INTERNATIONAL MONETARY FUND AND
INTERNATIONAL DEVELOPMENT ASSOCIATION

REPUBLIC OF MOLDOVA

Joint IMF-World Bank Debt Sustainability Analysis

Prepared by the Staffs of the International Monetary Fund and
the International Development Association

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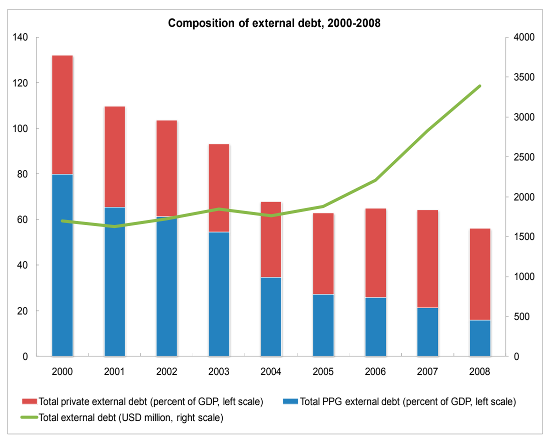
Debt Sustainability Analysis

The joint IMF-World Bank low-income country debt sustainability analysis (LIC DSA) indicates that Moldova's risk of debt distress is low at present, but additional factors increase vulnerability compared to the previous DSA. *Under the baseline scenario, the debt burden will temporarily increase in the medium term as a result of significant financing contracted by the government to counteract the effects of the economic crisis. The indicator of net present value (NPV) of the debt-to-GDP ratio could temporarily breach its indicative threshold under two of the conventional stress tests, but other indicators remain below their respective thresholds. However, large private sector debt and potential large borrowing on non-concessional terms signal elevated risks and warrant a continuing careful approach to external financing.*

1. **The DSA presented here reflects the macroeconomic framework underlying staff projections under the program supported by a blend of Extended Credit Facility - Extended Fund Facility Arrangements (ECF/EFF) and extended until 2029.** It assumes that the implementation of prudent macroeconomic and structural policies, including a fiscal framework that aims to reverse recent structural fiscal deterioration, and adoption of the flexible exchange rate policy, will help Moldova recover from the economic crisis and resume sustainable growth. [10]

IV. Background



2. **Reflecting strong growth, Moldova's total external debt burden has declined in recent years, helped by the shrinking public debt.[11]** At end-2008 public debt was low and was mostly owed to multilaterals and Paris Club creditors on concessional terms, without significant rollover risks. The ratios of debt service to exports and to fiscal revenues more than halved since 2006 and remain reasonably

[10] The DSA scenarios presented in this document were produced jointly by Fund and Bank staffs following "Staff Guidance Note on the Application of the Joint Fund-Bank Debt Sustainability Framework for Low-Income Countries (LICs)" of October 06, 2008, available at www.imf.org/external/np/pp/eng/2008/070308.pdf and http://siteresources.worldbank.org/INTDEBTDEPT/PolicyPapers/21952151/39748MainExt.pdf .

[11] Consistent with the definition of the general government in the Technical Memorandum of Understanding (TMU) for the new Fund-supported program, the public debt covers gross debt of the general government, while debts of state-owned enterprises are not included unless they are explicitly guaranteed by the government. In the absence of reliable data, both private and general government debt exclude liabilities of Transnistria, though press articles suggest large energy-related external arrears in that region. In line with the DSA guidelines, public debt includes liabilities towards the IMF.

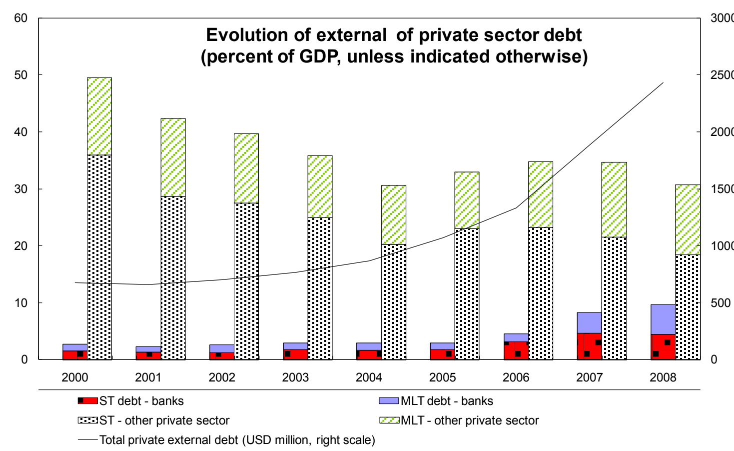
low. In the recent review of debt limits in Fund-supported programs, Moldova has been classified as a higher-capacity country, reflecting progress made in upgrading capacities for managing domestic and external public debt, reforming public administration, and improving transparency and accountability in the public sector. This progress is important, taking into account the significant borrowing that Moldova intends to contract from its international partners in the next few years.

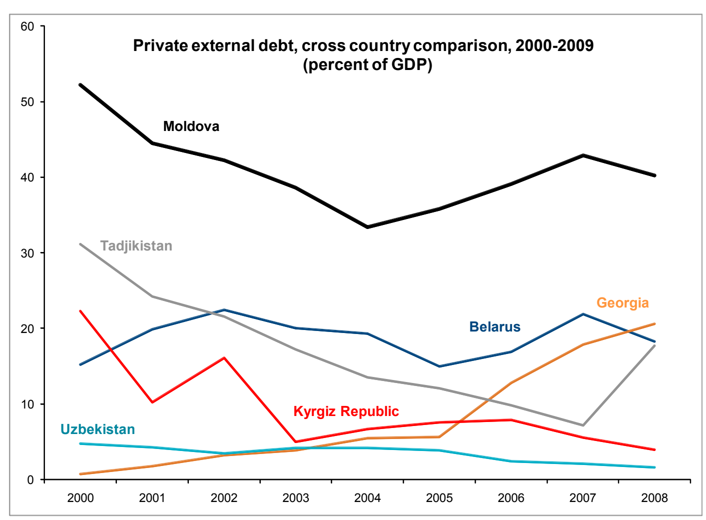
Moldova: Composition of External PPG Debt, 2008

	USD milion	Percent of GDP	Net Persent Value in USD million
Total external debt	3386	56	…
External private debt	2433	40	…
External public debt	953	16	742
Multilaterals	644	11	479
IMF	164	3	136
World Bank	436	7	307
IDA	311	5	184
IBRD	125	2	123
Others	44	1	36
Official bilateral	276	5	240
Paris Club	257	4	225
Non-Paris Club	19	0	16
Commercial	33	1	23

Source: Moldovan Ministry of Finance, National Bank of Moldova and Fund staff calculations

3. **At the same time, private sector borrowing remains high.** Between 2004 and 2008, the external private debt increased from 33 to 40 percent of GDP, two-and-a-half times the size of the public and publicly guaranteed (PPG) external debt. This increase was mainly caused by rising external exposure of the banking sector, both on a short-term (currency and deposits) and on a long-term (credits) basis. The majority of non-bank debt is short-term, and consists of trade credits, arrears and other payment liabilities, mostly for the imports of natural resources. The latter emerged in part as a result of heating tariffs set below cost recovery levels, which created a sequence of domestic and (later on) external payment arrears. This debt could potentially become a fiscal liability of up to 3 percent of GDP, since the heat production and distribution companies that are not paying for energy resources are publicly-owned companies.





4. **The long-term debts of the non-banking sector are loans.** Their share in total non-bank debt has been rising since 2005, reflecting mainly the increasing share of foreign-

owned companies operating in Moldova. The share of private debt is very high by international standards, significantly exceeding the levels observed in other LICs and developing economies.

V. Macroeconomic Framework

5. **The international financial crisis has worsened Moldova's macroeconomic outlook significantly since the 2008 DSA exercise.** In 2009, FDI came to a halt, domestic investment contracted sharply, and recession in the trading partners caused a severe decline in exports and remittances, contributing to a collapse in domestic demand. As a result, the economy went into a recession and external and fiscal financing gaps emerged. The baseline macroeconomic projections in this DSA take into account the expected sizeable fiscal and external adjustment, supported by significant borrowing in the near future in the context of the IMF arrangement (Box 1).[12] Higher borrowing needed to fill the gaps will temporarily increase debt ratios, reversing recent gains in lowering the debt burden.

6. **The macroeconomic assumptions differ with respect to the previous DSA due to the impact of recent global crisis.** Key changes include a significantly lower GDP growth in the medium and long term on account of effects of the 2009 crisis, as well as a lower inflation rate. Recent reforms introduced by the government are projected to facilitate exports of agricultural products and exports of services, resulting in higher share of exports to GDP in the long-run than envisaged in the previous DSA, and a smaller current account deficit.

VI. External Debt Sustainability under the Baseline and Alternative Scenarios

7. **All external debt ratios remain well below the thresholds under the baseline scenario, but the PV of the debt-to-GDP ratio temporarily breaches the threshold under two stress scenarios (Figures 1A–2A, Tables 1A–4A).**[13] Large borrowing in the next three years needed to fill the external and fiscal financing gaps will result in a temporary but significant increase in the level of external PPG debt to 35 percent of GDP in 2012. Due to the initial low levels of debt, the PV of the debt will not breach the threshold under the baseline scenario but could exceed it under two stress scenarios (lower non-debt creating

[12] The authorities requested a three-year blend of the Extended Credit Facility and the Extended Fund Facility with an access of SDR 369.6 million (300 percent of quota, or US$588 million), split equally between the two arrangements.

[13] Average Country Policy and Institutional Assessment (CPIA) score for the last three years (2006–08) rates Moldova as a medium performer, and the DSA uses the indicative threshold indicators for countries in this category: 40 percent for the PV of debt-to-GDP ratio, 150 percent for the PV of debt-to-exports ratio, 250 percent for the PV of debt-to-revenue ratio, 20 percent for the debt service-to-exports ratio, and 30 percent for the debt service-to-revenue ratio. At the same time, in 2008—the last year for which the CPIA score is available—the CPIA rated Moldova as a high performing country.

flows and a decline in the growth of exports).[14] These extreme scenarios, however, assume that exports do not pick up before 2012 after the 2009 collapse and remittances decline further from the very depressed 2009 levels. Taking into account the ongoing recovery in Moldova's trading partners, as well as the dismantling of trade restrictions by the new government, exports are not likely to remain stagnant. Remittances, which before the 2009 crisis were one of the highest in the world as percentage of GDP, are also unlikely to decrease any further, mitigating the risks.

8. **While rebound in exports, fiscal consolidation and significant levels of remittances should ensure that adequate resources for public debt service remain available, certain risks exist.** While none of the indicators of debt service breaches the threshold, some liquidity pressures could emerge in the medium term when the repurchases of the ECF and the EFF are falling due as shown by an increase in ratios of debt service to exports and revenues under the extreme scenarios. In addition, significant private external debt implies that private borrowers would compete with the public sector for foreign exchange needed to service their external debt.

VII. Public Debt Sustainability under the Baseline and Alternative Scenarios

9. **Under the baseline, the ratios of total public debt do not signal increased vulnerability at present.** Total public debt consists mainly of external PPG debt (72 percent) hence it follows closely the dynamics of its external component. Under the baseline scenario, after the initial increase over the medium-term, the PV of total public debt-to-GDP ratio will decline to 24 percent, while the PV of debt service to revenue ratio would fluctuate around 7 percent.

10. **The most significant increase of public debt indicators would materialize if the primary balance remains at the unsustainable 2009 level.** Large and persistent primary gap would then lead to an explosive debt dynamics. However, the ongoing process of fiscal consolidation, combined with binding financing constraints should result in a structural reversal of the fiscal position, rendering such scenario less probable.

11. **Two stress scenarios could result in a sharp increase of public debt indicators. Permanently lower GDP growth results in an ever-increasing PV of debt-to-GDP ratio reaching 87 percent in 2029, almost three times larger compared to the current level.** A sharp real exchange rate depreciation could result in a spike in public sector debt but this increase would be temporary, and debt dynamics would revert to a benign pattern in the medium term.

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[14] In Moldova, remittances are classified as either current transfers or compensation of employees. Both categories are included in the DSA (under "current transfers").

Box 1. Macroeconomic Assumptions behind the DSA

During the projection period (2009–2029), **real GDP** is projected to grow by 3.4 percent on average. After the initial decline of 9 percent in 2009, growth will gradually rise to an average of 2.3 percent in 2010–2011 and to 5 percent in 2012–2014, led by a rebound in exports, investment and remittances. In the long-run, the negative output gap will close and growth will decline to 4 percent.

Inflation is projected to remain in single digits, increasing somewhat in 2010 as the economy recovers, but subsiding to 4 percent in the long-run (as measured by the GDP deflator). This projection assumes sound public sector policies and strong commitment of the National Bank to preserving price stability.

Exports are expected to be an important driver of growth. They are projected to accelerate in the medium term, as the trading partners recover from the recent crisis, internal restrictions on exports of wine and other agricultural products are removed, and Moldova makes full use of the autonomous trade preferences agreement with the EU. In addition, structural reforms aimed at improving the business environment, demonopolizing telecommunication services and expanding access to broadband internet should result in strong growth of services, in particular software development. As a result, exports of goods and services are projected to reach 59 percent of GDP in 2029.

Imports are projected to expand as well, fuelled by intermediate imports needed for the exports sector, as well as driven by the rebound in investment and private consumption. In the long-term, however, growth of imports will subside somewhat as domestic production of tradables expands.

Remittances are projected to gradually recover from the depressed 2009 level in the medium-term. In the long-term, however, as the economy develops, more employment options are available domestically, and migrants abroad lose ties with the home country, remittances are projected to decline relative to GDP from 32 percent to 29 percent of GDP.

The current account deficit is projected to widen in the short run, and to stabilize around 8-9 percent of GDP in the medium and long term. It will be financed by **FDI** that is expected to recover to the pre-boom levels of 7.2 percent of GDP in the long run, supported by structural reforms aimed at improving the business climate.

The primary fiscal deficit is projected to decline in the medium term as a result of fiscal consolidation undertaken by the authorities. In the long run, revenues are projected to increase by 3.2 percent of GDP, while rationalization of primary noninterest expenditures will cause their decline by 4.4 percent of GDP, resulting in a primary surplus of 0.1 percent of GDP.

Borrowing assumptions reflect the gradual shift of Moldova away from concessional financing. Concessional loans are projected to decline from 88 percent of total borrowing in 2015 to 23 percent in 2029. At the same time, borrowing from commercial sources is projected to increase, reaching 55 percent of the total in 2029.

VIII. Scenarios with Additional Non-Concessional Borrowing

12. **This section explores alternative scenarios where the government increases its non-concessional borrowing by additional US$125 million a year over ten years.**[15] The non-concessional resources could be invested in infrastructure upgrades (e.g., roads, energy supply and distribution, water treatment, and agricultural irrigation). It is assumed that the loans will be repaid within 15 years, with 3 year grace period, and will carry an interest rate of 3 percent per annum.

Scenario 1

13. **The first scenario envisages that the additional borrowing will contribute to a higher real growth rate of GDP in the medium and long term than under the baseline scenario.** In the absence of specific information on the projects to be financed with new loans, it is conservatively assumed that their "domestic component" will be about 30 percent, while the remaining amount will directly translate into increased imports. Given large spare capacities in the economy after the crisis, the projects' implementation can directly contribute to the GDP growth without rekindling inflation pressures. Therefore in the medium term, annual growth could rise by 0.5–0.6 percent under a conservative scenario, mainly as a result of higher investment, employment, and consumption during project implementation years. Additional infrastructure investment will also raise the economy's capital stock and boost productivity, ensuring higher growth in the long run (4.5 percent, or 0.5 percentage points higher than under the baseline).

14. **Exports and FDI will initially rise only in line with GDP, but then will accelerate in the long run, compared with the baseline scenario.** Modest initial growth will reflect lags in improvements in infrastructure. In the long run, better infrastructure will improve Moldova's attractiveness to foreign investors, raising FDI to 9 percent of GDP and exports of goods to 43 percent of GDP.

15. **Imports will accelerate substantially over the course of the operation, causing initial deterioration of the current account (Figures 3A–4A, Tables 5A–8A).** In the long run, however, Moldova's reliance on imported energy will decrease due to new investment, contributing to a stabilization of imports at 79 percent relative to GDP. The current account in the long term will remain broadly unchanged from the baseline scenario (Section III).

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[15] The amount is in line with the ceiling on nonconcessional external borrowing set in the Fund-supported program for 2010. This ceiling excludes borrowing from international financial institutions (IFIs). Availability of external financing, changes in the macroeconomic framework and the debt sustainability outlook, and the new Fund policy on debt limits will be taken into account in discussions of the quantitative targets on debt accumulation in subsequent years during program reviews.

16. **Under these assumptions, the external debt burden indicators generally remain under the indicative thresholds, although the PV of the debt-to-GDP ratio could breach its threshold under some stress tests, signaling increased vulnerabilities.** Two tests, however, employ the unlikely assumptions that remittances would experience a further sharp drop in 2010–11 from their already depressed 2009 level. Two other tests are more realistic, assuming respectively that exports will take a long time to recover from the 2009 slump and a sharp real depreciation (30 percent), above levels observed in Moldova during the recent crisis, but comparable to the shocks in the late 1990s**.** The PV of the debt-to-GDP ratio also breaches the threshold if the financing terms of the new loans are much less favorable than assumed here. The probability of this scenario will strongly depend on the financing terms of the new non-concessional financing. If the authorities succeed in obtaining financing at fixed interest rate, the risk is less likely to materialize. On the other hand, floating interest rates linked to the international interest rates would significantly increase Moldova's debt vulnerability. Overall, this scenario emphasizes the need to contract additional financing needed for development projects on fixed (preferably concessional) terms.

Scenario 2

17. **The second (conservative) scenario assumes a similar schedule of borrowing as in Scenario 1, but no additional increase in growth and exports (Figure 5A–6A, Tables 9A–12A).** Additional borrowing will thus only result in increased imports, a wider current account deficit, and higher debt burden in the long run. These conservative assumptions are motivated by instances of international experience with large infrastructure projects, where actual benefits turn out much lower than expected.

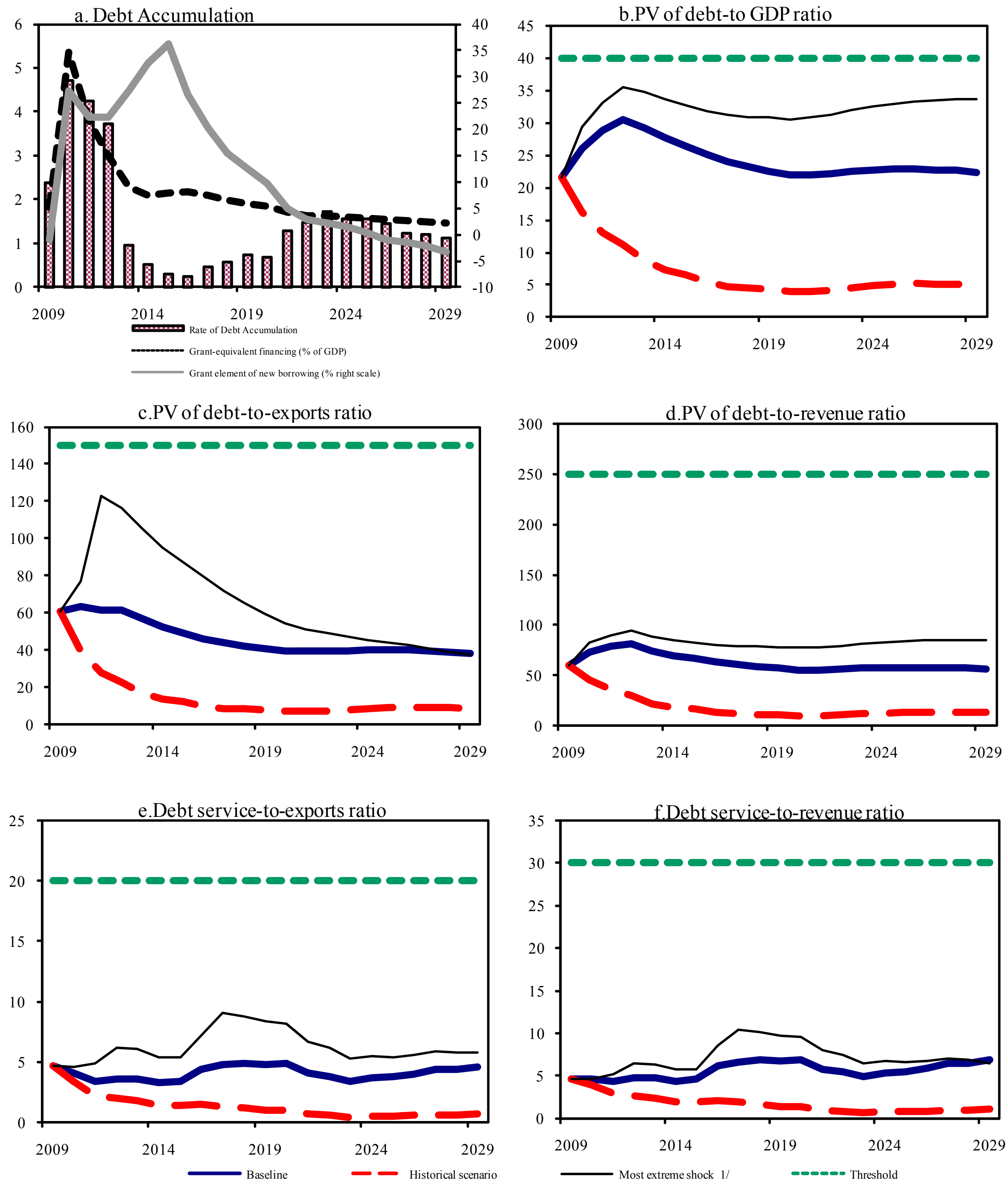
18. **Under Scenario 2, the baseline external debt burden indicators remain under the thresholds, while the PV of debt-to-GDP ratio exceeds the threshold under some of the extreme tests.** The outcome is similar to Scenario 1, indicating that the relatively benign picture in that scenario does not depend on assumptions about rising growth and exports.

IX. Debt Distress Classification and Conclusions

19. **The risk of public debt distress in Moldova is low at present, but alternative scenarios indicate certain vulnerabilities.** Under the baseline scenario, all indicators of PPG external debt remain in safe territory, except under the most extreme stress tests. Significant borrowing under the new Fund arrangement, combined with financing from other international partners, will increase the debt burden, but only temporarily, and to manageable levels. Stress tests under alternative scenarios, however, point to a potentially significant risk stemming from the interaction of stepped-up non-concessional borrowing with sluggish export growth and interest and exchange rate shocks, highlighting the need to seek financing at concessional terms, or at least at a fixed and low interest rate.

20. **Moreover, the sizeable private external debt, the arrears on energy payments and Moldova's history of debt distress warrant additional caution in public borrowing.** Private debt is significantly larger than PPG debt and exceeds by far levels observed in other LICs. It could generate balance of payments pressures by competing with public debt for foreign exchange needed to cover the debt service. Moreover, the existing payment arrears for energy resources are a potential source of fiscal liability, though these risks are mitigated by the authorities' plans to ensure tariff setting at cost-recovery levels. Moldova's previous debt difficulties—the Eurobond rescheduling in 2002 and the Paris Club rescheduling in 2006—also calls for careful evaluation of the terms and uses of prospective external public borrowing.

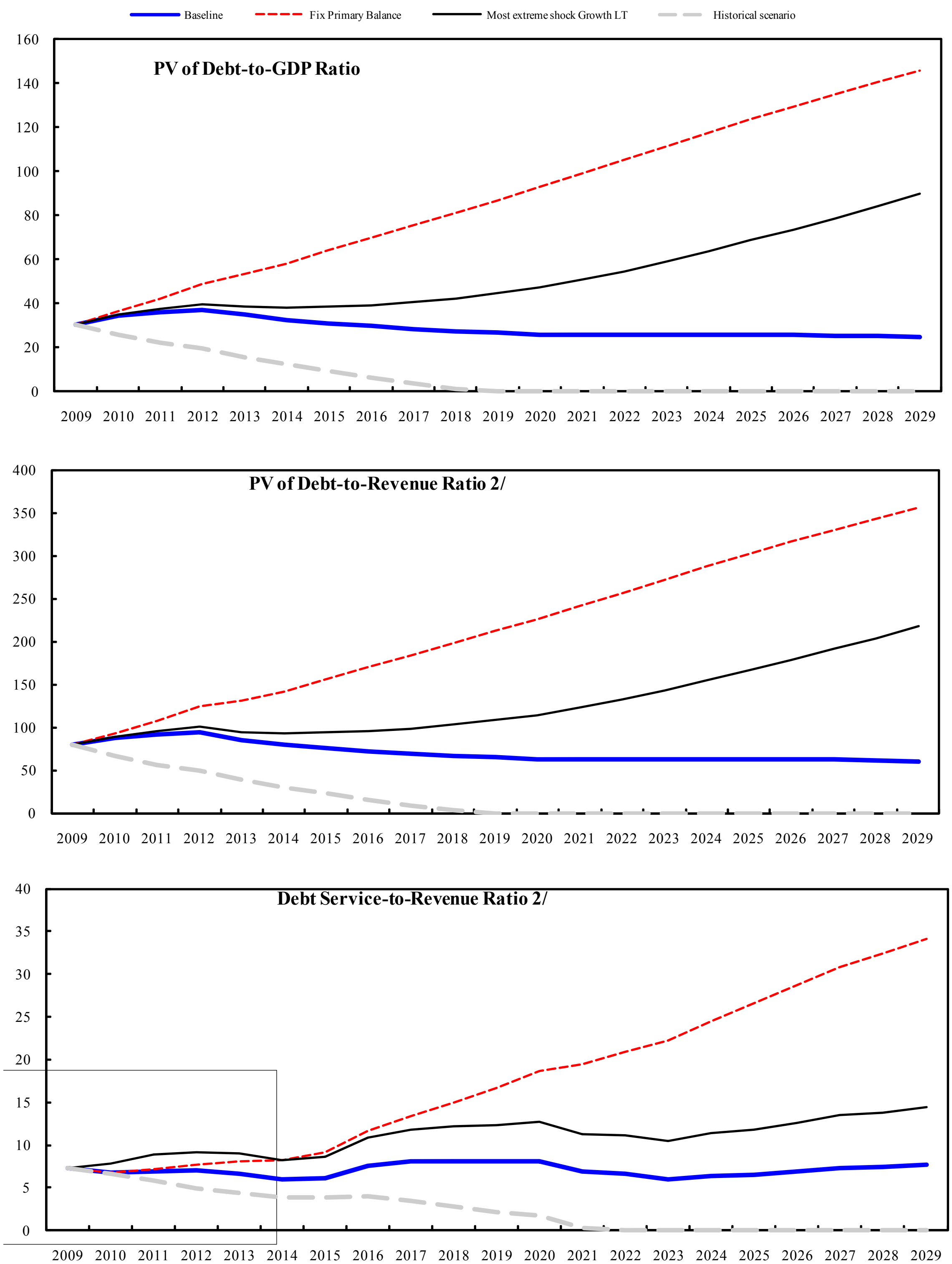
Figure 1A. Moldova: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019. In figure b. it corresponds to a Terms shock; in c. to a Exports shock; in d. to a Terms shock; in e. to a Exports shock and in figure f. to a Non-debt flows shock

Figure 2A.Moldova: Indicators of Public Debt Under Alternative Scenarios, 2009-2029 1/

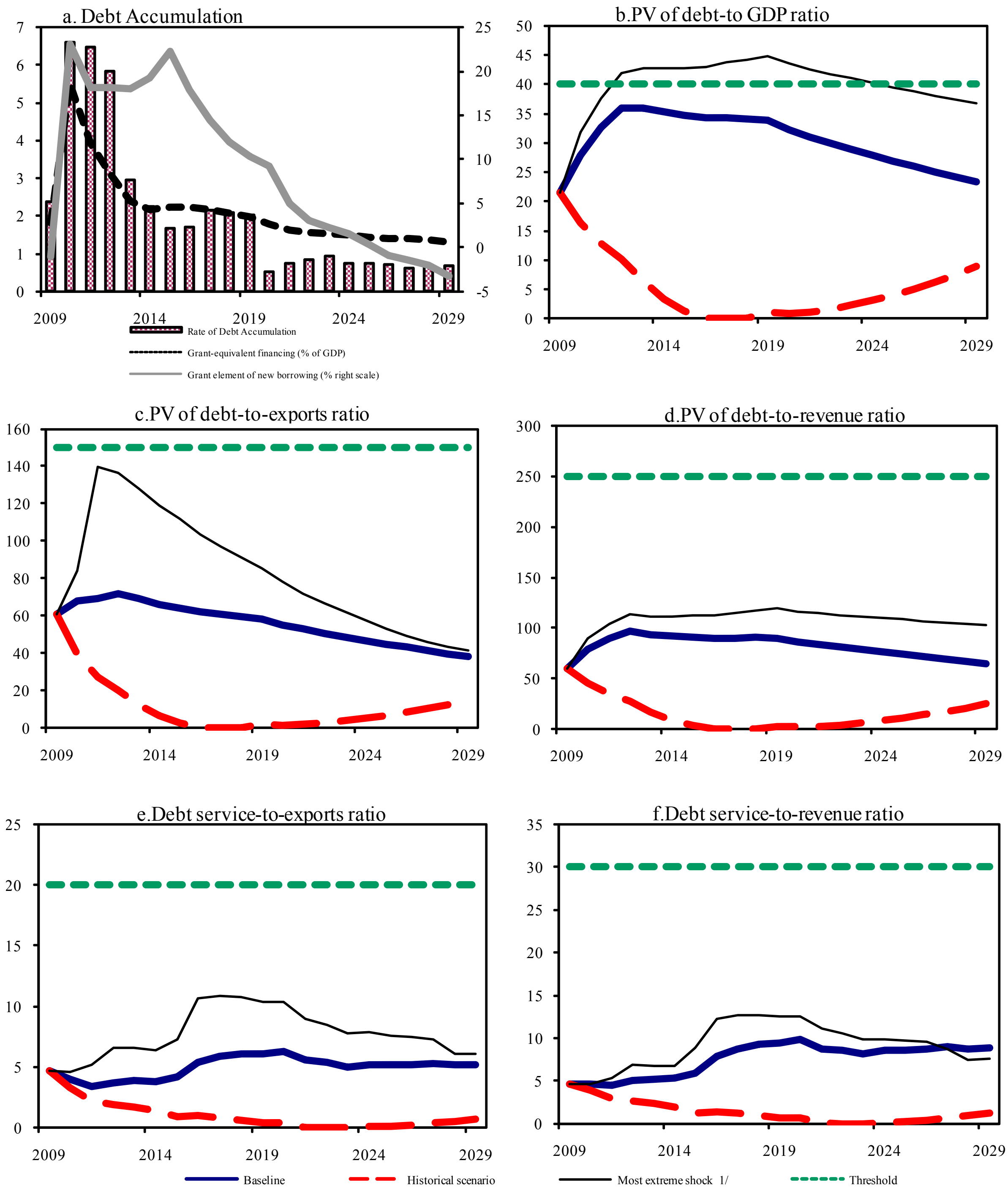


Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019.

2/ Revenues are defined inclusive of grants.

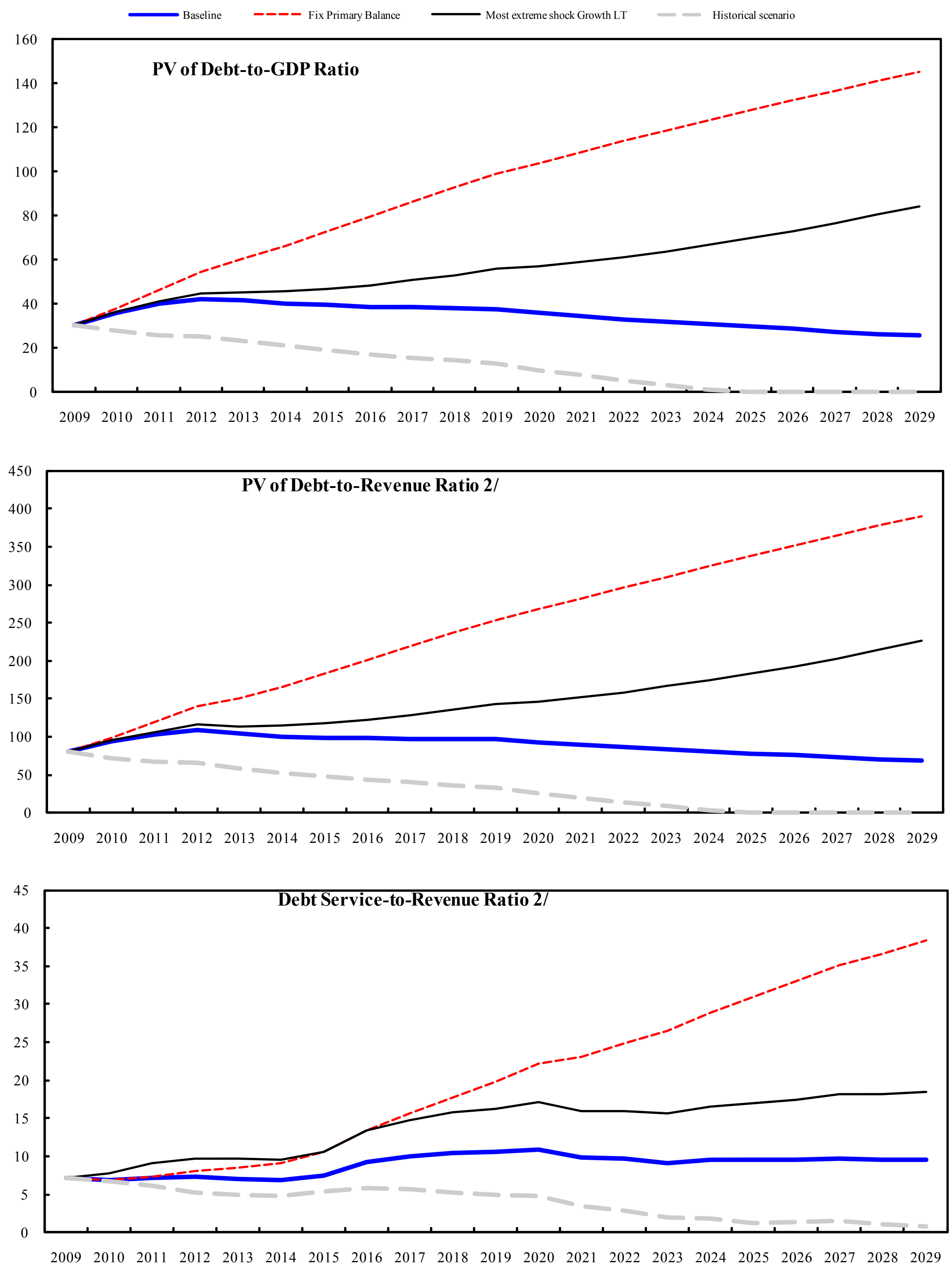
Figure 3A. Moldova: Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

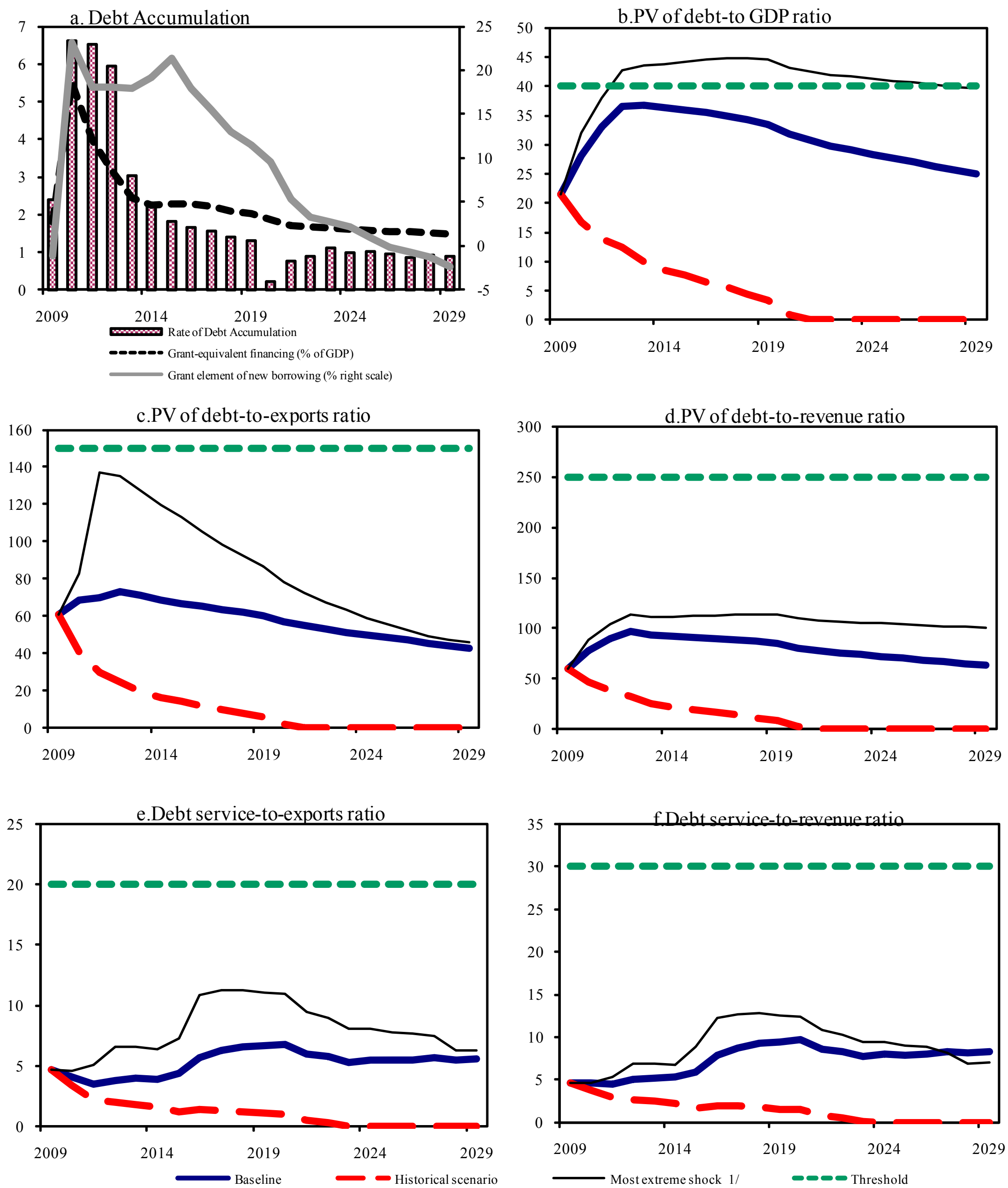
1/ The most extreme stress test is the test that yields the highest ratio in 2019. In figure b. it corresponds to a Terms shock; in c. to a Exports shock; in d. to a Terms shock; in e. to a Exports shock and in figure f. to a Non-debt flows shock

Figure 4A.Moldova: Indicators of Public Debt with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2019.
2/ Revenues are defined inclusive of grants.

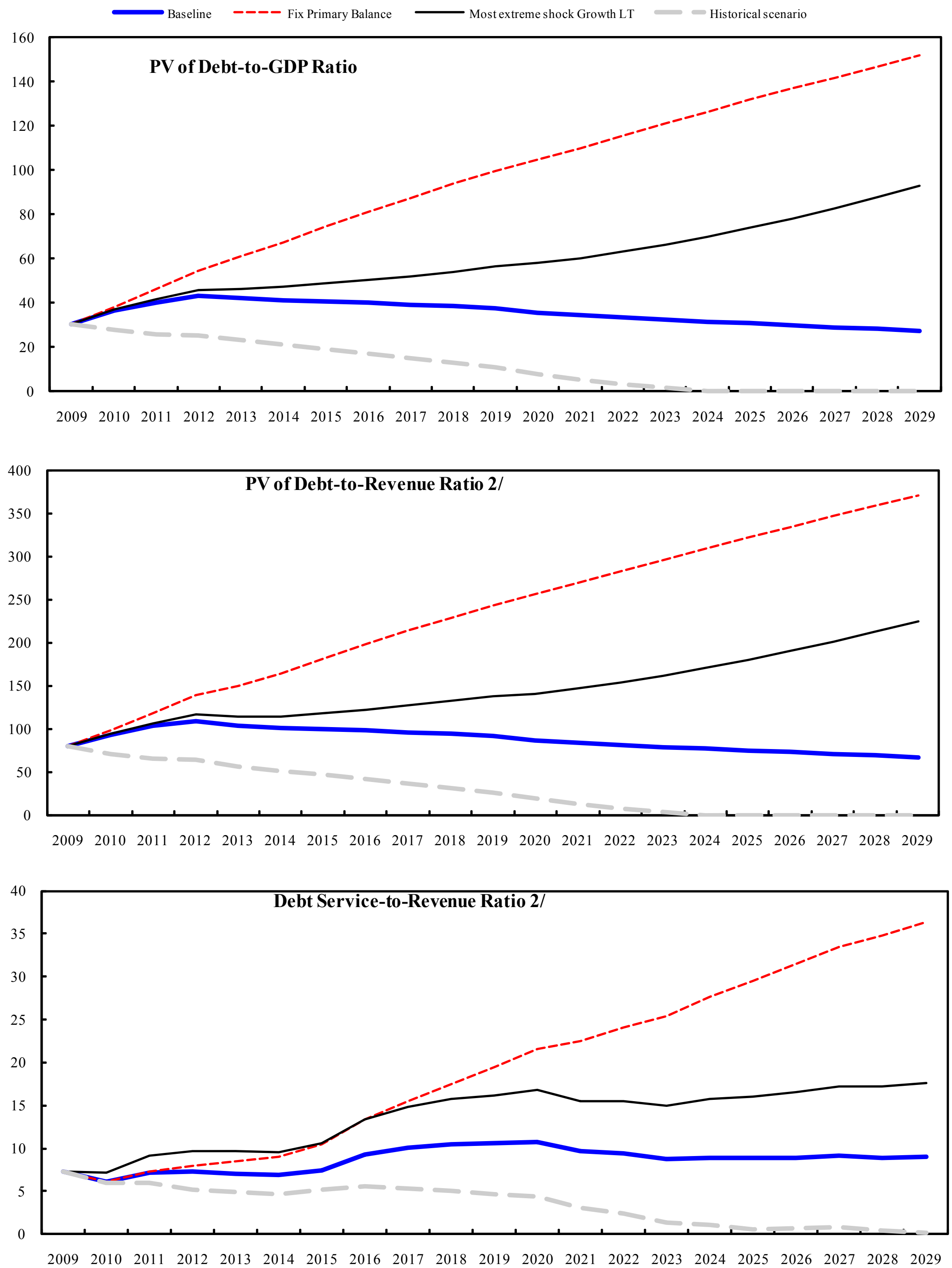
Figure 5A. Moldova: Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Financing and no Increase in Growth, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019. In figure b. it corresponds to a Terms shock; in c. to a Exports shock; in d. to a Terms shock; in e. to a Exports shock and in figure f. to a Non-debt flows shock

Figure 6A.Moldova: Indicators of Public Debt with Additional Non-Concessional Financing and no Increase in Growth, 2009-2029 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2019.

2/ Revenues are defined inclusive of grants.

Table 1A. Moldova: External Debt Sustainability Framework, Baseline Scenario, 2006-2029 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	Standard Deviation	Projections									
	2006	2007	2008			2009	2010	2011	2012	2013	2014	2009-2014 Average	2019	2029	2015-2029 Average
External debt (nominal) 1/	**64.7**	**62.7**	**55.9**			**68.1**	**79.3**	**84.2**	**86.4**	**84.8**	**82.7**		**76.7**	**67.6**	
o/w public and publicly guaranteed (PPG)	25.6	19.8	15.7			22.4	28.7	32.3	34.6	33.1	31.3		25.7	23.1	
Change in external debt	2.5	-2.0	-6.8			12.2	11.2	4.9	2.2	-1.6	-2.1		-1.2	-1.0	
Identified net debt-creating flows	-2.1	-9.3	-10.7			13.9	6.8	5.4	2.3	0.1	-0.9		-0.2	-0.4	
Non-interest current account deficit	**10.3**	**15.5**	**16.6**	**6.0**	**6.6**	**7.5**	**7.9**	**8.7**	**7.3**	**6.2**	**5.3**		**5.5**	**5.4**	5.5
Deficit in balance of goods and services	47.1	52.5	53.0			33.0	37.3	38.2	37.6	37.3	37.0		36.0	34.0	
Exports	44.8	45.4	41.0			35.6	40.8	47.0	49.6	51.5	52.8		55.4	58.2	
Imports	91.9	97.9	94.0			68.5	78.1	85.3	87.2	88.7	89.8		91.4	92.3	
Net current transfers (negative = inflow)	-39.1	-40.0	-38.4	-29.9	8.5	-27.2	-32.4	-32.5	-33.1	-33.9	-34.5		-32.6	-29.2	-31.6
o/w official	-1.9	-1.7	-2.0			-1.5	-3.2	-2.5	-1.8	-1.7	-1.6		-1.6	-1.6	
Other current account flows (negative = net inflow)	2.3	3.0	1.9			1.7	3.1	2.9	2.9	2.9	2.8		2.1	0.6	
Net FDI (negative = inflow)	**-6.9**	**-11.9**	**-11.4**	**-6.5**	**3.4**	**-1.7**	**-3.8**	**-4.8**	**-5.2**	**-5.9**	**-6.5**		**-6.8**	**-7.2**	-6.9
Endogenous debt dynamics 2/	**-5.5**	**-13.0**	**-15.9**			**8.1**	**2.7**	**1.6**	**0.1**	**-0.3**	**0.3**		**1.1**	**1.4**	
Contribution from nominal interest rate	2.1	1.6	1.3			2.5	3.8	3.9	4.1	3.8	4.2		4.0	3.9	
Contribution from real GDP growth	-2.6	-1.5	-3.6			5.7	-1.1	-2.3	-3.9	-4.0	-3.9		-2.9	-2.6	
Contribution from price and exchange rate changes	-5.1	-13.1	-13.6			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**4.7**	**7.3**	**3.9**			**-1.7**	**4.4**	**-0.5**	**-0.1**	**-1.7**	**-1.2**		**-1.0**	**-0.6**	
o/w exceptional financing	-2.5	-3.1	-2.6			-1.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	55.1			67.4	76.6	80.7	82.3	80.9	79.1		73.5	66.9	
In percent of exports	...	...	134.3			189.3	187.7	171.7	165.9	157.2	149.6		132.8	114.9	
PV of PPG external debt	**...**	**...**	**14.9**			**21.6**	**26.0**	**28.8**	**30.6**	**29.2**	**27.6**		**22.6**	**22.4**	
In percent of exports	**...**	**...**	**36.3**			**60.7**	**63.7**	**61.3**	**61.6**	**56.8**	**52.3**		**40.8**	**38.5**	
In percent of government revenues	**...**	**...**	**38.3**			**60.2**	**73.0**	**78.5**	**81.6**	**74.7**	**70.1**		**57.3**	**56.8**	
Debt service-to-exports ratio (in percent)	**15.1**	**13.7**	**16.6**			**19**	**21**	**17**	**18**	**17**	**19**		**24.5**	**24.6**	
PPG debt service-to-exports ratio (in percent)	**7.0**	**3.9**	**3.3**			**4.7**	**4.1**	**3.4**	**3.6**	**3.6**	**3.3**		**4.8**	**4.6**	
PPG debt service-to-revenue ratio (in percent)	**8.0**	**4.4**	**3.5**			**4.6**	**4.7**	**4.3**	**4.7**	**4.8**	**4.4**		**6.8**	**6.8**	
Total gross financing need (Millions of U.S. dollars)	1118.9	1332.9	1865.3			2057.4	2003.2	1988.1	2007.1	1918.0	1957.8		2446.1	3368.6	
Non-interest current account deficit that stabilizes debt ratio	7.7	17.5	23.3			-4.7	-3.3	3.8	5.1	7.9	7.4		6.7	6.4	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	1.5	3.0	5.0	5.0	5.0	1.8	4.0	4.0	4.0
GDP deflator in US dollar terms (change in percent)	8.9	25.4	27.6	9.4	15.7	-2.8	-6.3	1.6	1.9	2.1	2.4	-0.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	3.9	3.2	2.8	4.1	0.8	3.9	5.3	5.1	5.2	4.7	5.3	4.9	5.5	6.1	5.8
Growth of exports of G&S (US dollar terms, in percent)	1.5	30.9	24.3	13.2	15.7	-23.2	9.1	20.5	13.0	11.2	10.4	6.8	6.6	6.6	6.8
Growth of imports of G&S (US dollar terms, in percent)	15.3	37.5	32.1	18.7	20.9	-35.5	8.4	14.2	9.5	9.2	8.9	2.4	6.3	6.2	6.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	-1.1	27.3	22.2	22.4	27.3	32.5	21.8	12.4	-3.3	8.3
Government revenues (excluding grants, in percent of GDP)	39.2	39.9	38.9			35.9	35.6	36.7	37.5	39.1	39.4		39.4	39.4	39.4
Aid flows (in Millions of US dollars) 7/	46.6	126.1	127.0			123.4	249.4	190.9	162.8	162.8	162.8		188.0	254.0	
o/w Grants	24.0	79.9	102.8			99.7	161.4	130.9	102.8	102.8	102.8		138.0	249.0	
o/w Concessional loans	22.6	46.2	24.2			23.7	88.0	60.0	60.0	60.0	60.0		50.0	5.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			1.8	5.4	3.8	3.0	2.3	2.1		1.9	1.5	1.8
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			33.1	47.9	44.8	41.8	58.2	65.3		43.3	33.6	42.0
Memorandum items:															
Nominal GDP (Millions of US dollars)	3408.4	4401.1	6054.8			5359.0	5094.8	5330.4	5705.7	6119.2	6581.8		8841.5	15953.7	
Nominal dollar GDP growth	14.1	29.1	37.6			-11.5	-4.9	4.6	7.0	7.2	7.6	1.7	6.1	6.1	6.1
PV of PPG external debt (in Millions of US dollars)			900.8			1044.9	1298.0	1514.4	1713.4	1768.2	1799.2		1976.8	3533.7	
(PVt-PVt-1)/GDPt-1 (in percent)						2.4	4.7	4.2	3.7	1.0	0.5	2.8	0.7	1.1	1.0

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that PV of private sector debt is equivalent to its face value.

5/ Current-year interest payments divided by previous period debt stock.

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

Table 2A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2009-2029
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
PV of debt-to GDP ratio												
Baseline	22	26	29	31	29	28	26	25	24	23	**23**	22
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	22	16	13	11	9	7	7	5	5	5	**4**	5
A2. New public sector loans on less favorable terms in 2009-2029 2	22	29	33	36	35	34	33	32	31	31	**31**	34
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	22	24	26	27	25	22	20	18	16	15	**14**	14
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	22	28	42	42	39	36	34	31	28	26	**24**	16
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	22	24	28	28	26	24	21	19	17	16	**15**	15
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	22	35	49	48	46	42	40	37	33	30	**28**	17
B5. Combination of B1-B4 using one-half standard deviation shocks	22	25	36	36	34	31	29	27	24	22	**20**	14
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	22	35	38	39	36	32	29	26	23	22	**20**	21
PV of debt-to-exports ratio												
Baseline	61	64	61	62	57	52	49	46	44	42	**41**	38
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	61	40	28	23	17	14	12	10	9	8	**8**	9
A2. New public sector loans on less favorable terms in 2009-2029 2	61	72	70	72	68	64	61	59	57	56	**56**	58
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	61	59	55	53	47	41	37	32	29	27	**25**	24
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	61	77	123	117	106	95	87	80	72	65	**60**	38
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	61	59	55	53	47	41	37	32	29	27	**25**	24
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	61	86	103	97	89	80	74	68	61	55	**50**	28
B5. Combination of B1-B4 using one-half standard deviation shocks	61	71	100	95	86	77	71	64	58	53	**48**	32
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	61	59	55	53	47	41	37	32	29	27	**25**	24
PV of debt-to-revenue ratio												
Baseline	60	73	78	82	75	70	67	64	61	59	**57**	57
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	60	46	36	30	22	19	17	14	12	12	**11**	13
A2. New public sector loans on less favorable terms in 2009-2029 2	60	82	90	95	89	85	83	81	79	79	**78**	86
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	60	68	71	71	63	56	51	45	41	38	**35**	37
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	60	79	114	112	101	92	86	79	72	66	**61**	40
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	60	67	76	76	67	60	54	48	44	40	**38**	39
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	60	98	132	129	117	108	101	93	85	77	**71**	42
B5. Combination of B1-B4 using one-half standard deviation shocks	60	71	98	96	87	79	74	68	62	56	**52**	36
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	60	99	103	103	91	82	73	66	60	55	**51**	53

Table 2A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2009-2029 (continued)
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
Debt service-to-exports ratio												
Baseline	5	4	3	4	4	3	3	4	5	5	**5**	5
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	3	2	2	2	1	1	2	1	1	**1**	1
A2. New public sector loans on less favorable terms in 2009-2029 2	5	4	4	4	4	4	4	5	5	5	**4**	6
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	4	3	3	3	3	3	4	4	4	**4**	3
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	6	6	5	5	7	9	9	**8**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	4	3	3	3	3	3	4	4	4	**4**	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	4	4	5	5	4	4	6	8	7	**7**	4
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	5	5	4	4	6	7	7	**7**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	4	3	3	3	3	3	4	4	4	**4**	3
Debt service-to-revenue ratio												
Baseline	5	5	4	5	5	4	5	6	7	7	**7**	7
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	4	3	3	2	2	2	2	2	2	**1**	1
A2. New public sector loans on less favorable terms in 2009-2029 2	5	5	5	6	6	5	6	6	6	6	**6**	9
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	5	4	5	5	4	4	5	6	6	**6**	5
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	6	6	5	5	7	9	9	**9**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	5	5	5	5	4	4	6	6	6	**6**	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	5	5	6	6	6	6	9	10	10	**10**	6
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	5	5	5	5	6	8	8	**7**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	7	6	7	7	6	6	8	8	8	**8**	7
Memorandum item:												
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	7	7	7	7	7	7	7	7	7	7	**7**	7

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 3A.Moldova: Public Sector Debt Sustainability Framework, Baseline Scenario, 2006-2029
(In percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2006	2007	2008	Average	Standard Deviation	2009	2010	2011	2012	2013	2014	2009-14 Average	2019	2029	2015-29 Average
Public sector debt 1/	34.0	26.8	21.3			30.9	37.0	39.7	41.0	38.7	36.2		29.7	25.5	
o/w foreign-currency denominated	25.6	19.8	15.7			22.4	28.7	32.3	34.6	33.1	31.3		25.7	23.1	
Change in public sector debt	-3.6	-7.2	-5.5			9.6	6.0	2.7	1.3	-2.3	-2.5		-1.0	-0.6	
Identified debt-creating flows	-6.0	-8.5	-6.3			12.9	5.1	2.4	-0.3	-2.3	-2.0		-0.9	-0.7	
Primary deficit	-1.3	-1.0	-0.2	-2.0	3.5	7.5	5.5	3.6	1.7	0.3	-0.2	3.1	-0.1	-0.2	-0.2
Revenue and grants	39.9	41.7	40.6			37.8	38.8	39.2	39.3	40.8	41.0		41.0	41.0	
of which: grants	0.7	1.8	1.7			1.9	3.2	2.5	1.8	1.7	1.6		1.6	1.6	
Primary (noninterest) expenditure	38.6	40.8	40.4			45.3	44.3	42.8	41.0	41.0	40.8		40.8	40.7	
Automatic debt dynamics	-4.3	-7.3	-4.2			5.8	0.2	-0.6	-1.4	-1.9	-1.7		-0.8	-0.4	
Contribution from interest rate/growth differential	-3.7	-6.0	-5.3			3.9	2.1	-0.4	-1.5	-1.7	-1.7		-0.8	-0.4	
of which: contribution from average real interest rate	-2.0	-5.0	-3.4			1.7	2.5	0.6	0.4	0.3	0.1		0.4	0.6	
of which: contribution from real GDP growth	-1.7	-1.0	-1.9			2.1	-0.5	-1.1	-1.9	-2.0	-1.8		-1.2	-1.0	
Contribution from real exchange rate depreciation	-0.6	-1.3	1.1			2.0	-1.9	-0.2	0.1	-0.2	0.0		...	...	
Other identified debt-creating flows	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Privatization receipts (negative)	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	2.3	1.3	0.8			-3.3	0.9	0.4	1.6	0.0	-0.5		0.0	0.1	
Other Sustainability Indicators															
PV of public sector debt	8.5	7.0	20.5			30.2	34.3	36.2	37.0	34.9	32.6		26.6	24.8	
o/w foreign-currency denominated	0.0	0.0	14.9			21.6	26.0	28.8	30.6	29.2	27.6		22.6	22.4	
o/w external	...	...	14.9			21.6	26.0	28.8	30.6	29.2	27.6		22.6	22.4	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.9	4.8	4.9			12.9	15.2	13.3	10.7	8.7	7.3		6.9	5.2	
PV of public sector debt-to-revenue and grants ratio (in percent)	21.2	16.8	50.4			79.9	88.3	92.4	94.2	85.5	79.4		64.9	60.6	
PV of public sector debt-to-revenue ratio (in percent)	21.6	17.6	52.7			84.1	96.2	98.5	98.7	89.2	82.6		67.5	63.0	
o/w external 3/	…	…	38.3			60.2	73.0	78.5	81.6	74.7	70.1		57.3	56.8	
Debt service-to-revenue and grants ratio (in percent) 4/	9.2	6.9	6.0			7.2	6.8	7.0	7.0	6.6	6.0		8.0	7.6	
Debt service-to-revenue ratio (in percent) 4/	9.3	7.2	6.3			7.6	7.4	7.4	7.3	6.9	6.2		8.3	7.9	
Primary deficit that stabilizes the debt-to-GDP ratio	2.3	6.2	5.3			-2.1	-0.5	0.8	0.3	2.6	2.3		0.8	0.3	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	1.5	3.0	5.0	5.0	5.0	1.8	4.0	4.0	4.0
Average nominal interest rate on forex debt (in percent)	3.3	1.9	1.8	3.3	1.1	2.3	2.5	2.1	2.1	1.9	1.9	2.2	2.2	3.5	2.6
Average real interest rate on domestic debt (in percent)	-6.6	-3.8	5.4	-0.5	4.8	13.8	5.5	6.1	5.5	5.5	5.8	7.0	7.6	10.0	8.3
Real exchange rate depreciation (in percent, + indicates depreciation)	-2.4	-6.5	7.6	-3.7	10.5	10.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	13.4	15.9	9.2	16.0	10.1	3.9	6.5	4.7	4.7	4.3	4.0	4.7	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	-1.1	27.3	22.2	22.4	27.3	32.5	21.8	12.4	-3.3	...

Sources: Country authorities; and staff estimates and projections.
1/ General government gross debt, excluding debt of state-owned enterprises.
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.
3/ Revenues excluding grants.
4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.
5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4A.Moldova: Sensitivity Analysis for Key Indicators of Public Debt 2009-2029

	Projections							
	2009	2010	2011	2012	2013	2014	2019	2029
PV of Debt-to-GDP Ratio								
Baseline	30	34	36	37	35	33	27	25
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	30	26	22	19	16	12	0	0
A2. Primary balance is unchanged from 2009	30	36	42	49	53	58	87	146
A3. Permanently lower GDP growth 1/	30	35	38	40	39	38	45	90
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	30	34	37	39	37	36	32	36
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	30	30	30	31	29	27	22	21
B3. Combination of B1-B2 using one half standard deviation shocks	30	28	26	27	24	21	13	7
B4. One-time 30 percent real depreciation in 2010	30	43	45	45	43	41	35	38
B5. 10 percent of GDP increase in other debt-creating flows in 2010	30	44	46	47	44	42	35	32
PV of Debt-to-Revenue Ratio 2/								
Baseline	80	88	92	94	85	79	65	61
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	80	67	56	49	39	30	0	0
A2. Primary balance is unchanged from 2009	80	94	108	124	131	142	212	356
A3. Permanently lower GDP growth 1/	80	90	96	101	95	93	109	217
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	80	88	95	99	91	87	79	87
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	80	78	77	79	71	66	53	50
B3. Combination of B1-B2 using one half standard deviation shocks	80	72	67	68	59	52	32	17
B4. One-time 30 percent real depreciation in 2010	80	112	114	115	105	99	86	93
B5. 10 percent of GDP increase in other debt-creating flows in 2010	80	114	118	119	108	101	85	77
Debt Service-to-Revenue Ratio 2/								
Baseline	7	7	7	7	7	6	8	8
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	7	7	6	5	4	4	2	0
A2. Primary balance is unchanged from 2009	7	7	7	8	8	8	17	34
A3. Permanently lower GDP growth 1/	7	7	7	7	7	7	11	20
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	7	7	7	7	7	6	9	10
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	7	7	7	6	6	5	7	7
B3. Combination of B1-B2 using one half standard deviation shocks	7	7	6	6	5	5	5	3
B4. One-time 30 percent real depreciation in 2010	7	8	9	9	9	8	12	14
B5. 10 percent of GDP increase in other debt-creating flows in 2010	7	7	8	9	8	7	10	9

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.
2/ Revenues are defined inclusive of grants.

Table 5A: External Debt Sustainability Framework with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	Standard Deviation	Projections									
	2006	2007	2008			2009	2010	2011	2012	2013	2014	2009-2014 Average	2019	2029	2015-2029 Average
External debt (nominal) 1/	**64.7**	**62.7**	**55.9**			**68.1**	**81.0**	**87.7**	**91.3**	**90.8**	**89.7**		**85.7**	**65.5**	
o/w public and publicly guaranteed (PPG)	25.6	19.8	15.7			22.4	30.7	36.4	40.4	40.2	39.5		37.6	24.0	
Change in external debt	2.5	-2.0	-6.8			12.2	12.9	6.6	3.6	-0.5	-1.2		-0.9	-1.5	
Identified net debt-creating flows	-2.1	-9.3	-10.7			13.9	8.2	7.4	4.6	2.7	2.0		-0.1	-2.7	
Non-interest current account deficit	**10.3**	**15.5**	**16.6**	**6.0**	**6.6**	**7.5**	**9.8**	**11.1**	**10.1**	**9.3**	**8.7**		**7.0**	**5.2**	6.6
Deficit in balance of goods and services	47.1	52.5	53.0			33.0	39.0	40.3	39.8	39.6	39.4		36.7	32.7	
Exports	44.8	45.4	41.0			35.6	41.1	47.3	50.0	52.0	53.5		58.2	61.2	
Imports	91.9	97.9	94.0			68.5	80.1	87.7	89.8	91.6	92.9		94.9	93.9	
Net current transfers (negative = inflow)	-39.1	-40.0	-38.4	-29.9	8.5	-27.2	-32.3	-32.2	-32.7	-33.3	-33.7		-31.9	-28.6	-30.9
o/w official	-1.9	-1.7	-2.0			-1.5	-3.1	-2.4	-1.8	-1.6	-1.5		-1.5	-1.5	
Other current account flows (negative = net inflow)	2.3	3.0	1.9			1.7	3.1	3.0	3.0	3.0	3.0		2.2	1.1	
Net FDI (negative = inflow)	**-6.9**	**-11.9**	**-11.4**	**-6.5**	**3.4**	**-1.7**	**-3.9**	**-4.8**	**-5.1**	**-5.8**	**-6.3**		**-7.5**	**-8.8**	-7.9
Endogenous debt dynamics 2/	**-5.5**	**-13.0**	**-15.9**			**8.1**	**2.3**	**1.1**	**-0.4**	**-0.8**	**-0.3**		**0.4**	**0.9**	
Contribution from nominal interest rate	2.1	1.6	1.3			2.5	3.8	3.9	4.1	3.8	4.3		4.1	3.8	
Contribution from real GDP growth	-2.6	-1.5	-3.6			5.7	-1.5	-2.7	-4.5	-4.7	-4.6		-3.7	-2.8	
Contribution from price and exchange rate changes	-5.1	-13.1	-13.6			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**4.7**	**7.3**	**3.9**			**-1.7**	**4.7**	**-0.8**	**-1.0**	**-3.1**	**-3.2**		**-0.8**	**1.2**	
o/w exceptional financing	-2.5	-3.1	-2.6			-1.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	55.1			67.4	78.2	83.9	86.9	86.5	85.6		82.0	64.9	
In percent of exports	...	...	134.3			189.3	190.2	177.3	173.8	166.6	160.0		140.9	106.0	
PV of PPG external debt	**...**	**...**	**14.9**			**21.6**	**27.9**	**32.6**	**35.9**	**35.9**	**35.4**		**33.9**	**23.3**	
In percent of exports	**...**	**...**	**36.3**			**60.7**	**67.9**	**69.0**	**71.9**	**69.2**	**66.1**		**58.2**	**38.1**	
In percent of government revenues	**...**	**...**	**38.3**			**60.2**	**78.8**	**89.8**	**97.5**	**93.9**	**92.0**		**90.4**	**65.1**	
Debt service-to-exports ratio (in percent)	**15.1**	**13.7**	**16.6**			**19**	**20**	**17**	**18**	**17**	**19**		**23.7**	**22.9**	
PPG debt service-to-exports ratio (in percent)	**7.0**	**3.9**	**3.3**			**4.7**	**4.0**	**3.4**	**3.7**	**3.9**	**3.8**		**6.1**	**5.2**	
PPG debt service-to-revenue ratio (in percent)	**8.0**	**4.4**	**3.5**			**4.6**	**4.7**	**4.5**	**5.1**	**5.3**	**5.3**		**9.5**	**8.8**	
Total gross financing need (Millions of U.S. dollars)	1118.9	1332.9	1865.3			2057.4	2100.1	2128.2	2180.6	2126.4	2215.0		2593.2	3179.9	
Non-interest current account deficit that stabilizes debt ratio	7.7	17.5	23.3			-4.7	-3.1	4.5	6.5	9.8	9.8		7.9	6.7	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	2.1	3.6	5.5	5.5	5.5	2.2	4.5	4.5	4.5
GDP deflator in US dollar terms (change in percent)	8.9	25.4	27.6	9.4	15.7	-2.8	-6.3	1.6	1.9	2.1	2.4	-0.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	3.9	3.2	2.8	4.1	0.8	3.9	5.3	5.0	5.0	4.5	5.1	4.8	5.0	6.0	5.4
Growth of exports of G&S (US dollar terms, in percent)	1.5	30.9	24.3	13.2	15.7	-23.2	10.5	21.1	13.7	12.0	11.2	7.5	8.4	7.1	7.6
Growth of imports of G&S (US dollar terms, in percent)	15.3	37.5	32.1	18.7	20.9	-35.5	11.8	15.1	10.2	9.9	9.6	3.5	7.0	6.4	6.7
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	-1.1	23.1	18.1	18.1	18.0	19.2	15.9	10.4	-3.3	6.0
Government revenues (excluding grants, in percent of GDP)	39.2	39.9	38.9			35.9	35.4	36.3	36.9	38.3	38.5		37.5	35.8	37.0
Aid flows (in Millions of US dollars) 7/	46.6	126.1	127.0			123.4	249.4	190.9	162.8	162.8	162.8		188.0	254.0	
o/w Grants	24.0	79.9	102.8			99.7	161.4	130.9	102.8	102.8	102.8		138.0	249.0	
o/w Concessional loans	22.6	46.2	24.2			23.7	88.0	60.0	60.0	60.0	60.0		50.0	5.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			1.8	5.5	3.9	3.1	2.4	2.2		2.0	1.3	1.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			33.1	41.4	36.7	33.8	41.0	43.9		32.0	31.2	35.4
Memorandum items:															
Nominal GDP (Millions of US dollars)	3408.4	4401.1	6054.8			5359.0	5124.3	5390.6	5799.0	6248.3	6749.8		9287.0	17580.9	
Nominal dollar GDP growth	14.1	29.1	37.6			-11.5	-4.4	5.2	7.6	7.7	8.0	2.1	6.6	6.6	6.6
PV of PPG external debt (in Millions of US dollars)			900.8			1044.9	1399.6	1732.3	2048.4	2221.3	2362.1		3115.2	4051.6	
(PVt-PVt-1)/GDPt-1 (in percent)						2.4	6.6	6.5	5.9	3.0	2.3	4.4	2.0	0.7	1.1

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that PV of private sector debt is equivalent to its face value.

5/ Current-year interest payments divided by previous period debt stock.

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

Table 6A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 1/
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
PV of debt-to GDP ratio												
Baseline	22	28	33	36	36	35	35	34	34	34	**34**	23
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	22	16	13	10	6	3	1	0	0	0	**1**	9
A2. New public sector loans on less favorable terms in 2009-2029 2	22	32	38	42	43	43	43	43	44	44	**45**	37
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	22	26	30	32	32	30	29	28	27	27	**27**	17
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	22	30	47	48	47	45	43	41	39	37	**35**	18
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	22	26	32	34	34	32	31	30	29	28	**28**	18
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	22	37	52	54	52	50	47	44	42	40	**38**	18
B5. Combination of B1-B4 using one-half standard deviation shocks	22	28	41	43	42	40	38	36	34	33	**31**	16
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	22	38	43	47	46	44	42	40	39	39	**38**	25
PV of debt-to-exports ratio												
Baseline	61	68	69	72	69	66	64	62	61	60	**58**	38
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	61	40	27	20	12	6	3	0	0	0	**2**	15
A2. New public sector loans on less favorable terms in 2009-2029 2	61	77	80	84	82	80	79	78	78	77	**77**	60
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	61	63	62	63	60	55	52	49	47	46	**45**	28
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	61	84	140	136	128	119	112	103	97	91	**86**	42
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	61	63	62	63	60	55	52	49	47	46	**45**	28
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	61	90	110	107	100	94	87	80	75	70	**65**	30
B5. Combination of B1-B4 using one-half standard deviation shocks	61	77	115	113	106	98	92	85	80	76	**71**	35
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	61	63	62	63	60	55	52	49	47	46	**45**	28
PV of debt-to-revenue ratio												
Baseline	60	79	90	98	94	92	91	90	90	90	**90**	65
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	60	46	35	27	17	9	4	0	0	1	**3**	25
A2. New public sector loans on less favorable terms in 2009-2029 2	60	90	104	114	112	111	112	113	115	117	**119**	103
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	60	73	83	88	83	79	76	74	72	72	**71**	49
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	60	86	129	131	123	118	113	107	102	98	**94**	51
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	60	73	88	93	88	84	80	78	76	76	**75**	51
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	60	104	144	145	136	130	124	117	111	106	**101**	51
B5. Combination of B1-B4 using one-half standard deviation shocks	60	78	114	116	109	104	100	94	90	87	**84**	46
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	60	107	119	126	119	113	109	105	104	103	**102**	69

Table 6A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 (continued) 1/
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
Debt service-to-exports ratio												
Baseline	5	4	3	4	4	4	4	5	6	6	**6**	5
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	3	2	2	2	1	1	1	1	1	**0**	1
A2. New public sector loans on less favorable terms in 2009-2029 2	5	4	4	5	5	5	5	7	7	6	**6**	7
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	4	3	4	4	4	4	5	5	5	**5**	4
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	7	7	6	7	11	11	11	**10**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	4	3	4	4	4	4	5	5	5	**5**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	4	4	5	5	5	6	8	9	8	**8**	4
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	6	6	5	6	9	9	9	**9**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	4	3	4	4	4	4	5	5	5	**5**	4
Debt service-to-revenue ratio												
Baseline	5	5	4	5	5	5	6	8	9	9	**9**	9
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	4	3	3	2	2	1	1	1	1	**1**	1
A2. New public sector loans on less favorable terms in 2009-2029 2	5	5	5	6	7	6	7	10	10	9	**10**	13
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	5	4	5	5	5	5	7	8	8	**8**	7
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	6	6	6	7	11	11	12	**11**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	5	5	5	5	5	6	7	8	9	**9**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	5	5	7	7	7	9	12	13	13	**13**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	6	6	6	7	10	10	10	**10**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	7	6	7	7	7	8	10	11	12	**12**	10
Memorandum item:												
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	5	5	5	5	5	5	5	5	5	5	**5**	5

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 7A.Moldova: Public Sector Debt Sustainability Framework, Baseline Scenario with Additional Non-Concessional Borrowing, and Positive Impact on Growth, 2009-2029 1/
(In percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2006	2007	2008	Average	Standard Deviation	2009	2010	2011	2012	2013	2014	2009-14 Average	2019	2029	2015-29 Average
Public sector debt 1/	34.0	26.8	21.3			30.9	38.9	43.7	46.7	45.8	44.3		41.4	26.2	
o/w foreign-currency denominated	25.6	19.8	15.7			22.4	30.7	36.4	40.4	40.2	39.5		37.6	24.0	
Change in public sector debt	-3.6	-7.2	-5.5			9.6	8.0	4.7	3.0	-0.9	-1.5		-0.5	-1.2	
Identified debt-creating flows	-6.0	-8.5	-6.3			12.9	4.9	2.0	-0.8	-3.0	-2.7		-1.8	-0.9	
Primary deficit	-1.3	-1.0	-0.2	-2.0	3.5	7.5	5.5	3.5	1.5	0.1	-0.4	2.9	-0.5	-0.3	-0.4
Revenue and grants	39.9	41.7	40.6			37.8	38.6	38.8	38.6	39.9	40.0		39.0	37.2	
of which: grants	0.7	1.8	1.7			1.9	3.1	2.4	1.8	1.6	1.5		1.5	1.4	
Primary (noninterest) expenditure	38.6	40.8	40.4			45.3	44.0	42.2	40.2	40.0	39.6		38.5	36.8	
Automatic debt dynamics	-4.3	-7.3	-4.2			5.8	0.0	-0.9	-1.7	-2.4	-2.2		-1.4	-0.6	
Contribution from interest rate/growth differential	-3.7	-6.0	-5.3			3.9	1.9	-0.7	-1.8	-2.1	-2.2		-1.4	-0.6	
of which: contribution from average real interest rate	-2.0	-5.0	-3.4			1.7	2.5	0.7	0.5	0.3	0.2		0.5	0.6	
of which: contribution from real GDP growth	-1.7	-1.0	-1.9			2.1	-0.6	-1.3	-2.3	-2.4	-2.4		-1.8	-1.2	
Contribution from real exchange rate depreciation	-0.6	-1.3	1.1			2.0	-1.9	-0.2	0.1	-0.3	0.0		...	...	
Other identified debt-creating flows	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Privatization receipts (negative)	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	2.3	1.3	0.8			-3.3	3.1	2.7	3.8	2.0	1.3		1.3	-0.2	
Other Sustainability Indicators															
PV of public sector debt	8.5	7.0	20.5			30.2	36.1	39.9	42.3	41.5	40.2		37.7	25.5	
o/w foreign-currency denominated	0.0	0.0	14.9			21.6	27.9	32.6	35.9	35.9	35.4		33.9	23.3	
o/w external	...	...	14.9			21.6	27.9	32.6	35.9	35.9	35.4		33.9	23.3	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.9	4.8	4.9			12.9	15.1	13.1	10.6	8.5	7.2		7.2	5.3	
PV of public sector debt-to-revenue and grants ratio (in percent)	21.2	16.8	50.4			79.9	93.6	103.0	109.4	103.8	100.5		96.7	68.6	
PV of public sector debt-to-revenue ratio (in percent)	21.6	17.6	52.7			84.1	101.9	109.8	114.7	108.3	104.5		100.5	71.3	
o/w external 3/	...	...	38.3			60.2	78.8	89.8	97.5	93.9	92.0		90.4	65.1	
Debt service-to-revenue and grants ratio (in percent) 4/	9.2	6.9	6.0			7.2	6.8	7.1	7.3	7.1	6.9		10.6	9.5	
Debt service-to-revenue ratio (in percent) 4/	9.3	7.2	6.3			7.6	7.4	7.6	7.6	7.4	7.1		11.0	9.9	
Primary deficit that stabilizes the debt-to-GDP ratio	2.3	6.2	5.3			-2.1	-2.5	-1.3	-1.5	1.0	1.0		0.1	0.9	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	2.1	3.6	5.5	5.5	5.5	2.2	4.5	4.5	4.5
Average nominal interest rate on forex debt (in percent)	3.3	1.9	1.8	3.3	1.1	2.3	2.5	2.2	2.2	2.1	2.1	2.2	2.5	3.5	2.8
Average real interest rate on domestic debt (in percent)	-6.6	-3.8	5.4	-0.5	4.8	13.8	5.5	6.1	5.5	5.5	5.8	7.0	7.6	10.0	8.3
Real exchange rate depreciation (in percent, + indicates depreciation)	-2.4	-6.5	7.6	-3.7	10.5	10.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	13.4	15.9	9.2	16.0	10.1	3.9	6.5	4.7	4.7	4.3	4.0	4.7	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	...	...	-1.1	23.1	18.1	18.1	18.0	19.2	15.9	10.4	-3.3	...

Sources: Country authorities; and staff estimates and projections.
1/ General government gross debt, excluding debt of state-owned enterprises.
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.
3/ Revenues excluding grants.
4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.
5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 8A.Moldova: Sensitivity Analysis for Key Indicators of Public Debt 2009-2029

	Projections							
	2009	2010	2011	2012	2013	2014	2019	2029
PV of Debt-to-GDP Ratio								
Baseline	30	36	40	42	41	40	38	26
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	30	28	26	25	23	21	13	0
A2. Primary balance is unchanged from 2009	30	38	46	54	60	66	99	145
A3. Permanently lower GDP growth 1/	30	37	41	45	45	46	56	84
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	30	37	42	46	46	46	48	42
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	30	32	34	37	36	35	33	22
B3. Combination of B1-B2 using one half standard deviation shocks	30	30	30	33	32	31	28	16
B4. One-time 30 percent real depreciation in 2010	30	45	48	50	49	48	47	41
B5. 10 percent of GDP increase in other debt-creating flows in 2010	30	46	50	52	51	49	46	32
PV of Debt-to-Revenue Ratio 2/								
Baseline	80	94	103	109	104	101	97	69
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	80	72	67	65	58	53	33	0
A2. Primary balance is unchanged from 2009	80	99	119	140	151	166	254	391
A3. Permanently lower GDP growth 1/	80	95	107	116	114	115	143	226
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	80	95	109	118	115	114	122	114
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	80	83	88	95	90	87	85	59
B3. Combination of B1-B2 using one half standard deviation shocks	80	78	78	85	80	77	72	42
B4. One-time 30 percent real depreciation in 2010	80	117	125	130	124	120	120	110
B5. 10 percent of GDP increase in other debt-creating flows in 2010	80	120	128	134	127	123	117	85
Debt Service-to-Revenue Ratio 2/								
Baseline	7	7	7	7	7	7	11	10
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	7	7	6	5	5	5	5	1
A2. Primary balance is unchanged from 2009	7	7	7	8	9	9	20	38
A3. Permanently lower GDP growth 1/	7	7	7	8	7	7	13	22
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	7	7	7	8	8	7	12	14
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	7	7	7	6	6	6	9	8
B3. Combination of B1-B2 using one half standard deviation shocks	7	7	6	6	6	6	8	7
B4. One-time 30 percent real depreciation in 2010	7	8	9	10	10	10	16	19
B5. 10 percent of GDP increase in other debt-creating flows in 2010	7	7	8	9	8	8	13	11

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.
2/ Revenues are defined inclusive of grants.

Table 9A. Moldova: External Debt Sustainability Framework with Additional Non-Concessional Borrowing and no Impact on Growth, 2006-2029 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	Standard Deviation	Projections									
	2006	2007	2008			2009	2010	2011	2012	2013	2014	2009-2014 Average	2019	2029	2015-2029 Average
External debt (nominal) 1/	**64.7**	**62.7**	**55.9**			**68.1**	**81.5**	**88.7**	**92.8**	**92.8**	**92.0**		**87.8**	**69.5**	
o/w public and publicly guaranteed (PPG)	25.6	19.8	15.7			22.4	30.9	36.8	41.0	41.1	40.5		37.3	25.9	
Change in external debt	2.5	-2.0	-6.8			12.2	13.4	7.2	4.1	0.0	-0.8		-1.6	-1.4	
Identified net debt-creating flows	-2.1	-9.3	-10.7			13.9	8.3	7.2	3.9	1.5	0.4		1.0	1.2	
Non-interest current account deficit	**10.3**	**15.5**	**16.6**	**6.0**	**6.6**	**7.5**	**9.4**	**10.5**	**9.0**	**7.8**	**6.8**		**6.9**	**7.1**	7.0
Deficit in balance of goods and services	47.1	52.5	53.0			33.0	38.8	39.9	39.1	38.7	38.3		37.4	35.4	
Exports	44.8	45.4	41.0			35.6	41.0	47.2	49.8	51.7	53.0		55.5	58.4	
Imports	91.9	97.9	94.0			68.5	79.9	87.1	88.9	90.4	91.3		93.0	93.8	
Net current transfers (negative = inflow)	-39.1	-40.0	-38.4	-29.9	8.5	-27.2	-32.4	-32.5	-33.1	-33.9	-34.5		-32.6	-29.2	-31.6
o/w official	-1.9	-1.7	-2.0			-1.5	-3.2	-2.5	-1.8	-1.7	-1.6		-1.6	-1.6	
Other current account flows (negative = net inflow)	2.3	3.0	1.9			1.7	3.1	3.1	3.1	3.0	3.0		2.2	0.9	
Net FDI (negative = inflow)	**-6.9**	**-11.9**	**-11.4**	**-6.5**	**3.4**	**-1.7**	**-3.9**	**-4.9**	**-5.2**	**-6.0**	**-6.4**		**-6.8**	**-7.2**	-6.9
Endogenous debt dynamics 2/	**-5.5**	**-13.0**	**-15.9**			**8.1**	**2.7**	**1.6**	**0.0**	**-0.4**	**0.1**		**0.9**	**1.3**	
Contribution from nominal interest rate	2.1	1.6	1.3			2.5	3.8	3.9	4.2	3.9	4.4		4.2	3.9	
Contribution from real GDP growth	-2.6	-1.5	-3.6			5.7	-1.1	-2.3	-4.1	-4.3	-4.3		-3.4	-2.7	
Contribution from price and exchange rate changes	-5.1	-13.1	-13.6			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**4.7**	**7.3**	**3.9**			**-1.7**	**5.1**	**0.0**	**0.3**	**-1.5**	**-1.2**		**-2.6**	**-2.6**	
o/w exceptional financing	-2.5	-3.1	-2.6			-1.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	55.1			67.4	78.7	84.9	88.3	88.4	87.7		84.0	68.6	
In percent of exports	...	...	134.3			189.3	191.7	179.6	177.2	171.1	165.5		151.2	117.5	
PV of PPG external debt	**...**	**...**	**14.9**			**21.6**	**28.1**	**33.0**	**36.5**	**36.7**	**36.3**		**33.5**	**25.1**	
In percent of exports	**...**	**...**	**36.3**			**60.7**	**68.4**	**69.8**	**73.3**	**71.0**	**68.4**		**60.3**	**42.9**	
In percent of government revenues	**...**	**...**	**38.3**			**60.2**	**78.2**	**89.8**	**97.5**	**93.9**	**92.0**		**85.1**	**63.6**	
Debt service-to-exports ratio (in percent)	**15.1**	**13.7**	**16.6**			**19**	**21**	**17**	**19**	**17**	**20**		**26.2**	**24.9**	
PPG debt service-to-exports ratio (in percent)	**7.0**	**3.9**	**3.3**			**4.7**	**4.1**	**3.5**	**3.8**	**4.0**	**3.9**		**6.7**	**5.5**	
PPG debt service-to-revenue ratio (in percent)	**8.0**	**4.4**	**3.5**			**4.6**	**4.6**	**4.5**	**5.1**	**5.3**	**5.3**		**9.4**	**8.2**	
Total gross financing need (Millions of U.S. dollars)	1118.9	1332.9	1865.3			2057.4	2078.7	2086.2	2108.5	2022.9	2079.0		2659.3	3679.6	
Non-interest current account deficit that stabilizes debt ratio	7.7	17.5	23.3			-4.7	-3.9	3.3	4.9	7.9	7.6		8.5	8.5	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	1.5	3.0	5.0	5.0	5.0	1.8	4.0	4.0	4.0
GDP deflator in US dollar terms (change in percent)	8.9	25.4	27.6	9.4	15.7	-2.8	-6.3	1.6	1.9	2.1	2.4	-0.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	3.9	3.2	2.8	4.1	0.8	3.9	5.3	5.0	5.0	4.5	5.1	4.8	5.0	5.9	5.4
Growth of exports of G&S (US dollar terms, in percent)	1.5	30.9	24.3	13.2	15.7	-23.2	9.6	20.4	12.9	11.2	10.4	6.9	6.6	6.6	6.8
Growth of imports of G&S (US dollar terms, in percent)	15.3	37.5	32.1	18.7	20.9	-35.5	10.8	14.2	9.3	9.0	8.7	2.7	6.3	6.2	6.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	-1.1	23.1	18.1	18.1	18.0	19.2	15.9	11.5	-2.4	6.6
Government revenues (excluding grants, in percent of GDP)	39.2	39.9	38.9			35.9	35.9	36.7	37.5	39.1	39.4		39.4	39.4	39.4
Aid flows (in Millions of US dollars) 7/	46.6	126.1	127.0			123.4	249.4	191.0	162.8	162.8	162.8		188.0	254.1	
o/w Grants	24.0	79.9	102.8			99.7	161.4	131.0	102.8	102.8	102.8		138.0	249.1	
o/w Concessional loans	22.6	46.2	24.2			23.7	88.0	60.0	60.0	60.0	60.0		50.0	5.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			1.8	5.5	4.0	3.2	2.5	2.2		2.0	1.5	1.8
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			33.1	41.4	36.7	33.8	41.0	43.9		35.8	32.2	36.6
Memorandum items:															
Nominal GDP (Millions of US dollars)	3408.4	4401.1	6054.8			5359.0	5094.8	5330.4	5705.7	6119.2	6581.8		8841.5	15953.7	
Nominal dollar GDP growth	14.1	29.1	37.6			-11.5	-4.9	4.6	7.0	7.2	7.6	1.7	6.1	6.1	6.1
PV of PPG external debt (in Millions of US dollars)			900.8			1044.9	1399.6	1732.3	2048.4	2221.3	2362.1		2931.3	3955.0	
(PVt-PVt-1)/GDPt-1 (in percent)						2.4	6.6	6.5	5.9	3.0	2.3	4.5	1.3	0.9	1.1

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that PV of private sector debt is equivalent to its face value.

5/ Current-year interest payments divided by previous period debt stock.

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

Table 10A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Borrowing and no Impact on Growth, 2009-2029
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
						PV of debt-to GDP ratio						
Baseline	22	28	33	37	37	36	36	35	35	34	**34**	25
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	22	17	14	12	10	9	8	7	6	5	**3**	0
A2. New public sector loans on less favorable terms in 2009-2029 2	22	32	38	43	44	44	44	45	45	45	**45**	40
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	22	26	30	33	32	31	30	29	28	27	**26**	18
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	22	30	47	48	47	46	44	41	39	37	**35**	19
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	22	26	32	35	34	33	32	31	29	28	**27**	20
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	22	37	53	55	54	52	49	46	43	41	**38**	20
B5. Combination of B1-B4 using one-half standard deviation shocks	22	27	40	42	41	40	38	36	34	32	**30**	17
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	22	38	44	47	47	45	43	41	40	38	**37**	27
						PV of debt-to-exports ratio						
Baseline	61	68	70	73	71	68	67	65	63	62	**60**	43
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	61	41	30	25	19	16	14	12	10	8	**6**	0
A2. New public sector loans on less favorable terms in 2009-2029 2	61	78	81	86	84	83	82	82	81	81	**80**	68
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	61	63	63	65	61	57	54	52	49	47	**45**	31
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	61	83	137	135	127	119	113	106	98	92	**86**	46
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	61	63	63	65	61	57	54	52	49	47	**45**	31
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	61	91	112	110	104	97	91	85	79	73	**68**	34
B5. Combination of B1-B4 using one-half standard deviation shocks	61	76	112	111	105	98	93	87	81	76	**72**	39
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	61	63	63	65	61	57	54	52	49	47	**45**	31
						PV of debt-to-revenue ratio						
Baseline	60	78	90	98	94	92	91	90	89	87	**85**	64
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	60	47	38	33	26	22	20	17	14	11	**8**	0
A2. New public sector loans on less favorable terms in 2009-2029 2	60	89	104	114	112	111	112	113	114	113	**113**	101
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	60	73	82	87	82	78	76	73	70	67	**65**	47
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	60	84	127	129	121	116	111	105	99	93	**88**	49
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	60	73	88	93	88	84	81	77	75	72	**69**	50
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	60	104	144	146	137	131	125	117	110	103	**96**	50
B5. Combination of B1-B4 using one-half standard deviation shocks	60	76	110	112	106	101	97	91	86	81	**77**	44
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	60	107	119	126	119	114	109	105	101	97	**94**	67

Table 10A.Moldova: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt with Additional Non-Concessional Borrowing and no Impact on Growth, 2009-2029 (continued)
(In percent)

	Projections											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	**2019**	2029
Debt service-to-exports ratio												
Baseline	5	4	3	4	4	4	4	6	6	7	**7**	6
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	3	2	2	2	2	1	1	1	1	**1**	0
A2. New public sector loans on less favorable terms in 2009-2029 2	5	4	4	5	5	5	5	7	7	7	**7**	8
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	4	3	4	4	4	4	5	5	6	**6**	4
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	7	7	6	7	11	11	11	**11**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	4	3	4	4	4	4	5	5	6	**6**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	4	4	5	5	5	6	9	9	9	**9**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	5	6	5	6	9	9	9	**9**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	4	3	4	4	4	4	5	5	6	**6**	4
Debt service-to-revenue ratio												
Baseline	5	5	4	5	5	5	6	8	9	9	**9**	8
A. Alternative Scenarios												
A1. Key variables at their historical averages in 2009-2029 1/	5	4	3	3	2	2	2	2	2	2	**2**	0
A2. New public sector loans on less favorable terms in 2009-2029 2	5	5	5	6	7	6	7	10	10	9	**9**	12
B. Bound Tests												
B1. Real GDP growth at historical average minus one standard deviation in 2010-2011	5	5	4	5	5	5	5	7	8	8	**8**	6
B2. Export value growth at historical average minus one standard deviation in 2010-2011 3/	5	5	5	6	6	6	7	11	11	11	**11**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2010-2011	5	5	5	5	5	5	6	8	8	9	**9**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2010-2011 4/	5	5	5	7	7	7	9	12	13	13	**12**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	5	4	4	6	6	5	6	9	10	10	**10**	6
B6. One-time 30 percent nominal depreciation relative to the baseline in 2010 5/	5	7	6	7	7	7	8	10	11	12	**12**	9
Memorandum item:												
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	6	6	6	6	6	6	6	6	6	6	**6**	6

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 11A.Moldova: Public Sector Debt Sustainability Framework, Baseline Scenario with Additional Non-Concessional Borrowing and no Impact on Growth, 2009-2029
(In percent of GDP, unless otherwise indicated)

	Actual			Average	Standard Deviation	Estimate	Projections								
	2006	2007	2008			2009	2010	2011	2012	2013	2014	2009-14 Average	2019	2029	2015-29 Average
Public sector debt 1/	34.0	26.8	21.3			30.9	39.2	44.2	47.5	46.7	45.4		41.3	28.3	
o/w foreign-currency denominated	25.6	19.8	15.7			22.4	30.9	36.8	41.0	41.1	40.5		37.3	25.9	
Change in public sector debt	-3.6	-7.2	-5.5			9.6	8.2	5.0	3.3	-0.7	-1.3		-1.1	-1.0	
Identified debt-creating flows	-6.0	-8.5	-6.3			12.9	5.1	2.2	-0.6	-2.8	-2.6		-1.6	-0.8	
Primary deficit	-1.3	-1.0	-0.2	-2.0	3.5	7.5	5.7	3.5	1.6	0.1	-0.4	3.0	-0.5	-0.3	-0.4
Revenue and grants	39.9	41.7	40.6			37.8	39.0	39.2	39.3	40.8	41.0		41.0	41.0	
of which: grants	0.7	1.8	1.7			1.9	3.2	2.5	1.8	1.7	1.6		1.6	1.6	
Primary (noninterest) expenditure	38.6	40.8	40.4			45.3	44.7	42.7	40.8	40.8	40.5		40.5	40.6	
Automatic debt dynamics	-4.3	-7.3	-4.2			5.8	0.0	-0.7	-1.6	-2.2	-2.0		-1.2	-0.5	
Contribution from interest rate/growth differential	-3.7	-6.0	-5.3			3.9	1.8	-0.5	-1.6	-1.9	-2.0		-1.2	-0.5	
of which: contribution from average real interest rate	-2.0	-5.0	-3.4			1.7	2.3	0.7	0.5	0.3	0.2		0.5	0.6	
of which: contribution from real GDP growth	-1.7	-1.0	-1.9			2.1	-0.5	-1.1	-2.1	-2.3	-2.2		-1.6	-1.1	
Contribution from real exchange rate depreciation	-0.6	-1.3	1.1			2.0	-1.9	-0.2	0.1	-0.3	0.0		...	...	
Other identified debt-creating flows	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Privatization receipts (negative)	-0.4	-0.3	-1.9			-0.4	-0.6	-0.6	-0.6	-0.7	-0.1		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	2.3	1.3	0.8			-3.3	3.1	2.8	3.9	2.1	1.3		0.5	-0.1	
Other Sustainability Indicators															
PV of public sector debt	8.5	7.0	20.5			30.2	36.3	40.4	43.0	42.3	41.2		37.5	27.5	
o/w foreign-currency denominated	0.0	0.0	14.9			21.6	28.1	33.0	36.5	36.7	36.3		33.5	25.1	
o/w external	...	...	14.9			21.6	28.1	33.0	36.5	36.7	36.3		33.5	25.1	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.9	4.8	4.9			12.9	15.2	13.2	10.7	8.7	7.4		7.6	5.6	
PV of public sector debt-to-revenue and grants ratio (in percent)	21.2	16.8	50.4			79.9	93.0	103.0	109.4	103.9	100.6		91.5	67.1	
PV of public sector debt-to-revenue ratio (in percent)	21.6	17.6	52.7			84.1	101.3	109.9	114.7	108.3	104.5		95.2	69.8	
o/w external 3/	…	…	38.3			60.2	78.2	89.8	97.5	93.9	92.0		85.1	63.6	
Debt service-to-revenue and grants ratio (in percent) 4/	9.2	6.9	6.0			7.2	6.1	7.1	7.3	7.1	6.9		10.6	9.0	
Debt service-to-revenue ratio (in percent) 4/	9.3	7.2	6.3			7.6	6.7	7.6	7.6	7.4	7.2		11.0	9.3	
Primary deficit that stabilizes the debt-to-GDP ratio	2.3	6.2	5.3			-2.1	-2.5	-1.5	-1.7	0.8	0.8		0.6	0.6	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.8	3.0	7.8	5.0	3.6	-9.0	1.5	3.0	5.0	5.0	5.0	1.8	4.0	4.0	4.0
Average nominal interest rate on forex debt (in percent)	3.3	1.9	1.8	3.3	1.1	2.3	2.5	2.2	2.2	2.1	2.1	2.2	2.4	3.4	2.7
Average real interest rate on domestic debt (in percent)	-6.6	-3.8	5.4	-0.5	4.8	13.8	2.6	6.1	5.5	5.5	5.8	6.5	7.6	10.0	8.3
Real exchange rate depreciation (in percent, + indicates depreciation)	-2.4	-6.5	7.6	-3.7	10.5	10.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	13.4	15.9	9.2	16.0	10.1	3.9	6.5	4.7	4.7	4.3	4.0	4.7	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	-1.1	23.1	18.1	18.1	18.0	19.2	15.9	11.5	-2.4	...

Sources: Country authorities; and staff estimates and projections.

1/ General government gross debt, excluding debt of state-owned enterprises.

2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues excluding grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 12A.Moldova: Sensitivity Analysis for Key Indicators of Public Debt with Additional Non-Concessional Borrowing and no Impact on Growth, 2009-2029

	Projections							
	2009	2010	2011	2012	2013	2014	2019	2029
PV of Debt-to-GDP Ratio								
Baseline	30	36	40	43	42	41	37	28
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	30	28	26	25	23	21	11	0
A2. Primary balance is unchanged from 2009	30	38	46	55	61	67	100	152
A3. Permanently lower GDP growth 1/	30	37	42	46	46	47	56	93
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	30	36	42	45	45	44	43	38
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	30	32	34	37	37	36	32	23
B3. Combination of B1-B2 using one half standard deviation shocks	30	30	30	32	31	30	24	10
B4. One-time 30 percent real depreciation in 2010	30	45	49	51	50	49	47	44
B5. 10 percent of GDP increase in other debt-creating flows in 2010	30	46	50	53	52	50	46	34
PV of Debt-to-Revenue Ratio 2/								
Baseline	80	93	103	109	104	101	92	67
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	80	71	66	64	56	51	26	0
A2. Primary balance is unchanged from 2009	80	98	118	139	150	164	244	371
A3. Permanently lower GDP growth 1/	80	94	107	116	114	115	137	225
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	80	93	106	114	110	108	106	94
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	80	82	87	94	90	87	79	57
B3. Combination of B1-B2 using one half standard deviation shocks	80	77	77	82	77	73	58	23
B4. One-time 30 percent real depreciation in 2010	80	116	125	130	124	120	115	108
B5. 10 percent of GDP increase in other debt-creating flows in 2010	80	119	128	134	127	123	112	84
Debt Service-to-Revenue Ratio 2/								
Baseline	7	6	7	7	7	7	11	9
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	7	6	6	5	5	5	5	0
A2. Primary balance is unchanged from 2009	7	6	7	8	8	9	19	36
A3. Permanently lower GDP growth 1/	7	6	7	8	7	7	13	22
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2010-2011	7	6	7	7	7	7	12	11
B2. Primary balance is at historical average minus one standard deviations in 2010-2011	7	6	7	6	6	6	9	8
B3. Combination of B1-B2 using one half standard deviation shocks	7	6	6	6	6	6	7	5
B4. One-time 30 percent real depreciation in 2010	7	7	9	10	10	10	16	18
B5. 10 percent of GDP increase in other debt-creating flows in 2010	7	6	8	9	8	8	13	11

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined inclusive of grants.