Dominica: Table of Common Indicators Required for Surveillance

(As of June 6, 2007)

	Date of latest observation	Date received [7]	Frequency of Data [7]	Frequency of Reporting [7]	Frequency of Publication [7]
Exchange Rates[1]	Fixed Rate	NA	NA	NA	NA
International Reserve Assets and Reserve Liabilities of the Monetary Authorities [1, 2]	March 2007	4/22/07	M	M	Q
Reserve/Base Money	March 2007	4/22/07	M	M	Q
Broad Money	March 2007	4/22/07	M	M	Q
Central Bank Balance Sheet	March 2007	45/22/07	M	M	Q
Consolidated Balance Sheet of the Banking System	March 2007	4/22/07	M	M	Q
Interest Rates[3]	March 2007	4/22/07	Q	Q	Q
Consumer Price Index	March 2007	4/22/07	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[4] – General Government[5]	2006	05/8/07	A	A	A
Revenue, Expenditure, Balance and Composition of Financing[4] – Central Government	April 2007	5/22/07	M	M	A
Stocks of Central Government and Central Government-Guaranteed Debt[6]	March 2007	5/07/07	M	M	A
External Current Account Balance	2005	10/13/06	A	A	A
Exports and Imports of Goods and Services	March 2007	5/07/07	M	Q	A
GDP/GNP	2006	05/02/07	A	A	A
Gross External Debt	March 2007	5/7/07	M	M	A

[1] Dominica is a member of the Eastern Caribbean Currency Union, in which the common currency of all member states (E.C. dollar) is pegged to the U.S. dollar at US$1=EC$2.70.
[2] Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[3] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[4] Foreign, domestic bank, and domestic nonbank financing.
[5] The general government consists of the central government and state and local governments.
[6] Currency and maturity composition are provided annually.
[7] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A); Irregular (I); Not Available (NA); Not applicable (n.a).

INTERNATIONAL MONETARY FUND

DOMINICA

Debt Sustainability Analysis

Prepared by the staff of the International Monetary Fund

In consultation with World Bank Staff

July 2, 2007

This debt sustainability analysis (DSA) assesses the sustainability of Dominica's public and external debt. The analysis shows that Dominica has improved its debt sustainability outlook since the last Article IV consultation, primarily due to stronger than expected fiscal performance and output growth, the initiation of a reform to the pension system, and the recent participation in the Caribbean Catastrophe Insurance Facility—a regional insurance pool organized by the World Bank. The outlook still presents, nevertheless, large risks, as Dominica's debt remains high and the country is exposed to potentially large shocks (including volatility of aid flows, natural disasters, among others).

I. INTRODUCTION

1. After a restructuring of its public sector debt, a strong fiscal turnaround, and a rebound of economic activity, Dominica has been able to improve its debt sustainability outlook. The debt restructuring that started in 2004, jointly with donors help, allowed a reduction in debt's face value and improved the terms of a large portion of the existing debt. The central government primary balance, which had been in deficit since 1997, has exhibited sound surpluses in the last three years in the context of a PRGF program (concluded in December 2006). Growth rebounded under program and the government has started the implementation of the Growth and Social Protection Strategy (GSPS), which constitutes a comprehensive strategy to foster private sector-led growth and reduce poverty while maintaining prudent fiscal policy.

II. UNDERLYING DSA ASSUMPTIONS

2. Staff has prepared a baseline scenario whose main parameters are consistent with the authorities projections under the GSPS, and with staff projections and assumptions in the 2005 Article IV consultation DSA.

Box 1. Baseline Macroeconomic Assumptions (2007–27)

- Real GDP growth is projected at 3 percent (as in GSPS and 2005 Article IV DSA). While this assumption implies a rate of growth higher than the average observed in the 1990s (2 percent), it seems consistent with the stronger growth observed in the period 2004–06, with the reforms envisaged, and with the projected international environment (see Box 2). Inflation is projected to remain low (1.5 percent per year), consistent with historical averages.

- Primary balance of the central government remains at 3 percent of GDP over the projection period (as in GSPS and 2005 Article IV DSA), while public enterprises run an overall deficit of 0.5 percent of GDP. The assumption about the government primary balance is consistent with the strong fiscal turnaround Dominica has had in recent years. The assumption on public enterprises follows the average observed during the period 1999–2006. External grants are assumed to remain at 8.3 percent of GDP broadly in line with the GSPS. This number is high by historical standards although it is lower than the grants actually received and not out of bound given the authorities' attempt to improve the management of aid and aid-related expenditures. Given the uncertain grants outlook, we undertake a stress test below.

- Annual disbursements of external concessional debt reach 1.5 percent of GDP (as in 2005 Article IV DSA), consistent with the country's public sector investment program (PSIP). The financing terms are similar to those of existing external debt. New domestic financing is projected to be available at an interest rate of 7 percent (as in 2005 Article IV DSA).

- The current account deficit is assumed to remain high in a transition period (2007–12), while gradually falling to a level fully financed by the projected external grants and FDI. This assumes that: (i) banks continue to use their external assets to extend domestic credit and that the government draws down its deposits to finance its investment program (government deposits in domestic banks have increased substantially given the recent increase in grants received. Banks have allocated a large fraction of those deposits to external assets); and (ii) the loss of export revenue associated with the closure of a large factory is partially and temporarily compensated by a decline in private agent's foreign assets.

- FDI is assumed to remain at the 2006 level (8 percent of GDP). While this number is higher than its historical average (so helping finance the current account), its actual net impact is not large since it is linked in the projections to foreign firms' retained earnings (which increase the current account deficit).

III. Evaluation of Public Sector Debt Sustainability

Dominica's public debt as of end-2006

3. As of end-2006 Dominica's public sector debt stood at 102 percent of GDP, of which 71 percent of GDP represented external debt and the remaining 31 percent represented domestic debt. Regarding the external debt, the largest share is owed to multilateral creditors (around 43 percent of GDP, with the Caribbean Development Bank holding around two thirds of that), followed by the debt with bilateral and commercial creditors (around 16 and

12 percent of GDP, respectively). In the domestic front, the largest creditor is Dominica's own Social Security System (around 13 percent of GDP) followed by a commercial bank with a significant government stake. In NPV terms, public sector debt stood at around 88 percent of GDP, due to the concessionality attached to most of the external debt (whose NPV was around 56 percent of GDP).[1]

The baseline scenario

4. Under the baseline scenario (Table 1a.), all the indicators show a progressive improvement in terms of debt sustainability. The only indicator that does not decline continuously is the debt service to revenue ratio, which temporarily shows an upward trend and then a decline in 2011.[2] Even though the increase in the indicator is temporary, it is important, however, to take into account that it remains high for several years, which calls for maintaining fiscal discipline in order to avoid liquidity constraints. Under this scenario, Dominica would reach a public debt to GDP ratio of 60 percent—the guidance of the ECCB—by 2017.

Alternative scenarios and stress tests

Changes in growth and primary balance

5. Economic growth and the primary balance are the two key drivers of Dominica's debt path and both are subject to large exogenous shocks, such as volatility of grants (see below) and of foreign growth (see Box 2).

6. The sensitivity analysis illustrates two important points (Table 1b.). First, if Dominica's primary balance and economic growth return to their averages of the last ten years (a primary deficit of 0.1 percent and annual growth of 0.9 percent), then public debt starts rising again (Scenario A.1), although the path of the debt increase is not steep. Second, if Dominica can maintain the fiscal effort projected for 2007 (a primary balance of 4.8 percent) public debt stays on a declining path (Scenario A.2).

7. In addition, the sensitivity analysis shows the importance of sustaining growth. In the alternative Scenario A.3, in which growth falls to 2.3 percent per year, debt initially declines but later returns to an ascending path. This is because as output growth slows, fiscal revenues

[1] The figures could change somewhat depending on the final agreement with hold-out creditors (since different options have different hair-cuts). These final agreements, however, should not have a material impact on the debt sustainability paths given that all restructuring options available for restructuring have the same NPV. The simulations in this appendix assume that hold-out creditors take the intermediate bond, which carries a hair-cut of 20 percent. The discount rate for the NPV calculations is 5 percent.

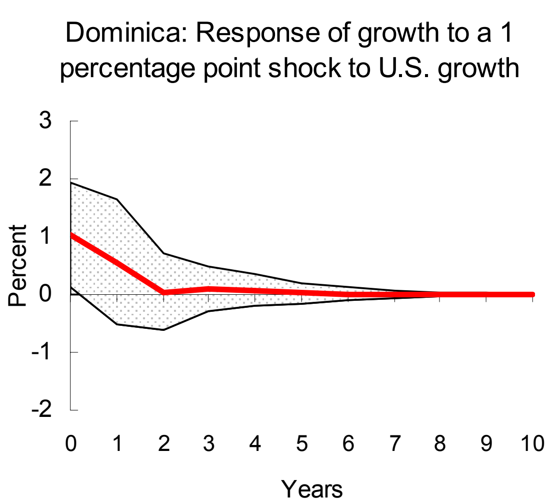
[2] The initial upward trend is mainly caused by the early repayment clause that was included in Dominica's debt restructuring agreement. Under that clause, there is an increase in amortization starting in 2009 and a bunching of payments up to 2011.

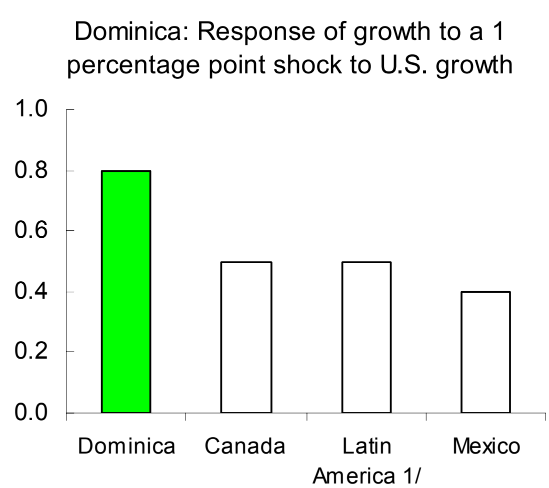
are projected to decline relative to the baseline scenario while expenditures are assumed to remain constant relative to the baseline scenario (which produces a deterioration of the primary balance). Figure 2 shows the individual contributions of growth and primary balance to the debt path. The importance of growth in debt sustainability is clear from the second panel, but it is also clear that public debt remains on a declining path if Dominica is able to maintain a primary balance of 3 percent of GDP even if growth were to decline to an annual rate of 1 percent.

Box. 2. Dominica: External Shocks and Growth

Since independence in 1978, Dominica has gone through periodic difficulties. The island was ravaged by hurricanes; experienced with banana-driven booms and busts; and more recently suffered from a debt and economic crisis. The lack of economies of scale and accessibility increases business costs. Also, as a small state, it faces more volatile growth and terms of trade, more prone to natural disasters, and more vulnerable to external shocks.

External shocks are a key challenge to sustaining growth in Dominica. In a standard vector auto-regression analysis,[3] staff found that a 1 percentage point shock to the U.S. output affects Dominica output roughly by the same magnitude, doubles the effect on some larger countries in the region, such as Mexico and Canada. Similarly, staff found that Dominica is particularly vulnerable to other external shocks: more than half of its growth volatility can be explained by growth volatility of its main trading partners; and typical shocks to annual banana prices (about 14 percentage points) and aid inflows (about 2¾ percent of GDP) affect Dominica GDP by ¾–1 percentage point over a year or two.





Source: Fund staff estimates.
1/ Argentina, Brazil, Chile, Colombia, Mexico and Peru.

[3] Based on the methodology used in World Economic Outlook, April 2007, Chapter 4.

Decline in external grants

8. External grants to the central government are expected to reach around 8 percent of GDP in the fiscal year 2006–07[4], around 3 percentage points above its historical average. Figure 2 (lower panel) illustrates the impact of a 3 percent of GDP decline in external aid from 2009 on. The results present two alternative scenarios: (i) the partial adjustment scenario, which assumes that government cuts investment spending by around 1.5 percent of GDP and finances the rest of the aid decline with larger borrowing (the increase in borrowing is assumed to increase interest rates by 1 percentage point). The other scenario assumes no cuts in public investment. The aid decline is financed entirely via higher borrowing, which increase interest rates by 2 percentage points. In both scenarios, the new borrowing is assumed to be domestic.

9. As the figure illustrates, under the no adjustments scenario, public debt quickly starts rising again due to the cascading effects of rising debt and higher refinancing rates. The debt to GDP ratio stabilizes at around 62 under the partial adjustment scenario.

Other shocks

10. We also assessed shocks to interest rates, the impact of natural disasters, and the balance sheet implications of a depreciation of the U.S. dollar against other major international currencies.

- **Natural disasters** produce an initial increase in debt but the latter returns to a declining trajectory after growth is restored and fiscal costs of reconstruction have ended.[5]

- **Interest rates** shocks have little impact on Dominica's public debt path of most of its debt, including domestic debt, has fixed interest rates.

- **A depreciation of the U.S. dollar against other major currencies** would have a modest balance sheet effect on Dominica's public debt: around 70 percent of the external debt is denominated in the U.S. dollar, 19 percent in SDR (where the U.S. dollar weigh is about 50 percent), and around 4 percent is denominated in the Euro.

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[4] Measured as grants spent, in line with IMF Country Report No. 05/384.

[5] It is assumed that the shock costs the government 9 percent of GDP over a three-year period (thus exhausting the primary surpluses assumed under the baseline scenario) and causes real growth to decline to zero over the same period. This shock is costlier than the standard shock reported in IMF Country Report No. 04/335, in particular. In addition, the actual impact of this shock could be lower given the recent participation of Dominica into the Caribbean Catastrophe Insurance Facility—a regional insurance pool organized by the World Bank—has lowered the costs of catastrophe insurance and is expected to mitigate fiscal costs in the event of extreme hurricanes.

The rest is denominated in the EC dollar, and other currencies that are pegged to the U.S. dollar.

IV. Evaluation of External Debt Sustainability

11. Dominica's external debt is mostly owed by the public sector, since private sector borrowing takes place with domestic commercial banks. Due to this feature, the external DSA has to a large extent the same properties as the public sector DSA.

12. External debt remains on a declining path in the baseline scenario (Table 2a.). Similarly to the public debt DSA, the only indicators of debt sustainability that do not decline continuously are those related to the share of external debt service as a percent of exports and public sector revenues. Both indicators increase up to 2010 as a consequence of the features of the debt restructuring and then start declining. The closure of operations of a large foreign manufacturing company also contributes to the increase of the debt service as a share of exports. The large residuals observed in the first five years of the projections period reflect our assumptions regarding the temporary financing of part of the current account deficit by a reduction in bank's and private agents' net foreign assets.

13. Sensitivity tests show a picture similar to the public debt DSA (Table 2b.). If key variables were to return to their historical averages (Scenario A.1) external debt would return to an ascending path, as lower grants, lower FDI, and lower growth would push external debt up. Higher interest rates (Scenario A.2) do not significantly impact the external debt paths as in the baseline scenario Dominica faces low financing needs (see previous section).

V. Conclusions and Comparison with the 2005 Article IV Consultation DSA

14. Dominica has improved its debt sustainability outlook since the previous Article IV consultation (2005), mostly due to stronger than projected fiscal performance and economic growth. Public debt for end-2007 is currently projected at 96 percent of GDP, which is 3.5 percentage points lower than the projections made in the last Article IV consultation. At the same time, Dominica has introduced a reform to its pension system, which targets one of the main vulnerabilities to debt sustainability identified in the 2005 Article IV consultation. Dominica has also made progress in reducing debt-related vulnerabilities, particularly by joining the Caribbean Catastrophe Insurance Facility.

15. In spite of the progress achieved, important debt-related vulnerabilities remain, as: (i) public debt is high (over 100 percent of GDP), which gives the government little room to maneuver in case of unforeseen events; (ii) there is a bunching of payments between 2009 and 2011; (iii) the arrival of new grants is uncertain; and (iv) the country is exposed to external shocks and natural disasters.

16. The government's medium-term reform strategy, which appropriately envisages the maintenance of a fiscal policy geared at achieving a primary surplus target of 3 percent of

GDP and thereby bringing about a gradual reduction in the debt ratio, constitutes, therefore, a step in the right direction. The structural reforms proposed in the government strategy will—via its positive impact on economic growth—also help to attain the objective of reducing debt related vulnerabilities.

Table 1a.Dominica: Public Sector Debt Sustainability Framework, Baseline Scenario, 2004–27

(In percent of GDP, unless otherwise indicated)

	Actual					Est.	Projections								
	2004	2005	2006	Historical Average 1/	Standard Deviation 1/	2007	2008	2009	2010	2011	2012	Average 2007–12	2017	2027	Average 2013–27
Public sector debt 2/	116.0	108.1	102.5			95.8	91.9	87.5	83.2	79.2	75.2		57.2	23.4	
Of which: Foreign-currency denominated 3/ 4/	80.6	74.8	70.9			65.2	60.5	56.3	51.4	46.9	43.0		30.6	21.2	
Change in public sector debt	-14.8	-7.8	-5.7			-6.7	-3.9	-4.4	-4.3	-4.1	-3.9		-3.5	-3.4	
Identified debt-creating flows 5/	-12.0	-9.1	-9.1			-6.7	-3.9	-4.4	-4.3	-4.1	-3.9		-3.5	-3.4	
Primary deficit	-4.4	-4.5	-6.9	0.1	5.3	-4.8	-3.3	-3.2	-3.2	-3.2	-3.1	-3.5	-3.0	-3.1	-3.1
Revenue and grants	48.7	48.9	50.1			49.4	48.7	49.6	50.1	50.1	50.1		50.1	50.1	
of which : grants	6.0	6.8	8.3			7.7	7.0	7.9	8.3	8.3	8.3		8.3	8.3	
Primary (noninterest) expenditure	44.4	44.4	43.1			44.7	45.5	46.4	46.9	46.9	47.0		47.0	46.9	
Automatic debt dynamics	-2.1	-2.1	-2.9			-1.9	-0.7	-1.2	-1.1	-0.9	-0.8		-0.4	-0.3	
Contribution from interest rate/growth differential	-2.1	-2.7	-3.0			-2.1	-1.3	-1.4	-1.3	-1.2	-1.0		-0.6	-0.4	
Of which : Contribution from average real interest rate	1.8	1.0	1.2			1.1	1.4	1.2	1.2	1.3	1.3		1.2	0.4	
Of which : Contribution from real GDP growth	-3.9	-3.7	-4.1			-3.1	-2.6	-2.7	-2.5	-2.4	-2.3		-1.8	-0.8	
Contribution from real exchange rate depreciation	0.0	0.6	0.0			0.2	0.6	0.3	0.3	0.2	0.2		...	...	
Other identified debt-creating flows	-5.6	-2.5	0.8			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	-2.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	-0.9	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) 6/	-4.6	-0.6	0.8			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	-2.8	1.3	3.4			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
NPV of public sector debt	35.4	93.3	87.7			82.8	80.1	76.8	73.6	70.4	67.3		52.1	20.9	
Of which: Foreign-currency denominated	0.0	60.0	56.1			52.2	48.8	45.6	41.7	38.2	35.1		25.5	18.6	
Of which: External	...	60.0	56.1			52.2	48.8	45.6	41.7	38.2	35.1		25.5	18.5	
NPV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 7/	6.7	0.5	-0.9			1.5	3.0	3.4	4.4	4.2	3.8		1.0	-1.0	
NPV of public sector debt-to-revenue and grants ratio (in percent)	72.6	190.9	175.2			167.5	164.4	154.8	146.9	140.6	134.4		104.1	41.7	
NPV of public sector debt-to-revenue ratio (in percent)	82.9	221.8	209.9			198.2	191.8	183.9	176.1	168.6	161.1		124.8	49.9	
Of which: External 8/		142.6	134.4			125.0	116.7	109.2	99.8	91.4	83.9		61.0	44.3	
Debt service-to-revenue and grants ratio (in percent)	22.7	10.2	12.0			12.8	12.9	13.3	15.1	14.6	13.7		8.1	4.3	
Debt service-to-revenue ratio (in percent) 9/	25.9	11.8	14.4			15.1	15.0	15.8	18.1	17.5	16.5		9.7	5.2	
Primary deficit that stabilizes the debt-to-GDP ratio	10.5	3.4	-1.3			1.9	0.7	1.2	1.1	0.9	0.8		0.4	0.2	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	3.0	3.3	4.0	0.9	3.1	3.2	2.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Average nominal interest rate on forex debt (in percent)	3.9	2.0	2.2	3.5	1.2	2.1	2.5	2.5	2.4	2.4	2.3	2.4	2.3	3.2	2.5
Average real interest rate on domestic currency debt (in percent)	0.7	3.5	3.2	5.8	3.4	3.2	3.5	3.2	3.3	3.5	3.7	3.4	4.0	3.0	3.8
Real exchange rate depreciation (in percent, + indicates depreciation)	0.0	0.8	0.1	0.3	1.0	0.2	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	2.1	1.5	1.9	1.5	0.9	1.8	1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Growth of real primary spending (deflated by GDP deflator, in percent)	4.3	3.2	0.9	2.7	11.6	6.8	4.6	5.1	4.1	3.1	3.1	4.5	3.0	2.9	3.0
Grant element of new external borrowing (in percent)	...	...	...			17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	...

Sources: Country authorities; and Fund staff estimates and projections.

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

2/ Nonfinancial public sector (includes debt with Dominica's Social Security System).

3/ Refers to external debt. Assumes that nonpartcipating creditors receive the intermediate bond. Excludes external interest arrears. Arrears with participating creditors have been settled as part of the debt restructuring. Arrears with nonparticipating creditors are either in dispute or expected to be settled when an agreement is reached. Undisputed interest arrears are approximately 0.4 percent of GDP

4/ For 2005, it includes the reallocation of part of an external bond (around 4 percent of GDP) from external to domestic

5/ Fiscal year aggregates are averaged to estimate calendar year figures.

6/ In 2004/05, it is assumed that all nonparticipating creditors received the intermediate bond, which carries a face value reduction of 20 percent.

7/ 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.

8/ Revenues excluding grants.

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

Table 1b.Dominica: Sensitivity Analysis for Key Indicators of Public Debt 2007–27

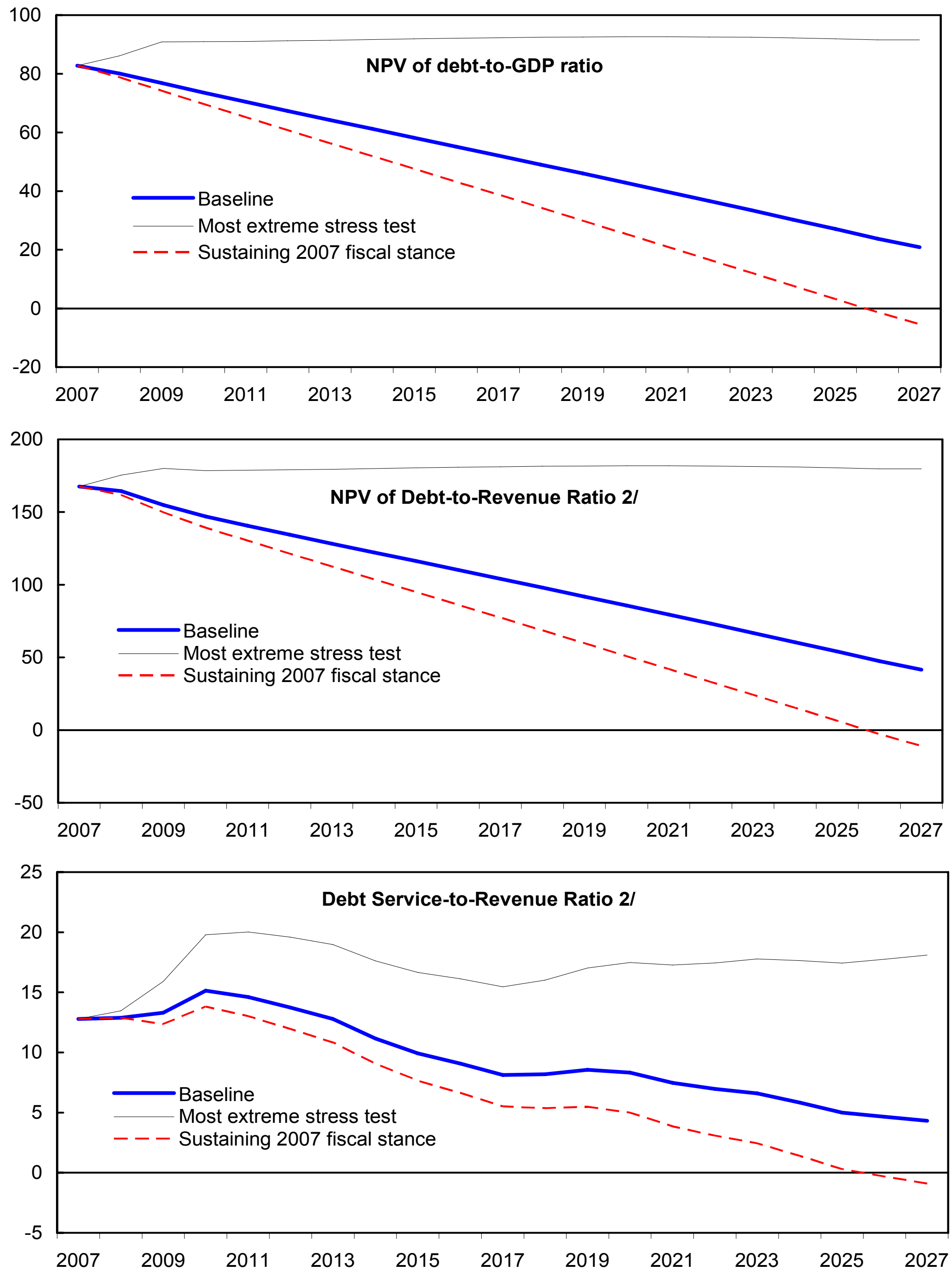
	Projections							
	2007	2008	2009	2010	2011	2012	2017	2027
NPV of Debt-to-GDP Ratio								
Baseline	83	80	77	74	70	67	52	21
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	83	85	86	87	88	89	96	105
A2. Primary balance is unchanged from 2007	83	79	74	70	65	61	39	-5
A3. Permanently lower GDP growth 1/	83	81	79	77	75	73	69	77
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008–09	83	86	91	91	91	91	92	92
B2. Primary balance is at historical average minus one standard deviations in 2008–09	83	88	92	88	84	81	66	33
B3. Combination of B1–B2 using one half standard deviation shocks	83	88	93	89	85	81	63	26
B4. One-time 30 percent real depreciation in 2008	83	103	100	96	93	89	72	37
B5. 10 percent of GDP increase in other debt-creating flows in 2008	83	89	85	82	78	75	60	28
NPV of Debt-to-Revenue Ratio 2/								
Baseline	168	164	155	147	141	134	104	42
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	168	173	172	172	174	175	184	194
A2. Primary balance is unchanged from 2007	168	162	150	139	130	121	77	-11
A3. Permanently lower GDP growth 1/	168	166	158	152	149	146	137	149
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008–09	168	175	180	178	179	179	181	180
B2. Primary balance is at historical average minus one standard deviations in 2008–09	168	180	184	175	169	162	131	67
B3. Combination of B1-B2 using one half standard deviation shocks	168	180	185	175	168	161	125	51
B4. One-time 30 percent real depreciation in 2008	168	212	201	192	185	178	144	74
B5. 10 percent of GDP increase in other debt-creating flows in 2008	168	182	171	163	157	150	120	56
Debt Service-to-Revenue Ratio 2/								
Baseline	13	13	13	15	15	14	8	4
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	13	13	16	19	19	19	15	20
A2. Primary balance is unchanged from 2007	13	13	12	14	13	12	6	-1
A3. Permanently lower GDP growth 1/	13	13	14	16	16	15	12	15
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008–09	13	13	16	20	20	20	15	18
B2. Primary balance is at historical average minus one standard deviations in 2008–09	13	13	19	23	18	16	10	7
B3. Combination of B1-B2 using one half standard deviation shocks	13	13	18	21	18	16	9	5
B4. One-time 30 percent real depreciation in 2008	13	14	15	17	16	15	9	6
B5. 10 percent of GDP increase in other debt-creating flows in 2008	13	13	20	18	16	15	9	6

Sources: Country authorities; and Fund staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of 20 (i.e., the length of the projection period)

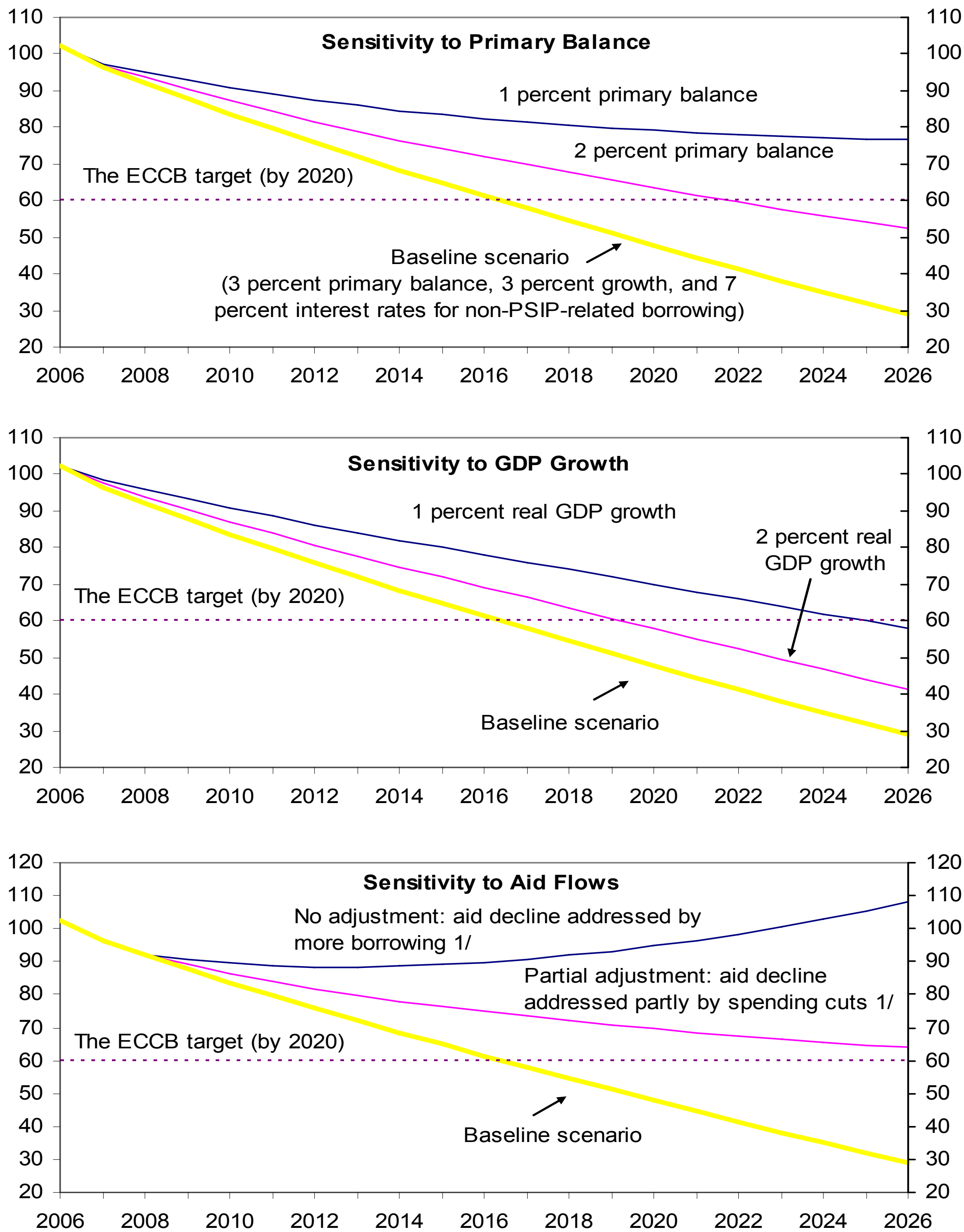
2/ Revenues are defined inclusive of grants.

Figure 1. Dominica: Indicators of Public Debt Under Alternative Scenarios, 2007–27 1/



Source: Staff projections and simulations.
1/ Most extreme stress test is test that yields highest ratio in 2017.
2/ Revenue including grants.

Figure 2. Dominica: Debt Sustainability Analysis
(In percent of GDP)



Source: Fund staff calculations based on data from Dominica authorities.
1/ Assumes that grants decline to the pre-crisis historical average in 2009.

Table 2a. Dominica: External Debt Sustainability Framework, Baseline Scenario, 2004–27 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average 2/	Standard Deviation 2/	Projections									
	2004	2005	2006			2007	2008	2009	2010	2011	2012	Average 2007–12	2017	2027	Average 2013–27
External debt (nominal) 1/	**80.6**	**74.8**	**70.9**			**65.2**	**60.5**	**56.3**	**51.4**	**46.9**	**43.0**		**30.6**	**21.1**	
Of which: Public and publicly guaranteed (PPG)	80.6	74.8	70.9			65.2	60.5	56.3	51.4	46.9	43.0		30.6	21.1	
Change in external debt	-4.0	-5.8	-3.9			-5.7	-4.7	-4.2	-4.9	-4.4	-3.9		-1.7	-0.3	
Identified net debt-creating flows	0.3	12.8	-1.2			-0.8	2.4	1.4	0.1	-0.5	-3.1		-1.9	-0.8	
Noninterest current account deficit	**14.1**	**27.9**	**17.8**	**14.9**	**6.0**	**15.5**	**17.6**	**17.5**	**16.7**	**16.1**	**13.5**		**14.6**	**15.5**	14.8
Deficit in balance of goods and services	16.5	25.1	19.5			16.9	19.0	19.0	18.2	17.6	17.0		16.6	17.5	
Exports	47.5	44.5	46.6			46.9	44.7	44.2	44.3	44.3	44.5		44.5	44.5	
Imports	64.1	69.7	66.1			63.8	63.6	63.2	62.5	62.0	61.5		61.1	62.0	
Net current transfers (negative = inflow)	-7.3	-7.6	-7.3	-6.3	1.1	-7.0	-7.0	-7.0	-7.0	-7.0	-7.0		-7.0	-7.0	-7.0
*Of which: O*fficial	-0.5	-0.7	-0.3			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other current account flows (negative = net inflow)	4.9	10.4	5.6			5.6	5.6	5.6	5.5	5.5	3.5		5.0	5.0	
Net FDI and capital grants (negative = inflow)	**-12.7**	**-13.2**	**-16.3**	**-12.5**	**4.0**	**-15.7**	**-15.0**	**-15.9**	**-16.3**	**-16.3**	**-16.3**		**-16.3**	**-16.3**	-16.3
Endogenous debt dynamics 3/	**-1.2**	**-2.0**	**-2.7**			**-0.7**	**-0.2**	**-0.3**	**-0.3**	**-0.3**	**-0.3**		**-0.2**	**0.0**	
Contribution from nominal interest rate	3.2	1.5	1.6			1.4	1.6	1.4	1.3	1.2	1.0		0.7	0.7	
Contribution from real GDP growth	-2.4	-2.6	-2.8			-2.1	-1.8	-1.7	-1.6	-1.5	-1.3		-0.9	-0.6	
Contribution from price and exchange rate changes	-1.9	-1.0	-1.4			…	…	…	…	…	…		…	…	
Residual 4/ 5/	**-4.2**	**-18.5**	**-2.7**			**-4.9**	**-7.1**	**-5.6**	**-5.0**	**-3.9**	**-0.8**		**0.2**	**0.4**	
*Of which: E*xceptional financing	-4.6	-0.6	0.8			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
NPV of external debt 6/	...	...	56.1			52.2	48.8	45.6	41.7	38.2	35.1		25.5	18.5	
In percent of exports	...	...	120.5			111.4	109.1	103.2	94.2	86.1	78.8		57.3	41.6	
NPV of PPG external debt	**...**	**...**	**56.1**			**52.2**	**48.8**	**45.6**	**41.7**	**38.2**	**35.1**		**25.5**	**18.5**	
In percent of exports	**...**	**...**	**120.5**			**111.4**	**109.1**	**103.2**	**94.2**	**86.1**	**78.8**		**57.3**	**41.6**	
In percent of government revenues	**...**	**...**	**134.4**			**125.0**	**116.7**	**109.2**	**99.8**	**91.4**	**83.9**		**61.0**	**44.3**	
Debt service-to-exports ratio (in percent)	**20.7**	**12.6**	**8.6**			**9.8**	**10.3**	**10.4**	**12.1**	**11.1**	**10.0**		**5.5**	**3.6**	
PPG debt service-to-exports ratio (in percent)	**20.7**	**12.6**	**8.6**			**9.8**	**10.3**	**10.4**	**12.1**	**11.1**	**10.0**		**5.5**	**3.6**	
PPG debt service-to-revenue ratio (in percent)	**23.0**	**13.3**	**9.6**			**11.0**	**11.0**	**11.0**	**12.8**	**11.7**	**10.6**		**5.9**	**3.8**	
Total gross financing need (billions of U.S. dollars)	30.6	58.0	16.7			14.1	23.7	21.6	20.7	17.7	6.3		3.9	6.1	
Noninterest current account deficit that stabilizes debt ratio	18.1	33.7	21.7			21.3	22.3	21.7	21.6	20.5	17.4		16.3	15.8	
Key macroeconomic assumptions															
Real GDP growth (in percent)	3.0	3.3	4.0	0.9	3.1	3.2	2.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
GDP deflator in U.S. dollar terms (change in percent)	2.3	1.2	1.9	1.6	0.8	1.8	1.1	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Effective interest rate (percent) 7/	3.9	2.0	2.2	3.5	1.2	2.1	2.5	2.5	2.4	2.4	2.3	2.4	2.3	3.2	2.5
Growth of exports of goods and services (U.S. dollar terms, in percent)	9.2	-2.0	10.9	2.3	10.1	5.6	-1.0	3.5	4.7	4.7	4.9	3.7	4.5	4.5	4.5
Growth of imports of goods and services (U.S. dollar terms, in percent)	11.3	13.7	0.6	2.5	7.3	1.3	3.7	3.8	3.4	3.7	3.7	3.3	5.1	4.5	4.6
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
Aid flows (in millions of US dollars) 8/	75.4	61.7	67.7			68.0	64.3	78.3	86.1	89.9	93.9		117.2	182.9	
Of which: Grants	16.4	19.4	25.0			24.2	22.9	27.0	29.8	31.2	32.6		40.7	63.5	
Of which: Concessional loans	18.4	7.8	2.6			2.5	2.5	5.5	5.6	5.8	5.9		7.4	11.5	
Grant-equivalent financing (in percent of GDP) 9/	...	...	...			7.8	7.1	8.1	8.6	8.6	8.6		8.6	8.6	8.6
Grant-equivalent financing (in percent of external financing) 9/	...	...	...			92.3	91.9	86.1	87.0	87.2	87.4		87.4	87.4	87.5
Memorandum items:															
Nominal GDP (billions of US dollars)	271.7	284.3	301.3			316.3	328.7	343.6	359.2	375.5	392.6		490.3	764.7	
(NPVt-NPVt-1)/GDPt-1 (in percent)						-1.3	-1.6	-1.0	-2.0	-1.8	-1.5	-1.5	-0.1	1.0	0.0

Source: Staff simulations.
1/ Only includes both public sector external debt.
2/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.
3/ Derived as [r - g - r(1+g)]/(1+g+r+gr) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and r = growth rate of GDP deflator in U.S. dollar terms.
4/ 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.
5/ In 2005, it includes the reallocation of part of an external bond (around 4 percent of GDP) from external to domestic. It also includes a negative FDI flow reflecting extraordinary dividends paid by a foreign company (5 percent og GDP), which were made out of an account in a foreign bank.
6/ Assumes that NPV of private sector debt is equivalent to its face value.
7/ Current-year interest payments divided by previous period debt stock.
8/ Defined as grants, concessional loans, and debt relief.
9/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the NPV of new debt).

Table 2b. Dominica: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2007–27

(In percent)

	Projections							
	2007	2008	2009	2010	2011	2012	**2017**	2027
NPV of debt-to-GDP ratio								
Baseline	52	49	46	42	38	35	**25**	19
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008–27 1/	52	49	48	46	46	48	**62**	90
A2. New public sector loans on less favorable terms in 2008–27 2/	52	49	46	43	39	37	**29**	26
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008–09	52	51	51	46	42	39	**28**	21
B2. Export value growth at historical average minus one standard deviation in 2008–09 3/	52	51	54	50	47	44	**34**	23
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008–09	52	49	46	42	39	35	**26**	19
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008–09 4/	52	56	60	56	53	49	**39**	27
B5. Combination of B1-B4 using one-half standard deviation shocks	52	52	56	51	47	44	**34**	24
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	52	69	65	59	54	50	**36**	26
NPV of debt-to-exports ratio								
Baseline	111	109	103	94	86	79	**57**	42
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007–26 1/	111	110	108	105	104	108	**140**	202
A2. New public sector loans on less favorable terms in 2007–26 2/	111	110	104	96	89	83	**65**	59
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008–09	111	109	103	94	86	79	**57**	42
B2. Export value growth at historical average minus one standard deviation in 2008–09 3/	111	123	148	137	127	118	**92**	64
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008–09	111	109	103	94	86	79	**57**	42
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008–09 4/	111	125	136	127	119	111	**89**	60
B5. Combination of B1-B4 using one-half standard deviation shocks	111	115	127	117	108	100	**76**	53
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	111	109	103	94	86	79	**57**	42
Debt service-to-exports ratio								
Baseline	10	10	10	12	11	10	**6**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008–27 1/	12	10	11	13	12	12	**9**	14
A2. New public sector loans on less favorable terms in 2008–27 2/	12	10	10	12	11	10	**6**	5
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008–09	12	10	10	12	11	10	**6**	4
B2. Export value growth at historical average minus one standard deviation in 2008–09 3/	12	11	13	16	14	13	**8**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008–09	12	10	10	12	11	10	**6**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008–09 4/	12	10	11	13	12	11	**8**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	12	10	11	14	13	12	**7**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	12	10	10	12	11	10	**6**	4

Source: Staff projections and simulations.

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.