Strategy (TSDS) 2020, the Yerevan Development Program for 2018-22, and the Yerevan Sustainable Energy Development Action Plan for 2016–20.

25. Planning horizons are not synchronized between different strategic plans and budget documents. Synchronization of different strategic documents is needed for the project appraisal (Institution 4) and selection (Institution 10) to effectively function. However, planning periods of several sectoral strategies go beyond the national planning period of the PDS. For example, the planning period of Long-Term Power System extends to 2036. Due to this lack of synchronization, a project can be selected for implementation without being consistent with national strategy or with the fiscal constraints it defines.

26. Some flagship investment projects are not included in all planning documents. The Armenia-Georgia Transmission project is an example of a project that is included in all planning documents. The PDS recognizes it as a key energy transmission project; the GP presents target dates for completing its design and construction phases; and the energy sector strategy provides the technical specifications, initial cost estimates and potential sources of funding. However, the North-South Corridor project, which started in 2009, was not mentioned by the Sustainable Development Program (SDP) 2008, the then long-term national development program.

27. Strategic documents include costing of major projects, but they are not constrained by resource envelopes and do not present life cycle costs. The PDS sets out a long-term ceiling on sectoral expenditure; and the sectoral strategies include total costs of major projects. However, the costing of sectoral strategies is not constrained by resource envelopes shown in the PDS. The total cost of the Armenia-Georgia Transmission project presented in energy sector strategies was larger than the total resource envelope of the energy sector provided by the PDS. The costing of sectoral strategies also tends to be optimistic. The total cost of the North-South Corridor project has tripled since the original estimate in 2008 (Figure 28).

Figure 28. Total Cost of North-South Corridor Project (Million USD) [1]



Source: mission based on SDP, TSDS, websites of MoTCIT 1/converted by a current spot rate.

28. Some strategic documents present target levels of development indicators for different sectors, but these are not project specific. These indicators can refer to infrastructure development, allocation of funds and changes to market conditions, including liberalization of markets. These targets are to be achieved by not only public investments, but also private investments and non-investment related public policies.

3. Coordination between entities (Design—Medium; Effectiveness—Medium)

29. The size of capital investments by communities has been limited, and their major projects are effectively implemented by the central government. Total capital expenditure of communities has been less than ten percent of total public investments; and the central government is financing and implementing communities' major projects (e.g., Yerevan Subway Reconstruction Project), although they are included in the community budget. Excluding these major projects, most of communities' capital expenditure are for small capital repairs, financed by own revenue from the proceeds of land and real estate sale.[19] Capital transfers (called "capital subventions") to communities account for only 2 percent of total capital expenditures of communities (Table 4). Communities publish their capital investment plans on their websites, which are provided to, but not formally coordinated with, the central government.

Table 4. Armenia: Capital Transfers from Central to Community Government
(AMD million)

	2014	2015	2016	2017
Capital subventions to communities	407.5	953.2	273.0	215.4
Total municipal capital expenditures	27,522.5	16,649.1	13,057.8	12,289.6
Share of capital subventions (percent of total municipal capital expenditure)	1.5	5.7	2.1	1.8

Source: mission based on Community Budget Summary Reports and final accounts.

30. The formal coordination for projects funded by capital subventions is undertaken in accordance with the law or contracts. Communities submit their requests for capital subventions to a regional governor ("marz").[20] These requests are summarized and submitted to the line ministries and the Ministry of Territorial Administration and Development (MoTAD). In case of positive conclusion, the line ministries include these requests in their budget proposals and submit them to the MoF and MoTAD (or to Yerevan municipality).

31. In addition to the regular capital subventions, the government recently introduced a new capital transfer program to encourage new infrastructure projects in communities. Until 2017, the capital subventions were given only for disaster recovery and other limited purposes. The 2018 budget created a new program to provide capital subventions to infrastructure development at a community level (AMD 500 million). The criteria and process for the project selection are defined in the law and include: (i) the creation of a special appraisal committee to evaluate project requests; (ii) determines that 60 percent of economic infrastructure projects and 40 percent of social projects will be co-financed by the State

[19] More than 90 percent of capital expenditure of Yerevan City for 2017 was for Yerevan Subway and Urban Development projects. The rest was almost entirely composed of capital repair projects.

[20] In case of Yerevan municipality, they are submitted to the MoTAD and the line ministry directly.

budget;[21] and (iii) the amount of capital subvention is notified to a community only during a financial year.

32. The annual budget documentation discloses information on contingent liabilities associated with many, but not all, capital projects of PCs and PPPs. The government finances PCs' investments through on-lending funded by IFI's. The on-lending is disclosed and authorized in the MTEF and annual budget documentation. The Annual Debt Report published together with the MTEF discloses a list of State guarantees broken down to each beneficiary. The outstanding guarantees are limited to 0.1 percent of GDP in 2017. Fiscal risks associated with some but not all PCs' projects and PPPs are also discussed together with information on financial performance of all major PCs in the energy, water and transportation sectors (see Institution 5).

4. Project Appraisal (Design—Low; Effectiveness—Medium)

33. There is no standardized requirement for technical, economic and financial analysis of capital projects, which follow different appraisal practices in each line ministry. The government has not developed a standardized appraisal methodology for all capital projects, nor designated an entity to coordinate this process. Some planning documents require feasibility studies of externally financed major projects, but only on an ad hoc basis.[22, 23]

34. Appraisal of major capital projects was undertaken only to meet the donor financing agreements. Because 77 percent of the investment projects over AMD 1 billion are externally financed, most major projects have been subject to appraisals required by donors. While the results of these appraisals are available to the government, these are rarely reviewed to determine if a project should be undertaken.[24] Appraisals are typically completed after the project has been presented to the Cabinet and the loan agreement signed. The methodologies also differ from donor to donor, limiting the comparability between projects.

35. A full-fledged economic assessment of major domestic projects is not undertaken on a systematic basis. Domestically funded projects of the State budget are subject to the standardized costing and technical analysis, which is required by law and reviewed by the MoF (see Chapter IV.A), but not subject to a full-fledged appraisal process. Only a handful of

[21] Agriculture equipment, irrigation water-pipes, renovation of kindergartens, construction and renovation of cultural houses are considered as a priority area of this kind of projects.

[22] For example, the Government Program for the period 2017–22 establishes conditions for the development of a geothermal power plant, based on a positive conclusion of its feasibility study, which should draw attention from IFIs and the private sector.

[23] A 2017 document on investment projects produced by the Ministry of Economic Development and Investments identifies 20 projects, some of which can be tracked back to the country's development strategy documents. This document provides background, technical and financial information on projects, including investment cost and return on investment.

[24] Some, but not all, pre-feasibility studies of major projects were published in the government websites.

domestic projects would require such full appraisal, because the domestic project portfolio is composed almost entirely of very small capital repairs.

36. There have been efforts to enforce appraisal and develop a systematic methodology, but this is yet to be implemented. A Concept Note was drafted by the MoEDI in 2011 to develop a public investment evaluation system based on good practices (Appendix II) but has not been approved by the government.

5. Alternative infrastructure financing (Design—Medium; Effectiveness—Low)

37. There is a well-established independent regulator, the Public Services Regulatory Commission (PSRC), for the electronic communications, energy and water sectors. It was established in 1997, and its statute was amended in 2001 to strengthen its independence. The tariff-setting methodology used by the PSRC was most recently reviewed in 2016 by international experts. The PRSC gives prior approval for individual investments that require tariff approval for the associated revenue generation.

38. The degree of competition in the infrastructure sector varies:

- **The mobile telecommunication market faces competition, while the landline service does not.** The mobile telecommunications are provided only by various private sector companies; both suppliers and consumers face market prices; and the PSRC does not set prices. However, the PSRC requires that the licensees cover the whole country, which likely results in some cross-subsidization. In contrast, there is a single supplier for the landline network and the PSRC sets the tariffs.
- **The PSRC is developing the institutional arrangements and methodologies to deregulate the electricity sector, but the impact to date has been limited.**[25] Regulated electricity prices reflect cross-subsidization between low and high-cost generators that reduce incentives to improve consumption efficiency, while generators do not face the full risks of high-cost provision. The distribution network provision and trading have been bundled and there is a single company that buys from generators and distributes electricity.
- **Gas distribution is undertaken by a regulated private monopoly, on the basis of prices at the border set by intergovernmental agreements.** The PSRC sets the tariffs paid by different consumer categories (e.g., large, small, socially vulnerable, and agriculture sector). There are no plans to deregulate the sector;
- **The drinking water sector is dominated by a PPP, which sets the tariff basis for the first 15 years of the agreement.** The PSRC subsequently adjusts the tariff for various factors, such as electricity tariffs and inflation. The irrigation sector is also regulated by the PSRC and is much smaller than the drinking water sector.

[25] Examples of the changes being introduced include a new electronic market platform and the option for some large consumers to negotiate directly with generators.

39. The current legal and policy framework for PPPs is not sufficiently clear or strong to help ensure that the investment through PPPs will be efficient. As mentioned in the Fiscal Transparency Evaluation report, there are four PPP contracts with the total investment commitment of 10.2 percent of GDP, which were concluded without the legal or policy framework specific to PPPs.[26] The government approved a *PPP Policy Statement* in November 2017 as the basis for a new PPP law, which has been prepared but is not approved by Parliament yet. Furthermore, the new law will need to be supplemented by an extensive set of methodological guidelines to become properly operational.

40. Even though PC driven investment represented more than 50 percent of total public investment in 2016, only partial information on their financial performance and investment plans is prepared and published. A report from the State Property Management Department provides aggregate and company-level outturn data for most PCs, but does not include investment plans or financial projections. The SFRs in the MTEF and annual state budget documentation analyze the financial condition of several PCs, but do not focus on investment plans, nor disclose the stock and change of PCs' nonfinancial assets.

41. The LMs and MoF review investment plans of PCs, but these are not credible and projects can be approved outside the normal budget process. Most of PCs' major capital investments are financed by external borrowing of the State budget, which then makes on-lending to PCs. Externally-financed projects of PCs are subject to the same planning and selection process as those of the government. Significant deviations between the budget and outturn of such on-lending evidence the weaknesses of investment planning of PCs (Figure 17).

Recommendations

Issue 1: The national and sectoral strategies do not adequately guide investment decisions

Recommendation 1: Improve the existing hierarchical structure of investment strategy documents to: (i) define consistent planning horizons; (ii) ensure consistency of project information; and (iii) include resource envelop constraints.

- Issue legislation to make planning periods consistent with one another and ensure that sectoral investment plans are consistent with priorities of national strategies and that financial details of major projects are consistent with the MTEF and State Budget Law;
- Develop a pillared structure for the new long-term national development plan that clarifies and connects priorities;
- Develop new or update existing sectoral investment strategies in accordance with the new long-term national development plan, replacing all existing ones.

[26] Seiwald et. al. "*Republic of Armenia – Fiscal Transparency Evaluation*" (2018).

Issue 2: Major projects are selected without using systematic appraisal techniques across funding sources and project implementers.

Recommendation 2: Develop a unified appraisal methodology to ensure comparability across all major projects regardless of financing sources or implementer.

- Develop a unified appraisal methodology for all major projects of the State as well as those of communities and PCs that are State-supported, in order to ensure consistency with sector specific strategies and economic growth objectives;
- Formally adopt a government resolution to approve the systematic evaluation process underpinning the unified appraisal methodology;
- Ensure that all major projects above AMD 5 billion are subjected to a full-fledged, unified appraisal with consistent economic assumptions, in addition to donor-specific appraisals.

D. Investment Allocation

6. Multi-year budgeting (Design—Medium; Effectiveness—Low)

42. A medium-term expenditure framework (MTEF) was established in Armenia in 2003 and includes many good practices by international standards.[27] It is based on a single MTEF/budget calendar, which is effectively institutionalized and legislated through the Budget Systems Law (BSL) and has two main stages; the MTEF process and the detailed annual budget.

43. Projections of capital spending are made for the upcoming fiscal year and two additional years for each ministry at the project level, although ceilings are highly indicative. Following the issuance of the MTEF instructions, line ministries provide unconstrained project level submissions for the budget year and medium term. There is then a process of reconciling this within the available resource envelope considering debt and deficit rules, which constitutes the first set of budget ceilings. Following a series of budget hearings, the MTEF document is submitted to Parliament for information in July.[28] The detailed annual budget is subsequently formulated and accompanying annexes include the same level of detail as in the MTEF document.

44. Total construction costs of development projects are not published, although line ministries do provide this information for projects when preparing budget drafts.[29] For domestically funded projects, this is standard practice as part of the detailed budget approval process. For foreign financed projects, these form part of standard project preparation and appraisal stages. Over half of the capital budget is financed by development partners and many major infrastructure projects are implemented by PCs with this support, which account for

[27] Seiwald et. al. "*Republic of Armenia – Fiscal Transparency Evaluation*" (2018).

[28] The hearings are jointly conducted by the Ministry of Finance and Prime Minister's Office.

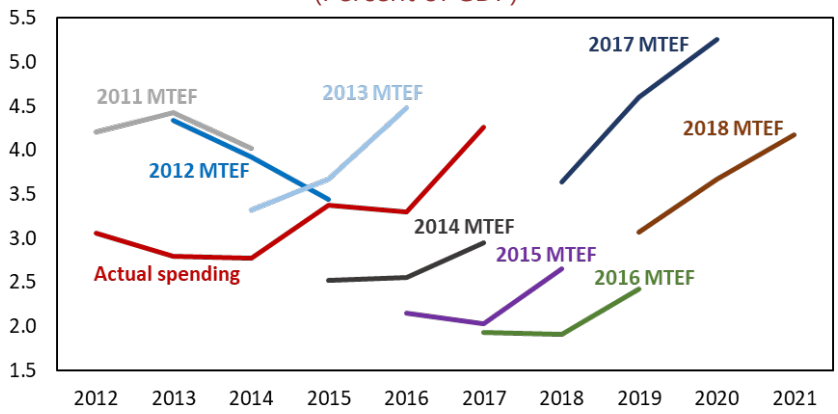
[29] For domestically funded projects, these include a certification that unit cost estimates are in line with regulatory standards.

approximately 10 percent of the total capital expenditure in the state budget. The MTEF and budget annexes include these projects where there has been an on-lending arrangement, but there is no list of investment related costs undertaken by PCs.

45. While the MTBF is well-established and closely aligned to Armenia's fiscal strategy, it is not a reliable anchor for planning spending over the medium term. Figure 29 provides a comparison of various MTEF projections and actual spending. These illustrate an extreme shift from under execution from 2012 to 2014 to overspending above the MTEF from 2015 onwards. This is reflected by average forecast errors of negative 26, 30 and 20 for 2012–14 and positive 40 and 45 for 2015 and 2016,[30] arising mainly from budget deviations of loan-financed projects (see Institution 8). This undermines the fiscal planning component of an MTEF as there is no accurate way to assess if you are within the confines of stated fiscal targets and rules.

Figure 29. MTEF Ceilings and Actual Outturns of Capital Expenditure

(Percent of GDP)



Source: Mission based on MTEF and Budget Implementation Reports (various years).

46. Inaccurate baselines for ongoing projects are undermining the credibility of the MTEF process. Aside from the ability to override the MTEF and appropriated ceilings during budget execution (see Institution 8), the costing of projects—and the ability for the Budget Block to challenge these—could be improved. Because there are hundreds of projects, which are mostly for small capital repairs, the Budget Block is not capable of analyzing all projects to ensure that the baseline costs are accurate.[31] Whilst the budget department takes a logical

[30] This includes the full budget year and two outer years for 2011-2014 and the budget year and one outer year for 2015–16.

[31] In 2017, there were 354 projects under execution (see institution 13). The mission was informed that under the current MTEF being reviewed by Parliament baseline estimations for these projects were 128 Billion Dram higher than what fiscal space would allow.

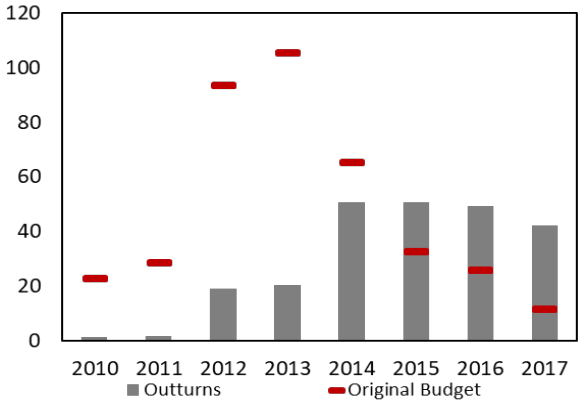
approach to rationalizing what projects can be accommodated in the MTEF, it is simply too big a task to be done accurately for all projects.[32]

47. Large multi-year projects create the largest distortions to the accuracy of the MTEF baseline. The North-South Corridor and the Guymri-2 Power Substation provide two such cases. Figure 30 illustrates the pattern of large under-execution during project inception, followed by significant over spending as the project makes progress. The baseline has been further complicated by poor project management in these examples that caused interruptions and delays during project implementation.[33]

Figure 30. Original Budgets and Outturns

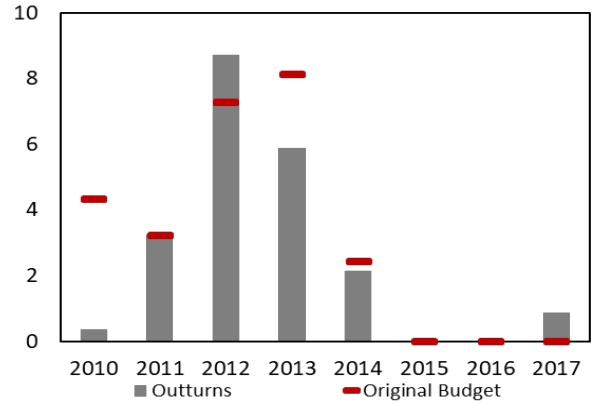
(Million USD)

(a) North-South Corridor (Tranches 1 to 3)



Source: mission based on final accounts.

(b) Gyumri-2 Power Substation



Source: mission based on final accounts.

48. Improving the credibility of the medium-term spending projections requires baseline estimations to be improved, starting with the largest projects. As a starting point, the baseline needs to focus on accurate projections for the largest foreign financed projects of over USD 5million. Currently, there is no systematic way of storing information on changes to project costs during implementation, which is gathered and stored in multiple PIUs. Such information would be imperative for the Budget Block to strengthen their challenge function and enable them to make project adjustments on an annual basis as information flows from PIUs during the MTEF/budget cycle. Such a system would also require standard parameters on changes to major cost drivers such as inflation, exchange rates, and commodity prices.[34]

[32] For the first time in Armenia, the methodological instructions for the 2019-2021 MTEF make a distinction between ongoing activities and new initiatives. Projects about to end take first call, agreed loan financing by Cabinet second, and if there is any additional fiscal space, new projects are considered.

[33] Institution 14 provides more detail on this point for the North-South Transport Corridor Project.

[34] Institution 10 and Chapter IV.B elaborate further on data management and costing process for project selection.

7. Budget comprehensiveness and unity (Design—High; Effectiveness—High)

49. The public investments of Armenia are mostly undertaken through the state and municipal budgets. In 2017, the capital expenditure made by extra-budgetary funds was limited to 0.1 percent of GDP (AMD 8.0 billion), a large majority of which was composed of police equipment and civil servant apartments acquired by earmarked revenue.[35] The capital expenditures undertaken by state and municipal non-commercial organizations (NCOs) were also minimal.[36] There is no data on the capital expenditures of PPPs and PCs that would be classified as general government units according to *GFSM 2014*; but the former may be relatively small because three out of four PPP contracts were concluded more than ten years ago; and on-lending that funds most of PCs' capital projects is undertaken through the state budget.

50. Capital and recurrent budgets are prepared by the MoF on the proposal of each ministry and presented together in the state budget documents on the basis of the program and functional classifications by each ministry. This coordination occurs at the program level but not at the sub-program (policy action) level. Because the policy action level is currently the focus of Armenia's program-based budgeting (PBB) system, and capital projects are separate policy actions, there may be a potential problem of coordinating capital and related recurrent expenditures. A three-level program classification, as previously recommended by FAD, could help to resolve this problem.

51. All significant capital projects of the budget sector are disclosed individually in the annual state budget documentation, except for PPPs. Tables 13, 14, and 15 of Annex 1 of the Annual Budget Law (ABL) shows each capital project funded respectively by budget resources, external loans, and grants. Tables 2 and 3 of Annex 4 also show on-lending to each capital project of PCs, funded by external loans and grants. The SFR included in the MTEF published in 2017 discloses information on two but not all PPP contracts.

8. Budgeting for Investment (Design – Low; Effectiveness – Low)

52. Capital expenditure is appropriated on an annual basis, and the budget documents do not present total costs, which have been overshot for some major projects. Article 21(8) of the Budget System Law requires that expenditure for multi-year capital projects be appropriated on an annual basis. The budget documents include limited information on capital projects; only expenditure for a budget year is presented; and there is no disclosure of total project costs or multiannual commitments.[37] This has been one of the factors that permit overshooting of total project costs for some major projects (see Institution 2).

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[35] State Budget Implementation Report for 2017.

[36] The total expenditure of these NCOs was limited to 0.6 percent of GDP in 2016, which was almost entirely composed of wage and recurrent spending (see the Fiscal Transparency Evaluation report).

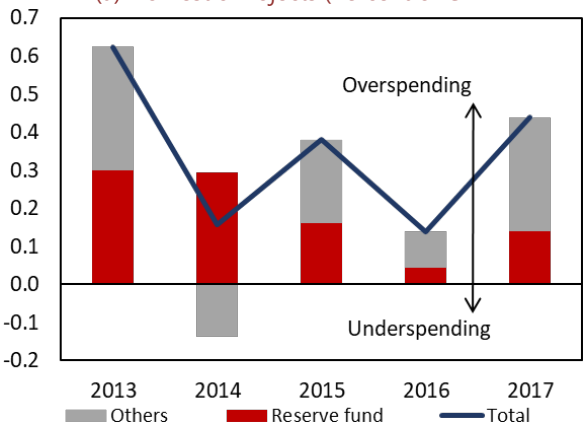
[37] State Budget Law for 2018, Annex N1 Tables 13 (domestic), 14 (external loans), and 15 (external grants).

53. Virement from capital to recurrent expenditure can be approved by the Prime Minister, but is rarely used given that the largest part of capital expenditure has been externally financed. Article 23(3) of the Budget System Law requires that any reallocation between different "programs" be approved by the Government Decision signed by the Prime Minister, while reallocation within the same program can be made by a spending agency. Under the current budget classification systems, a "program" typically encompasses a single capital project (e.g., "North-South Transport Corridor Development Project (Tranche 2)") or a group of capital projects (e.g., "major repairs of public roads"). This effectively means that reallocation from capital to recurrent expenditure always calls for the Prime Minister's approval. In addition, there is a quantitative limit to reallocation between different programs (3 percent of total expenditure).

54. There is no mechanism in place to ensure sufficient funding of domestic projects. There has been a persistent tendency that the budgets for domestic projects were significantly overspent. This was driven by extensive use of government reserve funds for financing domestic projects (Figure 31a). In 2017, one-fourth of non-defense domestic projects were financed by government reserve funds.[38] Many ongoing projects are given limited allocations in the annual budget and need to compete with new projects over government reserve funds. For example, in 2014, the original budget made no appropriation for domestic projects of the health sector.

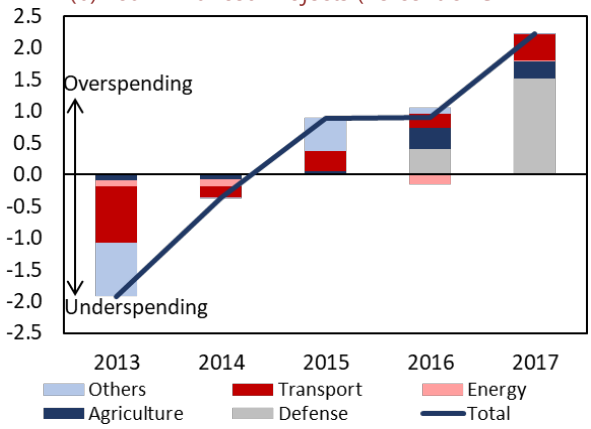
Figure 31. Variations between Original Budgets and Outturns

(a) Domestic Projects (Percent of GDP)



Source: mission based on final accounts

(b) Loan-Financed Projects (Percent of GDP)



Source: mission based on final accounts

55. There are no binding appropriations for externally financed projects, expenditure for which is controlled by borrowing decisions during a year, not the budget. Under the annual State Budget Law, total expenditure and deficits are allowed to be increased without

[38] Article 19 of the Budget System Law allows the Government (Prime Minister) to use government resource funds for any "unforeseen expenditures," while sets a ceiling of 5 percent of total expenditure. In 2017, one-third of resource funds was used for domestic projects, which comprised only four percent of total expenditure.

parliamentary approval of supplementary budgets.[39] This has been one of the main causes of significant over-execution of loan-financed project budgets (Figure 31b). This arrangement also requires ongoing projects to compete over borrowing space with new projects that are added throughout a year. The government has refrained itself from using this provision of the annual State Budget Law under the Government Decision, which, however, is not permanent and can be changed very easily.[40]

9. Maintenance funding (Design—Medium; Effectiveness—Medium)

56. Funding requirements for routine and major maintenance are available in different planning documents; and their standard methodologies are set by laws, but there is some variation across sectors. In the roads sector, the PDS (2014-25) specifies a proportion of GDP for road maintenance that is supported through a law that sets standards and procedures for national, republic and community roads.[41] The Energy Law states that tariffs should provide "reasonable leverage to cover maintenance costs of energy facilities."[42] The PSRC has clear guidelines on setting tariffs for the electricity, gas and water sectors, using fixed rates of profitability and depreciation consistent with international practice.[43] In cases where the government borrows for the renovation of major works, tariffs are based on ability to service debt (both principal and interest). However, maintenance for social infrastructure (schools and health facilities) is not specifically mentioned in the PDS. Whilst their major repairs are done by the Ministry of Urban Development (MUD), following the methodologies set by Government Decrees, routine maintenance is predominantly done at the provincial and community levels, who follow their own standards.[44]

57. Expenditures related to routine maintenance and major works are visible in the state budget and consistent with GFSM 2014 definitions.[45] A budget line for current repairs and maintenance exists under the goods and services category and a separate line for the capital repairs of buildings and construction under the non-financial assets. As part of the MTEF process, line ministries submit project details that specify allocations to these budget lines. It is

[39] Article 11(4) of the 2018 State Budget Law. The State Budget Law for every year contains similar provisions.

[40] Government Decision 1717-2017 for Implementation of the 2018 State Budget.

[41] Decree 1499, 2011, which covers the state and provincial budgets, with maintenance requirements on the type, condition and usage of the road.

[42] Energy Law, Chapter 4, 2001.

[43] For generation, this is set at 10 percent profitability rate of return and 4 percent depreciation and 12 and 2 percent for distribution. This includes flexibility for depreciation to change and the structure has recently been reviewed by Deloitte.

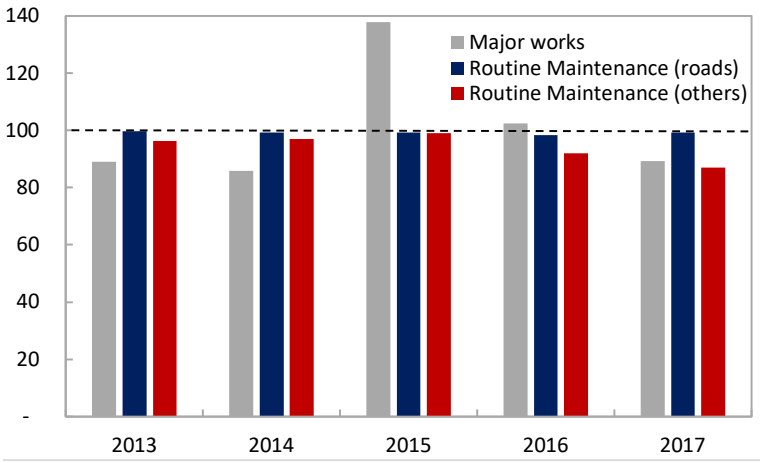
[44] For example, Government Decision 596-2015.

[45] Section 6.45 of the GFSM 2014 notes that "goods and services consumed for the ordinary maintenance and repair of fixed assets constitute use of goods and services. However, major renovations, reconstructions, or enlargements of exiting fixed assets are recorded as an acquisition of fixed assets."

possible to assess execution of these lines in the quarterly and annual budget execution reports. The same report also contains an annex on the execution for routine road maintenance.

58. Maintenance spending has been well protected during budget execution. Figure 32 illustrates that all three major components of the maintenance budget have maintained significant levels of execution, suggesting these budget lines are not vulnerable to in-year cuts, if spending pressures in other areas are high, or if there are funding pressures or disbursement issues. The execution rate for maintenance of major works has been the most volatile with an execution rate of 86 and 89 percent for three of the past five years. Routine road maintenance averaged 99 percent and routine maintenance for all other sectors averaged an execution rate of 94 percent over the five-year period.

Figure 32. Budget Execution for Maintenance
(Percent of revised budget)[1/]



Source: Budget Implementation Reports (various years).
1/ When compared against the appropriation, execution rates are significantly higher that 100 percent due to the issue of open ended appropriations.

59. The maintenance budget has not grown sufficiently to cover the growing trend in investment spending and the needs of Armenia's capital stock. Figure 33 illustrates that whilst there has been a recent rise in routine maintenance for other sectors, road maintenance spending has been flat in nominal terms and the MoTCIT estimates this is approximately a third of what is required to maintain the current stock of roads. The 2015 road financing strategy also indicated that 3,000 km of rural are in urgent need of repair.[46] Similarly, the maintenance of other major works has remained flat at 2015 levels despite the upward trend in investment spending (Figure 34). One specific sector that requires monitoring in this area is the energy sector due to a combination of highly regulated tariffs and several loss-making PC, which elevates the risk of maintenance spending being underserved.[47]

[46] This is currently being heavily supported through the World Bank Lifeline Rehabilitation Project.

[47] The FTE outlined how profitability is weak in the PC sector with combined losses of AMD 12.1 billion that far exceeded the AMD 2.6 billion generated by the profitable corporations.

Figure 33. Routine Maintenance
(Billions of Dram)

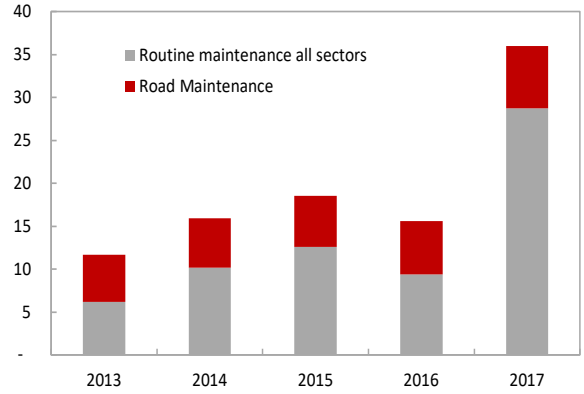
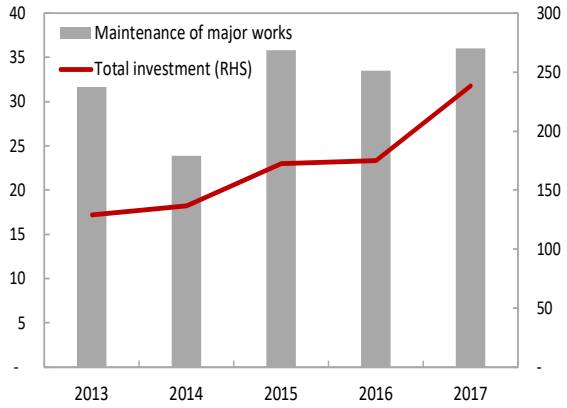


Figure 34. Maintenance of Major Works
(Billions of Dram)



Source: Budget Implementation Reports (various years).

10. Project selection (Design—Low; Effectiveness—Low)

60. There is no structured selection procedure or criteria for all capital projects before inclusion in the budget. While externally financed projects are selected during the approval and negotiations of financing agreements, domestic projects are selected by line ministries throughout the year without a common procedure. Defined selection criteria exist for domestic capital repair projects, based on a level of wear and tear and other indicators (see Institution 9), but do not exist for externally financed projects. In practice, for both domestic and externally financed projects, financial, technical, and strategic issues are analyzed to some extent at various stages of the project cycle, but the results of analysis are not necessarily used or ready when projects are selected to be included in the budget.[48] This supports the idea that the selection of major projects, which are mostly donor-financed, has been driven by availability of financing.

61. There is no centralized pipeline of appraised projects from which the MoF can draw initiatives to be included in the budget. The MoF has only a database of projects that are currently under implementation (see Chapter VI.B). Some line ministries and PCs do have a pipeline of projects that they plan to implement, but such pipeline is not accessible by the MoF or the Ministry of Economic Development and Investments (MoEDI). Some strategic documents present lists of projects that the line ministries wish to implement, but these lists are not consistent across different documents and do not substitute a project pipeline.

62. Projects that are likely to receive external financing can "fast-track" through the selection process, without a thorough project assessment being undertaken. Appendix III shows the current approval process for externally financed projects. In this process, the line ministries send to the Cabinet project proposals that are eligible for donor funding without the MoF and the MoEDI having reviewed it. The MoF and the MoEDI provide opinions only after the

[48] See also Institution 6.

Cabinet requests them to do so. Moreover, the full appraisal of the project only happens after the Prime Minister has approved the project and the loan has been signed. The MoF's approval is required for financing negotiations and terms, but involving the MoF only at such a late stage has a number of disadvantages: (i) agreeing to invest in a project that may not be feasible or affordable; (ii) permitting more growth enhancing projects to be crowded out from available resources; and (iii) creates a favorable bias for the appraisal process.

63. Creating the "gatekeeping roles" of the MoF and MoEDI and consolidating pipeline information in a central database are critical to strengthen project selection. This gatekeeping function needs to be performed before the submission of the concept note to the Cabinet, which is consistent with the 2011 draft Concept Note discussed in Institution 4. Appendix IV presents examples of countries that have adopted this approach, while Appendix III describes in detail the mission's proposed gateway approach.

64. Because developing the full-fledged selection process and the MoF's gatekeeping functions can take years, a sequenced approach is necessary for Armenia. At an initial stage, the project selection could be based on the simple, weighted averages of certain indicators that should be easy to calibrate for each project. Appendix V provides an example of how such an exercise could be designed. In parallel, the MoF would need to start developing the methodologies and guidelines for project selection and training staff on their implementation.

Recommendations

Issue 3: The central agency has no power to reprioritize projects that are facing feasibility issues or overshooting total costs, which is undermining the credibility of the MTEF.

Recommendation 3: Establish the MoF's power to challenge the project cost estimate baselines and the process to require reappraisal of the projects for reprioritization, when their budget execution and other factors show the needs of project adjustments.

- Include in the MTEF and budget message updated total costs of all loan-financed projects (including communities' and PCs') with annual breakdown for the entire project period.
- Issue legislation that requires major projects (irrespective of funding source or implementer) to go through a reassessment and reselection process if: (i) project implementation is interrupted or significantly delayed or (ii) updated total costs exceed the original estimate by a certain threshold, integrating the project monitoring requirements of the 2017 MoF Order;

Issue 4: The credibility of budget allocations for capital expenditure is undermined because budget appropriations are not binding for this expenditure category.

Recommendation 4: Amend the Budget System Law or the State Budget Law to establish restrictions on in-year adjustments to capital expenditure.

- Ensure that the amended Budget System Law or State Budget Law stipulates that:

- Appropriations for loan-financed projects and limits to on-lending arrangements financed by external loans are binding and cannot be changed without parliamentary approval of supplementary budgets (except by reallocation);
- Government reserve funds are only used in cases of natural disasters or state of emergencies.

Issue 5: There is no centralized pipeline of appraised projects nor defined selection criteria for major projects, meaning their selection is driven by the availability of financing and not the projects' viability.

Recommendation 5: Establish a project selection process based on a "gateway" approach and a centralized pipeline of projects, which have been ranked and selected.

- Develop and issue legislation that empowers the MoF and MoEDI to veto all major projects at two "gateway" stages:
  - Stage 1 is before project concepts are brought to the Cabinet for the first time; and it should include projects that have undertaken pre-feasibility studies through a standardized methodology developed by the MoF and MoEDI;
  - Stage 2 is required if the total costs exceed a certain threshold. Full appraisal of the project should be presented at the gateway for final approval before financing negotiations can commence. If during appraisal the cost increases above a certain percent, the project should be sent back to Stage 1;
  - The Legislation should comprehensively include all projects implemented by the state, communities, PC, external loans and PPPs, where total project costs exceed AMD 5 Billion;
- Develop a pipeline of new projects from which proposals can be selected for inclusion in the MTBF and annual budget;
- Develop a simple prioritization exercise using weighted averages of indicators that can be easily calibrated for scenario analysis, to support the project selection process.

E. Investment Implementation

11. Procurement (Design—High; Effectiveness—Medium)

65. The government of Armenia has issued regulation to strengthen its procurement system by adopting good practices. The New "Law on Procurement" (PPL) (designed to conform to EU and EEU standards) came into force on April 25, 2017. The PPL is primarily aimed at increasing the efficiency of the use of public funds and leveling corruption risks by ensuring transparency of procedures throughout the chain. The PPL reflects good practices such as value for money, equal rights and non-discrimination, competition, transparency and openness, and proportionality in the procurement process. For the effective implementation of the PPL, the MoF directs further efforts to enhance capacity among procurement officials, increase the shares and volumes of competitive methods, further streamline the procurement process, and fully apply e-procurement methods.

66. Transparency and service delivery improvements were achieved through various electronic government systems. They include the Armenian Electronic Procurement System (ARMEPS), which currently covers the whole procurement cycle from planning to payment. It is expected that the Government Financial Management Information System (GFMIS), including a comprehensive e-GP system with a block chain module, will be developed and rolled out in the near future. This is supported by the Treasury Single Account system (see Institution 12) and the rollout of the Armenian Public Sector Accounting Standards (APSAS) developed with World Bank assistance for the International Public Sector Accounting Standards (IPSAS) implementation.

67. Significant progress has been achieved in expanding the e-Procurement system by adding new modules that provide a more comprehensive coverage of the procurement process. Currently, 300 public procuring entities are registered in the ARMEPS and implement its procurement electronically. According to the current regulations, one of the mandatory requirements for participation is the public disclosure of a statement on a real shareholder of the bidder and a statement on the absence of conflict of interests. The latest GP plans to gradually integrate new e-management systems into the procurement system and clarify the legal responsibilities for ineffectiveness of procurement and budgetary expenditures.

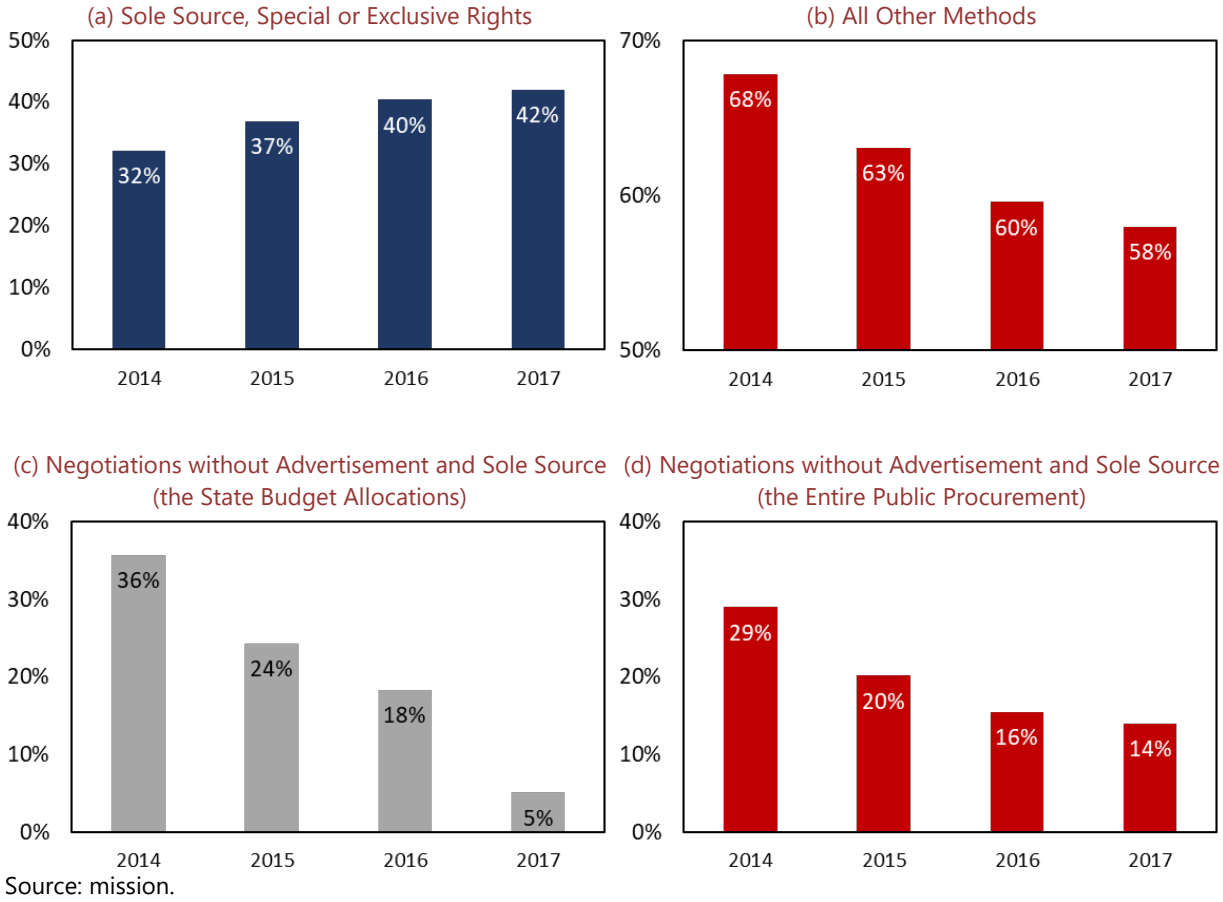
68. The institutional framework of public procurement includes the following actors: (i) the MoF responsible for making procurement regulations, policy and coordination and providing services to contracting units and businesses; (ii) the procurement appeal officers who are under the MoF and solve the appeals related to the bidding process; (iii) the procuring entities: including state governance entities, municipalities and state-owned enterprises and foundations; and (iv) the Chamber of Audit responsible for external audit of procurement process.

69. The relatively independent procurement appeal process is in place. Since the establishment of the current process, the number of complaints increased by 35 percent. The appeal meetings are broadcast on-line; and all accepted complaints, appealing minutes, decisions and annual reports are published on the MoF website. There is some room for improvements to analytical and statistical works for procurement complaints; and automatic suspension of process could be introduced when complaints are submitted.

70. Weaknesses exist in the accessibility of the business intelligence tool and the capacity of the procurement officers. The MoF has recently developed the business intelligence tool with the EBRD support. The tool complies with the "Open Contracting Data Standard" (OCDS) and enables disclosure of data and documents at all stages of the contracting process. However, the system is not available publicly and the data are open to a limited group of persons. While there has been some progress in training public procurement officers for new systems, the capacity of public procurement officers is yet to be strengthened.

71. Limited competition and extensive use of a single source method have been key areas of concern. There have been some improvements. The use of single source procurement and negotiation procedures without advertisement has been largely decreased since 2014, particularly those implemented by the State budget (Figure 35). However, the use of single source procurement in total ("sole source, special or exclusive rights" methods as per Government Decrees 168-N and 526-N) has slightly increased during the same period. Although this increase is associated with recurrent spending for utilities and communications, rather than capital expenditure, a high level of single source procurement illustrates a challenge posed by Armenia's small economy where there is little competition among suppliers.

Figure 35. Composition of Procurement Methods
(Percent of total procurements)



Source: mission.

12. Availability of Funding (Design – High; Effectiveness - High)

72. Almost all payments for general government capital expenditure are currently made from the Treasury Single Account (TSA) at the Central Bank of Armenia (CBA). Central and local government non-commercial organizations (NCOs) currently execute their capital expenditures through commercial bank accounts, but their proportion of total general government capital expenditure is minor, and in any case these expenditures will in the near future also be executed through the TSA. The bank accounts for donor-funded projects,

including those in foreign currencies, have been sub-accounts of the TSA since 2012; these sub-accounts are under the control of the line ministry's Project Implementation Units (PIUs) established and operating according to agreements with the relevant donors.

73. For capital expenditures funded by general state budget resources, monthly cash flow forecasts at aggregate and line ministry levels are prepared for the fiscal year. Cash forecasts are used as the basis of the quarterly budget allocations approved by the government following parliamentary appropriation of the annual budget. This is a bottom-up process that starts with the officials in the MoF's budget departments responsible for monitoring line ministry expenditures. These forecasts are updated monthly on the basis of actual inflows and outflows. The forecasts are broken down by month and week, and the cash planning processes is structured around weekly meetings. Line ministry commitment limits are the annual appropriations. Although expenditures may be contractually committed by line ministries with a time horizon for payments up to one year, payments during the year are still subject to the quarterly payments limits equal to the quarterly budget allocation breakdowns. Line ministries may request adjustments to these limits if warranted by circumstances (e.g., contractors submitting payments certificates according to schedules different from planned). The centralized cash planning and commitment control does not apply to donor-funded capital expenditures, as these are subject to the cash planning and commitment controls of the donors' procedures.

74. Since the economic and financial crisis year of 2009, there have been no significant problems in releasing cash for capital expenditures in a timely manner. For donor-funded projects, the PIU TSA sub-accounts are usually pre-funded by donors so that contractor invoices are paid promptly. For capital expenditures funded by general state budget resources, the Treasury maintains a cash buffer to enable it to cope with shortfalls of receipts; this, together with well-established and highly-automated cash forecasting and commitment control systems, means that supplier invoices are usually paid on a timely basis.

13. Portfolio Management and Oversight (Design – Medium; Effectiveness - Medium)

75. The MoF is monitoring annual project costs and physical progress at a detailed level but has limited power to control the implementation of major projects. Regardless of the size of a project, a project implementer is required to report detailed information on the expenditure and physical progress to the MoF.[49] Reporting is required on a monthly basis for loan financed projects and a quarterly basis for others. Total project costs are reported in the MTEF applications. Because of significant budget deviations discussed in Institutions 6 and 8, the monitoring was intensified for loan financed projects in 2017.[50] However, the MoF has

[49] A report includes outlays broken down to project components and economic classifications, volume of works done by each contractor, volume of materials and services procured from each supplier, cash balances, and descriptions of physical progress of each project component. (Government Decision No. 429-1998)

[50] MOF Regulation on Externally Supported Project Monitoring and Risk Management

limited powers to address implementation problems; and the monitoring results of domestic projects have been used mainly for permitting overspending through reserves or budget revisions.

76. The funds can be reallocated between different projects, and reallocation is used without altering original allocations significantly. Article 23(2) of the Budget System Law gives spending agencies flexibility in reallocation between different projects within the same program. This applies mainly to a program that groups several domestic projects.[51] The size of reallocation does not alter the original budget significantly. For example, in case of the program "major renovation of educational facilities in Yerevan City," which is one of the largest program in terms of number of projects, reallocation has been limited to 10 percent of the original budget of the program for the past three years. Reallocation between projects is recorded in the Treasury system, published in Gazette regularly, and reported in budget execution reports.

77. There is no systemic requirement for ex-post project reviews. Full ex post reviews are typically conducted for externally financed projects in accordance with the donors' requirements. In some sectors, the State Inspectors attached to the sector ministries undertake systemic ex-post reviews of some aspects of projects. For example, the State Energy Inspectorate undertakes inspections of energy projects with a focus on technical aspects.[52] However, there is no systemic requirement for ex post reviews of project costs, deliverables, and outputs, covering all major projects regardless of funding sources.

14. Management of Project Implementation (Design – Medium; Effectiveness – Low)

78. The project management arrangements for domestic projects are relatively standardized and clear. Domestic projects are implemented by departments or NCOs of the line ministries, which make the project selection based on the resource envelope provided by the MoF, monitor the implementation, reallocate funds if necessary, and ensure that the works meet the specifications. The Armenia Road Directorate under the MoTCIT responsible for capital repairs and maintenance of roads is an example of such a unit. They comply with the Budget and Procurement Laws of Armenia and are subject to ex-post audits by the Audit Chamber.

79. Externally-financed projects have more convoluted implementation arrangements that involve additional stakeholders without clear allocation of responsibilities. A wider range of actors are involved in the implementation of externally-financed projects, but the respective responsibilities are overlapping and include gaps. While the PIU oversees project implementation, other stakeholders may provide advice on the evolution of the project. The procurement processes can vary according to each donor's policies. PIUs report the project

[51] Because each externally financed project typically constitutes one program, reallocation between externally financed projects is subject to reallocation rules between different programs mentioned in Institution 8.

[52] Annual Work Program of State Energy Inspectorate for 2018, approved by the Order of the Minister of Energy

implementation to all stakeholders, but it is not clear who is responsible for taking actions when an implementation plan went off-track.

80. Neither process ensures that project resources are spent in accordance with the implementation plans or within the ceilings set by the MTEF. The implementation plans are submitted as part of the MTEF applications.[53] However, as discussed in Institutions 6 and 8, there have been significant deviations between the MTEF, budget appropriations, and actual spending of each project due to budget under- and over-execution. This shows that the implementation plans underlying the MTEF and budget are not credible.

81. There are no requirements for major projects to be reappraised once they have been selected for the implementation. As shown by Figure 28 in Institution 2, the total cost of the North-South Corridor project has more than doubled since 2008. Moreover, as shown in Figure 30 in Institution 6, the budget execution rate of the same project was only 13 percent on average for the first four years and 237 percent on average for the last three years. In 2017, the revised budget of the same project, which was largely increased from the original budget to address countercyclical issues (see Institution 1), was highly under-executed. The combination of total cost overshooting and persistent and significant deviations from budgets and implementation plans should have triggered a project reappraisal and revision before further resources were allocated, but such reappraisal and reprioritization did not occur.[54]

82. Some major capital projects have been subject to ex-post audit by the Audit Chamber, and audit results are published and discussed by the National Assembly. Based on the approved annual plan, the Audit Chamber, which is the supreme audit institution, undertakes the compliance, financial, performance audits of capital projects, based on quantitative, qualitative, timeframe and cost related indicators. The findings and recommendations are presented in the regular and annual reports, which are submitted to the National Assembly and published by the Chamber on timely manner.

83. Armenia will have a more robust audit function when the provisions in the new Law on the "Audit Chamber" are fully implemented.[55] The law shifted the key mandate from control to audits and expanded the responsibilities of the Chamber to audit of all public expenditures, including donor-funded projects, following the INTOSAI standards. The procurement related monitoring and ex-post review is also undertaken by the internal audits of the MoF and respective line ministries. The capacity of the Audit Chamber needs to be further strengthened to ensure the financial, operational and administrative independence. Subject to improvements to the capacity of the Audit Chamber's staff, the procurement post review of the

[53] Forms attached to the Methodological Instructions for Budgeting in the MTEF and the 2019 Budget.

[54] The Government Decision 526-2017 sets out certain limits to increase in a contracted price, but this regulation applies only to the procurement process and does not necessarily require project reappraisal.

[55] The law converted the Control Chamber into the Audit Chamber and is effective since April 9, 2018.

WBG funded projects will be provided to the Chamber. Currently, donor organizations conduct the procurement ex-ante and post reviews independently.

15. Monitoring of Public Assets (Design – Medium; Effectiveness – Medium)

84. The asset registers of the government are not comprehensive but some are being improved to help prioritizing maintenance. There are several asset registers maintained by different agencies with different coverages; and they are typically updated at a reasonable interval (Table 5). Some agencies are upgrading the registers to capture more information necessary for identifying maintenance needs. For example, the Armenian Road Directorate maintains a database of all roads (except for community roads) into which survey results of road conditions are stored. A bi-annual survey covers 1,500 km each time; and all roads will be surveyed every five years. Scores on road conditions calculated by this database will be used for prioritizing the maintenance projects (see Institution 9). The MUD is also developing a database of the seismic assessment of school buildings.

Table 5. Armenia: Government Asset Registers

Register	Maintaining Agency	Coverage	Registered Assets	Update	Value
State Property Register	SPMD	Central Gov't	Roads, buildings, structures, reservoirs, water pipes, intangible assets, vehicles, shares	Annual	Building only
Community Property Register	Community	Community	Roads, buildings, lands	(Varies)	Building only
State Register of Property Rights	State Cadaster Committee	All economy	Lands	(Rolling basis)	N/a
"HDM4"	Armenian Road Directorate	Central Gov't	Roads	2 years	N/a

Source: mission based on various laws and agencies' websites.

85. There is no fiscal report that includes the stock value of non-financial assets of the government. The annual government or community accounts are prepared on a cash-basis of accounting and include no data on stock of nonfinancial assets.[56] The national accounts or government finance statistics produced by the State Statistics Committee also do not include stock of nonfinancial assets. In contrast, the annual SOE report prepared by the SPMD includes stock of fixed assets broken down to each enterprise, which uses an accrual basis of accounting.[57]

86. The national accounts include depreciation of government fixed assets based on statistical estimates. The consumption of fixed assets of the public administration (i.e., the State and communities) is presented in the annual national accounts. The State Property

[56] The Treasury prepares the annual State Budget Implementation Report and the Community Budget Summary Report as the government and consolidated community final accounts.

[57] "Summary Report on Commercial Organizations with State Participation for Monitoring and Analysis of the Financial-Economic Situation.

Register also record depreciation of buildings, while their revaluation has not been made since the 1990s.

Recommendations

Issue 6: A comprehensive e-procurement system is yet to be integrated into the GFMIS and the weaknesses exist in the procurement officer's capacity and the strategic procurement.

Recommendation 6: Improve the system and capacity for public procurement associated with capital projects

- Develop the comprehensive e-Tendering system to incorporate the requirements of the new PPL and integrate it into the GFMIS;
- Address capacity shortage at the level of procurement officers by developing KPIs;
- Reconsider the design of the country level strategic procurement and establish mechanisms for strategic procurement planning;

Issue 7: Project implementation plans can be easily modified within the year, leading to substantial budget deviations and limiting the government's ability to request corrective actions; and the Audit Chamber's mandate is yet to be fully shifted from the control to the audit.

Recommendation 7: Establish a constraint on in-year changes in project implementation plans and complete the transformation of the Audit Chamber from the Control Chamber.

- Develop legislation requiring that changes to project implementation plans should not increase the capital budget of the responsible line ministry.
- Provide the Audit Chamber with the necessary resources to fully implement the new Law on Audit Chamber.

IV. CROSSCUTTING ISSUES

A. Legal Framework

87. The legal framework includes significant gaps in the planning and selection of major projects. For smaller projects, mainly those for capital repairs, the legal framework includes the requirements of costing and technical analysis and some selection criteria, although it is fragmented into several decrees.[58] The legal framework also exists for the procurement of major and small projects.[59] However, there is significant gaps in the legal framework for the planning, appraisal and selection of major projects (Table 6). Article 14 of the Budget System Law requires the government to issue a decree on the public investment procedure, but the existing decrees focus on reporting of financial and physical progress.

Table 6. Armenia: Gaps in the Legal Framework for Project Planning, Appraisal, and Selection

Topic (Existing Laws)	Gaps
Strategic planning (Constitution)	**There is no legislation in force that establishes a hierarchy of national and sectoral strategic plans or synchronizes their planning horizons.** Article 154 of the new 2015 Constitution requires the government to make a "unified economic and financial state policy", but there is no law or decree that specifies a structure of planning documents or requires their consistencies. The government introduced a draft decree (draft Protocol Decision No. 42) to streamline existing strategic documents into three levels (Comprehensive and Medium-Level Strategic Documents and Budget Program Strategies), but the draft has not been assented by the President.
Project appraisal (Various Gov't Decisions and Ministerial Orders; Statues of MoF and MoEDI;)	**Several decrees require costing and technical analysis, but no legislation requires economic or financial analysis of major projects.** There are many decrees that establish costing standards and require technical analysis (for example, Government Decisions 879-2011 and 596-2015; and MUD Order 19-2008). They are applied to all construction projects regardless of their size. However, no decree has been issued to require economic or financial analysis of major projects. Neither the MoF nor the MoEDI has a formal mandate to establish the appraisal methodologies (Statutes of MoF and MoEDI).
Project selection (Law on International Treaties)	**The existing law permits major projects to be selected without involving the MoF.** Selection of major projects is guided only by the Law on International Treaties, which specify a negotiation process for financial agreements. The said law requires a LM to obtain a go-ahead from the Prime Minister before the MoF begins negotiations. This provision is interpreted to allow the Prime Minister to select a major project without requiring the MoF to evaluate its pre-feasibility study. No criteria are mentioned for such go-ahead of the Prime Minister.

Source: mission based on various laws and decrees.

[58] For example, the selection criteria on capital maintenance of roads are specified in the Government Decision 873-2015 (the Strategy for Renovation of State Roads 2015-2025).

[59] See Institution 11.

B. IT Support

88. The existing IT systems do not capture information throughout all phases of a project lifecycle. Most of the attention has concentrated on the budget preparation and execution phases. For ongoing projects, the TOD, debt management, and other systems maintained by the MoF capture a very detailed information on budget execution, physical progress, and financial projections mainly for MTEF periods. Reports on budget execution and physical progress are automatically collected from PIUs' systems interfaced with the TOD. An expanded database that captures information on all project cycles is necessary for the MoF to prioritize the allocation of the resource envelope.

89. There is no database that works as a pipeline of projects from which projects can be selected into the budget. For new projects, neither the MoF nor the MoEID have a database of all project proposals including those rejected. These entities only receive project information either when external financing must be finalized or when preparing the upcoming year's budget. Assessment against strategic priorities or appraisal analysis, which are fundamental for the project selection, are not systemically recorded. Likewise, updated total and life-cycle costs, or ex-post reviews of ongoing projects may be kept in paper-based formats and not uploaded into a system that could provide better analysis (Table 7).

Table 7. Armenia: Gaps in Project Databases Accessible by the MoF

Necessary Data	Gaps	
Project outline	Some data missing	For example, updated start and end dates and geographic information may not be captured
Link to strategic documents	No information	There is no record of which priority in a strategic document a project falls within;
Appraisal information	No information	The appraisal documents and costing and technical analysis seems to be kept on a paper-base
Parameters for project selection	No information	There is no record of whether the selection criteria are met, even if such criteria exist
Financial requirements	Some data missing	There is no record of life cycle costs; updated total costs and annual breakdowns may not be uploaded
Execution and monitoring	Some data missing	Original and revised budgets, actual expenditure, and physical progress are stored into TOD at a very detail level, but there may not be comprehensive records of multiannual commitments and contracts.
Ex-post evaluation	No information	Ex-post review documents seem to be kept on a paper-base, if they are delivered to the MoF.

Source: mission

C. Staff Capacity

90. The MoF and the MoEID have limited resources dedicated to the scrutiny and monitoring of major projects. The MoF has the Capital Expenditure Division, composed of five staff, but the division's functions are focusing on the budget process for domestically financed projects. The externally financed projects are covered by the Budget Process Management

Department, which is responsible for the budget preparation of all recurrent and capital expenditure. The main role of the MoEID's Strategic Planning and Monitoring Department is to prepare the national long-term development plan. Neither the MoF nor the MoEID has a dedicated unit or function for scrutinizing new proposals or controlling implementation of major, externally financed projects.

91. Taking the leading role in the project approval process requires the central agency to establish a dedicated unit or function for the project scrutiny and monitoring. The gatekeeping roles to review the project proposals, challenge the economic and financial assessment, and recommend the selection or rejection are effectively the new functions that do not exist in the government. Creating such gatekeeping roles in the MoF and the MoEID requires additional resources and capacity. An option for the MoF would be to expand the Capital Expenditure Division to cover both domestic and externally financed projects, granting additional financial and human resources to the division. In the initial phases of the capacity development process, staff could be seconded from other line ministries that have large project portfolios. Assistance would need to be sought from outside the government, including universities and other independent entities and experts.

Recommendations for Cross Cutting Issues

Issue 8: While the MoF has the Capital Expenditure Division covering domestically financed projects, it has limited resources for scrutinizing and controlling externally financed projects.

Recommendation 8: Establish in the MoF a dedicated unit covering all domestic and externally financed projects, in order to ensure that projects are consistently appraised and selected prior to funding negotiations and inclusion in the budget.

- Explore an option to expand the mandate of the Capital Expenditure Division to cover both domestic and externally financed projects (excluding defense projects);
- Identify the needs of additional resources for scrutinizing new major projects and controlling ongoing major projects in accordance with the proposed gateway approach;
- Discuss with development partners possible funding to obtain assistance from outside the government, including universities and other independent entities and experts.

Appendix I. Proposed Action Plan

Action	2018	2019	2020	2021	Responsible agency
Recommendation 1: Improve national and strategic planning					
Improve the existing hierarchical structure of investment strategy documents and define consistent planning horizons		Issue legislation to make planning periods consistent with one another and ensure that sectoral investment plans are consistent with priorities of national strategies and that financial details of major projects are consistent with the MTEF and State Budget Law.			MoEDI and line ministries
Clarify priorities of projects in strategic documents and ensure consistency of project information and with resource envelops		Develop a pillared structure for the new national development plan that clarifies and connects priorities	Publish the new national development plan	Develop new or update existing sectoral investment strategies in accordance with the new national development plan, replacing all existing ones	MoEDI and line ministries
Recommendation 2. Develop a unified appraisal methodology					
Develop a unified appraisal methodology to ensure comparability across all major projects		Formally adopt a government resolution to approve the systematic evaluation process	Develop a unified appraisal methodology for all major projects of the State as well as those of communities and PCs that are State-supported	Begin a full-fledged appraisal of all major projects above AMD 5 with consistent economic assumptions, in addition to donor-specific appraisals	MoF, MoEDI
Recommendation 3. Strengthen the medium-term budgeting					
Establish the MoF's power to challenge the project cost baselines and the process to reappraise and reprioritize projects		Include in the MTEF and budget message updated total costs of all loan-financed projects with annual breakdown for the entire project period	Issue legislation that requires major projects to go through a reappraisal and reprioritization process when their budget execution and other		MoF, MoEDI

			factors show the needs of project adjustments		
Recommendation 4. Control in-year adjustments					
Amend the Budget System Law or the State Budget Law to establish restrictions on in-year adjustments to capital expenditure	Amend the Budget System Law or the State Budget Law to make binding appropriations for loan-financed projects and on-lending limits and to prevent use of contingency reserves for projects				MoF
Recommendation 5. Develop a gateway approach to the project selection					
Establish a project selection process based on a "gateway" approach with a centralized pipeline of projects, which have been ranked and selected		Issue legislation that empowers the MoF and MoEDI to veto all major projects at two "gateway" stages as suggested in this report Develop a pipeline of new projects from which proposals can be selected for inclusion in the MTBF and annual budget (before 2020 budget preparation)	Develop a simple prioritization exercise using weighted averages of indicators that can be easily calibrated for scenario analysis to support the project selection process	Elaborate the assessment methodologies for projects that have undertaken pre-feasibility studies	MoF, MoEDI
Recommendation 6. Improve public procurement for capital projects					
Develop a comprehensive e-Tendering system to incorporate the requirement of the new PPL			Initiate the development of the comprehensive e-Tendering system as part of the GFMIS envisaged under the PSMP 3 project	Complete the integration of the comprehensive e-Tendering system in the GFMIS envisaged under the PSMP 3 project	MOF

Address capacity shortage at the level of procurement officers by developing KPIs		Continue the certification of state officers responsible for procurement function; and the training	Develop and introduce KPIs for state procurement	Include the procurement discipline in the curriculums of the higher education	MOF, GOA
Reconsider the design of the country level strategic procurement and establish the strategic procurement planning		Prepare strategic planning document and monitor it throughout the project implementation.			MOF
Recommendation 7. Strengthen project implementation through enhanced planning and auditing functions					
Strengthen the link between project implementation plans and budget requests		Include in the 2019 budget the requirement that changes to project implementation plans should not increase the capital expenditure of the responsible line ministry			MoF
Fully develop the audit capacity of the Audit Chamber		Plan the necessary resources for the Audit Chamber to fully implement the new audit law	Develop and implement capacity development programs for the Audit Chamber's staff		Audit Chamber, MoF, Government of Armenia
Recommendation 8. Develop the central agency's capacity for scrutinizing and controlling projects					
Establish a dedicated unit covering both domestic and externally financing projects		Assess options for institutional set-up, including expansion of the Capital Expenditure Division Identify additional resources and assistance needed for undertaking the gatekeeping roles.	Operationalize the dedicated unit Mobilize additional resources, possibly through secondment from other ministries Obtain assistance from universities and independent experts	Hire and increase own staff for the dedicated unit	MoF

Appendix II. Key Components of the Concept Note on Public Investment Management

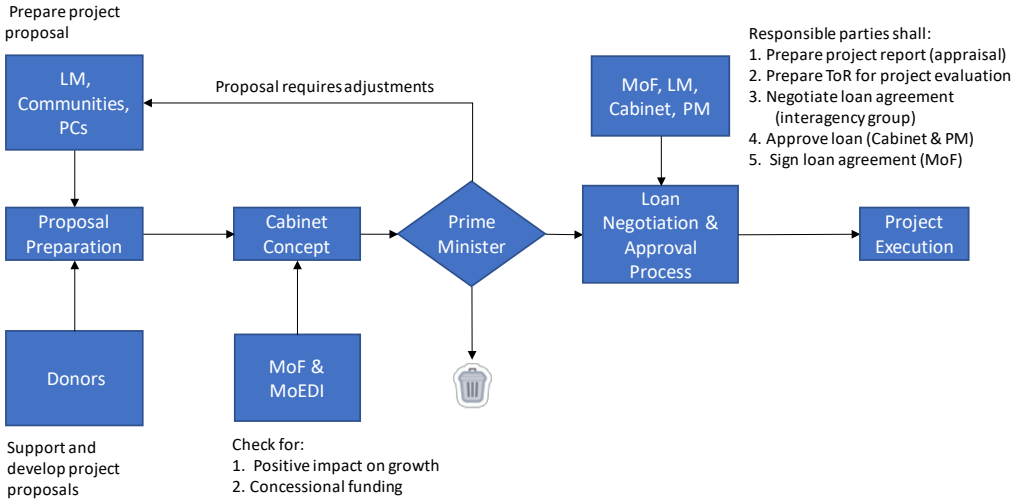
Component	Rationale to Address Gaps in Current Practice
Standardized templates for project presentation	This addresses the heterogeneity in presentation of project information. A standardized template helps identify which information gaps need to be filled and signals which projects are better prepared and more likely to be completed on time and within the budget.
Establishment of an assessment body	This body plays an independent gate keeping role to ensure that projects are (i) consistent with the country/sector development strategy; and (ii) have undergone all the required analysis for approval. This assessment body will also be able to look at projects across sectors and analyze projects as part of a broader portfolio and not as standalone initiatives.
A two-step appraisal process	Projects go through multiple rounds of review. This allows the assessment body to remove projects from the pipeline that do not meet the specified criteria. It will also focus resources on appraisal of those that have a higher likelihood of being approved. For example, the first round of assessment might only include identification of project risks, while their quantification and management strategies are included in the second round.
Synchronization with the budget cycle	This should increase the coordination between project development and budget preparation, providing greater information to the MoF for allocation of the resource envelope.
Methodologies and guidelines	These should address the lack of methodologies used for large domestic projects and the differences between approaches used by third party assessments, particularly for donor-funded projects.

Appendix III. Developing the Project Gatekeeping Role

Figure 36 presents the current process for the selection of externally funded investment projects of which it is important to highlight:

- Government entities are responsible for preparing project proposals, in which donors actively participate, putting forward some initial conditions on concessional funding;
- The MoF and MoEDI play a secondary role in this process, providing Cabinet opinions on the project's broad growth impact and if funding conditions are concessional; fiscal impact, particularly the availability of space in the MTEF for a project is not considered, nor is there an analysis on fiscal risks;
- Prime Minister decides to: reject the project, request adjustments, or approve the proposal;
- Approved proposals will continue into the loan negotiation process, in which the MoF again plays a secondary role: in charge of submitting formal loan applications to donors and signing the negotiated agreement;
- Full project appraisal and feasibility studies occur after a project has been selected and a loan for its funding has been approved.

Figure 1. Existing Selection Process for Loan Financed Projects



The existing setup poses challenges for the project appraisal and selection process. Project selection can be driven by the availability of funding; full project appraisal is made too late in the process; there is no detailed assessment of the fiscal "space" available to undertake the project.

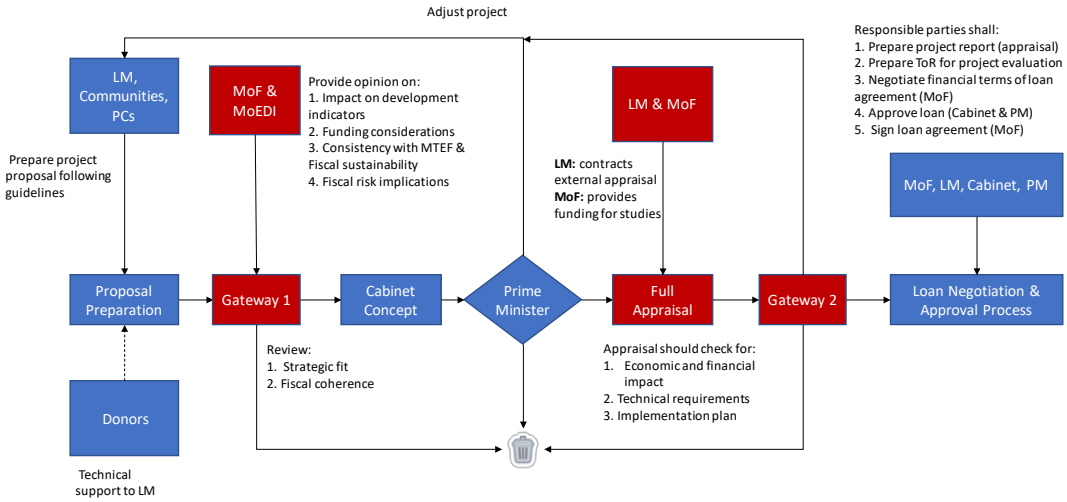
Figure 37 presents the mission's proposed changes that can help improve the process selection process (highlighted in red):

- Two gateways are suggested: the first will review project proposals before submission to Cabinet; the second will review project proposals after a full appraisal and feasibility study has been undertaken for projects with total costs over AMD 5 billion;
- MoF and MoEDI will play leading roles in the approval process: in the first gateway these central agencies must provide a thorough analysis on a projects' impact on development indicators, consistency with the fiscal space available with the MTEF, implications on fiscal risks, and possible sources of funding; MoF will lead the negotiation of the financial conditions of the loan;
- A full appraisal and feasibility study will be required for projects above the AMD 5 billion threshold which have been approved by the Prime Minister; the MoF will provide the sponsoring entity the resources to undertake the full project appraisal.
- Donor support should be limited to financing and/or technical advice on the appraisal and feasibility study of the project. Only after the full appraisal has been completed, negotiations on potential funding for the project implementation should start.

This approach will strengthen project selection by incorporating fiscal sustainability issues early in the process and completing comprehensive studies before any commitments to complex projects are made. Implementing these changes will require:

- Increasing capacity at the MoF and MoEDI on project analysis;
- Developing methodologies, guidelines and timetables for presentation of project information;
- Project selection should be linked with the budget process.

Figure 2. Proposed Changes to the Approval Process for Major Projects



Appendix IV. Country Examples of the Gatekeeping Functions for Project Selection

Throughout the world countries are looking at mechanisms to strengthen public investment project selection so that initiatives with the potential to have the highest impact on the country are selected. Some countries have gone for a full review of all initiatives proposed while others focus on only those above a certain cost threshold. Below are three examples for Chile, Uganda and Mozambique. The first has had a public investment evaluation system for many years, while the other two are in the process of developing them:

Chile – Chile's public investment system is well known and is used as a guide for counties that want to have strict control over the projects entering into the national budget. The country has developed and published specific guidelines stipulating how projects must be prepared, appraised and presented to the Ministry of Social Development. Projects are evaluated based on the economic and social benefit that will be delivered and the Ministry will decide whether the project is good enough to continue into the budget process, or it must be revised or rejected. All projects must undergo this process, which is supported by a comprehensive IT system through which stakeholders must submit all project information.

Uganda – In 2016 the Ministry of Finance, Planning and Economic Development issued the Development Committee Guidelines which focus on improving its PIM processes. The guidelines enhance the project review process by adding additional stages and gateways in which projects are reviewed for technical, strategic and economic consistency. Methodologies and specific formats were developed for project submission for approval by the Development Committee. Projects that do not meet the requirements set in the guidelines are not eligible for entering into the budget, even if funding is available through loans or grants.

Mozambique – The authorities have been improving the public investment management system for recent years. The Directorate of Studies and Economic Research at the Ministry of Economy and Finance was assigned the role of reviewing the appraisal of selected capital projects. However, projects with an investment cost above MT 50 million would be prioritized and selected by a higher-level body of the government. Like in the previous cases the government developed methodologies and guidelines to require that projects be selected on the consistent criteria.

Appendix V. Developing a Simple Project Prioritization Exercise

Armenia could strengthen its project selection process by conducting a simple prioritization exercise of the new initiatives proposed to be included in the MTEF in the next fiscal year. This exercise will form part of the MoF's role at the "first gateway" in the project selection process (see Appendix II). The prioritization exercise will evaluate each project on certain parameters and provide a weighted score. Projects will be ranked based on this score and those with the best result will be the first to secure resources from the budget once the fiscal space for new initiatives has been provided in the MTEF.

To be able to develop this type of exercise the authorities will need to:

- **Create a list of projects to be prioritized.** Information for all initiatives needs to be available at the same time for the prioritization exercise to be completed.
- **Determine which variables to use for the prioritization.** The selection of these will depend on the availability of information on projects and the questions on projects that the government needs to know. It can be divided into two sets of data:
    - Information that can be standardized and will be used for classification and aggregation purposes; examples include who the project sponsor is, what sector of the economy will benefit or which is the link to country's development strategy.
    - Information that is more project or sponsor specific such as financial variables of the project or recent budget execution levels of the sponsoring agency.
- **Weights to be attached to each variable.** The weights given to each variable will reflect the priorities for investment that the country has; a higher weight for renovation projects will assign a higher share of resources to these projects over construction of new ones. These weights can be modified during the budget preparation to generate different scenarios for discussions with sponsoring agencies.
- **Available resource envelope.** Quantifying the value of the resources available for allocations between sectors will determine which projects can be included and which must be postponed for a later date. It will also help to check if the allocation of the resource envelope allows the best projects to be chosen across sectors.

Undertaking this exercise will allow the government to build a pipeline of investment projects; those not selected for next year's budget will remain in the database for consideration in future vintages. It will also strengthen the MoF's challenge role by providing basis on which to challenge the line ministry's decision on project selection. However, this exercise does not replace the analysis and discussions with the line ministries that must take place as part of the budget process.

The usefulness of the exercise will depend on the quality of information provided on projects. Therefore, a minimum and standard set of data must be available for all projects. Submissions

that do not meet this minimum requirement should not be considered in the exercise.

Below is an illustration of what variables and weightings could be used for this exercise. The actual variables and weightings should be more tailored to Armenia:

Table 1. Example of Parameters for Project Prioritization

Parameter	Weight	Parameters	Weight
The impact of this project will be primarily on?	**10.0%**	**To which pillar of the PDS is the project related?**	**15.0%**
Better Social Infrastructure	4.0	Environmental Protection	3.0
Increased economic productivity	3.0	Human Capital Development	5.0
Better infrastructure	5.0	Infrastructure	4.0
Efficient public administration	1.0	Public Administration	2.0
		Regional Development	1.0
Will the project require contracting new debt?	**25.0%**	**Does the project have a feasibility analysis?**	**10.0%**
Yes	0.0	Yes	5.0
No	5.0	No	0.0
What is the objective of the investment?	**25.0%**	**What is the average budget execution rate of the line ministry's projects in 2017?**	**15.0%**
Cost optimization	4.0	75% < X	5.0
New capital formation	3.0	50% < X <= 75%	3.0
Renovation	5.0	25% < X <= 50%	1.0
		X <= 25%	0.0

Each project will receive a score between 0 and 5 for each of six dimensions, which in turn have been given a weight that reflects the relevance that the government assigns to that particular dimension. In this case, the government's priority is to determine if additional debt resources are needed and the objective of the investment, both with a weight of 25 percent. Renovation projects that do not require debt will score higher than those that are building new capital and require external financing, all other scores being equal.[60] The sum of the different categories will be compared across projects to select those with the highest score.

Some dimensions are not project specific but focus on the economic impact of the initiative (relationship to PDS), the preparedness of the proposal (does it have feasibility studies), or characteristics of the sponsoring agency (the line ministry's budget execution rate).

Other examples of possible dimensions could include (i) the population that will directly benefit from the project, (ii) the recurrent expenses that the project will require once it is completed, and (iii) if the project is eligible for grants from the donor community.

The following presents an example of scoring of three hypothetical projects:

[60] The maximum score for each of these two dimensions is 1.25 (25%*5). Therefore, projects do not require new debt and that focus on renovation of existing infrastructure will receive 2.5 points. On the contrary, those that require external financing and will focus on new investments will receive 0.75 points.

Project 1: New school construction with support of IFI		
Parameter	**Result**	**Score**
What is the objective of the investment? (25%)	New capital formation (3)	0.75 (25%*3)
To which pillar of the PDS it's the investment related? (15%)	Human Capital Development (5)	0.75 (15%*5)
The impact of this project will be primarily on? (10%)	Better Social Infrastructure (4)	0.40 (10%*4)
Does the project have a feasibility analysis? (10%)	No (0)	0.00 (10%*0)
What is the average execution of the MDAs investment projects in 2017? (15%)	25%<2017 Execution <=50% (1)	0.15 (15%*1)
Will the project require contracting new debt? (25%)	Yes (0)	0.00 (25%*0)
Total score		**2.05**

Project 2: Renovation of warehouses to promote grain exports		
Parameter	**Result**	**Score**
What is the objective of the investment? (25%)	Renovation (5)	1.25 (25%*5)
To which pillar of the PDS it's the investment related? (15%)	Infrastructure (4)	0.60 (15%*4)
The impact of this project will be primarily on? (10%)	Economic Productivity (3)	0.30 (10%*3)
Does the project have a feasibility analysis? (10%)	Yes (5)	0.50 (10%*5)
What is the average execution of the MDAs investment projects in 2017? (15%)	50%<2017 Execution <=75% (3)	0.45 (15%*3)
Will the project require contracting new debt? (25%)	Yes (0)	0.00 (25%*0)
Total score		**3.10**

Project 3: Purchase of scanners for the customs office		
Parameter	**Result**	**Score**
What is the objective of the investment? (25%)	Cost Optimization (4)	1.00 (25%*4)
To which pillar of the PDS it's the investment related? (15%)	Modern Public Administration (2)	0.30 (15%*2)
The impact of this project will be primarily on? (10%)	Public Administration (1)	0.10 (10%*1)
Does the project have a feasibility analysis? (10%)	No (0)	0.00 (10%*0)
What is the average execution of the MDAs investment projects in 2017? (15%)	Execution <=75% (5)	0.75 (15%*5)
Will the project require contracting new debt? (25%)	No (5)	1.25 (25%*5)
Total score		**3.40**

In this example, Project 3 would be the first to be included in the MTEF and later have resources allocated through the budget. By not requiring debt financing but optimizing costs this project offset being in a less attractive sector as per the government's weighting. The other two projects could also receive resources depending on the resource envelope available. Finally, if the government decided to change the weighting and focus more on the relationship to the pillars of the PDS (weight increased to 25 percent) and less on debt (weight reduced to 10 percent), then the score of Project 3 would be reduced to 2.90 and that of Project 2 would increase to 3.65 points.

Countries that have started strengthening their public investment management systems have used this type of approach as a short-term solution until the regulations, methodologies, and capacities are fully developed.

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