

**IMMEDIATE
ATTENTION**

SM/11/60

March 31, 2011

To: Members of the Executive Board

From: The Secretary

Subject: **Mauritius—Staff Report for the 2011 Article IV Consultation**

Attached for consideration by the Executive Directors is the staff report for the 2011 Article IV consultation with Mauritius, which meets the criteria for consideration on a lapse of time basis. This staff report has been prepared using the new format for Article IV staff reports.

In the absence of a request by an Executive Director by **noon on Tuesday, April 12, 2011**, that this matter be brought to the agenda of the Executive Board, the consultation will be deemed approved on Thursday, April 14, 2011, by the Executive Board and the following decision will be recorded in the minutes of the next meeting thereafter:

The Executive Board endorses the thrust of the staff appraisal in the report for the 2011 Article IV Consultation with Mauritius (SM/11/60, 3/30/11).

It is expected that the next Article IV consultation with Mauritius will take place on the standard 12-month cycle.

If an Executive Director requests that the matter be taken up at a Board meeting, the item will be tentatively scheduled for discussion on Friday, April 22, 2011.

Unless an objection from the authorities of Mauritius is received prior to the conclusion of the Board's consideration, the document will be published. Any requests for modifications for publication are expected to be received two days before the Board concludes its consideration.

If there is no request for a Board discussion, the Executive Board Assessment section of the Public Information Notice will be based on the staff appraisal.

Questions may be referred to Mr. Petri (ext. 38429) and Ms. Svirydzenka (ext. 38542) in AFR.

Unless the Documents Section (ext. 36760) is otherwise notified, the document will be transmitted, in accordance with the procedures approved by the Executive Board and with the appropriate deletions, to the WTO Secretariat on Friday, April 8, 2011; and to the African Development Bank, the Common Market for Eastern and Southern Africa, the European Commission, and the Organisation for Economic Cooperation and Development, following its consideration by the Executive Board.

This document, together with a supplement providing an informational annex, will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities. The supplement, which is not being distributed in hard copy, will also be available in the Institutional Repository; a link can be found in the daily list (<http://www-int.imf.org/depts/sec/services/eb/dailydocumentsfull.htm>) for the issuance date shown above.

Att: (1)

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Department Heads



MAURITIUS

STAFF REPORT FOR THE 2011 ARTICLE IV CONSULTATION

March 29, 2011

KEY ISSUES

Growth prospects: Supported by wide-ranging structural reforms and prudent policies, Mauritius has established itself as a top performer in Africa. The government's comprehensive policy response contributed to its recovery in 2010 with growth at 4 percent combined with low inflation. Growth is projected at slightly more than 4 percent in 2011. Going forward higher growth will require increased investments, improvements in education and skills, and structural reforms to improve productivity.

Fiscal policy and public debt sustainability: The expansionary fiscal stance in 2010 was appropriate to cushion the economy against the backdrop of the European debt crisis. With the economy operating essentially at its potential in 2011, a less expansionary fiscal stance is recommended. Mauritius is well placed to comply with the legally-mandated public debt limit of below 50 percent of GDP by 2018, although a slightly more ambitious fiscal consolidation would reduce debt vulnerabilities further. Ensuring that parastatals operate on a fully commercial basis with full cost recovery would contribute to achieving fiscal sustainability and to increasing productivity.

Monetary and exchange rate policies: Monetary policy was loosened in 2010 to support economic recovery. Now, with higher international food and oil prices and excess liquidity in the financial system, monetary policy should be forward looking and include a tightening bias to ensure that recent inflationary pressures do not become engrained. The real exchange rate appreciated during 2010 compared to its estimated equilibrium value but can still be considered to be broadly in line with fundamentals.

Financial sector: Financial soundness indicators reveal high capital adequacy ratios, few non-performing loans, and sound liquidity positions. The Mauritian financial system is expected to expand further as the global economy recovers since Mauritius is well placed to channel investments to other countries in Asia and Africa.

Green taxation: Mauritius is a pioneer in the development of green taxes with a clear intention to enhance the tax system to make it more environmentally sustainable.

Approved By
**Roger Nord and
 Martin Mühleisen**

Discussions took place in Port Louis from January 19–February 2, 2011. The staff team comprised Mr. Petri (head), Mr. Köhler, Mr. Culiuc, Ms. Svirydzenka (all AFR), and Mr. Parry (FAD).

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INTRODUCTION

1. **Over the past two decades, wide-ranging structural reforms, supported by prudent policies, have established Mauritius as a top regional performer.** The economy grew strongly and attracted high capital inflows. The country successfully diversified from sugar into textiles, then tourism, and more recently communication and financial services. Growth

declined in the face of the recent global downturn, but the authorities successfully cushioned its impact with a comprehensive policy package that included fiscal stimulus, monetary easing, ensuring foreign exchange (FX) liquidity, strengthening the social safety net, and measures facilitating private sector debt restructuring and preservation of jobs.

RECENT DEVELOPMENTS

2. **The Mauritian economy recovered in 2010.** Real GDP growth is estimated to have accelerated to 4 percent (3 percent in 2009), driven by strong growth in fishing, ICT, and financial industries (Figure 1). The average inflation rate was low at 2.9 percent, although it accelerated to 6.1 percent at end-year. Unemployment increased marginally to 7.5 percent, reflecting slower growth in labor-intensive industries.

2010, but total revenues decreased by $\frac{3}{4}$ percent of GDP on account of grants. Spending increased by $\frac{3}{4}$ percent of GDP leading to the widening of the overall consolidated fiscal deficit from 2 percent of GDP in 2009 to 3.5 percent in 2010, compared to the 4.5 percent of GDP forecast during the last Article IV consultation.¹

3. **Against the backdrop of the European debt crisis and a depreciating Euro in mid-2010, the government adopted a second stimulus package.** The new package includes around 100 policy measures to shift export growth towards new markets, restructure and deleverage enterprises, reemploy retrenched workers, accelerate public infrastructure, and improve the regulatory environment.

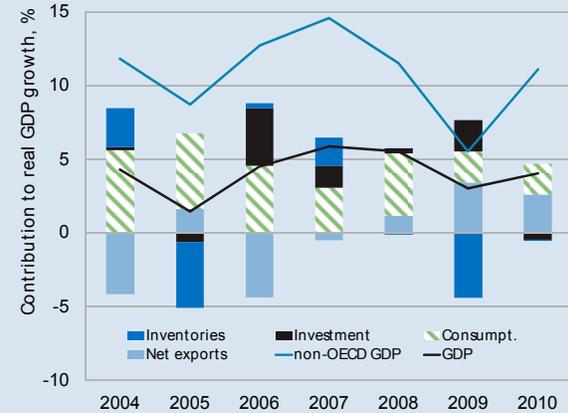
5. **Monetary policy supported the domestic recovery with the key repo rate cut by 100 basis points in September.** To mop up excess liquidity in the banking system, the Bank of Mauritius (BOM) increased the cash reserve requirement in two steps from 4.5 percent to 6 percent and issued some short-term and longer maturity instruments. Private sector credit growth picked up to 13 percent in 2010, which compares favorably to essentially zero growth in 2009.

4. **Fiscal policy was less expansionary than originally envisaged** due to delays in implementing infrastructure projects. Domestic revenues as a ratio to GDP increased slightly in

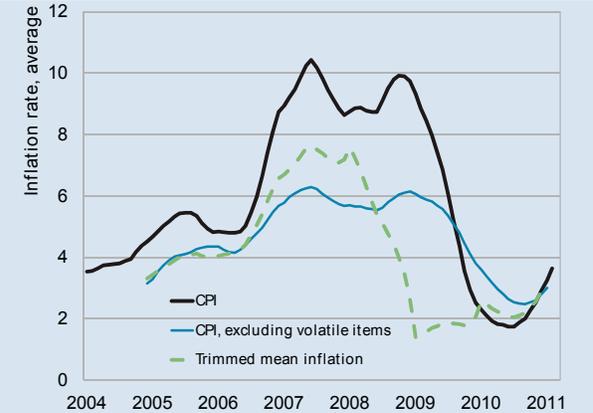
¹ The numbers consolidate the operations of special funds. The corresponding headline outcomes for the budgetary central government concept used by the authorities are 3.5 and 3.2 percent of GDP in 2009 and 2010, respectively.

Figure 1 Mauritius: Macroeconomic Developments, 2004–10

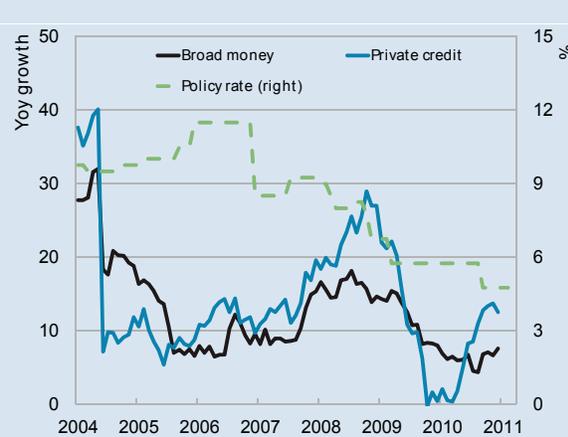
The post crisis rebound is driven by consumption and net exports



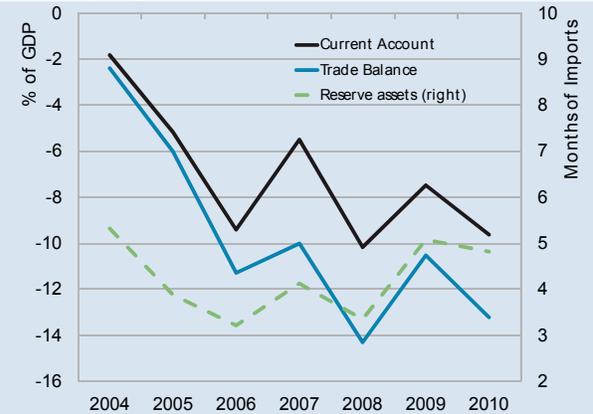
After reaching a historical low, inflation has started to pick up in late 2010



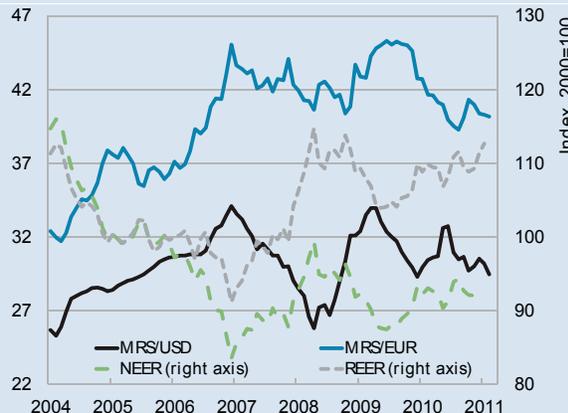
Private credit is recovering after falling during the crisis



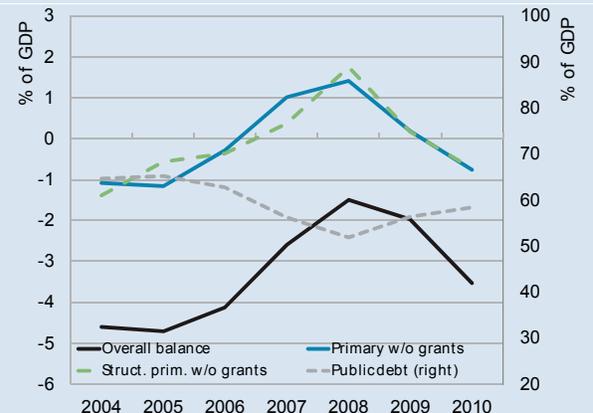
International reserves are at a comfortable level, despite relatively large trade and current account deficits



The REER has become more volatile in line with EUR/USD fluctuations



The fiscal loosening supported the fragile economic fundamentals



Starting in July 2010, the BOM intervened occasionally in the foreign exchange market to smooth excess volatility and the de facto exchange rate arrangement was reclassified from free floating to floating.

6. Driven by a surge in imports, the 2010 current account deficit widened to 9½ percent of GDP. After the 2009 trough, exports of goods and tourism receipts grew substantially in 2010 but this was more than offset by a 20 percent increase in imports, fueled by world commodity prices and FDI-related imports. Nevertheless, BOM's net international reserves went up some 10 percent to US\$2.15 billion on account of a highly positive financial account driven by record FDI, government

external borrowing, and large net capital inflows to the banking sector. Reserve import cover dropped from 5.1 months in 2009 to 4.6 months in 2010, reflecting mainly the large increase in imports of goods and services.

7. The banking sector withstood the downturn well. Banks have remained liquid and well-capitalized, even above proposed Basel III requirements. The share of non-performing loans (NPL) decreased and banks were profitable with 16.7 percent return on equity despite low leverage ratios. Stress-tests conducted by BOM in June indicate that the domestic banks would be resilient to significant increases in NPLs and losses on large exposures.

OUTLOOK AND RISKS

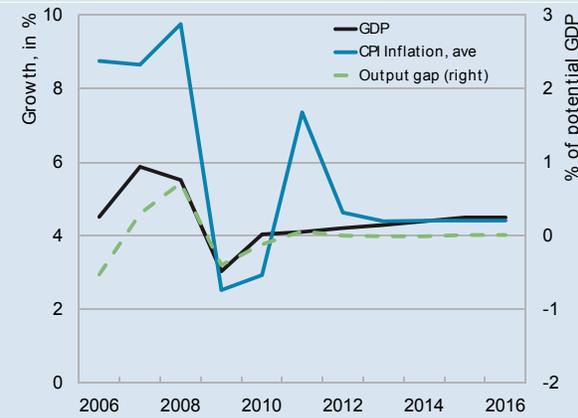
8. The outlook for 2011 is positive. Taking account of the expected upturn in the world economy and the continuing effects of the fiscal stimulus, real GDP growth is projected at 4.1 percent in 2011 (Figure 2). Year-on-year inflation is expected to increase to 5¼ percent in 2011, on the back of further projected increases in commodity prices, increases in excise duties, and administered prices, resulting in average inflation of 7½ percent. The 2011 current account deficit is projected to widen further to 13 percent of GDP as

strong export growth will be overshadowed by higher commodity import prices and large imports related to public infrastructure projects and FDI.

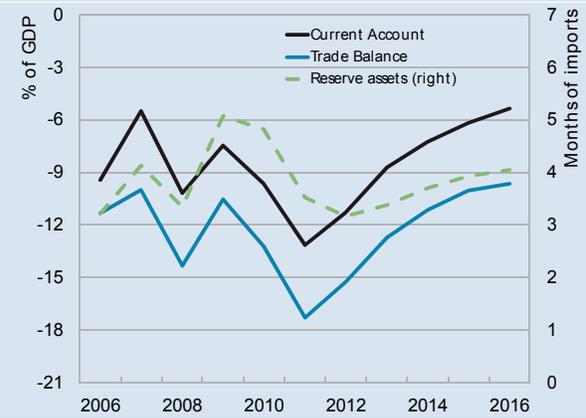
9. Going forward, the largest risks to growth would come from shocks to external demand, particularly tourism and FDI. Increasing inflation could also be a risk factor if monetary policy is not forward looking enough, which could allow imported inflation to result in second round effects including high wage demands.

Figure 2 Mauritius: Macroeconomic Projections, 2006–16

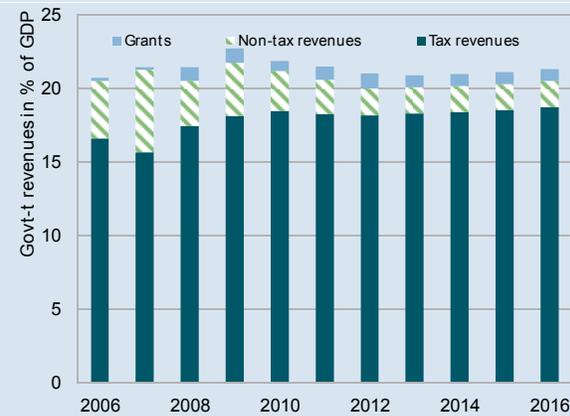
Growth should be close to its potential with moderate inflation after 2011.



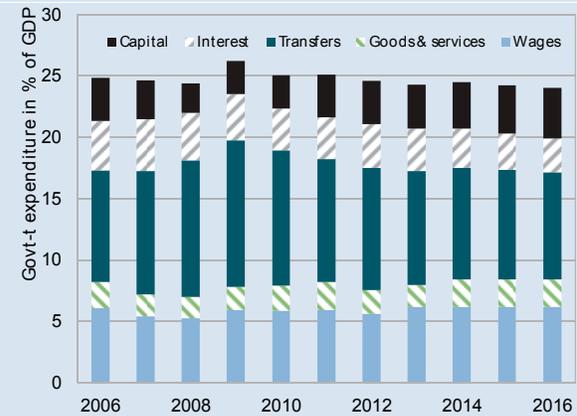
The current account should improve while reserve assets stay stable



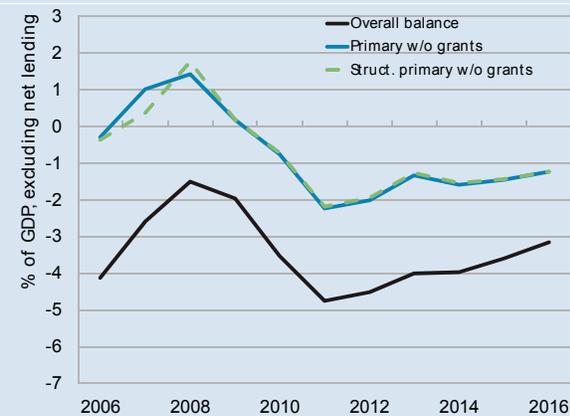
Tax revenues should increase on the back of a revamped tax structure



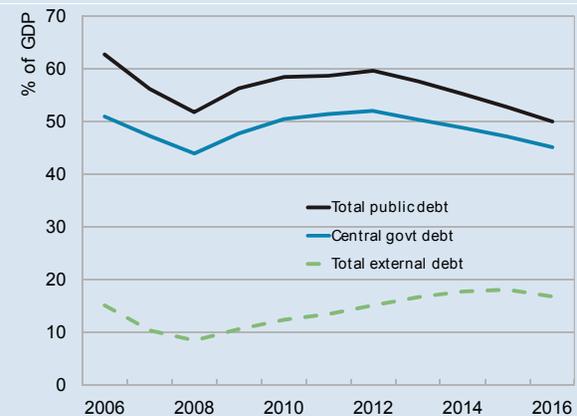
On the spending side, the focus is on increasing public investment



Primary balances settle sustainable levels following the crisis...



...leading to total public debt at legally-mandated levels over time.



POLICY THEME#1—MACROECONOMIC POLICIES

FOR 2011

Discussions centered on the fiscal stance in light of the economic recovery and the supporting monetary and exchange rate policies.

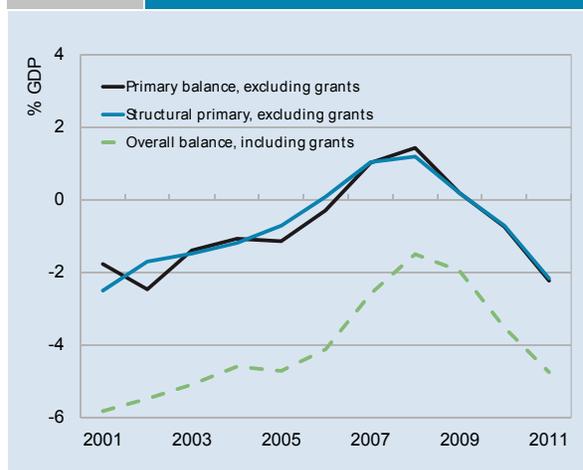
A. FISCAL POLICIES

10. The 2011 budget reflects the authorities' desire to increase growth through greener taxation and increased public investment. Tax policy reflects a move towards green taxation, taxes on consumption, and somewhat greater tax progressivity resulting in a small decline in tax revenues of 0.2 percentage points to 18.2 percent of GDP.² Total revenues are projected to decline marginally from 21.9 percent of GDP in 2010 to 21.5 percent of GDP in 2011, reflecting lower nontax revenues and higher grants. The expenditure mix combines essentially unchanged current spending levels (more goods and services and less transfers) with greater public investment, much of it under the PPP framework. Capital spending is targeted to increase by almost 1 percent of GDP to help expand the road network and fund other infrastructure priorities. Given historical patterns for implementation delays, staff estimated that the overall consolidated fiscal deficit

² The abolition of the National Residential Property Tax and the tax on interest income is partially compensated by increases in excises, green taxes (on plastic bags, bottles, and a type of carbon tax), the introduction of a solidarity income tax on interests and dividends for high earners, a tax on gains from sale of real estate, and the extensions of levies on telecommunication services and banks.

would increase from 3.5 percent of GDP in 2010 to 4.8 percent in 2011 (Figure 3).³

Figure 3 Mauritius: Fiscal Policy, 2001-11



11. Staff recommended a less expansionary fiscal stance for 2011. The cyclical component of the deficit is estimated to be less than 0.1 percent of GDP, indicating that most of the worsening of the fiscal balance was due to discretionary measures and an increasing

³ The concept used by the authorities, the overall deficit of the budgetary central government, is less comprehensive because it excludes spending from special earmarked funds, which are macroeconomically important. The deficit under this concept would increase from 3.2 to 4.2 percent of GDP. Staff welcomed the government's intention to close most special funds in 2011 and to place these operations on budget. This will reduce budgetary fragmentation, and is likely to result in stronger expenditure controls.

structural primary deficit (see Appendix 1 and Figure 3). In staff's view, there is little need for expansionary fiscal policy for macroeconomic stabilization purposes, and fiscal multipliers are likely to be low in a small open economy with a flexible exchange rate regime. The deficit in the structural primary balance excluding grants (SPBEG)—which is probably the best measure of the authorities' fiscal policy stance—is projected to increase by 1½ percent of GDP taking into account some implementation constraints. Staff recommended limiting the increase in the SPBEG deficit to 1 percent of GDP in 2011, which would result in an overall deficit of 4¼ percent of GDP and would allow the government to implement most of its policy priorities. Moreover, staff recommended ensuring proper controls over special funds and loans to public enterprises, saving unexpected revenues, and proper planning for capital.

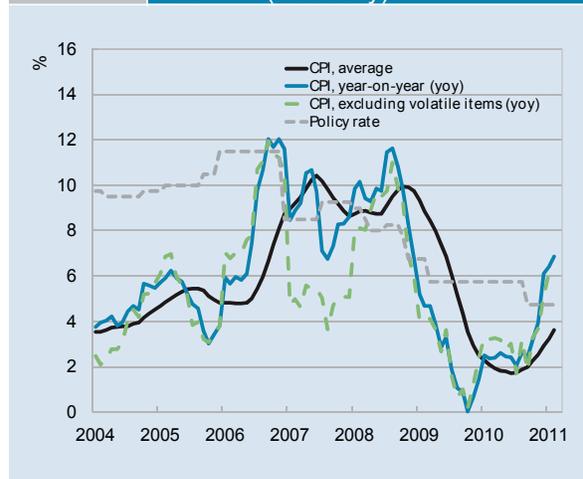
12. The authorities agreed that implementation delays might limit the increase in the deficit, but justified the increase in the deficit by pressing spending needs. They explained that infrastructure spending was necessary to relieve bottlenecks, but agreed that it would be reasonable to apply proper spending controls. Moreover, they pointed out that the budget contained contingency measures of 0.5 percent of GDP that may not be needed.

B. MONETARY AND EXCHANGE RATE POLICIES

13. In the face of rising inflation, monetary policy will need to adopt a tightening bias. The year-on-year inflation rate accelerated to

6.8 percent at end-February 2011, although the average inflation rate is still relatively low at 3½ percent (Figure 4). Most of the recent increase in the inflation rate appears to be due to one-time exogenous factors as 53 percent of the CPI basket consists of imported goods, which experienced a level increase. In addition, there were one-time increases in administered prices. These developments need not result in sustained inflationary pressures, with the appropriate monetary policy response and with wage policy

Figure 4 Monetary Policy and Inflation Rates, 2004-11 (February)



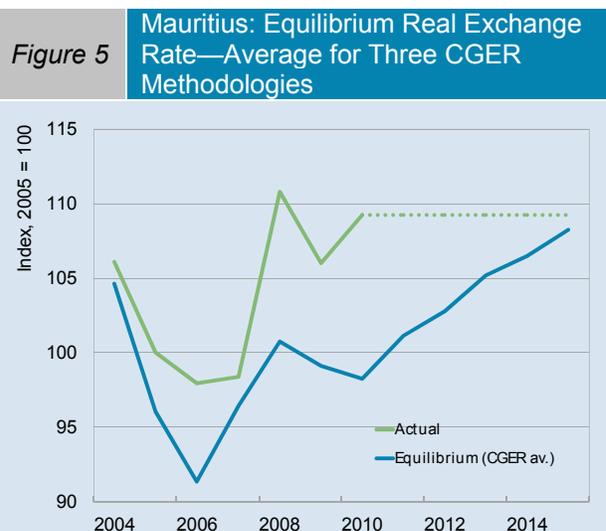
restraint. Historically, the repo rate, which serves as the main policy rate, has moved broadly with year-on-year inflation and with the spread to major currencies as the US\$ and the Euro. While the spread has not moved recently, recent inflation developments suggest that the current repo rate of 4.75 percent might have to be adjusted if inflationary pressures persist. In this respect, the BOM monetary policy committee (MPC) needs to be vigilant against further inflationary pressures—particularly regarding core inflation, which has risen as well—and be ready to raise rates to prevent

second round effects. In addition, excess liquidity should be removed from the banking system, even at the risk of further losses to the BOM.⁴ The policy to remove excess liquidity needs to be coordinated with the government's financing strategy to ensure a smooth operation of the money and debt markets. In particular, greater reliance on external financing could result in inflationary pressures to the extent that the greater spending does not reflect an equivalent increase in imports.

14. The authorities agreed that monetary policy would need to respond quickly to adverse inflationary pressures. They intend to remove excess liquidity as much as possible, but they were also worried about the BOM's income position. They stressed that wage moderation would be a key complement for limiting the second round impact of the recent, mostly imported inflation.

15. The rupee appears to have appreciated during 2010 with respect to its estimated equilibrium rate; though it remains broadly in line with fundamentals. Staff analysis, using the Consultative Group on Exchange Rate (CGER) methodologies, suggests that the rupee overvaluation increased from about 4½ percent for 2009 to about 10 percent in 2010 (Figure 5 and Appendix 2). A part of the appreciation is attributable to the real appreciation of the actual exchange rate, which is likely related to the record FDI inflows and large government external

borrowings. Staff explained that the surge in the import bill projected for 2011 may reverse some of the steady appreciation of the rupee. Moreover, the overvaluation of the rupee is projected to be eliminated over the medium-term in the current macroeconomic framework. In addition, continuation of structural reforms to increase productivity, reduce trade restrictions, and price rigidities are likely to appreciate the equilibrium rate and would thus reduce measured overvaluation of the real exchange rate.



16. The monetary and exchange rate framework, which may be described as hybrid inflation-targeting, is well suited to the needs of the Mauritian economy. Policy interest rate decisions appear to place significant weight on the interest rate differential relative to major currencies while also reacting to domestic inflation when it is above the target rate. However, given Mauritius' openness and the somewhat lower reliability of transmission mechanisms of interest-based monetary policy in emerging economies, staff encouraged the authorities to extend their

⁴ The BOM registered a loss in 2010, but it has adequate capital and reserves, and could absorb some further losses.

structural forecasting tools to take account of variations in the exchange rate to improve the accuracy of forecasts that goes into the monetary policy decision making process.

17. The authorities agreed that real exchange rate might have appreciated. However, BOM argued that the exchange rate responded to market forces and thus should be in

equilibrium in the absence of consistent intervention. BOM also questioned the validity of the econometric models to calculate the level of the equilibrium real exchange rate, but concurred that the models probably provide a reasonable estimate of the direction of change. Also, they agreed that it would be useful to integrate the exchange rate into its forecasting tools.

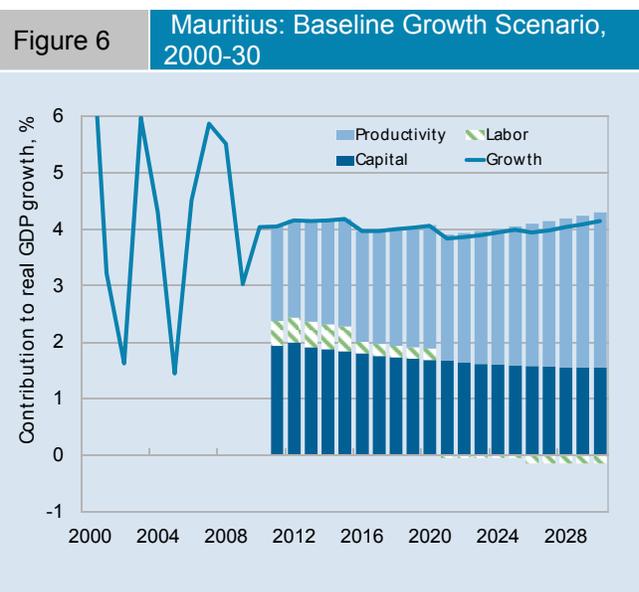
POLICY THEME#2—STRUCTURAL REFORMS TO IMPROVE ECONOMIC GROWTH

The discussions centered on the sources of future growth and how to enhance the economy's potential growth rate through sustainable public finances including green taxation reform, and other structural reforms; particularly through public enterprise reform and removing bottlenecks in key infrastructure sectors.

A. LONG-TERM GROWTH POTENTIAL

18. Staff estimates suggest that, under the economy's current structure, long-term growth prospects for Mauritius lie around 4 percent, but could increase with deliberate effort. The estimates are based on a growth accounting exercise (Figure 6 and Appendix 3), which decomposes growth into contributions from capital, labor and total factor productivity. It is expected that the contribution of labor to real growth is will turn slightly negative as population is forecasted to contract starting around 2020. Thus, physical and human capital and total factor productivity will be the main drivers of growth going forward. In order to raise potential growth, the authorities need to (i) accelerate the

implementation of investment projects; (ii) reform the labor market to increase participation rates and decrease the unemployment rates, especially for



women; (iii) build human capital by increasing secondary and tertiary enrollment rates (the share of the labor force with only primary education is 47 percent in Mauritius, versus 27 percent in Singapore); and (iv) reduce bottlenecks and improve business and investment climate.

19. The authorities argued that Mauritius' long-term growth rate could be higher with appropriate policies. Their target is 6 percent, which would require very large investment rates and significant improvements in total factor productivity. They agreed that it was necessary to continue with their structural reform program to achieve higher rates going forward.

B. MEDIUM-TERM FISCAL AND DEBT POLICIES

20. Mauritius debt outlook is positive but could be improved. The debt sustainability analysis (Appendix 4) shows that debt will decline steadily under current policies to about 51 percent of GDP in 2016. Staff welcomed the recent amendments to the 2008 Debt Management Act, which extended the 50 percent debt-to-GDP target to 2018, since maintaining the previous 2013 deadline would have required a counterproductive and excessive fiscal contraction. Staff recommended considering further enhancements in the debt law to provide greater flexibility to respond to shocks (see Appendix 5). Specifically, the debt law could include an operational fiscal anchor linked to the economic cycle and deviations from the debt target. A prime candidate for such an anchor is some measure of primary deficit, the main determinant of debt dynamics together with

nominal growth and nominal interest rates. Staff suggested targeting the structural primary balance excluding grants (SPBEG), since it excludes variables outside of the authorities' control (interest rates, grants, and the cyclical component of the fiscal balance. In the case of a breach of the debt ceiling, the operational anchor would require feasible annual adjustments in the SPBEG until the SPBEG consistent with the debt target is reached. Calculations of the cyclical component should be based on a replicable and transparent formula and undertaken by an independent fiscal commission. Staff further suggested considering a lower long-term debt target of 40 percent of GDP since international evidence suggests that debt vulnerabilities for emerging market countries are further reduced below this level.

21. The authorities thought that further modifications to the debt law might not be desirable at present. While they considered staff's suggestions reasonable they thought that the public debate required to change the law would be time consuming and, given projected debt development, they saw no urgency for immediate changes. Also, they stressed that the methodology for calculating the cyclical component of the deficit might be difficult to agree on and open to criticism even with an independent fiscal commission.

22. Mauritius' debt and financing strategy should be analyzed in an asset and liability management context. The authorities are considering creating a Sovereign Wealth Fund (SWF) by pooling government's own resources obtained by external borrowing with "excess

international reserves” of BOM, and the savings of the National Pension Fund (NPF) to create a US\$0.5-1.0 billion SWF.⁵ In addition, the government intends to increasingly rely on partially concessional long-term foreign financing from multilateral and bilateral sources for deficit financing which will increase the stock of external debt with an impact on BOP flows and external vulnerabilities. Staff agreed that accessing partially concessional external resources could be useful to lower borrowing costs and extend maturity profiles, but cautioned the authorities to consider the consequences of large inflows for monetary policy. Also, staff recommended that authorities explore (i) whether the SWF would do a better job in achieving the investment objectives of BOM and NPF or whether it could distract needed efforts by BOM and NPF to develop in-house asset management expertise; and (ii) whether the expected interest earned by the SWF would exceed the government external financing costs. The authorities agreed that it would be important to consider the macroeconomic effects of their financing strategy. Also they thought that further study was necessary on the SWF issue and they expressed their desire to receive technical assistance from the IMF on this topic.

C. STRUCTURAL FISCAL POLICIES

23. Well designed and predictable tax policy can support the government’s growth

⁵ The NPF is currently only invested in Mauritius and has a need to diversify internationally to reduce its exposure to the domestic market and increase its expected returns.

agenda. Recent tax changes have lowered the tax-to-GDP ratio from 19 percent in 2009 to a projected 18.2 percent of GDP in 2011. Given plans for public investment in education and infrastructure, there may be a need to raise the tax-to-GDP ratio over time. As a general principle, tax policy should be designed to raise revenues in the least distortive, most efficient and least burdensome manner while equity objectives are best addressed by expenditure policy. In this context, the mission recommended (i) reviewing the tax code for opportunities for further base broadening and (ii) continuing existing efforts on green taxation (Appendix 6).

24. Mauritius is a pioneer of green taxation, but challenges remain. Taxes allow policy makers to fully incorporate environmental damages into the costs of energy and vehicle use and to reduce these damages by changing behavior. The existing levy on energy products (*Maurice Ile Durable*) is close to an ideal carbon tax; staff suggested converting it into an explicit carbon tax; preferably at a higher rate reflecting the full cost of CO₂ emissions. Currently discussed proposals to base vehicle excise duties on CO₂ per kilometer represent an improvement over existing taxes on engine capacity. However, they do not (i) provide equal rewards for emissions reductions across different vehicles (important for a cost-effective policy); (ii) discourage vehicle use (to reduce CO₂ and, more important, traffic congestion); (iii) preserve revenue; nor (iv) do they simplify the tax system. Staff recommended an excise tax system with two components: a revenue-neutral “feebate” system involving a uniform fee for

vehicles with above average CO₂ per kilometer and rebate for vehicles below it, and a proportional tariff on purchase price (to meet revenue needs). In addition, to raise the marginal costs of driving and reduce congestion, annual road taxes and registration fees should be converted into a tax on actual annual kilometers driven measured initially by odometer recordings with a progressive switch to GPS monitoring.

25. The pass through of movements in the international price of petroleum products should be strengthened. The State Trading Corporation (STC) recently replaced the automatic price adjustment system with a system that reduces the frequency of price adjustments and relies partially on discretionary adjustments (guided by formula-based targets). Staff explained that international experience suggests that systems that limit the frequency of adjustment tend to result in losses of tax revenues and recommended using a formula-based automatic price adjustment that allows for full pass-through up to maximum. Weekly adjustments with a maximum 1 percent change would be best to depoliticize the process although monthly changes of up to 4 percent could also work well. To improve public acceptance, detailed price calculations should be published following each adjustment. The authorities stated that the discretionary element of the new system was fairly limited and explained that they would evaluate the experience with the new system before considering further changes.

26. Subsidies place a burden on government resources and are badly targeted.

Subsidies administered by the STC on LPG, rice and wheat are projected to increase from less than 0.3 percent of GDP in 2010 to perhaps over ½ percent of GDP in 2011. These subsidies are (i) poorly targeted.⁶ (ii) nontransparent because their cost is not reflected in the budget; and (iii) in the case of LPG, undermine the government's green agenda. Staff recommended placing all subsidies on budget, eliminating the subsidy on LPG, while helping poor families install solar-powered water heating systems. The subsidies for rice and wheat could be phased out over time (and their increase limited in 2011) as the government improves its social assistance programs. The authorities explained that the subsidies have a long tradition and that there might be significant resistance to removing them, but agreed that putting them on budget would be more transparent.

27. There is a need for well-targeted assistance programs. A streamlining of assistance programs combined with better targeting would allow reducing the significant outlays on social assistance (4.4 percent of GDP in the 2008/09 fiscal year) and increasing their effectiveness. A number of social assistance programs have been consolidated under the umbrella of the Ministry of Social Security but further progress is desirable to allow a shift of resources to higher priority spending areas such as infrastructure and education. More efficient social

⁶ For example, in the case of fuel products, less than 5 percent of subsidies go to the poorest 20 percent of the population, whereas the richest 20 percent of the population receives 40 percent of the subsidies.

spending would also free up resources for the authorities' large investment program.

D. FINANCIAL SECTOR ISSUES

28. Many of the 2007 FSAP recommendations have been implemented or are in process of being implemented. An important outstanding recommendation is the creation of deposit insurance scheme (DIS). Mauritius became a member of the International Association of Deposit Insurers, but the scheme's design parameters still need to be defined with a view to minimizing the risks for moral hazard on the part of banks. Also, the Bank of Mauritius Act will likely need amendments to better define the responsibilities and functions of the Governor and of the BOM Board of Directors, and to clarify the appointment procedures of new Board members. The non-bank financial institutions (NBFIs), which intermediate a large part of international investment into Asia and Africa continues to receive substantial inflows. Staff considers the risk from these activities to Mauritius to be relatively limited since this type of NBFIs mainly receive earnings from services. The authorities agreed that the first two issues are priorities and are working on their implementation. They noted that the NBFIs are well supervised and that information provision regarding their activities is being strengthened (see below).

29. The authorities have taken several measures to strengthen the overall AML/CFT regime in line with the recommendations of the 2008 assessment. These corrective actions allow Mauritius to capitalize on its national strategy to diversify its economy into global financial services.

However, it will be important to be proactive and continue monitoring potential ML/FT risks associated with the global financial businesses and to consistently apply penalties envisaged by law for noncompliance. Also the mechanisms for cooperation among the various national authorities involved in AML/CFT need to be established.

E. STRUCTURAL REFORMS AND STATISTICAL ISSUES

30. Structural reforms were solid in the past but need to continue. For the ninth consecutive year, the Mo Ibrahim Foundation ranked Mauritius as the best-governed country in Sub-Saharan Africa, while the World Bank's Doing Business Reports for 2008-2010 considered it the best place to do business in SSA. However, further progress is required to (i) shift operations of parastatals to a commercial basis; (ii) remove structural bottlenecks in key infrastructure areas; and (iii) improve export competitiveness.

31. Further policy measures are needed to improve service delivery and efficiency in the public enterprise sector. The government's program to strengthen the financial performance of state-owned enterprises (SOEs) is welcome. The appointment of management positions of public enterprises should be on purely professional grounds and vacancies should be filled quickly. Pricing of services provided by SOEs should be at full cost recovery levels including investment and maintenance costs. Investment in the water, road network, and electricity sectors is crucial to eliminate bottlenecks and should receive priority attention. Including the private sector in these

sectors is likely to facilitate speedy and efficient implementation of the investment program.

32. Exports should be diversified to strengthen future growth performance. Recent developments highlighted the risk of relying too heavily on European export markets. Diversifying and increasing the productivity of Mauritius' exports were two of the three major objectives in the 2011 budget. To gauge the potential yield of proposed export-boosting measures, staff analyzed the evolution of Mauritius' goods exports since the early nineties at a disaggregated level (Appendix 7). Mauritius made progress on all fronts—value of exports, diversification of product and markets, sophistication of exports—until mid-2000s, but little since, pointing to structural bottlenecks. Although the number of exported goods increased over 50 percent from 1994 to 2009, the number of important products (over US\$ 1 million in exports) remained flat, suggesting a need for stronger support for export-oriented SMEs launching new products. A decomposition of export growth into product and destination dimensions showed that the largest potential for future growth lies in exporting existing products to new markets already served by other products.

This tends to indicate that economic diplomacy could produce the highest yields when bringing non-traditional Mauritian products to markets already served by other Mauritian exporters. These lessons can be extended to some degree to services exports, tourism in particular, which benefit from coordinated public-private efforts to penetrate new markets.

33. Mauritius' national statistical capacity is being strengthened in line with its needs as an emerging economy. Already, there were significant improvements in reducing the errors and omissions category in the BOP statistics. Monetary and exchange rate policy formulation will be enhanced by a better coverage of the BOP statistics and the compilation of the international investment position (IIP)—a critical requirement for subscription to the SDDS (expected for end 2011). The first survey of resident Global Business Companies (GBCs) is being finalized and the second survey will be launched soon. In accordance with the July 2010 STA technical assistance, non-resident GBCs are not yet part of the survey. The BOM will further improve external debt statistics with the second Foreign Assets and Liabilities Survey (FALS) in March 2011.

STAFF APPRAISAL

34. The authorities' prompt policy response over 2008-10 helped to cushion the economy from the impact of the global crisis and supported an economic recovery in 2010. The fiscal stimulus packages combined with monetary easing and various measures aimed at preserving private sector jobs contributed to the rekindling of

growth to 4 percent in 2010. The policy measures included in the 2011 budget reflect the authorities' intent to diversify exports, restructure and deleverage enterprises, accelerate public infrastructure investments, and improve the regulatory environment.

35. Going forward, staff recommended a less expansionary fiscal policy. With the output gap in 2011 estimated close to zero, staff recommends limiting the overall fiscal deficit to 4¼ percent of GDP. This lower deficit target is still compatible with the need for higher capital spending to address infrastructure bottlenecks. Though Mauritius is well placed to comply with the legally-mandated 50 percent of GDP debt ceiling by 2018, staff recommends a slightly more ambitious medium-term fiscal consolidation path to further reduce debt vulnerabilities and suggested to target the structural primary fiscal balance to achieve a debt-to-GDP ratio of less than 40 percent over the longer term.

36. The central bank should closely monitor inflationary pressures with a tightening bias to ensure that recent inflationary pressures do not become engrained. With the appropriate early monetary policy response and wage restraint, the second round effect of imported inflation should be limited. BOM's measures to remove excess liquidity will likely reduce its profitability and should be well coordinated with the government's financing strategy to ensure a smooth operation of the money and securities' markets. Staff estimates suggest that the rupee appreciated further during 2010 with respect to its estimated equilibrium rate, although it can still be considered to be broadly in line with fundamentals.

37. Mauritius has implemented important structural reforms in the past, but needs to continue with its far-reaching reform strategy to increase its long-run growth potential. Staff

estimates suggest growth rates above 4 percent require accelerated investment project implementation, labor market reforms to decrease unemployment rates, and education initiatives to enhance human capital, and structural reforms to increase total factor productivity. Staff recommends improving service delivery and efficiency in the public enterprise sector, particularly for water. It encouraged the authorities to expand their policy of increasing the role of the private sector in managing state-owned enterprises. Staff supports the authorities' intention to diversify its export base, which relies heavily on Europe.

38. Mauritius is a pioneer of green taxation and should continue to spearhead new initiatives to support its sustainable development vision. The authorities agreed with staff that taxes are the appropriate instrument to reduce environmental damages while preserving revenue. Staff recommends converting a tax on energy products into an explicit carbon tax to fully reflect the externalities associated with CO₂ emissions and a tax system on motor vehicles that raises the marginal costs of driving to reduce pollution and alleviate traffic congestion in the capital area. Going forward staff encourages the authorities to continue to review its tax system to make it more environmentally sustainable and growth enhancing.

39. Staff recommends that the next Article IV consultation be held on the standard 12-month cycle.

Table 1. Mauritius: Selected Economic and Financial Indicators, 2008–2015

	2008	2009	2010	2011	2012	2013	2014	2015
			Prel.	Projections				
(Annual percent change, unless otherwise indicated)								
National income, prices and employment								
Real GDP	5.5	3.0	4.0	4.1	4.2	4.3	4.4	4.5
Real GDP per capita (in rupees)	5.2	2.5	3.6	3.5	3.6	3.7	3.8	3.9
GDP per capita (in U.S. dollars)	7,598	6,951	7,593	7,990	8,471	8,979	9,564	10,199
GDP deflator	6.5	0.2	1.6	5.0	4.4	4.4	4.4	4.4
Consumer prices (period average)	9.7	2.5	2.9	7.4	4.6	4.4	4.4	4.4
Consumer prices (end of period)	6.8	1.5	6.1	5.8	4.4	4.4	4.4	4.4
Unemployment rate (percent)	7.2	7.3	7.5	...	...	...	...	...
External sector								
Exports of goods, f.o.b.	7.3	-19.3	13.3	12.5	6.6	5.6	5.9	6.3
<i>Of which</i> : tourism receipts	11.5	-22.9	15.2	10.4	11.2	11.6	8.8	9.0
Imports of goods, f.o.b.	20.6	-20.5	19.0	18.8	4.2	3.3	4.4	5.0
Nominal effective exchange rate (annual averages)	7.5	-2.9	3.3	...	...	...	...	...
Real effective exchange rate (annual averages)	12.6	-4.3	3.3	...	...	...	...	...
Terms of trade	-1.1	1.6	-3.5	...	...	...	...	...
(Annual change in percent of beginning of period M2)								
Money and credit								
Net foreign assets	8.1	17.4	20.0	10.3	...	...	...	...
Domestic credit	21.2	1.8	10.8	16.1	...	...	...	...
Net claims on government	0.6	1.1	1.0	2.5	...	...	...	...
Credit to private sector ¹	20.6	0.4	9.9	13.6	...	...	...	...
Broad money (end of period, annual percentage change)	14.6	8.1	7.6	9.3	...	...	...	...
Income velocity of broad money	1.0	1.0	0.9	0.9	...	...	...	...
Interest rate (weighted average TBs, primary auctions)	9.0	4.4	3.9	...	...	...	...	...
(Percent of GDP)								
Central government finances								
Overall consolidated balance (incl. grants) ²	-1.5	-2.0	-3.5	-4.8	-4.5	-4.0	-4.0	-3.6
Primary Balance (including grants) ²	2.4	1.8	-0.1	-1.3	-1.0	-0.5	-0.8	-0.6
Revenues and grants	21.4	22.7	21.9	21.5	21.0	20.9	20.9	21.1
Expenditure, excl. net lending	22.9	24.7	25.4	26.2	25.5	24.9	24.9	24.7
Domestic debt of central government	43.9	44.5	43.0	42.5	41.6	38.4	35.8	33.2
External debt of central government	6.2	6.0	7.5	8.9	10.5	12.0	13.1	14.0
Investment and saving								
Gross domestic investment	24.6	26.3	24.6	26.2	26.6	26.9	27.2	27.5
Public	4.1	6.6	5.9	7.6	7.7	7.8	8.2	8.7
Private	20.5	19.7	18.6	18.6	18.9	19.1	19.0	18.8
Gross national savings	18.3	15.3	16.2	14.2	15.7	19.5	21.0	22.2
Public	2.3	0.8	-0.5	-0.7	-0.5	-0.3	-0.2	0.4
Private	15.9	14.4	16.7	14.9	16.2	19.8	21.2	21.9
External sector								
Balance of goods and services	-14.2	-10.4	-13.0	-15.7	-13.5	-11.0	-9.4	-8.4
Exports of goods and services, f.o.b.	51.1	46.9	49.5	52.9	53.6	54.2	54.2	54.2
Imports of goods and services, f.o.b.	-65.3	-57.3	-62.5	-68.6	-67.1	-65.2	-63.6	-62.5
Current account balance	-10.2	-7.5	-9.6	-11.8	-9.9	-7.4	-5.9	-4.9
Overall balance	1.7	4.3	3.3	-0.9	0.1	2.2	2.6	2.2
Total external debt ³	8.5	10.7	12.4	13.5	15.2	16.8	17.8	18.2
Net international reserves (millions of U.S. dollars)	1,760	2,150	2,448	2,253	2,265	2,641	3,155	3,674
in months of imports of goods and services, f.o.b.	3.4	5.1	4.8	3.8	3.7	4.2	4.7	5.2
Memorandum items:								
GDP at current market prices (billions of Mauritian rupees)	274.3	283.3	299.5	327.4	356.6	389.4	426.4	467.2
GDP at current market prices (millions of U.S. dollars)	9,641	8,865	9,729	10,299	...	...	...	...
Public sector debt (percent of GDP)	55.3	59.3	58.5	58.8	59.7	57.7	55.2	52.8
Foreign currency long-term debt rating (Moody's)	Baa2	Baa2	Baa2	...	...	...	...	...

Sources: Mauritian authorities; and IMF staff estimates and projections.

¹ Includes credit to parastatals.² *GFSM 2001* concept of net lending/net borrowing, includes special and other extrabudgetary funds.³ Reported debt only, excluding private sector short-term debt.

Table 2. Mauritius: Summary of Central Government Finances, 2009–2013¹

	2009	2010	2011	2012	2013
		Est.	Projections		
Total revenue and grants (1)	22.7	21.9	21.5	21.0	20.9
Domestic revenue	21.1	21.2	20.6	20.0	20.1
Tax revenue	18.9	18.4	18.2	16.5	18.2
Income tax - Individuals	1.4	1.5	1.5	1.5	1.7
Income tax - Corporations	3.6	2.8	2.5	2.5	2.6
Value added tax (VAT)	6.9	7.0	7.0	6.9	7.1
Excise duties, incl. "Maurice Ile Durable" levy	3.1	3.1	3.3	3.2	3.0
Customs	0.5	0.5	0.5	0.4	0.4
Other taxes	3.3	3.4	3.5	2.0	3.4
Social contributions	0.3	0.3	0.3	0.3	0.4
Nontax revenue	1.7	2.4	2.0	1.5	1.4
Grants	1.6	0.7	0.9	1.1	0.8
Total expense (current spending) (2)	23.5	22.4	22.2	21.6	21.2
Expenditures on goods and services	8.8	8.9	9.4	8.6	8.9
Compensation of employees	5.9	5.9	5.9	5.6	6.2
Use of goods and services	2.8	3.1	3.5	3.0	2.7
Interest payments	3.8	3.4	3.4	3.6	3.5
Transfers and subsidies					
Subsidies	0.3	0.3	0.4	0.3	0.3
Grants and transfers	6.2	5.1	4.0	4.3	3.7
Social benefits	4.4	4.5	4.4	4.3	4.4
Other expense	0.9	1.0	1.2	1.0	0.9
Contingencies	0.0	0.0	0.5	0.5	0.5
Gross operating balance ((3)=(1)-(2))	-0.8	-0.5	-0.7	-0.5	-0.3
Net acquisition of non-financial assets (capital spending)	2.7	2.7	3.5	3.5	3.6
Net lending / borrowing (central governm. budget balance) ²	-3.6	-3.2	-4.2	-4.1	-3.9
Net lending / borrowing (special funds) ³	1.6	-0.3	-0.6	-0.4	-0.1
Net lending / borrowing (consolidated balance)	-2.0	-3.5	-4.8	-4.5	-4.0
Transactions in financial assets/liabilities (4)					
Net acquisition of financial assets	0.3	0.2	1.2	1.0	-0.8
Of which: net lending	0.0	0.1	1.2	1.0	-0.8
Adjustment for difference in cash and accrual	0.0	0.1	0.2	0.2	0.4
Borrowing requirements (financing)	3.7	3.6	5.8	5.3	2.8
Domestic	3.0	1.8	3.7	3.0	0.4
Foreign	0.7	1.8	2.1	2.3	2.4
Disbursements	2.1	2.1	2.4	2.6	2.7
Amortization	-0.3	-0.3	-0.3	-0.3	-0.3
<i>Memorandum items:</i>					
Government debt	47.8	50.5	51.4	52.1	50.4
Public sector debt	56.3	58.5	58.8	59.7	57.7
GDP at current market prices (in billions of rupees)	283.3	299.5	327.4	356.6	389.4
Primary balance (incl. grants; excl. net lending)	1.8	-0.1	-1.3	-1.0	-0.5
Primary balance (excl. grants; excl. net lending)	0.2	-0.8	-2.2	-2.0	-1.3
Structural primary balance (excl. grants)	0.2	-0.7	-2.2	-1.9	-1.3

Sources: Ministry of Finance and Development; Bank of Mauritius; and IMF staff estimates and projections.

¹ GFSM 2001 presentation.

² Corresponds to the authorities' budget presentation.

³ Includes the following special and other extra-budgetary funds: Maurice Ile Durable Fund; Human Resource, Knowledge and Arts Development Fund; Food Security Fund; Local Infrastructure Fund; and Social Housing Development Fund; Business Growth Fund; and Road Decongestion Program Fund.

Table 3. Mauritius: Balance of Payments, 2007–2013

	2007	2008	2009	2010	2011	2012	2013
				Prel.	Projections		
(Millions of U.S. dollars, unless otherwise indicated)							
Current account balance	-423	-971	-654	-925	-1,191	-1,058	-832
Trade balance	-1,403	-1,989	-1,550	-1,956	-2,459	-2,503	-2,523
Exports of goods, f.o.b.	2,226	2,389	1,929	2,184	2,459	2,621	2,768
Imports of goods, f.o.b.	-3,629	-4,378	-3,479	-4,141	-4,918	-5,124	-5,291
Services (net)	632	621	627	688	847	1,022	1,240
Of which: tourism	944	997	763	872	937	1,076	1,242
Income (net)	224	172	53	240	316	336	364
Current transfers (net)	124	225	216	103	106	87	87
Capital and financial accounts	503	903	752	1,155	1,103	1,069	1,083
Capital account	-2	-1	-2	-5	-6	-6	-6
Financial account	505	905	754	1,160	1,108	1,075	1,089
Direct investment (net)	281	331	220	335	373	399	418
Abroad	-58	-52	-37	-145	-130	-134	-148
In Mauritius	339	383	257	480	503	534	566
Portfolio investment (net)	63	-171	-57	-215	-63	-77	-75
Other investment (net)	161	745	591	1,040	798	752	746
Of which: SDR allocation	...	...	127	...	...	...	...
Of which: government (net)	74	49	155	177	215	256	279
Errors and omissions	363	231	281	84	0	0	0
Overall balance	443	163	379	314	-88	11	251
Change in official reserves (- = increase)	-443	-163	-379	-314	88	-11	-251
(Percent of GDP, unless otherwise indicated)							
<i>Memorandum items:</i>							
Balance of goods and services	-9.9	-14.2	-10.4	-13.0	-15.7	-13.5	-11.0
Exports of goods and services, f.o.b.	56.7	51.1	46.9	49.5	52.9	53.6	54.2
Imports of goods and services, f.o.b.	-66.6	-65.3	-57.3	-62.5	-68.6	-67.1	-65.2
Foreign direct investment	4.4	4.0	2.9	5.0	5.0	5.0	5.0
Current account balance	-5.5	-10.2	-7.5	-9.6	-11.8	-9.9	-7.4
Overall balance	5.7	1.7	4.3	3.3	-0.9	0.1	2.2
Errors and omissions	4.7	2.4	3.2	0.9	0.0	0.0	0.0
Net international reserves, BOM, (mil. of U.S. dollars)	1,789	1,760	2,150	2,448	2,253	2,265	2,641
In months of imports of goods and services, f.o.b.	4.1	3.4	5.1	4.8	3.8	3.7	4.2
As ratio to external short term debt	12.7	34.9	37.5	33.5	32.7	30.0	30.2
In percent of broad money	21.1	20.4	22.0	21.3	18.0	...	...
Gross reserves, BOM, (mil. of U.S. dollars)	1,822	1,785	2,304	2,601	2,407	2,418	2,795
GDP (millions of U.S. dollars)	7,720	9,563	8,774	9,604	10,135	...	...
Total external debt	10.4	8.5	10.7	12.4	13.5	15.2	16.8
Total debt service ratio (% of goods & services exports)	3.7	3.9	4.8	3.6	3.2	2.8	2.6
Mauritian rupees per U.S. dollar (period average)	31.3	28.5	32.0	30.8			
Mauritian rupees per U.S. dollar (end of period)	28.2	31.8	30.3	30.4			

Sources: Mauritian authorities; and IMF staff estimates and projections.

Table 4. Mauritius: Depository Corporations Survey, 2007–2011

	2007	2008	2009	2010	2011 Proj.
	(Millions of rupees, end of period)				
Net foreign assets	265,602	285,016	332,684	392,018	424,734
Net domestic assets	-26,283	-10,702	-36,204	-89,545	-75,901
Domestic credit	242,190	296,098	301,170	315,593	366,952
Claims on government (net)	45,524	46,967	49,849	52,735	60,578
Monetary authorities	-270	-3,797	-10,289	-4,188	-4,174
Commercial banks	45,795	50,764	60,137	56,923	64,752
Claims on private sector ¹	183,106	232,514	233,629	262,858	306,374
Other financial liabilities ²	-188,761	-207,939	-237,986	-296,803	-324,433
Other items (net)	-79,713	-98,861	-99,388	-108,335	-118,420
Broad money (M2)	239,318	274,314	296,480	319,124	348,832
Money (M1)	64,429	75,820	88,151	91,119	103,555
Quasi-money	174,889	198,494	208,329	228,005	245,277
Reserve money	28,079	30,641	35,934	46,914	60,286
	(Annual change, millions of rupees)				
Net foreign assets	27,320	19,414	47,668	59,334	32,715
Domestic credit	24,183	50,851	5,072	14,423	51,359
Claims on government	-657	1,443	2,882	2,887	7,843
Claims on private sector ¹	11,279	49,409	1,115	29,228	43,516
Broad money (M2)	31,797	34,995	22,167	22,644	29,708
Money (M1)	11,281	11,390	12,332	2,968	12,436
Quasi money	20,516	23,605	9,835	19,676	17,272
Reserve money	2,728	2,561	5,293	10,980	13,373
	(Annual percent change)				
Domestic credit	11.1	21.0	1.7	4.8	16.3
Claims on government	-1.4	3.2	6.1	5.8	14.9
Claims on private sector ¹	6.6	27.0	0.5	12.5	16.6
Broad money (M2)	15.3	14.6	8.1	7.6	9.3
Money (M1)	21.2	17.7	16.3	3.4	13.6
Quasi-money	13.3	13.5	5.0	9.4	7.6
Reserve money	10.8	9.1	17.3	30.6	28.5
	(Percentage change of beginning of year of broad money)				
Net foreign assets	13.2	8.1	17.4	20.0	10.3
Domestic credit	11.7	21.2	1.8	4.9	16.1
Claims on government (net)	-0.3	0.6	1.1	1.0	2.5
Claims on private sector ¹	5.4	20.6	0.4	9.9	13.6
<i>Memorandum Items:</i>					
Domestic credit (in percent of GDP)	99.3	107.9	106.3	105.4	112.1
Claims on private sector (in percent of GDP)	75.0	84.8	82.5	87.8	93.6
Money multiplier	8.52	8.95	8.25	6.80	5.79
Velocity	1.02	1.00	0.96	0.94	0.94

Sources: Bank of Mauritius; and IMF staff estimates.

¹ Including claims on public enterprises.

² The major component of other financial liabilities consists of restricted deposits, which largely include deposits of the offshore nonfinancial corporations (so-called Global License Holders, GBLs). GBLs are resident corporations licensed to conduct business exclusively with nonresidents and only in foreign currencies.

Table 5. Mauritius: Financial Soundness Indicators for the Banking Sector, December 2003–September 2010¹
(End of period, in percent, unless otherwise indicated)

	2003	2004	2005	2006	2007	2008	2009	2010 Sept.
Capital adequacy								
Regulatory capital to risk-weighted assets ²	14.2	15.0	15.4	15.8	13.3	15.3	15.4	15.9
Regulatory Tier I capital to risk-weighted assets	13.7	13.7	13.5	13.7	11.5	13.7	13.3	13.6
Total (regulatory) capital to total assets	8.0	7.8	7.8	7.3	6.0	7.3	7.7	7.0
Asset composition and quality								
Share of loans (exposures) per risk-weight (RW) category								
<i>RW = 0%</i>	5.2	6.4	16.6	12.8	9.1	9.0	20.6	18.6
<i>RW = 20%</i>	4.8	6.7	0.2	1.3	3.9	3.3	24.9	23.8
<i>RW = 50%</i>	7.9	9.6	6.5	6.0	5.7	5.2	8.4	8.1
<i>RW = 100%</i>	82.1	77.3	76.7	79.8	81.1	82.3	38.3	41.8
Total exposures/total assets	47.8	45.9	53.6	40.1	44.8	54.9	40.0	45.5
Sectoral distribution of loans to total loans								
Agriculture	9.1	7.5	5.7	5.7	6.0	6.1	6.3	6.6
<i>of which: sugar</i>	8.0	6.4	5.6	5.0	4.8	5.0	5.2	5.7
Manufacturing	14.8	13.6	12.0	11.2	10.2	9.4	8.7	7.5
<i>of which: EPZ</i>	7.5	6.1	5.4	4.8	4.7	4.0	3.2	2.6
Traders	14.9	14.5	13.9	14.9	13.5	11.7	10.1	10.7
Personal and professional	9.8	10.0	9.4	9.5	9.7	8.6	9.0	9.0
Construction	14.2	16.2	15.2	15.4	16.4	18.7	19.7	20.3
<i>of which: housing</i>	9.0	10.8	10.7	12.0	10.9	12.4	11.6	12.1
Tourism/hotels	15.9	15.4	13.2	13.2	13.6	15.4	16.2	17.4
Other	21.2	22.8	30.7	30.1	30.6	45.6	30.0	28.5
Foreign currency loans to total loans	10.9	12.2	51.5	50.7	56.3	65.5	59.1	61.0
NPLs to gross loans - excluding accrued/unpaid interest	9.6	8.1	4.0	3.0	2.5	2.0	3.3	2.5
NPLs net of provisions to capital	28.1	22.4	11.4	7.0	9.1	8.2	13.4	8.6
Large exposure to capital ³	220.9	200.0	250.3	380.0	493.2	394.2	216.9	217.0
Earnings and Profitability								
ROA (Pre-tax net income/average assets)	2.1	2.1	1.9	1.7	1.9	1.7	1.6	1.2
ROE (Pre-tax net income/average equity)	19.2	19.2	21.1	22.4	26.4	24.3	21.0	16.7
Interest margin to gross income	32.1	34.7	36.3	31.2	27.6	29.7	68.9	70.5
Noninterest expenses to gross income	23.9	27.7	20.1	16.4	15	17.2	39.2	43.0
Expenses/revenues	10.6	10.2	8.1	7.7	6.8	8.5	...	...
Earnings/employee - in 000 of rupees	2,212	2,433	2,904	2,817	3,402	...	...	...
Liquidity								
Liquid assets to total assets ⁴	36.6	37.9	44.1	52.8	47.7	27.7	27.9	23.6
Liquid assets to total short-term liabilities ⁴	71.0	71.7	88.6	118.8	104.2	31.9	34.4	31.2
Funding volatility ratio	13.9	14.0	-20.1	-51.6	-33.7	-9.3	...	...
Demand deposits/total liabilities	10.3	10.7	15.9	15.4	18.4	19.4	23.9	27.4
FX deposits to total deposits	11.0	13.8	57.3	68.0	67.6	66.0	64.1	64.3
Sensitivity to market risk								
Net open positions in FX to capital ⁴	20.8	1.9	4.2	6.4	3.2	3.8	5.3	4.6

Source: Mauritian authorities.

¹ Banking sector refers to former Category 1 banks up to December 2004 and to all banks thereafter.

² Total of Tier I and Tier 2 less investments in subsidiaries and associates.

³ Prior to June 2006, data refer to Category 1 banks only.

⁴ Ratio has been revised according to manual as from 2008.

Appendix 1. Mauritius: Output Gap and Cyclical Adjustment of Fiscal Balances¹

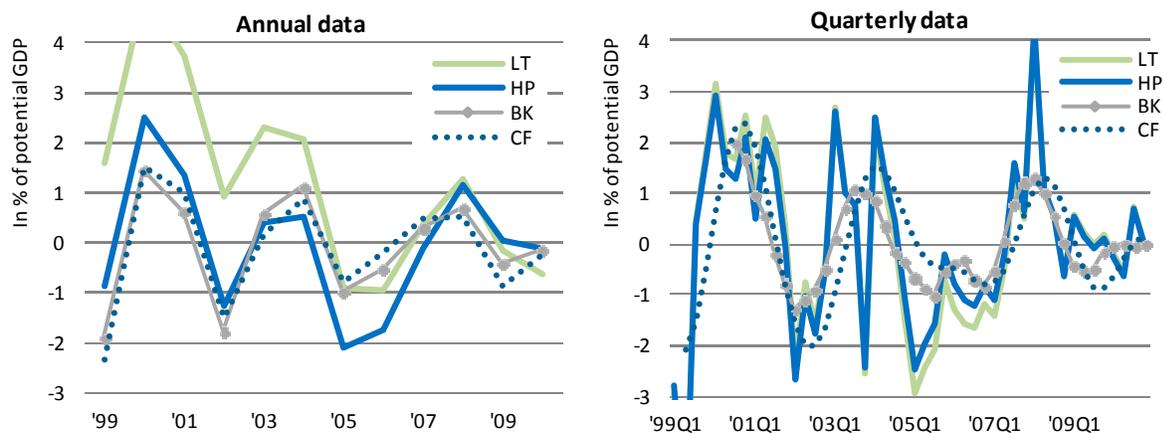
Estimates of the output gap and cyclically-adjusted fiscal balances are important to guide the stance of fiscal and monetary policies. The cyclical component of the fiscal deficit appears to have been almost eliminated at end-2010, and there is little scope for expansionary fiscal policy going forward. Results suggest that fiscal policy became more counter-cyclical over time.

Calculating the output gap

The output gap y is defined as the difference between actual and potential output. It is usually expressed as a percentage of potential output Y^* , which is the level of output when all factors of production are at full employment. Both potential output and output gap are unobservable variables, but can be estimated by various methods:

- **Linear trend (LT):** This assumes constant potential growth. Econometric tests on annual data suggest a break in 1973, when the Multifiber Agreement (MFA) was adopted. The implied constant potential growth is 5 percent after 1973 versus 2 percent before 1973.
- **Hodrick-Prescott (HP) filter:** Y^* is derived by minimizing the deviation of observed data from the trend and movements in the estimated trend, subject to a smoothing parameter λ . The lower λ , the smoother the trend.

Figure 1. Mauritius: Estimates of Output Gap, 1999–2010



Note: annual output gap estimates rely on data starting 1950, quarterly – on data starting 1999Q1

- **Band-pass filters:** Frequency filters, which isolate the frequency component of a time series by specifying the duration of the cycle. Tend to provide better end-period estimates. **Baxter-**

¹ Prepared by Katsiaryna Sviryzdenka.

King (BK) filter is symmetric and time-invariant. **Christiano-Fitzgerald (CF) filter** is a more general filter, asymmetric and with time-varying weights. CF is probably the most useful.

- **Multivariate Bayesian model** (Benes et al., 2010): Allows incorporating other conditioning information (inflation, capacity utilization and unemployment) in estimating the output gap. Should provide better estimates of the output gap than univariate estimates (Figure 2).

The annual and quarterly measures both indicate a small output gap in 2009-10. Estimates for output gap in 2011 are negative, but small (less than ½ percent of GDP) for most reasonable estimates.

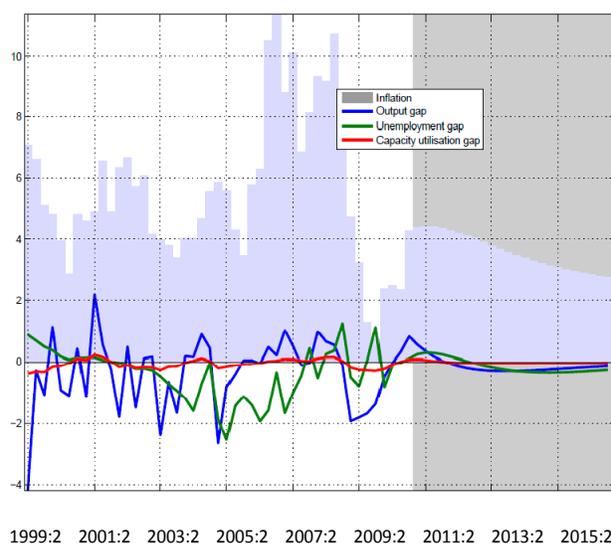
Methodology of cyclical adjustment

A worsening in the fiscal balance can result either from: (i) discretionary decreases in taxes or increases in expenditures; or (ii) economic slowdown accompanied by the automatic decreases in tax revenues (as people earn and spend less) and increases in expenditures (due to higher unemployment benefits).

The cyclically-adjusted fiscal balance shows the underlying fiscal position when the cyclical movements are removed. It is useful for assessing the current public finance policies abstracting from the impact of the cycle on the budget. We use (i) the IMF Fiscal Affairs Department (FAD) approach, where the adjustment is made on total domestic revenues and expenditures, applying generalized elasticities; and (ii) the simplified OECD/European Commission method, where adjustment is made to individual subcomponents of revenues and expenditures based on disaggregated elasticities. In principle, we would have liked to take into account discretionary fiscal policy actions, but we did not have the data for that.

With the FAD approach, the fiscal balance (FB) may be decomposed as: $FB = \text{Primary Balance (PB)} - \text{Interest (INT)}$. The $PB = (CAPB + CPB + GRANTS)$, where $CAPB$ is the cyclically-adjusted primary balance excluding grants and CPB is the cyclical component of the primary balance. The $CAPB$ depends on the elasticities of revenues and expenditures with respect to the output gap. Interest payments and grants are treated separately because their movements are not correlated with cyclical output changes. Estimates for OECD countries give aggregate revenue elasticity close to 1 and spending elasticity close to zero, as most spending

Figure 2. Mauritius: Output gap, 1999–2015
(In percent)



does not respond to the cycle, with the exception of unemployment benefits, whose share in total expenditures is typically small. Thus, using potential output as the scaling variable, the cyclical component of the primary balance (*CPB*) can then be estimated as: $CPB = r * y$; where r represents revenues excluding grants.

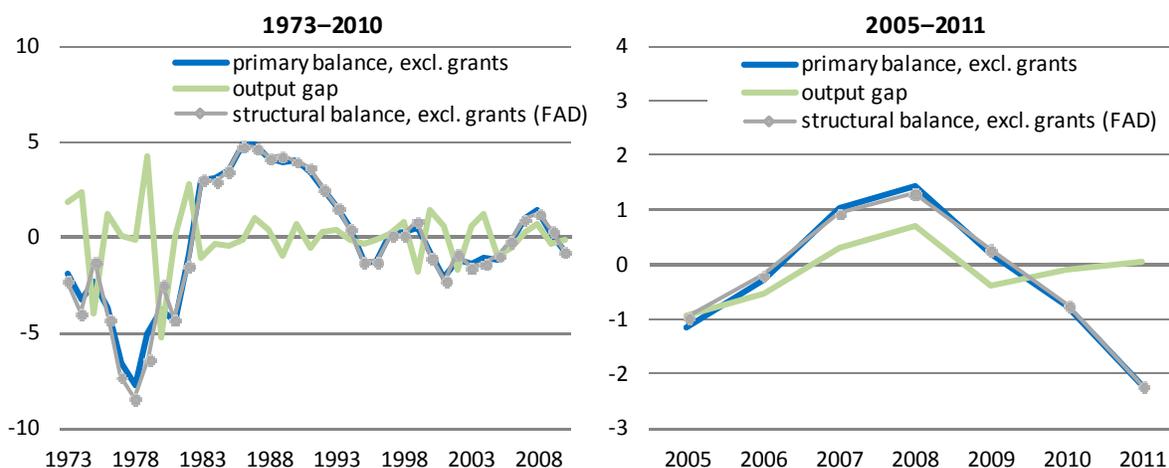
With the OECD approach, the cyclically-adjusted primary balance is the sum of the response to the output gap of four tax categories (individual and corporate income tax, indirect taxes and social contributions) and one expenditure category (unemployment benefits). We computed disaggregated elasticities on data from 1973-2010 following Burnside and Meshcheryakova (2004) as $r_t^c = e y_t^c + \varepsilon_t$ where r is the cyclical part of a fiscal component, computed as deviation from the HP-filtered trend. Since the computed elasticity on social expenditure is counter-intuitive, we adjusted only individual, corporate and indirect tax receipts for the cycle.

Characterizing fiscal policy

The two approaches yield similar results for Mauritius. There is some evidence that fiscal policy in Mauritius became more countercyclical over time. The correlation between Mauritius' structural primary surplus excluding grants as a percentage of potential GDP and the output gap switches from -0.65 for 1973–1990 to 0.3 for the 1990–2010 period.

The cyclical component in Mauritius' fiscal balances has been small recently (Figure 3). Our estimates suggest it was close to zero in 2010, particularly towards the end when the output gap is also estimated to be close to zero based on quarterly data. This implies that there is little need for expansionary fiscal policy for macroeconomic stabilization purposes in 2011.

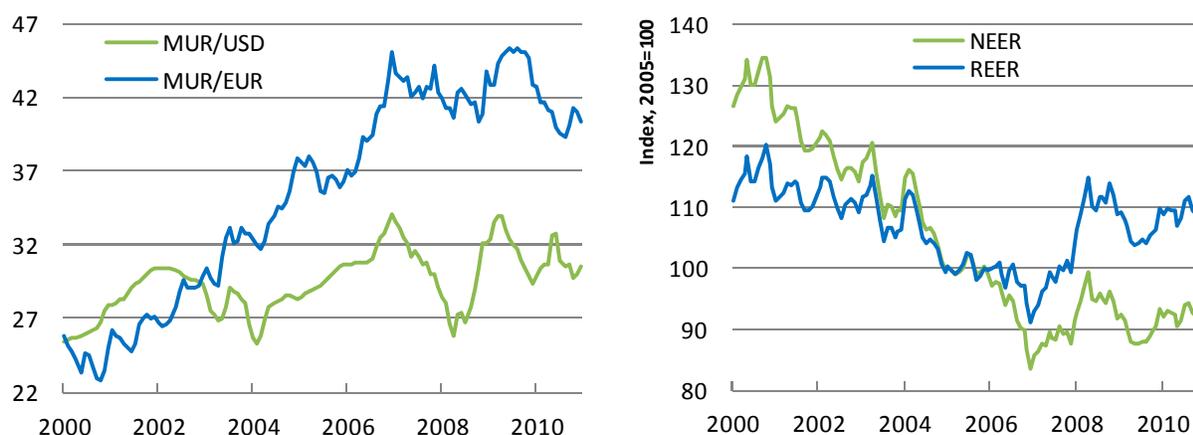
Figure 3. Mauritius: Fiscal Policy
(In percent of GDP)



Appendix 2. Mauritius: Exchange Rate Assessment¹

The real value of the Mauritian rupee has followed a U-shaped path over the last decade. The rupee depreciated steadily some 25 percent in real terms from peak (2001) to trough (end-2006). During the crisis years of 2008–09, the depreciation of the Euro and the Pound pushed up the value of the rupee. Mauritius experienced a relatively quick rebound from the world economic crisis, with FDI and other investment flows returning to pre-crisis levels in 2010, which translated into a slight real appreciation over the course of that year (Figure 1).

Figure 1. Mauritius: Bilateral and Effective Exchange Rates, 2000–10

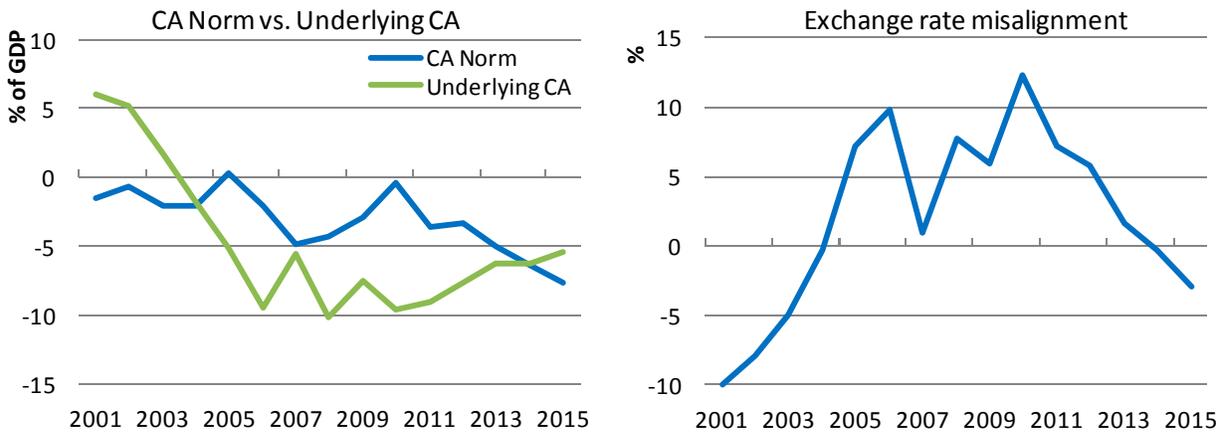


Staff estimates that **the real exchange rate of the rupee at end-2010 was broadly in line with fundamentals**. At the same time staff notes that the estimated deviation from equilibrium slightly widened compared to the last Article IV assessment: from 4½ percent for 2009 to about 11 percent in 2010. These findings apply the three CGER-based methodological approaches (macroeconomic balances, external sustainability and equilibrium real exchange rate).

The **macroeconomic balance (MB) approach** is a two-stage method. First the equilibrium current account or “CA norm” is estimated based on a GMM regression using a panel dataset covering 184 economies and spanning 1973 to 2009. The CA norm is then compared to the “underlying CA”, which adjusts the CA for large one-off imports and projected real exchange rate movements. Second, a country-specific elasticity of the CA with respect to the real exchange rate (0.755 for Mauritius, see IMF WP/08/212) is used to compute the misalignment as the real exchange rate adjustment required to close the gap between “underlying CA” and “CA norm”. Figure 2 shows that the underlying current account has diverged from its equilibrium level in 2010, when the overvaluation reached around 12 percent. However, CA projections imply that the overvaluation would shrink rapidly in 2011 and disappear over the medium term (Figure 2).

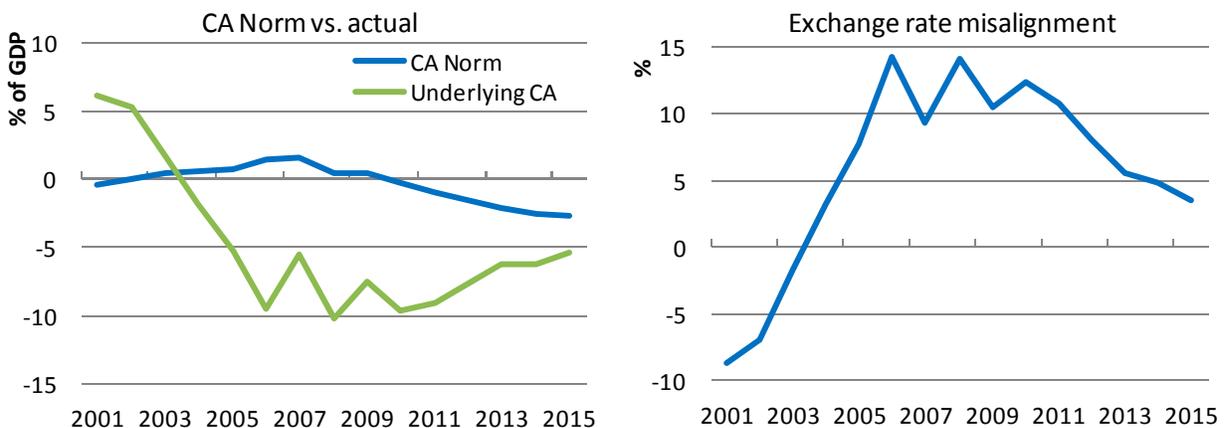
¹ Prepared by Alexander Culiuc.

Figure 2. Macroeconomic Balances Approach: Norm vs. Underlying Current Account
Balances and Implied Real Effective Exchange Rate Misalignment



The external sustainability (ES) approach also estimates the misalignment as the adjustment required to close the gap between the underlying CA and the norm. However, unlike the MB approach, ES defines the CA norm as the CA that would freeze Mauritius' net foreign assets at the current level. Despite differences in methodology, results for the ES approach (Figure 3) are very similar to the MB approach: the 2010 exchange rate is estimated to be overvalued by some 12 percent, but the misalignment is projected to diminish rapidly over the medium term.

Figure 3. External Sustainability Approach: Norm vs. Underlying Current Account
Balances and Implied Real Effective Exchange Rate Misalignment



The misalignment estimated using ES should be interpreted with caution. As discussed in IMF WP/08/212 and WP/10/148, the liability side of the Global Business Corporations' activity is currently underestimated in external sector statistics, which biases upwards the NFA estimate for Mauritius. This results in overestimating the CA norm and, consequently, the REER overvaluation.

The **equilibrium real exchange rate (ERER) approach** uses fitted values from a panel regression to compute Mauritius' ERER. The difference with the actual REER constitutes the misalignment. Results, presented in Figure 4, corroborate those obtained from the other two methods: the overvaluation is projected to shrink rapidly from 8 percent in 2010 to around 2 percent by 2015.

Figure 4. Equilibrium Real Effective Rate Approach

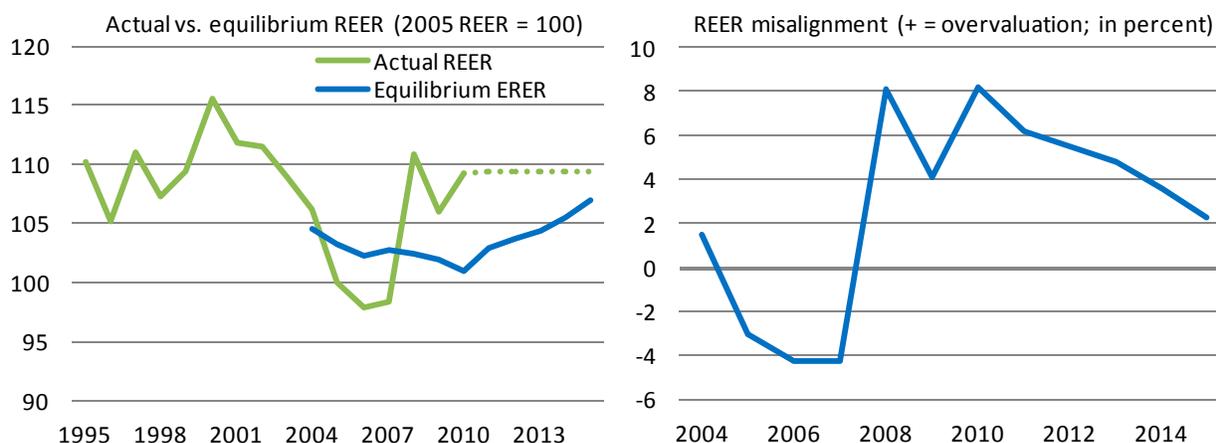


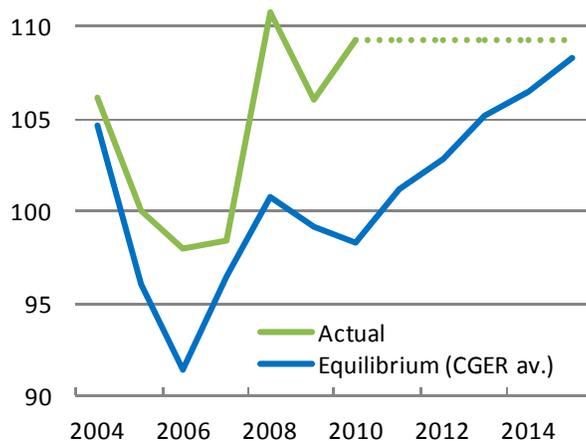
Table 1 summarizes the current and medium-term exchange rate misalignment computed under the three methodologies, while Figure 5 compares the average equilibrium exchange rate computed under the three methodologies with the REER forecasted as constant (random walk hypothesis). The results show a history of varying moderate overvaluations since 2004 and a projected narrowing to equilibrium over the medium term.

Table 1. REER Misalignment, %

	2010	2015
MB	12.3	-2.9
EREER	8.3	2.4
ES	12.4	3.5
Average	11.0	1.0

Figure 5. Equilibrium Exchange Rate: Average for Three CGER Methodologies

(Index, 2005=100)



Appendix 3. Mauritius: Long-term Growth Prospects¹

Real growth accelerated after the establishment of preferential trade agreements in the 1970s. However, starting in the mid 2000s, as the agreements expired, trend growth appears to have declined. A simple growth accounting exercise examines the factors that drove past growth and are likely to drive it in the future. Future potential real growth is estimated to be between 3.5-5.4 percent depending on the authorities' policy efforts and private sector initiatives.

Empirical methodology and data

The growth accounting framework is based on the Cobb-Douglas production function and is obtained by decomposing the growth rate of output (Y) into the growth rates of capital (K), labor input (L), and total factor productivity (A), where α is the elasticity of output with respect to capital:

$$\frac{dY}{Y} = \frac{dA}{A} + \alpha \frac{dK}{K} + (1 - \alpha) \frac{dL^*}{L^*}$$

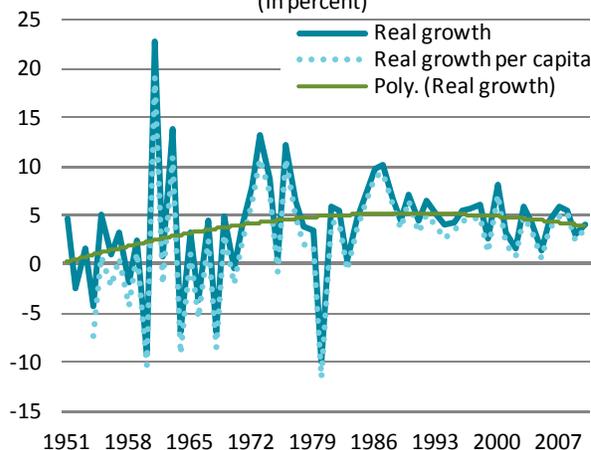
Labor input is augmented with human capital (H), to allow for the role of educational attainment, where s is the average years of schooling of the labor force and r is the return to each year of schooling, estimated to be 10.7 percent for middle-income countries: $L^* = HL = e^{rs} L$

Total factor productivity (A), which captures other factors, such as technology, infrastructure and institutions, is computed as a residual. The capital stock and employment series from the Central Statistics Office (CSO) were extended back to 1950. CSO data on human capital was extended back to 1960. CSO data exhibit a persistent decline in the share of the employee compensation over time, which likely reflects the underestimation of the labor income of self-employed workers. The study uses constant elasticities or capital shares (α from 0.25 to 0.35 to 0.5).

Historical evidence

Mauritius experienced two growth accelerations in the past: in the 1970s growth was 6 percent on average and in 1990s it was 5.2 percent. The contribution of labor has systematically declined because of the slowing population growth rate, although its role picks up if one accounts for improvements in education. Since the 1990s, capital (K) and productivity (A) play the dominant role (Figure 2), with A permanently higher than before. Accounting for human capital (L^*)

Figure 1. Mauritius: Real Growth, 1951–2010
(In percent)



¹ Prepared by Katsiaryna Svirydzenka.

suggests lower productivity improvements in recent years. A larger share of economic output attributable to capital (α) decreases productivity (A) for the whole period (Table 2).

Figure 2. Mauritius: Growth Decomposition, 1951–2010

(10-year rolling average of growth rates)

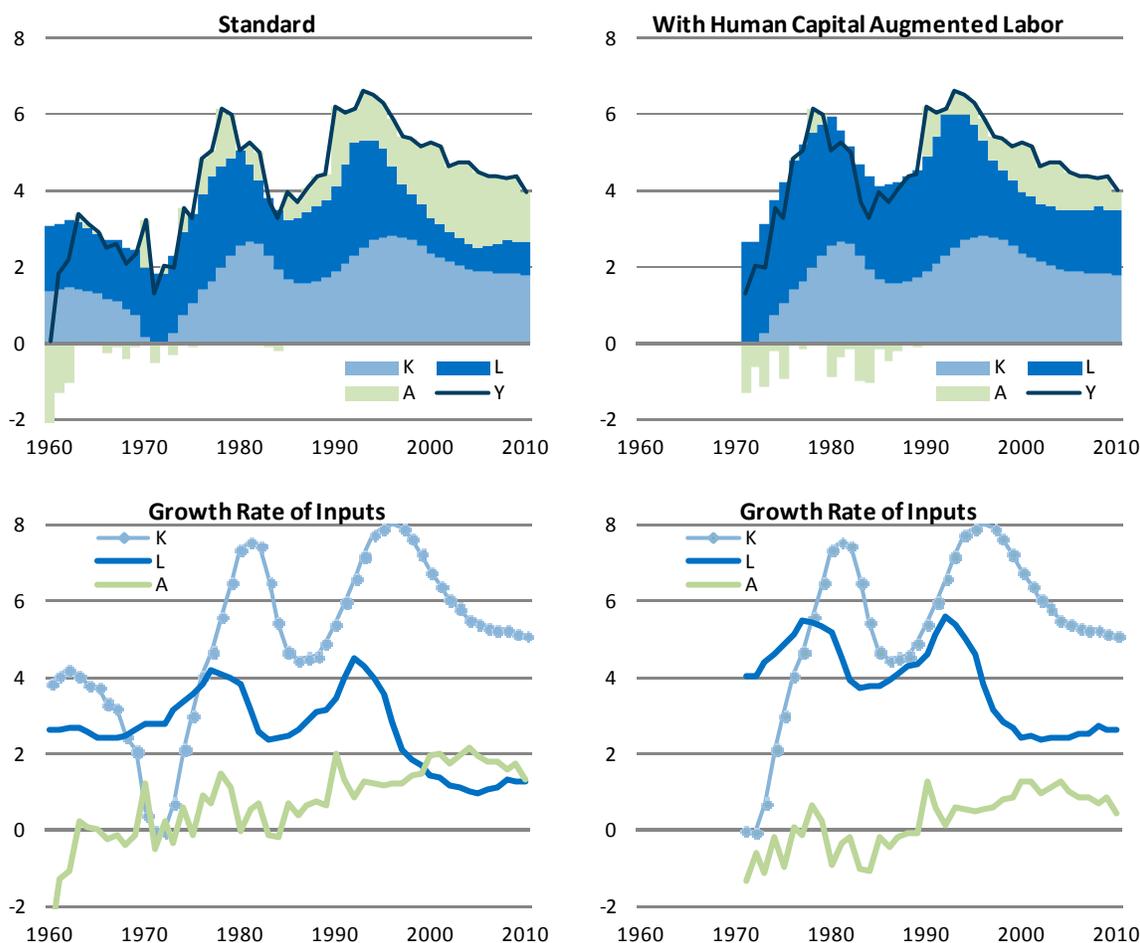


Table 1. Mauritius: Decomposing Historical Growth, 1951–2010

	1950s	1960s	1970s	1980s	1990s	2000s	Ave hist
Real growth, Y	1.1	2.4	6.0	4.5	5.2	4.4	4.0
Contribution of:							
K	1.0	0.7	2.3	1.7	2.5	1.8	1.7
L	1.8	1.7	2.6	2.1	1.1	0.8	1.7
A	-1.7	-0.1	1.1	0.7	1.5	1.7	0.6
L*		2.6	3.5	2.8	1.8	1.7	2.5
A		0.7	0.3	-0.1	0.9	0.9	0.5

Note: elasticity $\alpha = 0.35$

Table 2. Mauritius: Growth, 1951–2010

	Elasticity		
	0.25	0.35	0.5
Real growth, Y	4.0	4.0	4.0
Contribution of:			
K	1.2	1.7	2.4
L	1.9	1.7	1.3
A	0.8	0.6	0.3
L*	2.8	2.5	1.9
A	0.6	0.5	0.3

Baseline projection scenario and sensitivity analysis

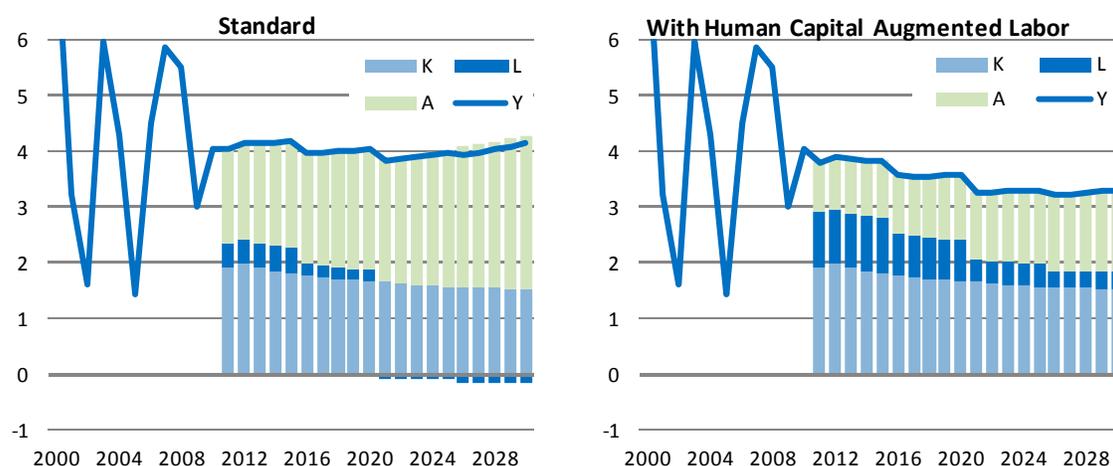
Baseline: According to the United Nations Population Division, median-variant forecast of the average growth of population aged 15–59 during 2011–30 is -0.01 percent in Mauritius. The current participation rate of 59 percent and unemployment rate of 7.5 percent are assumed to improve to 60 and 6 percent respectively. We assume an increase of 1.3 years of schooling and an increase in the current I/Y ratio from 24.5 percent to 27 percent by the end of 2030. Depreciation is assumed to stay at its 2010 estimate of 6.7 percent. TFP growth is assumed to start at its 20-year average (which varies depending on elasticity and human capital choice) and rise by 70 percent by the end of the horizon. **Given these assumptions, Mauritius could achieve long run growth of 3.4–4.2 percent.** Increasing the share of capital in output (or its elasticity) tends to decrease the growth rate because of its affect on the historical average of TFP growth.

Table 3. Mauritius: Baseline Scenario, 2010–30

Elasticity	Standard			With Human Capital		
	0.25	0.35	0.5	0.25	0.35	0.5
Real growth,	4.2	4.0	3.8	3.6	3.5	3.4
Contribution of:						
K	1.2	1.7	2.4	1.2	1.7	2.4
L	0.1	0.1	0.1	0.7	0.6	0.5
A	2.9	2.2	1.3	1.7	1.2	0.5

Figure 3. Mauritius: Growth Decomposition (Baseline Scenario), 2010–30

(In percent)



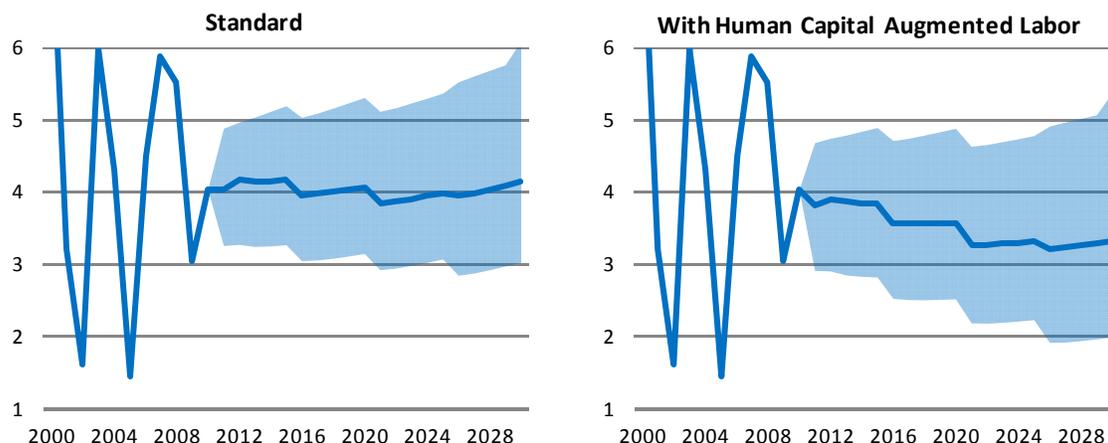
The optimistic scenario, using UN high-variant population forecasts and fast-track scenario for education, assuming that participation, unemployment rates and investment ratio reach by 2030 those of today's Singapore (65, 4.5 and 30 percent, respectively) and that TFP growth path is higher by 50 basis points, **gives 4.8–5.4 percent as the range of long run growth for Mauritius.**

The pessimistic scenario, using low-variant population and constant enrollment rate forecasts, no changes in participation, unemployment and investment rates, and a TFP growth path lower than

the baseline by 50 basis points, gives 2.2–3.3 percent as the range of long run growth for Mauritius.

Figure 4. Mauritius: Sensitivity of Baseline Growth Projections, 2010–30

(In percent; shaded areas give ranges of growth under optimistic and pessimistic scenarios)



Policy recommendations to raise the long-run growth rate

The results of the growth accounting exercise suggest that a target growth of 6 percent might be too ambitious and that pro-active policies are needed to raise growth closer to 5 percent:

- *Improving the investment rates through:* (i) acceleration in the implementation of current investment projects; and (ii) further measures to encourage FDI and domestic savings.
- *Labor market reforms* to increase participation and decrease unemployment rates, especially for women. In 2009, the female participation rate was 42.6 percent versus 76.1 percent for males and the unemployment rate was 12.3 percent versus 4.4 for males.
- *Investment in education and education reform* to increase secondary (currently, 1/3 of primary students fail primary exams and don't proceed to secondary school) and tertiary enrollment rates (only 40 percent now).
- *Further reforms to reduce bottlenecks and increase productivity via* (i) upgrades and restructuring of public utilities (water and electricity); (ii) road decongestion; (iii) further improvements in the business environment; and (iv) a growth friendly tax regime.

Appendix 4. Mauritius: Debt Sustainability Analysis

Assumptions

The macroeconomic projection assumes that the government will resume fiscal consolidation as part of its post-crisis strategy. Assuming no major negative shocks, GDP growth is expected to increase gradually to 4½ percent by 2015 driven by increased infrastructure investment and productivity improvements. The fiscal deficit will decline slowly as fiscal consolidation resumes and financial discipline on public enterprises is better enforced. The primary balance including net lending is projected to remain negative through 2012, and be roughly in equilibrium in subsequent years. The current account deficit will oscillate around 12 percent of GDP through 2012, on account of reduced demand in traditional export markets, and be expected to decline gradually to 6 percent of GDP by 2015.

Public Debt

The public finances of Mauritius are fundamentally sound, and public debt is sustainable over the medium-term. With the launching of a wide-ranging reform strategy in 2005, the government has successfully implemented program-based budgeting within a medium-term expenditure framework, and the 2008 Public Debt Management Act (PDMA) provides additional safeguards. Since fiscal consolidation began in 2005, public debt has been reduced from a peak of over 80 percent of GDP in 2003 to 52 percent in 2008, but increased again to 59 percent in 2010 as a result of the stimulus package enacted in the wake of the financial crisis. The forward-looking debt sustainability analysis (DSA) suggests that public debt will remain sustainable over the medium term (Table 1). The 50 percent debt-to-GDP target mandated by the PDMA is likely to be achieved in 2018. The baseline scenario incorporates fiscal stimulus measures, which are projected to push the 2011 and 2012 primary deficits (including net lending) to 2.5 and 2.0 percent of GDP respectively. Public debt is projected to peak at close to 60 percent of GDP in 2012 before falling to 53 percent in 2015, the end of the projection period.

The results of standardized sensitivity tests do not alter the broadly positive outlook, as no shock scenario raises the debt ratio to the 2003 level. Still, the projected increase in the share of external debt makes the debt-to-GDP ratio susceptible to devaluations – a 30 percent devaluation in 2010 would push it up 5 percentage points to 58 percent in 2015 (Figure 1). The medium-term scenario is quite resilient to other macroeconomic shocks: if growth were about 1 percent lower than projected, the debt-to-GDP ratio would increase insignificantly to 59 percent of GDP by 2015 (Figure 1).

While broadly positive, the results suggest that in order to meet the PDMA-mandated debt ceilings under plausible adverse scenarios over the medium term, the authorities may need to target a more ambitious fiscal consolidation agenda from 2012 forward.

External Debt

External debt is sustainable. Excluding short-term private sector liabilities, it stood at 12½ percent of GDP at the end of 2010, down from 20 percent in 2002. Official estimates put short-term private sector debt at only about 1 percent of GDP, which almost surely under-states its true magnitude. However, a preliminary survey suggests that total short-term external liabilities of the nonfinancial private sector are unlikely to exceed 10 percent of GDP. Gross bank external liabilities surpassed 100 percent of GDP at the end of December 2010 and are not included in external debt, as bank foreign assets are almost twice as large,¹ and as in many international financial centers, it would be misleading to include gross bank liabilities in the external debt measure.² Including banks' position on a net basis in external debt shows that the net external debt position for the economy as a whole is generally balanced. Projections suggest that external debt will rise over the next few years—as the authorities take advantage of partially concessional long-term financing from multi- and bilateral sources—before stabilizing at about 20 percent of GDP. A 30 percent real depreciation in 2010 would push up the steady state external debt-to-GDP ratio to around 27 percent in 2015. A current account deficit 3 percentage points of GDP larger than projected in the baseline would put the country on an unsustainable path, as the debt stock shoots up to 32 percent of GDP in 2015 and keeps growing thereafter.³ Thus, controlling the non-debt creating part of the external current account balance is key to maintaining external debt sustainability.

¹ Bank investments of the GBC float—that is, money from foreign investors meant to be transferred to third countries but held for a short period by GBCs in bank deposits—are included. Excluding these GBC counterpart investments would still result in a positive bank net foreign asset position.

² See *Debt Sustainability Analysis for Market Access Countries Guidance Note* (July 5, 2005), available at <http://www-intranet.imf.org/departments/SPR/Debt/Pages/DSAMarketAccess.aspx>.

³ Historically, there are large positive errors and omissions in the balance of payments. These likely reflect, inter alia, management fees earned by GBCs (which are not captured in the BOP statistics, which treat GBCs as nonresidents), as well as, possibly, capital inflows. For the purposes of DSA projections, the authorities' estimate of likely management fees is included in the service receipts of the current account. Nevertheless, the projections likely overestimate the increase in external debt, as the unaccounted errors and omissions are unlikely to be all debt-creating.

Table 1. Mauritius: Public Sector Debt Sustainability Framework, 2005–2015
(In percent of GDP, unless otherwise indicated)

	Actual						Projections					Debt-stabilizing primary balance 9/
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
1 Baseline: Public sector debt 1/	65.3	62.8	56.2	51.9	56.3	58.5	58.8	59.7	57.7	55.2	52.8	
o/w foreign-currency denominated	15.5	16.8	9.3	9.9	10.1	12.4	13.5	15.2	16.8	17.8	18.2	-1.0
2 Change in public sector debt	0.5	-2.5	-6.6	-4.3	4.5	2.1	0.3	0.9	-2.0	-2.4	-2.5	
3 Identified debt-creating flows (4+7+12)	1.8	3.3	-3.5	-1.7	2.1	0.5	1.5	1.2	-1.4	-1.4	-1.6	
4 Primary deficit	0.4	0.6	-0.8	-0.4	0.4	0.1	2.5	2.0	-0.3	0.0	-0.1	
5 Revenue and grants	19.7	20.7	21.4	21.4	22.7	21.9	21.5	21.0	20.9	20.9	21.1	
6 Primary (noninterest) expenditure	20.0	21.4	20.6	21.0	23.1	22.0	24.0	23.0	20.6	20.9	21.0	
7 Automatic debt dynamics 2/	1.5	-1.0	-6.3	-1.3	1.7	0.4	-1.6	-1.3	-1.6	-1.8	-1.9	
8 Contribution from interest rate/growth differential 3/	0.2	-2.7	-3.6	-2.3	2.1	0.4	-1.6	-1.3	-1.6	-1.8	-1.9	
9 Of which contribution from real interest rate	1.1	-0.1	-0.4	0.4	3.6	2.5	0.6	1.0	0.8	0.5	0.4	
10 Of which contribution from real GDP growth	-0.9	-2.6	-3.2	-2.8	-1.5	-2.2	-2.2	-2.3	-2.3	-2.3	-2.3	
11 Contribution from exchange rate depreciation 4/	1.3	1.7	-2.6	1.1	-0.4	...	...	...	...	...	...
12 Other identified debt-creating flows	0.0	3.7	3.6	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.4	
13 Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14 Recognition of implicit or contingent liabilities	0.0	3.7	3.6	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.4	
15 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	
16 Residual, including asset changes (2-3) 5/	-1.3	-5.8	-3.1	-2.7	2.4	1.6	-1.2	-0.3	-0.6	-1.1	-0.9	
Public sector debt-to-revenue ratio 1/	332.0	303.2	262.4	242.1	248.3	267.5	273.7	283.8	276.2	263.8	250.5	
Gross financing need 6/	43.7	36.3	27.7	20.4	13.5	17.8	16.3	15.1	14.5	10.9	10.1	
in billions of U.S. dollars	2.8	2.4	2.2	2.0	1.2	1.7	1.7	1.7	1.7	1.4	1.4	
Scenario with key variables at their historical averages 7/							56.7	55.8	54.6	53.0	51.6	-1.0
Scenario with no policy change (constant primary balance) in 2010-2015							56.4	55.5	54.1	51.9	49.8	-0.9
Key Macroeconomic and Fiscal Assumptions Underlying Baseline												
Real GDP growth (in percent)	1.5	4.5	5.9	5.5	3.0	4.0	4.1	4.2	4.3	4.4	4.5	
Average nominal interest rate on public debt (in percent) 8/	6.1	6.9	7.7	7.8	7.5	6.4	6.4	6.6	6.3	6.1	5.9	
Average real interest rate (nominal rate minus change in GDP deflator, in percent)	1.9	0.2	-0.3	1.2	7.3	4.8	1.4	2.1	1.6	1.2	1.0	
Nominal appreciation (increase in US dollar value of local currency, in percent)	-8.0	-10.7	21.7	-11.1	4.8	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	4.3	6.7	8.0	6.5	0.2	1.6	5.0	4.5	4.7	4.9	4.8	
Growth of real primary spending (deflated by GDP deflator, in percent)	3.7	11.6	2.1	7.7	13.1	-0.8	13.5	-0.1	-6.6	6.1	4.7	
Primary deficit	0.4	0.6	-0.8	-0.4	0.4	0.1	2.5	2.0	-0.3	0.0	-0.1	

1/ Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.

2/ Derived as $[(r - \pi(1+g) - g + \alpha\varepsilon(1+r))/(1+g+\pi+g\pi)]$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; α = share of foreign-currency denominated debt; and ε = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

3/ The real interest rate contribution is derived from the denominator in footnote 2/ as $r - \pi(1+g)$ and the real growth contribution as $-g$.

4/ The exchange rate contribution is derived from the numerator in footnote 2/ as $\alpha\varepsilon(1+r)$.

5/ For projections, this line includes exchange rate changes.

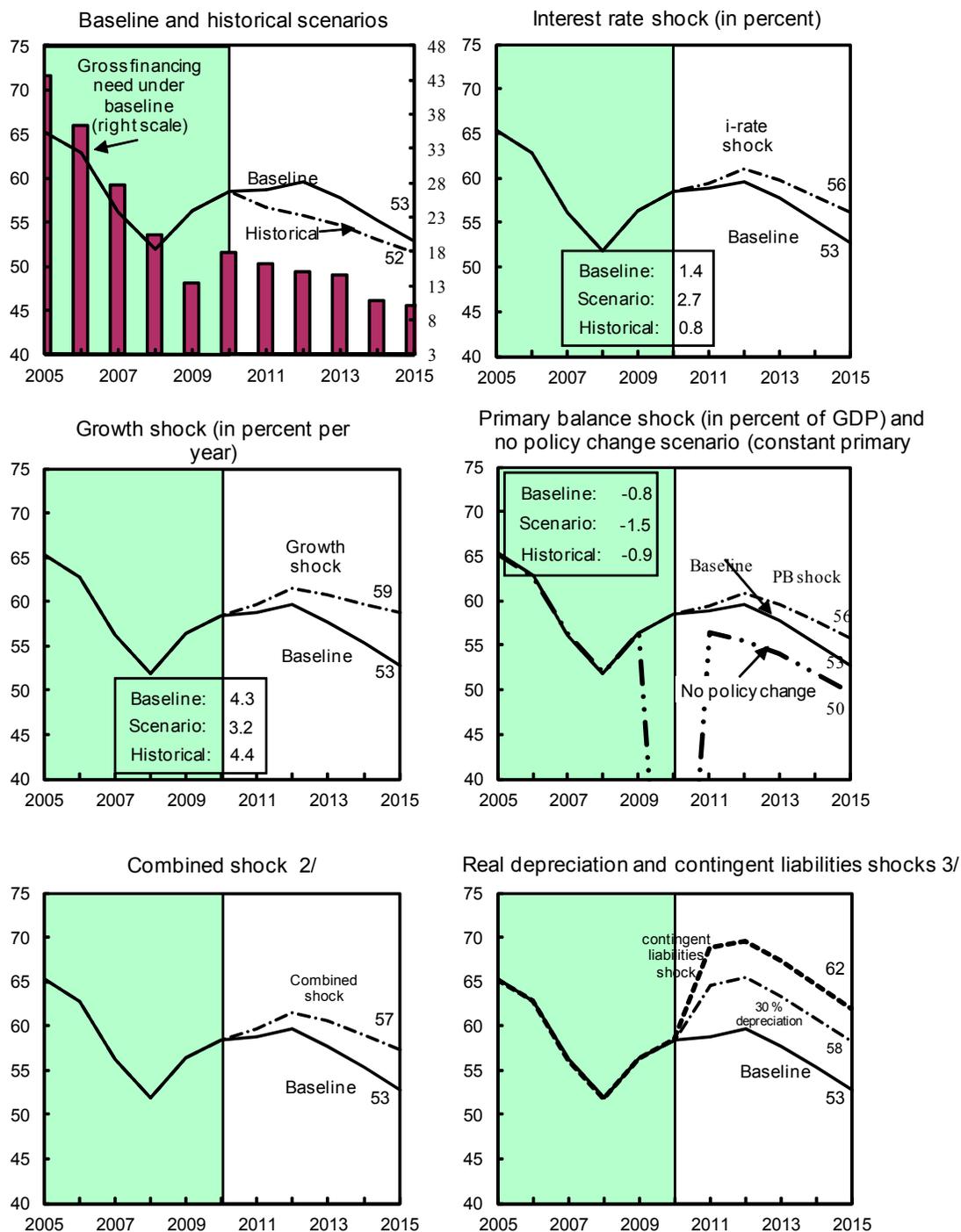
6/ Defined as public sector deficit, plus amortization of medium and long-term public sector debt, plus short-term debt at end of previous period.

7/ The key variables include real GDP growth; real interest rate; and primary balance in percent of GDP.

8/ Derived as nominal interest expenditure divided by previous period debt stock.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 1. Mauritius: Public Debt Sustainability: Bound Tests 1/
(Public debt in percent of GDP)



Sources: International Monetary Fund, country desk data, and staff estimates.
 1/ Shaded areas represent actual data. In individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
 2/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and primary balance.
 3/ One-time real depreciation of 30 percent and 10 percent of GDP shock to contingent liabilities occur in 2010, with real depreciation defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).

Table 2. Mauritius: External Debt Sustainability Framework, 2005–2015
(In percent of GDP, unless otherwise indicated)

	Actual						Projections					Debt-stabilizing non-interest current account 6/ -3.5
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
1 Baseline: External debt	14.9	15.5	10.3	8.8	10.6	12.6	13.3	15.0	16.6	17.6	18.0	
2 Change in external debt	0.1	0.7	-5.2	-1.5	1.8	1.9	0.8	1.6	1.6	1.1	0.4	
3 Identified external debt-creating flows (4+8+9)	5.5	7.5	-1.1	6.4	6.3	7.9	8.1	6.2	3.6	2.1	1.2	
4 Current account deficit, excluding interest payments	3.7	8.6	5.0	9.8	7.1	9.3	11.3	9.3	6.7	5.2	4.3	
5 Deficit in balance of goods and services	5.8	10.9	9.9	14.2	10.4	13.0	15.7	13.5	11.0	9.4	8.4	
6 Exports	58.0	59.6	56.7	51.1	46.9	49.5	52.9	53.6	54.2	54.2	54.2	
7 Imports	63.8	70.5	66.6	65.3	57.3	62.5	68.6	67.1	65.2	63.6	62.5	
8 Net non-debt creating capital inflows (negative)	0.3	-1.0	-4.4	-1.7	-1.8	-1.2	-3.0	-2.9	-2.9	-2.9	-2.7	
9 Automatic debt dynamics 1/	1.5	0.0	-1.7	-1.7	1.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3	
10 Contribution from nominal interest rate	1.3	0.5	0.4	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.4	
11 Contribution from real GDP growth	-0.2	-0.6	-0.8	-0.5	-0.3	-0.4	-0.5	-0.5	-0.6	-0.7	-0.7	
12 Contribution from price and exchange rate changes 2/	0.4	0.1	-1.3	-1.5	1.1	...	...	...	...	...	...
13 Residual, incl. change in gross foreign assets (2-3) 3/	-5.4	-6.9	-4.1	-7.9	-4.5	-6.0	-7.3	-4.5	-2.0	-1.0	-0.9	
External debt-to-exports ratio (in percent)	25.6	26.1	18.2	17.3	22.7	25.4	25.2	27.9	30.6	32.5	33.2	
Gross external financing need (in billions of US dollars) 4/	0.6	0.9	0.7	1.3	0.8	1.1	1.4	1.2	1.0	0.9	0.9	
in percent of GDP	8.7	13.5	8.5	13.0	9.2	11.2	13.4	11.3	8.7	7.6	6.7	
Scenario with key variables at their historical averages 5/							6.1	2.7	1.9	2.1	2.5	-1.1
Key Macroeconomic Assumptions Underlying Baseline												
Real GDP growth (in percent)	1.5	4.5	5.9	5.5	3.0	4.0	4.1	4.2	4.3	4.4	4.5	
GDP deflator in US dollars (change in percent)	-2.8	-0.7	9.3	17.3	-10.8	5.5	1.7	2.4	2.2	2.6	2.7	
Nominal external interest rate (in percent)	8.6	3.6	3.1	3.6	2.4	1.8	2.6	2.8	2.7	3.0	2.5	
Growth of exports (US dollar terms, in percent)	9.0	6.6	10.3	11.4	-15.6	15.9	13.1	8.1	7.8	7.2	7.2	
Growth of imports (US dollar terms, in percent)	14.9	14.6	9.5	21.2	-19.3	19.8	16.1	4.4	3.6	4.6	5.5	
Current account balance, excluding interest payments	-3.7	-8.6	-5.0	-9.8	-7.1	-9.3	-11.3	-9.3	-6.7	-5.2	-4.3	
Net non-debt creating capital inflows	-0.3	1.0	4.4	1.7	1.8	1.2	3.0	2.9	2.9	2.9	2.7	

1/ Derived as $[r - \rho - \gamma(1+g) + \varepsilon\alpha(1+r)] / (1+g+\rho+\gamma)$ times previous period debt stock, with r = nominal effective interest rate on external debt; ρ = change in domestic GDP deflator in US dollar terms, γ = real GDP growth rate, ε = nominal appreciation (increase in dollar value of domestic currency), and α = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as $[-\rho(1+g) + \varepsilon\alpha(1+r)] / (1+g+\rho+\gamma)$ times previous period debt stock. ρ increases with an appreciating domestic currency ($\varepsilon > 0$) and rising inflation (based on GDP deflator).

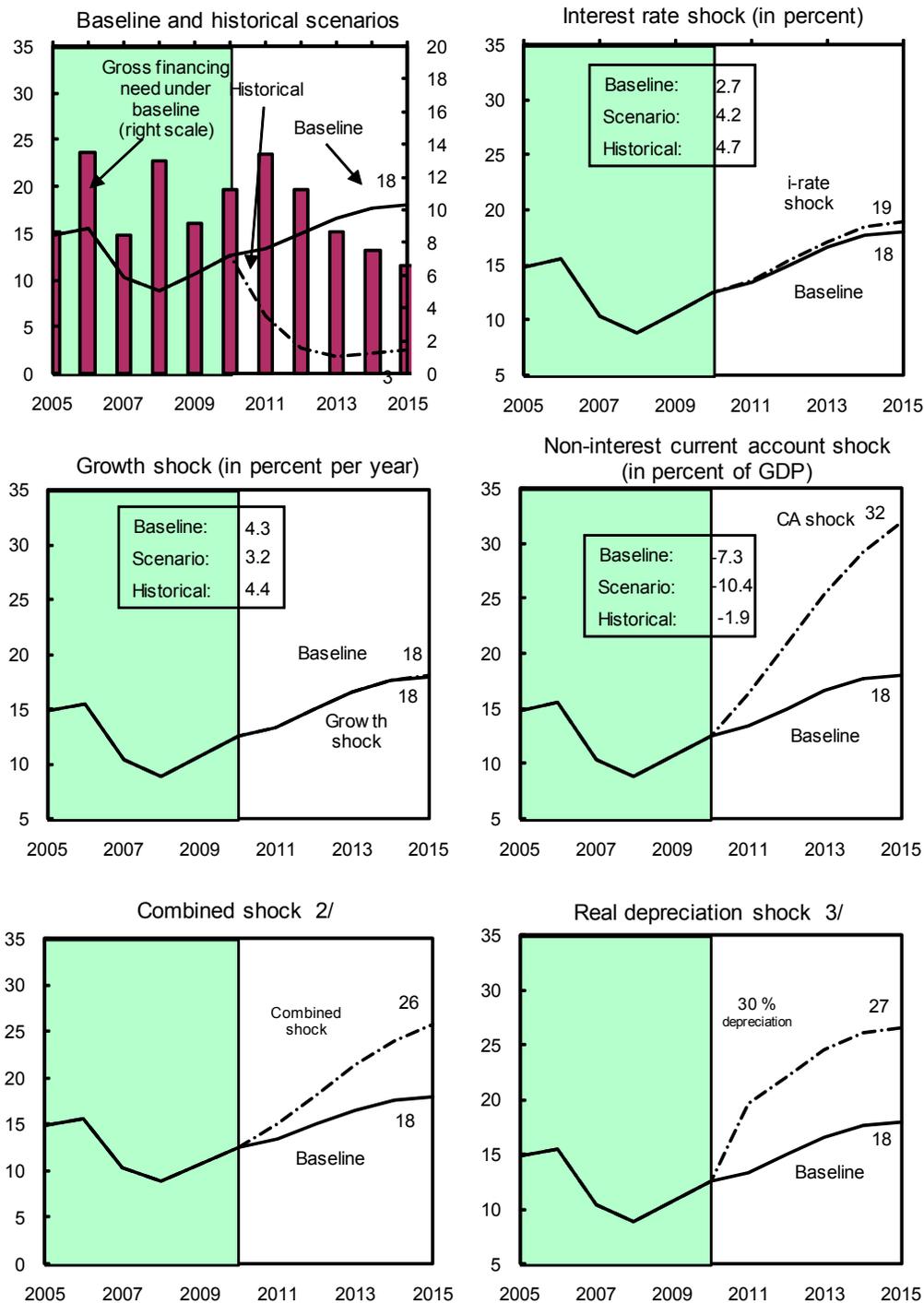
3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Figure 2. Mauritius: External Debt Sustainability: Bound Tests 1/
(External debt in percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

3/ One-time real depreciation of 30 percent occurs in 2010.

Appendix 5. Mauritius: Fiscal Rules and Fiscal Sustainability¹

Mauritius followed prudent macroeconomic policies in the recent past. Going forward some medium-term fiscal consolidation is necessary to ensure that debt adheres to the country's fiscal rule, defined in the 2008 Public Debt Management Act (PDMA). The PDMA puts a limit on the debt-to-GDP ratio. In 2010, the estimated debt-to-GDP ratio of 59 percent came close to the legally mandated 60 percent of GDP ceiling. Initially, the limit was 50 percent of GDP starting in 2013, but the authorities recently changed the date to 2018. This appendix provides options for enhancing the country's debt rule by introducing an operational fiscal anchor linked to the economic cycle and deviations from the debt target.

International experience with fiscal rules

Almost 80 countries adopted national or supranational fiscal rules by early 2009.² On average rules are associated with improved fiscal performance and more prudent fiscal policies. However, in many cases rules have been strained by the current crisis. Going forward, rules-based frameworks can be useful in anchoring expectations regarding fiscal sustainability, but they have to reflect country circumstances.

A fiscal rule (i) delineates a numerical target with a view to guiding fiscal policy, (ii) specifies a summary operational fiscal indicator, and (iii) it is simple enough that it can be operationalized, communicated to the public, and monitored. Fiscal rules serve different goals, but the focus here is on rules that promote fiscal sustainability.

Fiscal balance rules can help ensure that debt remains sustainable. The overall balance relates most directly to the change in the debt stock, but countries with a debt sustainability concern often focus on the primary balance because debt dynamics depend on the primary deficit, and interest and GDP growth rates, although the two later variables are mostly considered exogenous and are not controlled by the authorities. Fiscal balance rules that are not adjusted for the cyclical position of the economy tend to be problematic because revenues in particular respond vigorously to the output gap. Thus, structural fiscal balance rules reflect the actual stance of fiscal policies and avoid undesirable pro-cyclical policy responses.

¹ Prepared by Rainer Köhler.

² "Fiscal Rules—Anchoring Expectations for Sustainable Public Finances" (IMF, November 2009).

The Mauritius' Debt Rule in Practice—So Far So Good

Debt rules can be effective in terms of ensuring convergence to a debt target as happened in Mauritius. The strong debt reduction in the past suggests that legally-mandated debt ceilings served Mauritius well in improving fiscal sustainability. After the launching of wide-ranging reforms in 2005, including a fiscal consolidation strategy anchored in the new public debt law, public debt plummeted to below 60 percent of GDP in 2008 from a high of 80 percent in 2003. Forward looking, the results of standardized DSA tests on Mauritius' public debt provide a broadly positive debt outlook, as no shock scenario raises the debt ratio to the high 2003 levels.

However, international experience suggests that legal debt ceilings without operational adjustment rules might be overly rigid and could result in a loss of credibility if breached too often. Precisely to avoid a breach of the debt target, which originally required total public debt to be below 50 percent of GDP by 2013, the authorities recently extended this target to 2018. The PDMA specifies that the ceiling can be breached in the case of emergencies and large public investment projects, but then fiscal policy has to be such to comply with the debt ceiling within three fiscal years of the breach, which could be too rigid under certain economic shocks. Moreover, the PDMA provides little guidance as to the mechanism for deciding whether exceptional circumstances are present and what to do under such circumstances.

Ways to Improve the Mauritius' Fiscal Rule—An Operational Fiscal Anchor

To be effective the debt rule should not only have an unambiguous link between the numerical target and its ultimate objective (“public debt sustainability”) but should also have (i) sufficient flexibility to respond to shocks so that the fiscal rule does not exacerbate the economic cycle; and (ii) have a clear institutional mechanism to map deviations from numerical targets to implementable corrective actions.

The 50 percent of GDP debt ceiling seems reasonable over the next few years, but a more ambitious target might be adopted eventually. International experience suggests that debt levels below 40 percent of GDP are associated with reduced likelihood of debt crises in emerging market economies like Mauritius. Thus, consideration could be given to reducing the 50 percent target over the longer term.

Currently, the debt law's fiscal adjustment requirements are too stringent and provide insufficient operational guidance. Before its amendment (i.e., postponing the 50 percent debt-to-GDP target to 2018), the debt law implicitly required fiscal adjustment of over 4 percentage

points of GDP per year to comply with the law by 2013. Such massive fiscal adjustments would be counterproductive given the fragile macroeconomic environment and unnecessarily ambitious. Moreover, the law provides little guidance on how to change the fiscal policy stance if there is a deviation from the debt target. For example, now there is no guidance on the path of fiscal adjustment in order to reach the 2018 debt target.

Fund staff proposed to target adjustments in the structural primary balance excluding grants (SPBEG) as the operational fiscal anchor for reaching the debt ceiling. The SPBEG would have the advantage of removing the variables that are not directly under the control of the authorities, such as the cyclical element of the balance, interest rates, and grants. By focusing on the structural fiscal balance one targets the true stance of fiscal policy over the economic cycle. Moreover, the primary deficit is the deficit concept most closely related to reaching the debt target. Finally removing grants from the target does not require the authorities to make ad-hoc in-year budget adjustments, which tend to be inefficient. Adopting such an operational fiscal anchor would allow the government to comply with the debt law in the case of a debt stock outside its control and would thus contribute to the credibility of the law.

The size of the annual adjustment of the SPBEG should be related to the deviation from the debt law target. Adjustments should continue until the SPBEG level is reached that is consistent with the long-term debt ceiling—which is usually a few years before the debt target is reached. Staff calculations suggest that annual improvements in the SPBEG of about $\frac{1}{4}$ percentage points of GDP over 2011–14 would reduce the SPBEG to a deficit of around $\frac{1}{2}$ percent of GDP in 2014 compared to $1\frac{1}{2}$ percent under the authorities current fiscal plans. With such an adjustment the debt-to-GDP ratio would fall to 46 percent at end-2016 compared to 50 percent under the authorities' plans. Targeting this moderately more ambitious fiscal adjustment would allow to lower Mauritius' debt level sustainably without unduly affecting the economic cycle.

The precise formulation of the operational fiscal anchor in Mauritius would benefit from further public discussion and, if adopted, institutional strengthening. For example, the authorities might prefer the structural balance including grants for greater simplicity even if this complicates budgetary implementation. In order to create the highest level of transparency and credibility for the formulation of the fiscal anchor, the projections required for growth, interest rates, grants, and the cyclical adjustments should be made by an independent fiscal commission. This commission would calculate and publish the required fiscal adjustment for each new budget, which should be binding except if a super majority in parliament votes for a deviation from the recommended fiscal stance.

Appendix 6. Mauritius: Options for Environmental Tax Reform¹

Mauritius is one of the pioneers of promoting environmentally sustainable development through green taxation. The Maurice Ile Durable (MID) levy, introduced in 2008, is close to the ideal carbon tax that should be considered for implemented in other countries. Motor fuel taxes are sizable, but appear to be justified on environmental grounds. The government of Mauritius is interested in a transition towards a system of vehicle ownership taxes that would promote environmental objectives. Mauritius has implemented taxes to curtail the use of plastic shopping bags which are harmful to wildlife and the environment. And plans are being considered to address traffic congestion in Port Louis through road pricing, an approach that has been advocated by transportation economists for over fifty years. Although significant progress has been made, important challenges remain, not least the problem of relentlessly rising traffic congestion, which will require continued development of novel tax approaches. And the reform of vehicle taxation requires careful assessment.

Carbon policy. The MID, which is currently levied on fossil fuels on a volume basis, could be converted into an explicit carbon tax. In this case, the tax on a fuel would equal its CO₂ potential per unit, times the CO₂ tax. The pattern of fuel taxes would not be very different under the carbon tax (for same projected revenue yield). However, this change would make carbon policy in Mauritius more transparent, and would facilitate comparison with carbon pricing in other countries. The tax on CO₂ could be progressively increased over time up to a level that fully takes into account environmental damages.

Road congestion. The costs of time lost due to road congestion swamp the costs of automobile pollution and urban gridlock is a growing impediment to healthy economic growth. Preliminary staff estimates suggest that external costs per kilometer driven from congestion are over ten times the combined costs from local pollution and CO₂ per kilometer.

Although the capacity of the Mauritian transportation system needs improvement (possibly by adding light rail service to Port Louis), road congestion will always be excessive, unless motorists are charged for their impact on adding to congestion and increasing delay for other road users. Ultimately, countries would benefit from implementing (as Germany has done for trucks) a nationwide Global Positioning System (GPS) for charging motorists for each kilometer driven, where the charge is higher for urban driving, especially at peak periods. This policy

¹ Prepared by Ian Parry.

would exploit all of the possible behavioral responses for reducing driving on busy roads (e.g., encouraging people to commute earlier or later to avoid the peak of the rush hour, to car pool, to use public transport rather than drive, to reduce their overall number of trips, to re-locate to jobs and residences outside of busy downtown areas). Under such a system, prices are adjusted as needed to maintain reasonable traffic flows: although most people would continue to drive despite these tolls, typically it only takes a fairly modest reduction in the number of vehicles to significantly improve travel speeds on clogged roads. Concerns about centralized information collection of people's driving habits would need to be addressed, however. A first step in a gradual transition to this pricing system could be achieved through re-structuring the annual road tax (see below).

In the meantime, more practical pricing policies to reduce congestion include the proposed cordon toll for Port Louis. Cordon-pricing schemes are inefficient in that they impose the same fee regardless of the distance travelled by an individual motorist and can also exacerbate congestion elsewhere in the road network, as people change their routes to bypass the pricing region. Nonetheless, well-designed pricing schemes in Singapore, London, and Stockholm have been reasonably effective at alleviating congestion.

The cordon toll at peak period could be set at a level that reflects the external costs of congestion from a motorist driving within the tolled area. According to preliminary estimates, the external congestion cost caused by an extra kilometer driven is in the order of Rs 20 for peak driving in Port Louis. The appropriate cordon toll would equal this amount times the average trip distance (in and out) of the tolled area, which is approximately the diameter (in kilometers) of the tolling area (if the typical motorist drives to the center and back). It is also important that the toll rises and falls progressively during course of the rush hour to encourage people to depart before, or after, the peak hour and thereby "flatten" the pattern of trips. To help accommodate this, employers should be encouraged to offer more flexible work schedules. All routes into the downtown area should be covered by the toll, and motorbikes should be charged a smaller toll than cars, as they take up less road space.

Fuel taxes. Preliminary estimates suggest that the level of taxes on both gasoline and diesel fuel (accounting for excises and various other levies) is about right, when account is taken of their beneficial impact on reducing congestion, accidents, and pollution. Therefore, changes in the level of these taxes would not be necessary from an environmental point of view.

Vehicle taxation. Existing proposals to levy a graduated system of vehicle excise duties on CO₂ per kilometer will be more effective in improving vehicle fuel economy than existing taxes levied on engine capacity. However, the proposals do not address critical issues including maintenance of revenue; providing equal rewards for emissions reductions across different vehicles (which is important for a cost-effective policy); discouraging vehicle use (to reduce CO₂ and, more important, traffic congestion); and simplifying the tax system (so consumers better understand the tax implications of their vehicle choices).

An excise tax system with two components could be a better solution. The first component is a (revenue-neutral) “feebate” system where relatively fuel inefficient vehicles are taxed in proportion to the difference between their CO₂ per kilometer relative to that of the average vehicle (observed in the previous year) while relatively fuel efficient vehicles receive a proportional rebate. The feebate (which is widely supported by economists as a fuel economy policy) provides an ongoing incentive to keep reducing CO₂ per kilometer for every vehicle. The tax rate is easily adjusted over time, depending on how quickly policymakers wish to increase fuel economy. A value of around Rs 2,000 per gram would be broadly consistent with implicit taxes in other proposals. However, the initial level of the tax/rebate could be more or less aggressive based on policy preferences.

The feebate is cost effective as it provides the same reward, regardless of how CO₂ reductions come about, and therefore strikes the right balance between fuel economy improvements in small vehicles, medium vehicles, and large vehicles, and shifting people from large vehicles to medium vehicles, and from medium vehicles to small vehicles. In contrast, other proposals tend to rely too heavily on shifting people into small vehicles and do too little to exploit reductions in CO₂ per kilometer through other behavioral responses.

The second component is an ad valorem excise on vehicle purchases chosen to meet revenue requirements (alternatively the tax could be graduated, although the feebate already imposes a penalty on large and luxury vehicles with high CO₂ per kilometer relative to small vehicles receiving rebates). Revenues are maintained under this system, even if some people shift towards smaller vehicles—in contrast, revenues are eroded under proposals that induce people into low CO₂ per kilometer vehicles by offering them low or zero tax rates.

Over the medium term, to raise the marginal costs of driving and reduce congestion, the annual road tax could be converted into a tax on annual kilometers driven, as measured initially by odometer recordings (odometer fraud need not be a major problem with computerized readings

and suitable penalties for fraud). At the same time, a progressive switch to GPS monitoring over the longer term should also be encouraged through lower taxation for drivers who voluntarily demonstrate (via GPS) that their driving is predominantly rural or off-peak. As more drivers opt for GPS monitoring, the toll for odometer-metered cars could rise progressively, and once a critical mass of drivers have GPS this could ultimately be mandated for all drivers. A less radical alternative would be a further increase in the level of motor fuel taxes, perhaps made revenue neutral with corresponding reductions in vehicle ownership taxes. This would increase the marginal costs of driving, though it would not begin the transition to (far more effective) GPS-based tolling.

Car insurance. A complementary policy to address excessive vehicle use and congestion is the use of tax incentives to encourage a progressive transition to “pay-as-you-drive” car insurance. Under this approach, annual insurance payments vary in direct proportion to annual mileage which discourages vehicle use through raising the marginal costs of driving.

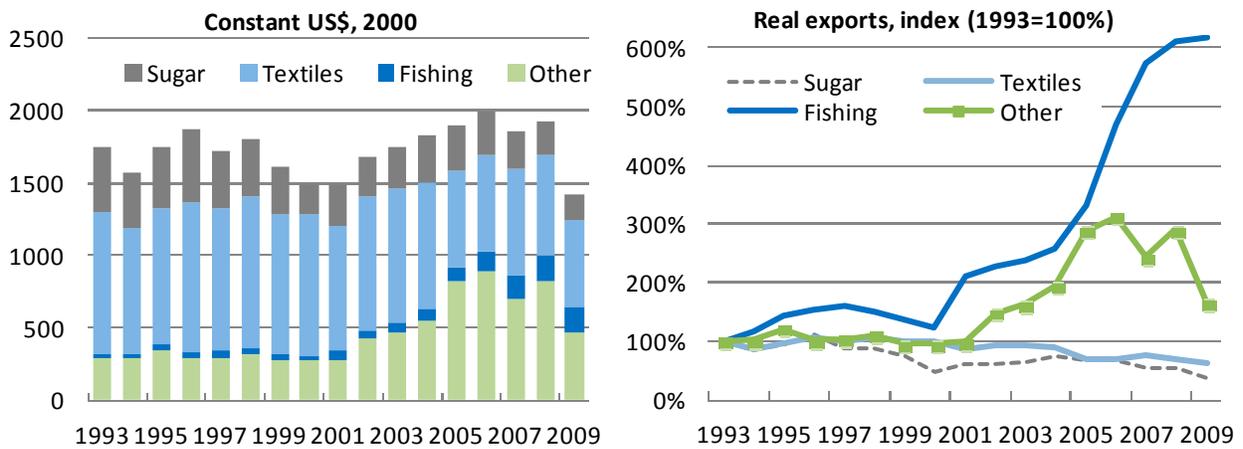
Further possible improvements. One could consider scaling back the subsidy for liquefied petroleum gas (which undermines environmental objectives); implementing deposit-refund schemes for hazardous products (e.g., batteries, tires, computer monitors); and studying the feasibility of “pay-by-the bag” to reduce household waste and promote recycling.

Appendix 7. Mauritius: Export Performance and Outlook¹

For a small open economy exports represent the main source of long-term growth.

However, the global recession showed that demand fluctuations in destination markets are the main source of shocks for such economies. Analyzing Mauritius’ export performance could help identify past constraints and future sources of growth. While acknowledging the growing importance of exports of services (tourism and financial services in particular), the analysis focused exclusive on goods exports, primarily for data availability reasons.²

Figure 1. Mauritius’ Exports of Goods in Real Terms, 1993–2009



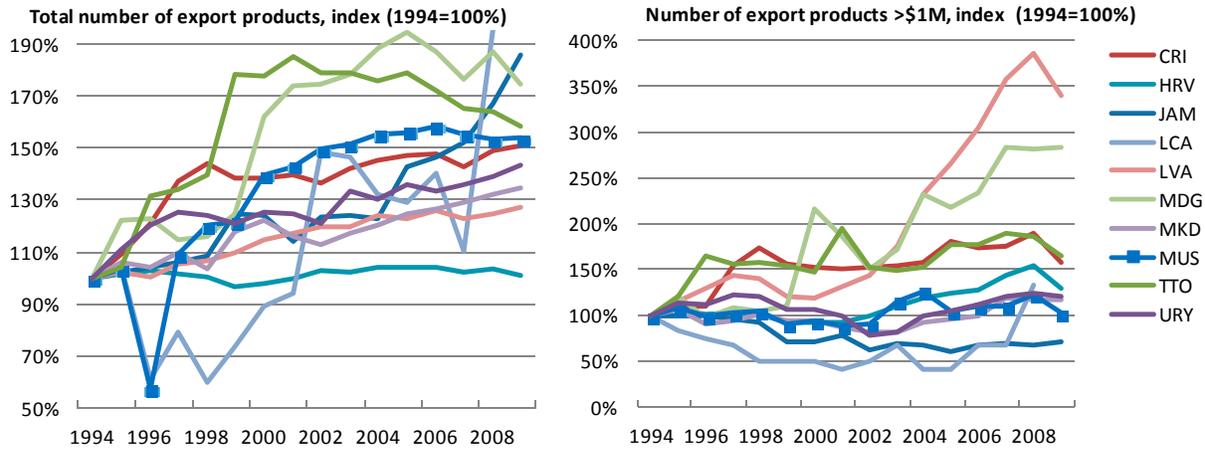
Export diversification by product and destination. The real value of goods exports (in US\$ deflated by US CPI) has been stagnant. Textiles and sugar, the two categories that accounted for much of Mauritius’ successes through the eighties, have shrunk between 1993 and 2009 by 60 and 40 percent respectively. Fisheries grew six fold—albeit from a low base—and surpassed sugar in 2009. However, much of the growth in early 2000s and the slowdown since 2006 were driven by other exports, which warrants a closer look at the disaggregated export basket.

The total number of products exported by Mauritius grew some 57 percent from 1993 to 2009 (for a total of around 2500 products), which compares positively to other small open economies (Figure 2). However, the number of goods has stagnated since 2004, and Mauritius failed to increase the number of export goods surpassing constant US\$1 million, which remained at around 110, while several other countries increased this number.

¹ Prepared by Alexander Culiuc.

² The study used UN Comtrade data, disaggregated by trading partner and product (Harmonized System classification, 6-digit level) for the period 1993–2009.

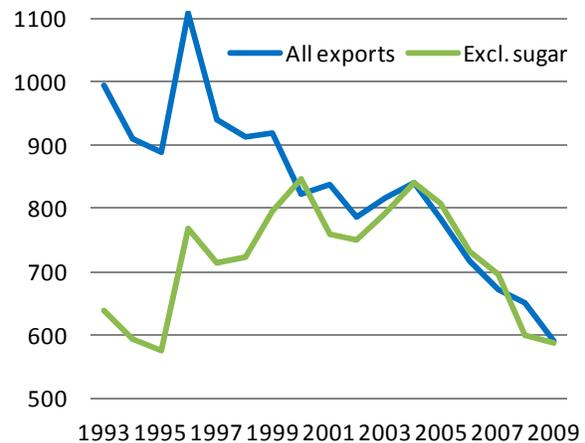
Figure 2. Number of Exported Goods, Mauritius vs. Comparator Countries, 1993–2009



Mauritius has seen a steady downward trend in the concentration of its export basket (Figure 3). However, a closer look reveals that the drop in the Hirfindahl index—the best measure of diversification—is mainly attributed to the contraction of sugar exports.

³ The geographical diversification of Mauritian exports has progressed slowly. Although the number of markets served increased from 105 in 1993 to 138 in 2009, the EU’s share over the period has remained constant at some 70 percent. The Hirfindahl index of geographical concentration stayed relatively flat since 2005.

Figure 3. Hirfindahl index of export basket concentration, 1993–2009



Export growth decomposition.⁴ The discussion above treated product and destination dimensions separately, whereas an export growth decomposition combines the two, as illustrated by the following example (Figure 4). The full set of possible product-destination combinations can be visualized as a matrix with some 200 columns (countries) and some 5000 rows (products

³ The Hirfindahl accounts both for number of goods and their relative shares in the basket. Computed as the sum of squared percentage shares of products in the total basket. Higher values indicate a higher concentration, the maximum being 10000 (one good accounts for 100 percent of exports).

⁴ Follows the methodology proposed in Zahler, Andres (2007) “Decomposing World Export Growth and the Relevance of New Destinations”, Harvard CID Working Paper.

in the Harmonized System). Suppose a country filled in 1993 only 7 cells of this product-country matrix, by exporting 4 products (P1 through P4) to 3 countries (A through C). The numbers within cells represent the value of exports of each product-destination (PD) combination, which sum up to 26. Note that only P1 is exported to all three countries. The 3-by-4 PD subset in which all exports are located is called the *potential PD space* (outlined with bold line), and defines quadrant I. By 2009 exports doubled to 52 in value. 42 percent of this growth was on account of old goods to old destinations (*surviving PD*). Filling cells within the old potential PD space (P4 to C) accounts for 12 percent of growth. Sending old goods to new destinations (quadrant II) accounts for 19 percent of growth; new goods to old destinations (quadrant III) account for 31 percent of growth; and new products to new destinations (quadrant IV) account for 4 percent. Finally, the death of old PD combinations (P3 no longer exported to B) has a negative contribution of 8 percent.

Figure 4. Conceptual Presentation of the Export Growth Decomposition Exercise.

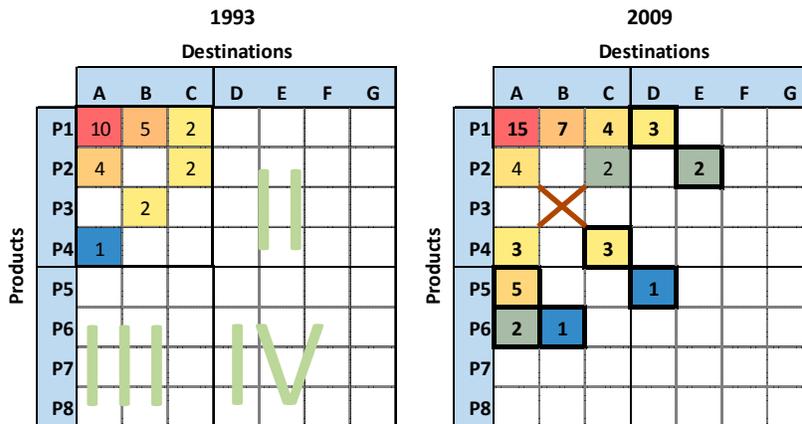
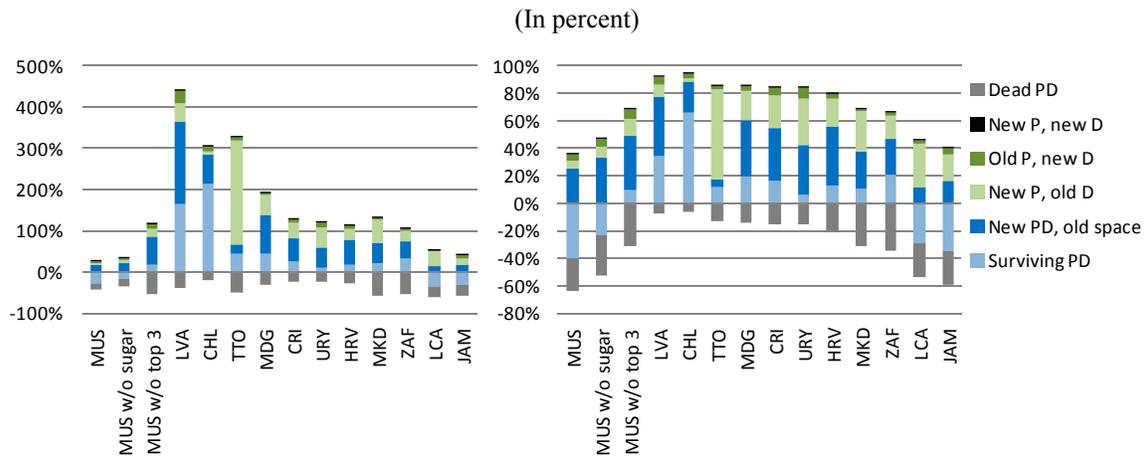


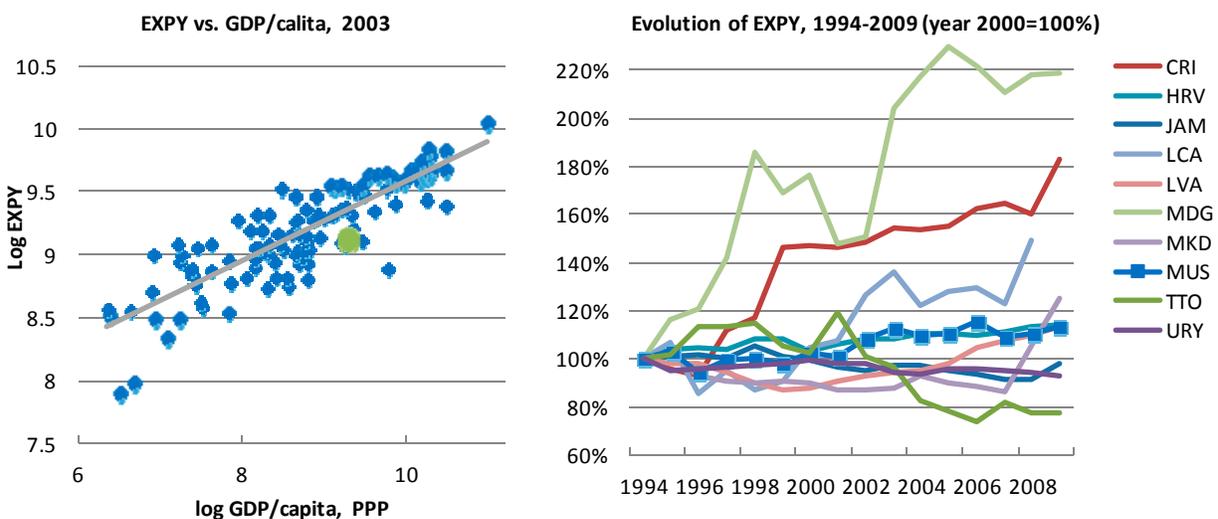
Figure 5 presents the results of export growth decomposition between 1993 and 2009 for 12 countries (right panel normalizes all bars to 100). For Mauritius, we have also looked at subsets that exclude just sugar, or sugar, textile and fishing (MUS w/o top 3 exports). The contraction of traditional exports in Mauritius as well as the death of old PD more than offset the positive sources of growth, which explains the overall contraction of exports. However, the most important positive contributors to growth is exporting an “old” product to a country to which Mauritius previously exported other goods (filling the gaps in the 1st quadrant in Figure 4). Also, Mauritius, along with most all countries in the sample, obtained more growth from the introduction of new products than from penetrating new destinations.

Figure 5. Growth Decomposition for Mauritius and Comparator Countries, 2009 vs. 1993



Sophistication of exports can be measured using the EXPY index, introduced by Hausmann, Hwang, Rodrik (2006). It is a useful tool for tracking structural transformation of tradables and a good predictor of future growth. The index is based on the observation that rich countries and poor countries export different goods (wrist-watches vs. cotton). A country that manages to export a basket of products that is characteristic for a richer country can be regarded as having achieved relatively high level of sophistication. The index is constructed in two stages. First an intermediate index PRODY is computed for each product as the average GDP/capita of exporters of that good (for example, the PRODY for wrist watches is \$31,651). EXPY for a country is then computed as the average PRODY of exported products, weighted by the value of each good in the export basket.

Figure 6. EXPY for Mauritius and Comparator Countries.



The left panel in Figure 6 shows that Mauritius’ EXPY is lower than predicted, i.e. its exports are less sophisticated than expected. Mauritius is below the regression line because the three major

exports—sugar, textiles and fish—are goods associated with relatively poor countries (low PRODY). Once these goods are excluded from the analysis, EXPY rises to around the predicted level. Unfortunately, the EXPY of Mauritius has remained flat since around 2003, signaling a slow-down in innovation and expansion into new industries.

Conclusions and policy implications. Until the mid-2000s, Mauritius made progress on all export fronts—value, diversification, and sophistication. The stagnation since 2004–05 points to important constraints faced by the traded goods sector. These could probably be traced to bottlenecks in infrastructure, but further investigations are warranted.

The export growth decomposition exercise shows that experimentation is going on: new product-destinations have emerged, some old ones have disappeared. This experimentation is a sign of healthy competition and structural transformation, and there is probably scope for supporting firms launching new export products. Regarding trade policy going forward, trade diplomacy is likely to work best when bringing existing products to markets to which Mauritius already exports. At the same time, the analysis shows that while new products are being exported, almost none of them reach large scale, indicating potential scope for supporting export-oriented enterprises through consulting services rendered by the export promoting agency and the chambers of commerce.



INTERNATIONAL MONETARY FUND

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FOR IMMEDIATE RELEASE
April [xxx], 2011

International Monetary Fund
700 19th Street, NW
Washington, D. C. 20431 USA

IMF Concludes 2011 Article IV Consultation with Mauritius

On April [xxx], 2011, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Mauritius.¹

Background

The Mauritian economy recovered in 2010 and the outlook for 2011 is positive. Real GDP growth is estimated to have accelerated to 4 percent (compared with 3 percent in 2009), driven by strong growth in fishing, ICT, and financial industries. Taking account of the expected upturn in the world economy and the continuing effects of the fiscal stimulus, real GDP growth is projected at 4.1 percent in 2011. The average inflation rate was low at 2.9 percent in 2010, although it accelerated to 6.1 percent at end-year. Year-on-year inflation is expected to increase to 5¾ percent in 2011, on the back of further projected increases in commodity prices, increases in excise duties, and administered prices, resulting in average inflation of 7½ percent. Driven by a surge in imports, the 2010 current account deficit widened to 9½ percent of GDP, and is projected to widen further to 13 percent of GDP as strong export growth will be

¹ Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. This PIN summarizes the views of the Executive Board as expressed during the May 2008 Executive Board discussion based on the staff report.

overshadowed by higher commodity import prices and large imports related to public infrastructure projects and foreign direct investment (FDI). Going forward, the largest risks to growth would come from shocks to external demand, particularly tourism and FDI.

Fiscal policy in 2010 was less expansionary than originally envisaged due to delays in implementing infrastructure projects. Total revenues decreased by $\frac{3}{4}$ percent of GDP on account of grants. With higher spending of $\frac{3}{4}$ percent of GDP the overall consolidated fiscal deficit (including special funds) widened from 2 percent of GDP in 2009 to 3.5 percent in 2010. This deficit is projected to increase to 4.8 percent of GDP in 2011, reflecting the authorities' desire to increase growth through greener taxation and increased public investment. Total revenues are projected to decline marginally in 2011, reflecting lower nontax revenues and higher grants. The expenditure mix combines essentially unchanged current spending levels (more goods and services and less transfers) with greater public investment, much of it under the PPP framework.

Monetary policy was loosened in 2010 to support economic recovery. Average inflation was low at 2.9 percent, but increased at end-year mainly due to imported inflation. The real exchange rate appreciated by 3 percent during 2010.

The banking sector withstood the downturn well. Banks have remained liquid and well-capitalized, even above proposed Basel III requirements. The share of non-performing loans (NPL) decreased and banks were profitable with 16.7 percent return on equity despite low leverage ratios. Stress-tests conducted by BOM in June indicate that the domestic banks would be resilient to significant increases in NPLs and losses on large exposures. Mauritius became a member of the International Association of Deposit Insurers and is preparing the necessary steps to establish a deposit insurance scheme. The nonbank financial institutions (NBFI) in Mauritius intermediate a large part of international investment into Asia and Africa, and continue to receive substantial inflows.

Over the past two decades, wide-ranging structural reforms, supported by prudent policies, have established Mauritius as a top regional performer. Mauritius' national statistical capacity is being strengthened in line with its needs as an emerging economy, and subscription to the SDDS is expected for end 2011.

Executive Board Assessment

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Public Information Notices (PINs) are issued, (i) at the request of a member country, following the conclusion of the Article IV consultation for countries seeking to make known the views of the IMF to the public. This action is intended to strengthen IMF surveillance over the economic policies of member countries by increasing the transparency of the IMF's assessment of these policies; and (ii) following policy discussions in the Executive Board at the decision of the Board.