

Haiti: Selected Issues and Statistical Appendix

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HAITI

Selected Issues and Statistical Appendix

Prepared by Andreas Bauer, Laure Redifer, Gamal El-Masry,
Kristian Hartelius (WHD), and Katja Funke (FAD)

Approved by the Western Hemisphere Department

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OVERVIEW

The Selected Issues paper accompanying the 2007 Article IV staff report covers three topics that are central to Haiti's challenge of further consolidating economic stability and converting the incipient recovery into a sustainable economic expansion.

The first chapter analyzes Haiti's external competitiveness. Competitiveness is key to support a sustainable balance of payments position, notably by allowing an adequate contribution of the export and import-substitution sectors to economic growth. While the analysis in this chapter is not conclusive of a price competitiveness problem in Haiti, it shows that the country has been experiencing equilibrium real exchange rate appreciation pressures, which have originated more recently from the rising inflow of transfers. Because macroeconomic policy responses to this phenomenon would be costly and unlikely to be effective, the chapter concludes that policy should focus mainly on addressing the widespread non-price competitiveness problems. These offer significant scope for improvement, and addressing them could foster needed productivity growth in the export and import substitution sectors.

The second chapter discusses avenues for further developing Haiti's monetary policy framework, to help consolidate a stable low-inflation environment and support deepening domestic financial markets. The analysis in the chapter suggests that Haiti's monetary policy regime could be strengthened through a two-step approach. Empirical evidence of a weak interest channel and a strong historical relationship between monetary aggregates and inflation indicate that monetary policy could be more effective in the short term through an increased focus on controlling inflation via the supply of base money. In addition, the institutional foundations for the conduct of monetary policy could be strengthened, through measures to increase central bank autonomy. Over time, as steps are taken to encourage financial market deepening and the interest rate transmission channel becomes stronger, a transition toward a more advanced monetary policy regime could be considered, including inflation targeting.

The concluding chapter focuses on options to increase domestic revenues as a means of funding priority expenditures. Growth in Haiti remains constrained by multiple structural bottlenecks, many of which are caused by insufficient provision of essential public goods and services. Increasing the provision of essential public goods and services without compromising macroeconomic stability requires additional resources, including from a higher domestic revenue effort. Chapter III discusses how this could be achieved. It finds that domestic revenues could be raised significantly through carefully sequenced actions on three fronts: strengthening tax administration; broadening the bases of major taxes; and, in due course, adjusting some tax rates and fees that are low by international standards.

I. ASSESSING HAITI'S EXTERNAL COMPETITIVENESS¹

A. Introduction

1. **Haiti has experienced a substantial long-term appreciation of its real effective exchange rate (REER).** In the last 10 years, the pace of this appreciation trend has accelerated, accompanied, among other things, by a large increase in remittances by the Haitian diaspora. In very recent months, the onset of nominal exchange rate appreciation has become a matter of national concern and debate.² From a surveillance perspective, both the most recent appreciation episode and the observed long-term REER appreciation trend raise at least three questions:

- Is there an external sustainability or vulnerability issue?
- Is the current REER misaligned with fundamentals?
- Is there a competitiveness problem that could affect medium term growth prospects?

2. **To answer these questions, this paper looks at the factors behind REER appreciation, analyzes whether the REER is in line with fundamentals and assesses the impact on competitiveness.** The next section gives background on REER appreciation in Haiti, the third section assesses price competitiveness using indicator-based as well as equilibrium analysis, the fourth section analyzes non-price competitiveness issues, and the final section concludes with policy implications.

B. Background

3. **Haiti's CPI-based REER has appreciated very significantly over the past 50 years, with strong volatility around the trend (Figure 1).**³ Periods of sharp depreciation, which often coincided with periods of political turmoil, were followed by even larger real appreciations in politically more tranquil periods.⁴ In the last fifteen years, REER appreciation was mostly driven by higher inflation relative to trading partners, not nominal effective appreciation of the Haitian gourde (Figure 2). However, since 2003 this situation

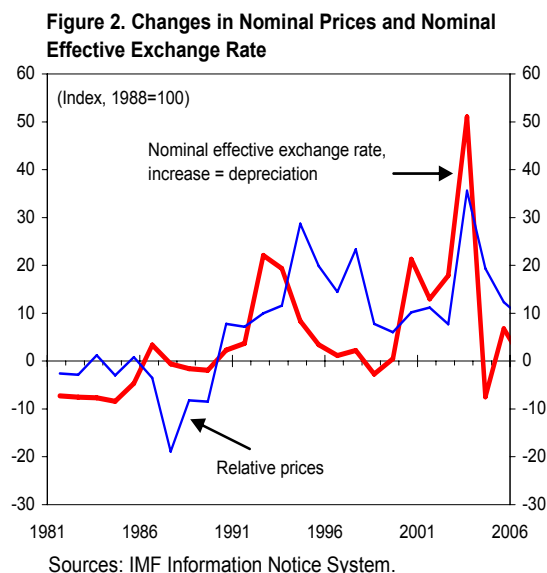
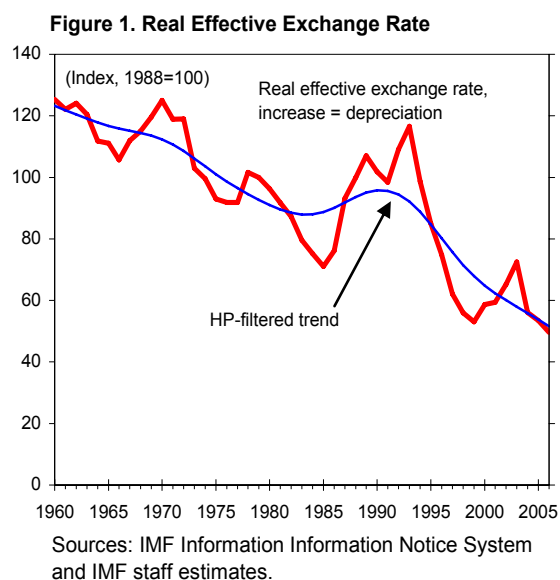
¹ By Laure Redifer and Kristian Hartelius.

² Haiti's exchange rate regime is classified as a managed float in the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAR), but it is a borderline case. In recent years, there has been very little exchange rate management, as the authorities have been constrained by a very low level of foreign reserves.

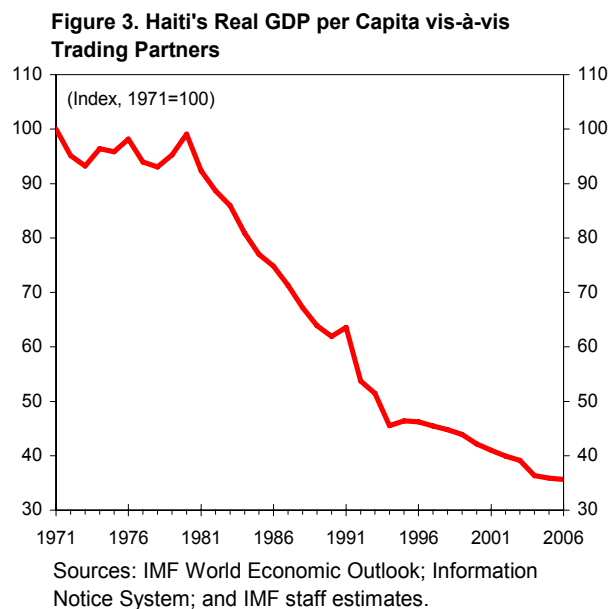
³ Throughout the paper the real exchange rate is defined so that an increase implies a depreciation.

⁴ The REER depreciated sharply in the years following the end of the second Duvalier regime in 1986, and the years 1990 and 2003, which saw the early terminations of Bertrand Aristide's two presidential terms.

seems to be gradually reversing, with a steady decline of the large inflation differential and a stabilization of the exchange rate in nominal effective terms.⁵



4. **REER appreciation has not been associated with an increase in real GDP per capita and productivity, as would be expected.** Contrary to the stylized fact that growth of a country's real GDP per capita tends to be positively correlated with an appreciation of its real exchange rate, Haiti's real GDP per capita has collapsed compared to its trading partners while the real exchange rate has appreciated.⁶ This trend has been somewhat less pronounced in the last ten years (Figure 3).

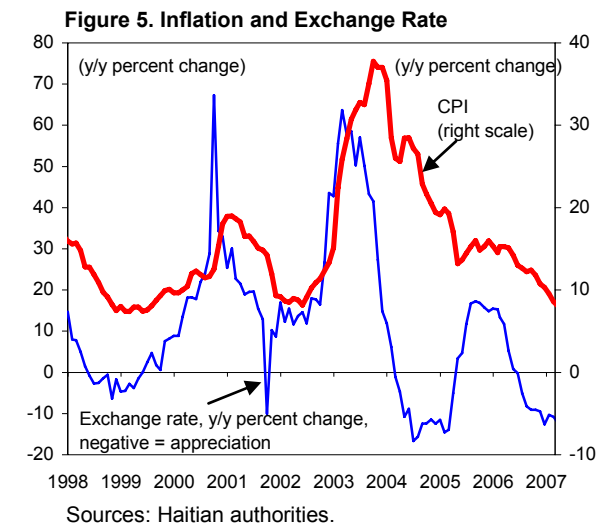
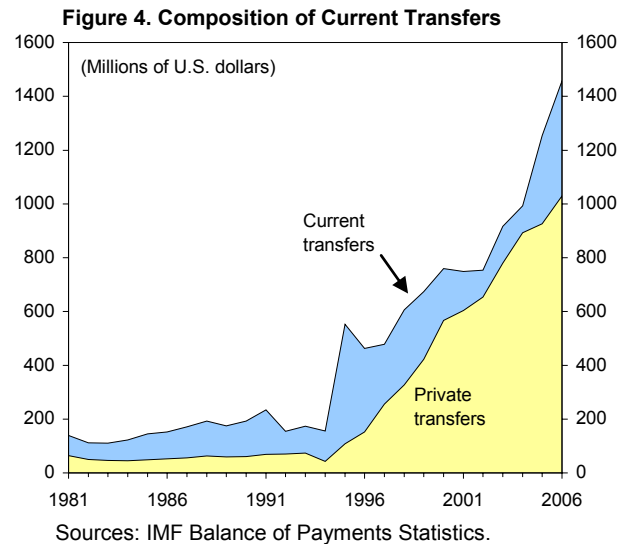


⁵ In recent months, the gourde has even begun to appreciate substantially in nominal terms.

⁶ Obstfeld and Rogoff (1996) document the stylized fact, for which Balassa (1964) provided the theoretical explanation. Haiti's relative real GDP per capita is calculated as a weighted index vis-à-vis its seven most important trading partners.

5. **Over the last ten years, the real exchange rate appreciation has been associated with a strong increase in transfers, especially workers' remittances (Figure 4).⁷** While remittances have risen in many countries in the region, Haiti's reliance on them has become particularly high (they reached about 20 percent of GDP in 2006, exceeding exports of goods and services and FDI as a source of financing for imports). Standard economic theory suggests that transfers (private or official aid grants) would be positively correlated with REER appreciation. Transfers (or any capital inflow) impact the real effective exchange rate by raising overall income and demand for both tradables and nontradables. If the country is a price-taker in world markets, the price of tradables will not rise (by the law of one price), but the price of inelastically supplied non-tradables will rise and lead to an appreciation of the real exchange rate.⁸ In Haiti, a growing rate of financial dollarization, coupled with increased dollar lending to construction and real estate, and continued appreciation pressure on the gourde, suggest that transfers finance more than just consumption from abroad.⁹

6. **REER appreciation has accelerated during the macroeconomic stabilization phase of the past three years (Figure 5).** Since the cessation of central bank financing of the budget deficit, the gourde has stabilized and, since the onset of the new PRGF-



⁷ This may also explain why the deterioration in relative GDP per capita has flattened over the same time period.

⁸ See for example, Kehoe and Fernandez de Cordoba (2000). The law of one price dictates that REER appreciation would be reflected in the internal relative prices of tradables and nontradables.

⁹ Eventually, most of the transferred dollars flow out of the country to buy assets or imports, but they fuel demand for domestic goods and services in the mean time. Recent empirical work on Central American and Caribbean countries find that remittances appear to lead to significant real exchange rate appreciation through “Dutch disease” like effects of capital flows overheating the local economy while keeping the nominal exchange rate strong (Lopez, Molina, and Bussolo (2007)).

supported program, has even begun appreciating in nominal terms. This has helped further dampen inflation, now down to 8 percent from almost 40 percent 3 years ago.

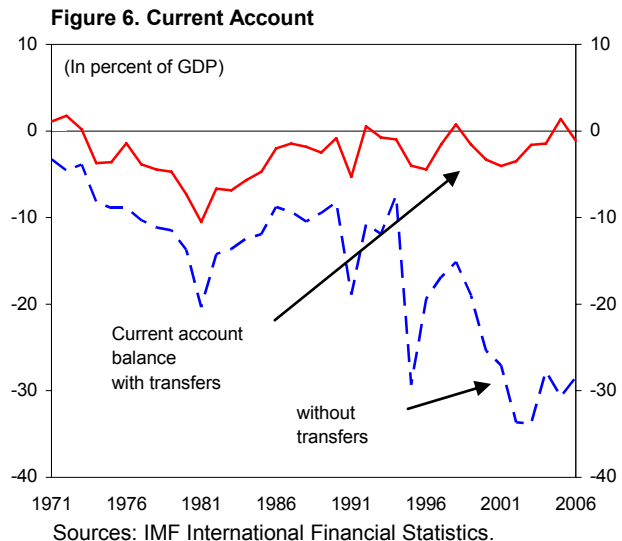
C. Price Competitiveness

7. **There are a number of ways to measure competitiveness, including through evaluating outcomes, but data limitations in Haiti are binding.** The most obvious method is evaluating the REER and its impact on the current account and the export sector. Other methods include competitor-based real exchange rates, and the “internal real exchange rate,” that is, relative prices of the non-tradables sector to the tradables sector. However, it is difficult to distinguish among these sectors in Haiti, as discussed further below. The quality of Haiti’s CPI data is broadly satisfactory, but there are no data on wages, unit labor costs or producer prices. Moreover, BOP data is relatively incomplete in the sense that the UN “grant” of security services is not reflected in the official statistics, and remittances are likely underestimated.¹⁰

8. **The analysis that can be undertaken with the available data is not conclusive of a price competitiveness problem in Haiti.** To investigate whether the real appreciation has led to external deficits, losses of export market shares or implies a price competitiveness problem, the macroeconomic impacts of REER appreciation are examined (indicator-based analysis), and the equilibrium exchange rate is estimated to determine whether the phenomenon is a result of changing fundamentals.

Indicator-Based Analysis

9. **An assessment of current account flows highlights that Haiti’s growing trade deficit is financed by increasing transfers.** Figure 6 shows that the current account including transfers has remained largely in balance over the past decades, notwithstanding REER appreciation. Excluding transfers, however, the current account deficit has grown with the appreciation, mainly through increased import demand, and now amounts to as much as 28 percent of GDP.¹¹ Consumption

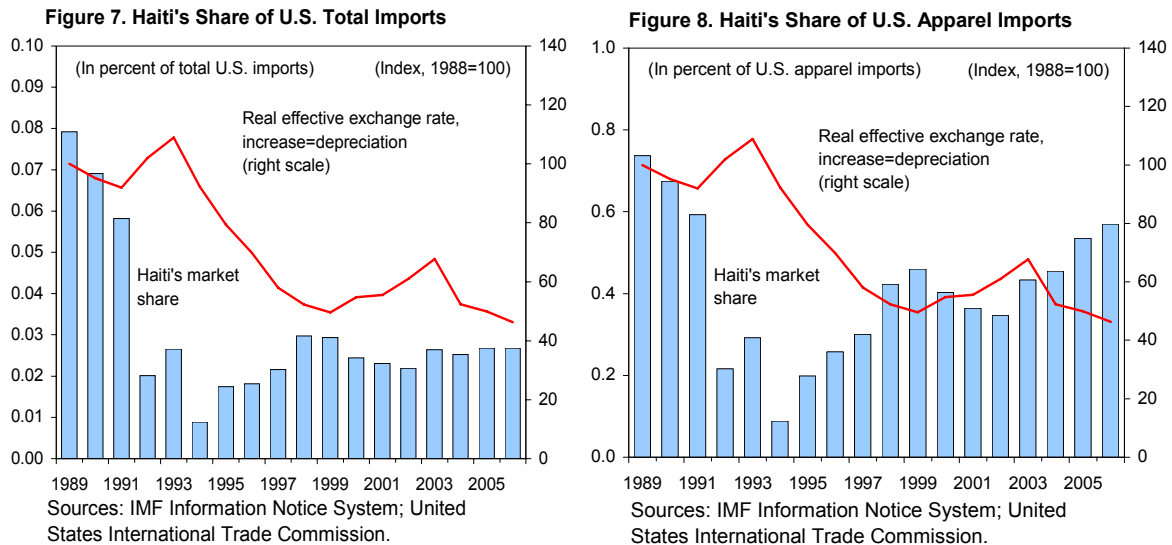


¹⁰ As in many other countries, Haiti’s remittances are likely underestimated in official BOP statistics. According to a recent IDB study, remittances may be some 10-20 percent higher than currently reported.

¹¹ The current account in Haiti is almost exclusively goods, services and transfers; net factor income is very small.

and imports are thus in principle vulnerable to an interruption in transfers, particularly remittances, although these have so far proven very resilient to the domestic economic and political cycle. Transfers have also more generally been shown to represent a more stable and less cyclical source of financing than other capital flows.¹²

10. **Export indicators have improved throughout the past decade, but have not recovered from the collapse during the embargo in the early 1990s.** At slightly above 14 percent of GDP (down from 25 percent during the 1980's), Haiti's exports of goods and services are small and highly concentrated in garments.¹³ Exports to the U.S. account for about 85 percent of total Haitian exports. Since the lifting of economic sanctions in 1994, Haiti's share of total U.S. imports has remained relatively constant in spite of the REER appreciation, but at a much lower level than before the embargo (Figure 7). Haiti's non-textile assembly exports were nearly eliminated as a result of the embargo, and have never recovered, which could be partly due to the REER appreciation. The volume and market share of apparel exports has managed to recover somewhat more, mainly through significant consolidation of the industry and a step down the value-added ladder to inexpensive garments of lower quality, such as T-shirts (Figure 8).

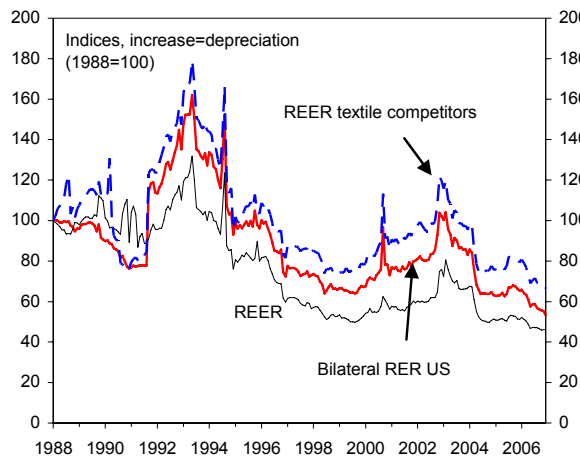


¹² See, for example, IMF (2005). Bugamelli and Paterno (2005) find that workers' remittances help reduce the probability of sharp current account reversals.

¹³ The textile assembly industry in 2006 accounted for almost 90 percent of total exports of goods, while agricultural products (mainly mango, coffee, and cacao) accounted for about 8 percent. For a more detailed analysis of Haiti's assembly sector exports, see Everaert and Jaramillo (2005).

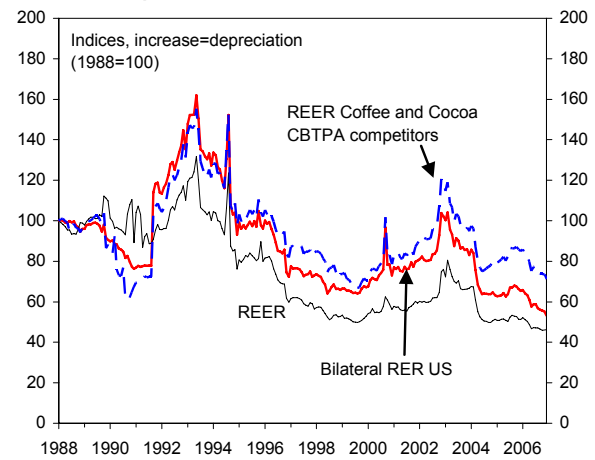
11. **Competitor-based effective real exchange rates indicate that Haiti has lost somewhat less ground than suggested by the overall REER.** For textiles and agriculture, the real exchange rate appreciation vis-à-vis competitors on the U.S. export market has been less dramatic over the past two decades, as evidenced by Figures 9 and 10. As of December 2006, the REER vis-à-vis coffee and cocoa competitors in the Caribbean Basin Trade Partnership Act (CBTPA) was actually weaker than in 1990 and 1999.

Figure 9. Competitor Based REER, Textile Exports to the United States



Sources: IMF Information Notice System; IMF International Financial Statistics; and United States International Trade Commission.

Figure 10. Competitor based REER, Coffee and Cocoa exports to the United States



Sources: IMF Information Notice System; IMF International Financial Statistics; and United States International Trade Commission.

12. **Analysis of tradables vs. nontradables inflation does not show that the relative price of non-traded goods has been increasing, although this could reflect measurement problems.** An increase in the relative price of non-tradable goods would normally be expected, given the strong appreciation of the CPI-based REER. However, distribution costs in the tradables sector are quite high, as a result of weak infrastructure and scale-inefficient operations, which makes the two sectors difficult to distinguish when using CPI data.¹⁴ Unfortunately, no producer price data or sectoral wage series are available for Haiti for determining alternative measures of price developments for tradables and nontradables. Recently, however, there has been anecdotal evidence of a demand push and bottlenecks in the non-tradables sector, such as shortages of construction services and rising real estate prices, which may be early signs of increasing relative prices in the non-tradables sector.

¹⁴ Anecdotal evidence suggests that a lack of competition may also be contributing to high distribution margins. For a study of the importance of distribution costs when measuring prices of tradable goods, see Burstein, Neves, and Rebelo (2000).

Equilibrium Real Exchange Rate Analysis

13. **To assess the real exchange rate in relation to fundamentals in the Haitian economy, cointegration (VECM) techniques are employed on annual data between the 1971 and 2006.** The data set presented in Figure 11 includes:

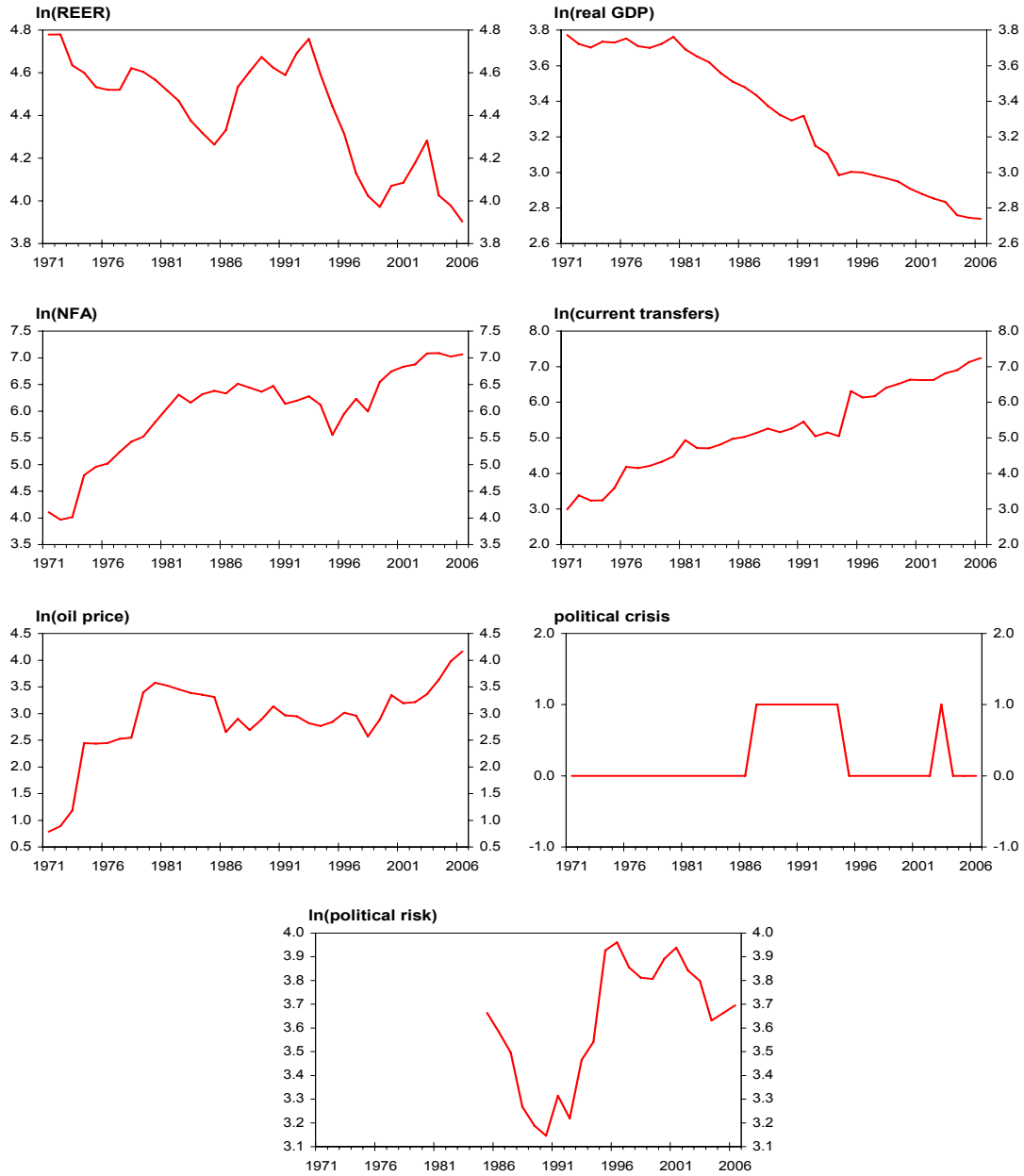
- Relative real GDP per capita, calculated vis-à-vis Haiti's seven most important trading partners. As previously noted, higher relative real GDP would be expected to be associated with an appreciated real exchange rate.
- Net foreign assets (NFA) as reported in Lane and Milesi-Ferreti (2006). The series was extended using IFS data for the last three years. For reasons of taking logs the sign of NFA was inverted, so that a positive stock denotes Haitian net claims on the rest of the world. *A priori*, a positive relation between NFA and an appreciated real exchange rate would be expected, since debtor countries will need a more depreciated real exchange rate to generate the trade surpluses necessary to service their external liabilities.¹⁵
- Current transfers, which includes both remittances and public transfers. As previously noted, higher transfers would be expected to be associated with an appreciated real exchange rate.
- The world price of oil, as a proxy for Haiti's commodity terms of trade. Higher commodity terms of trade (i.e. lower oil price) should appreciate the real exchange rate through real income or wealth effects.
- Political risk variables. The International Country Risk Guide (ICRG) has only been publishing its Political Risk Rating since 1984, and therefore a dummy variable approach was employed to capture the effects of political crises in the full data sample.¹⁶ Higher political risk would be expected to be associated with depreciation of the real exchange rate.

All variables, except the political dummy, are non-stationary. In contrast to many real exchange rate studies government expenditure is not included, because of a lack of reliable data. In any case, this omission may be less relevant in the case of Haiti, because government expenditures are not very large (around 12 percent of GDP, according to national accounts data).

¹⁵ See IMF (2006) for a discussion of the relation between NFA and the real exchange rate.

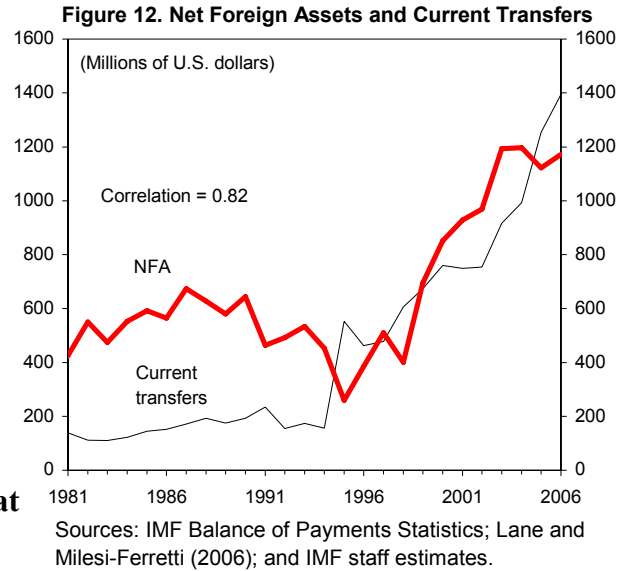
¹⁶ The period between 1987 and 1994, as well as 2003, were defined as periods of political crisis in Haiti. These years saw civil strife associated with the end of the Duvalier era and the early termination of Aristide's two presidential terms.

Figure 11. Variables in the Dataset



Sources: IMF databases; International Country Risk Guide; and Fund Staff estimates

14. **Net foreign assets and transfers both provide information content on capital inflows, but vary in importance depending on the length of the data sample.** Both series are highly correlated as illustrated by Figure 12. Over the last ten years, NFA appears to have been driven mainly by the strong inflows of current transfers, in particular remittances. In Haiti, the increase in dollar deposits in the commercial banking system has remained a relatively constant percentage of transfers and gross export receipts, with NFA as a steady share of dollar deposits.¹⁷ For the regressions covering the whole data sample, NFA was included in the models, since it is a much broader measure of external wealth, including prior to the period where transfers began to rise significantly.



15. **The empirical analysis indicates that capital flows and political risk have been important determinants of the real exchange rate over the past decades.** Table 1 presents the estimation results:

- The results show that a VECM including relative real GDP fares badly. The real exchange rate is not error correcting in Model (1), and the sign of the coefficient on GDP is not in line with theory.
- Model (2), however, which excludes GDP, shows error correction in REER and a cointegrating relation with the expected signs. Higher NFA tend to be associated with a strengthening of the real exchange rate, and higher oil prices or political crises with a weakening.
- Models (3) and (4), which include the ICRG Political Risk Rating instead of the dummy, and thereby only use the latter part of the data sample, corroborate the importance of political developments. In addition, similar results are obtained regardless of whether NFA or current transfers are used.

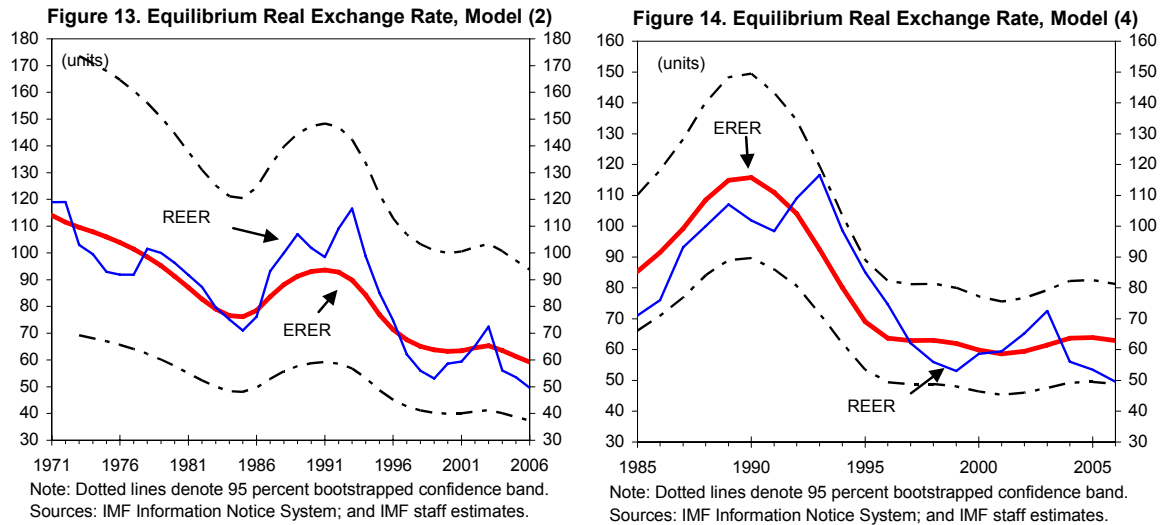
All the cointegration results remain when changing to Engel-Granger techniques that require estimation of fewer parameters.

¹⁷ The annual increase in dollar deposits has been 7-14 percent of private transfers plus gross goods and services exports receipts. Under the current regulatory framework, banks can only lend 50 percent of their dollar deposits and must constitute reserve requirements of 20 percent. The remaining dollar deposits are either used for cash in vault or to acquire net foreign assets.

Table 1. Vector Error Correction Models

Model	(1)	(2)	(3)	(4)
Number of observations	33	34	18	19
Cointegrating Equation:				
Political crisis	-0.50 (0.02) [-22.85]	-0.31 (0.03) [-9.16]	... ... ...	... ... ...
ln(political risk)	... ... ...	... ... ...	0.66 (0.03) [22.18]	0.71 (0.10) [7.43]
ln(real GDP)	-0.23 (0.04) [-5.23]	... ... ...	... ... ...	... ... ...
ln(NFA)	0.32 (0.04) [7.6]	0.51 (0.03) [18.29]	0.23 (0.02) [13.41]	... ... ...
ln(current transfers)	... ... ...	... ... ...	... ... ...	0.14 (0.04) [3.90]
ln(REER)	1	1	1	1
ln(oil price)	-0.28 (0.04) [-7.26]	-0.33 (0.03) [-9.88]	... ... ...	... ... ...
Constant	-4.63	-6.46	-8.22	-7.74
Error Correction Coefficients:				
Δ ln(REER)	0.02 (0.33) [0.06]	-0.43 (0.20) [-2.15]	-2.54 (0.33) [-7.76]	-0.99 (0.21) [-4.65]

Source: IMF staff estimates



16. **The models show that much of the appreciation of the real exchange rate is an equilibrium phenomenon in line with fundamental developments in Haiti's economy.** Figure 13 shows that the equilibrium exchange rate implied by Model (2) explains a large part of the fluctuations in the REER since 1971.¹⁸ Similarly, Figure 14 shows that Model (4), through trends in political risk and current transfers, can explain much of the observed movements in the real exchange rate.

17. **Both models indicate that the appreciation in recent years has been stronger than implied by fundamentals, but a firm conclusion on misalignment cannot be drawn.** The small number of observations in the sample makes the estimation uncertain, and the deviation of the REER from the estimated equilibrium is within the error margin for both models.¹⁹ Furthermore, since 2004 there have been structural developments associated with the stabilization of the economy that could be expected to appreciate the equilibrium real exchange rate (ERER), but which cannot be captured by the models. These include the ceasing of central bank financing of the government deficit, as well as the establishment of a strong UN military force, which has an annual budget equal to 10 percent of GDP and creates demand for domestic goods and services.

¹⁸ The equilibrium real exchange rate is defined as the exchange rate implied by the cointegrating relation, evaluated at Hodrick-Prescott filtered values of the fundamentals.

¹⁹ There is a particular large uncertainty in the estimation of Model (4) due to the very low number of observations. The bootstrapped error band is, however, more narrow for Model (4) because it better captures the volatility of the real exchange rate during the early 1990's.

D. Non-price Competitiveness

18. Haiti fares poorly in most qualitative measures of non-price competitiveness.

Despite significant gains in government transparency, expenditure management and stabilization of the security situation during the last three years of reform, investor confidence has yet to improve. Haiti ranks below most countries in the region, as well as other PRGF-eligible countries, including those with lower GDP per capita, as evidenced by the ICRG rankings of corruption, contract viability, and law and order (Tables 2 and 3). In Transparency International's 2006 corruption perceptions index, Haiti ranked at the bottom of 163 countries.²⁰

Table 2. Haiti's Ranking vis-à-vis Regional Competitors in Tourism and Agriculture as of January 2007

Corruption		Contract viability		Law and order	
El Salvador	2.5	Dominican Republic	3.5	Costa Rica	4
Nicaragua	2.5	Guatemala	3.5	Nicaragua	4
Costa Rica	2	Jamaica	3.5	Panama	3
Dominican Republic	2	Nicaragua	3.5	Dominican Republic	2.5
Guyana	2	Panama	3.5	Jamaica	2.5
Honduras	2	Trinidad & Tobago	3.5	Trinidad & Tobago	2.5
Panama	2	Costa Rica	2.5	Guyana	2
Trinidad & Tobago	2	El Salvador	2.5	El Salvador	1.5
Guatemala	1.5	Guyana	2.5	Guatemala	1.5
Jamaica	1.5	Haiti	2.5	Haiti	1.5
Haiti	1	Honduras	2	Honduras	1.5

Source: International Country Risk Guide.

Table 3. Haiti's Ranking vis-à-vis Selected PRGF Eligible Countries as of January 2007

Corruption		Contract viability		Law and order	
Tanzania	2.5	Burkina Faso	3	Tanzania	5
Burkina Faso	2	Mozambique	3	Uganda	4
Uganda	2	Uganda	3	Burkina Faso	3.5
Bangladesh	1.5	Haiti	2.5	Mozambique	3
Mozambique	1.5	Bangladesh	2	Bangladesh	2.5
Haiti	1	Tanzania	1.5	Haiti	1.5

Source: International Country Risk Guide.

19. **Wage costs in Haiti are low, but businesses face extraordinary high non-wage costs.**²¹ In the World Bank's 2007 *Ease of Doing Business* report, Haiti ranked second-to-last for the Western Hemisphere (Table 4). While Haiti fares poorly in the region on almost all indicators, it fares better relative to a select PRGF-country cohort (Table 5). However, even against these PRGF-eligible countries, Haiti's performance on some indicators such as days

²⁰ However, this was based on very limited survey information and apparently most of the information was gathered from entities not resident in Haiti itself.

²¹ These are some of the distribution costs referred to earlier.

needed to start or close a business and investor protection is worse. The time needed to register property is also higher: in sub-Saharan Africa an average of 108 days is needed, while in Haiti the average time is 683 days.²² More generally, there are a number of other problems, such as the need for expensive private security services, high transport costs due to dilapidated infrastructure, and high electricity costs. In Port-au-Prince, electricity service is only available 8 hours per day on average, forcing businesses to self-generate electricity at very high cost to ensure reliable supply. The authorities are well aware of these problems and are trying to address them, but progress has been slow, even though a step to reduce bureaucratic red tape was taken recently through the opening of a “guichet unique” (one-stop office for establishing businesses) in downtown Port-au-Prince.

Table 4. World Bank Ease of Doing Business Indicators for Latin America

	Ease of Doing Business	Starting a Business	Registering Property	Getting Credit	Protecting Investors	Closing a Business
Puerto Rico	19	8	46	21	12	27
St. Lucia	27	43	51	101	19	39
Chile	28	32	30	33	19	107
Antigua and Barbuda	33	22	71	101	19	54
Mexico	43	61	79	65	33	25
St. Vincent and Grenadines	44	29	101	83	19	151
Jamaica	50	10	107	101	60	23
Belize	56	103	117	83	118	24
Trinidad and Tobago	59	35	154	48	15	151
Uruguay	64	134	138	33	83	37
Peru	65	92	32	33	15	73
Nicaragua	67	62	127	48	83	66
El Salvador	71	123	49	33	99	79
Dominica	72	24	78	101	19	151
Grenada	73	50	145	83	19	151
Colombia	79	90	56	83	33	26
Panama	81	26	63	13	99	71
St. Kitts and Nevis	85	105	136	117	19	151
Argentina	101	106	74	48	99	58
Costa Rica	105	99	37	33	156	118
Honduras	111	138	89	21	151	102
Paraguay	112	135	48	48	46	124
Dominican Republic	117	119	126	33	135	142
Guatemala	118	130	26	48	135	83
Brazil	121	115	124	83	60	135
Suriname	122	158	120	117	156	143
Ecuador	123	139	84	65	135	134
Bolivia	131	149	115	65	118	53
Guyana	136	78	52	159	151	131
Haiti	139	167	135	117	142	146
Venezuela	164	129	75	143	162	144

Source: World Bank, *Doing Business*, 2007.

²² The World Bank’s “ease of doing business” index has 11 categories in total. The categories displayed are those where Haiti fares most poorly.

Table 5. World Bank Ease of Doing Business Indicators for Selected PRGFCountries

	Ease of Doing Business	Starting a Business	Registering Property	Getting Credit	Protecting Investors	Trading Across Borders	Closing a Business
Bangladesh	88	68	167	48	15	134	93
Uganda	107	107	166	159	60	160	44
Haiti	139	167	135	117	142	138	146
Mozambique	140	153	105	83	83	141	126
Tanzania	142	127	157	117	99	67	105
Burkina Faso	163	131	164	117	99	154	90

Source: World Bank, *Doing Business*, 2007.

E. Conclusions

20. **Haiti's economy has experienced substantial REER appreciation over the long term and more recently, even though the current account has remained relatively balanced owing to rising transfers.** Reliance on transfers is very high, with workers' remittances exceeding exports in goods and services and FDI. This dependence harbors some vulnerability, which is reduced to the extent that transfers are not debt-creating and tend to be more stable than other types of capital inflows. To mitigate remaining risks, further development of Haiti's export and import substitution sectors would be desirable to diminish the need for adjustment if the pace of transfers were to drop. While Haiti's exports have recovered somewhat from their collapse after the imposition of an economic embargo in the early 1990s, the sector remains fairly small, concentrated, and undiversified. Further recovery will depend on Haiti's competitiveness, both in its price- and non-price dimension.

21. **Equilibrium exchange rate analysis does not suggest, on balance, that the Haitian gourde is misaligned, but the recent acceleration in REER appreciation should nevertheless be watched.** Most of the recent appreciation reflects changes in underlying fundamentals, particularly the rapid increase in remittances and other transfers. The estimated equilibrium real exchange rate models indicate that in the past three years, the REER has appreciated to some extent beyond what fundamentals would imply. However, these deviations from the estimated equilibrium are within the error margins, and the analysis is constrained by data limitations and recent structural change. Also, periods of rapid stabilization, such as the one Haiti is experiencing, are often accompanied by strong real appreciations. Still, because of its intensity, the recent REER appreciation merits continued monitoring.

22. **Because Haiti’s appreciation appears to be largely an equilibrium phenomenon, the scope for a macroeconomic policy response is limited.** Fiscal restraint represents a standard policy response to real appreciation, but substantial immediate spending needs—including to address critical developmental bottlenecks—do not leave much space for further fiscal consolidation at this time. On the other hand, attempts to stem nominal appreciation through systematic intervention would likely be ineffective over time.²³ Unsterilized foreign exchange purchases would ultimately push up the inflation differential between Haiti and its trading partner countries, and thus not prevent REER appreciation. Sterilized intervention would be very costly. However, the authorities could strengthen their monetary policy instruments and regime, to ensure that monetary programs are implemented as planned and do not exacerbate pressures on the nominal exchange rate in the short term.²⁴

23. **Policy efforts should focus on addressing widespread non-price competitiveness problems, which at this stage appear to be a binding constraint to growth.** REER appreciation, although an equilibrium phenomenon, still poses a challenge to the competitiveness of the tradables sector. If productivity in that sector does not rise, there is a real risk that future growth and much needed diversification will not materialize. Tackling the key problems that contribute to the very high costs of doing business in Haiti appears most conducive to support productivity, and should thus be a policy priority. This will also be important to ensure that the country can benefit from development opportunities such as the recent HOPE Act, which provides preferential access for Haiti’s textile sector to the U.S. market.

²³ The authorities have been purchasing dollars recently, however, these purchases contribute to the PRGF objective of stockpiling official reserves from their current very low level (2 months of imports), and contribute to seasonal smoothing, as opposed to being a serious policy of exchange rate management.

²⁴ Chapter II of this Selected Issues paper discusses options to strengthen Haiti’s monetary policy framework. See also the staff report for a discussion of recent deviations from the monetary program and staff advice on the short-term monetary policy stance.

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II. MONETARY POLICY IN HAITI: IMPROVING EFFECTIVENESS²⁵

A. Introduction

24. Like other low-income countries, Haiti has experienced problems of fiscal dominance, with monetary policy subjugated to spending needs of the government. In addition, monetary policy implementation has been encumbered by underdeveloped markets, financial sector concentration and dollarization, and imperfect instruments. Thanks to the implementation of more prudent policies, particularly stronger fiscal discipline, the authorities were able to reduce inflation from almost 40 percent at the end of 2003, to 8 percent in April 2007. While the end of fiscal dominance and existing monetary tools were adequate to effect this outcome, some weaknesses of the monetary policy regime and implementation may need to be addressed, to entrench more firmly price stability and encourage financial market deepening, both needed for sustained growth.

25. **This paper discusses avenues to further strengthen Haiti's monetary policy regime.** It proposes methodologies for reinforcing the analytical framework underlying monetary policy, and discusses how the monetary policy regime itself could be made more coherent in the short term and evolve in the longer term. The next section provides background on monetary and inflation developments and the institutional setting of monetary policy in Haiti. The third section summarizes the findings of econometric analysis that was performed to fortify the analytical framework, the fourth section outlines possible steps for clarifying the monetary policy regime in the short term and developing it further over time, and the final section discusses implementation issues.

B. Background

Fiscal Dominance (prior to September 2004)

26. **Haiti's monetary policy regime evolved from a direct instruments-based regime.** Interest rate controls, credit controls, and directed credit were abandoned in the late 1990's, and the use of reserve requirements as the principal policy tool was abandoned shortly thereafter. BRH bonds were created in 1996 as a means for sterilizing central bank financing to the government; originally they were intended to be a temporary instrument. Since late 2000, monetary policy has been steered mainly by interest rates and the money supply.

²⁵ By Laure Redifer and Kristian Hartelius, building on earlier work by Briec Monfort.

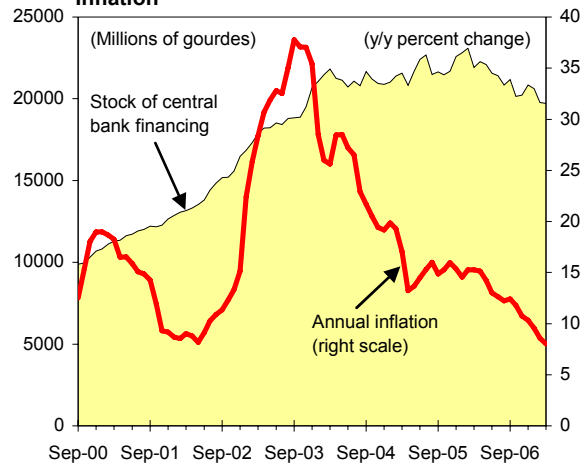
27. **Early in this decade, fiscal dominance led to a spike in inflation.** During the second Aristide regime (2001-2004), overspending by the government caused ballooning borrowing from central bank (Figure 1). The BRH attempted to sterilize the resulting increase in the money supply, but eventually monetary policy decisions were overshadowed by a desire to control mounting central bank losses, which grew to almost 2 percent of GDP by end-2003. Inflation soared to 38 percent by the end of 2003. By mid-2004, the BRH gave up sterilizing and a huge liquidity surplus developed.

28. **Higher inflation was accompanied by gourde depreciation and accelerating dollarization** (Figure 2). Dollarization increased, both in terms of gourde values and in real terms, with deposit dollarization increasing from roughly 30 percent at the beginning of 2000 to 50 percent in early 2004.

Stabilization (since September 2004)

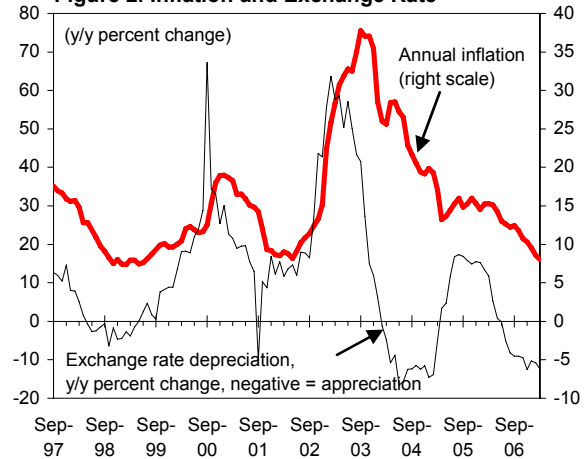
29. **The transition government took over in March 2004, and made efforts to restore macroeconomic stability.** The liquidity surplus was eliminated by ceasing central bank financing to the government, as fiscal balances improved, and doubling the stock of outstanding BRH bonds (Figure 3). Inflation declined from 38 percent in 2003 to 8 percent by end-April 2007, the exchange rate stabilized, and the rate of dollarization slowed.

Figure 1. Central Government Financing and Inflation



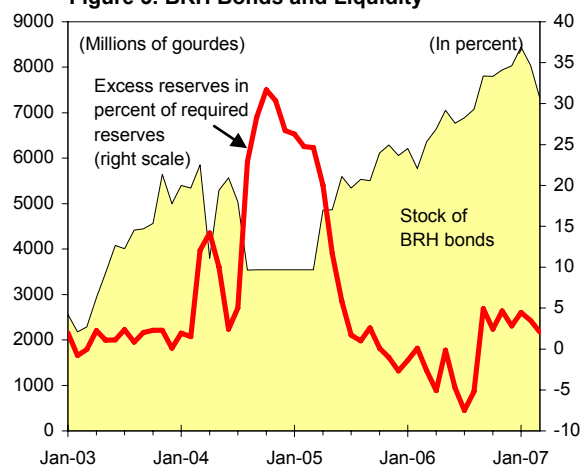
Source: Haitian authorities

Figure 2. Inflation and Exchange Rate



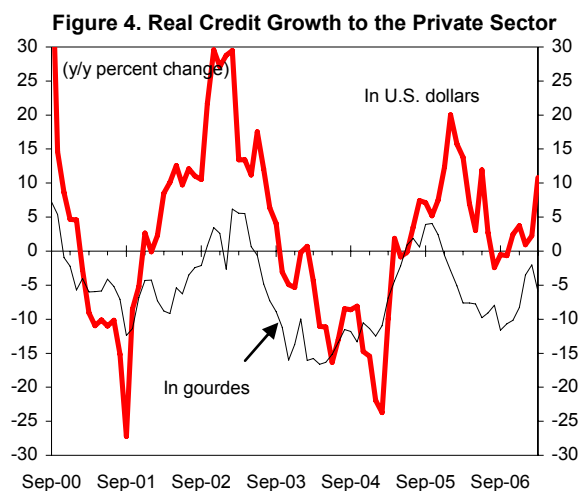
Source: Haitian authorities.

Figure 3. BRH Bonds and Liquidity



Source: Haitian authorities.

30. **BRH sterilization effectively shifted financing of the government debt to the private sector, crowding out private borrowing.** About 90 percent of BRH bonds are held by three large banks in Haiti, which rely increasingly on the high-interest/low-risk BRH bonds for profit, as well as other non-banking ventures, rather than engaging in riskier lending to the private sector. Credit growth, particularly in gourdes, has remained very weak in recent years (Figure 4).



31. **The BRH has incurred financial losses by bearing most of the carrying cost of the outstanding debt.** The BRH began running operational losses in 2000, and has continued to do so since, with cumulative losses in the range of 2 percent of GDP at end-FY2006. About half of its expenditures are interest on the outstanding stock of BRH bonds. The government has paid some interest on its outstanding stock of debt, but this has historically been only about 1/3 of the carrying cost of the BRH sterilization bonds.

32. **The conduct of monetary policy has been encumbered by lack of a clear regime, imperfect instruments, shallow market conditions, and high dollarization.** The policy regime remains an eclectic mix of monetary and inflation targeting, and, on the margin, exchange rate management--through opportunistic purchasing of foreign exchange to build reserves from their current low levels. The money supply is set by the volume of BRH bonds, and the policy rate is the interest rate on 91-day BRH bonds. However, the bond auctions have both fixed volumes and prices. Under this system, the policy interest rate (3-month BRH bonds) is not market-determined and, combined with the lack of interbank transactions and generally shallow financial markets, has a very muted and delayed impact on lending rates.²⁶ Despite significant policy interest rate easing in the past six months, intermediation spreads remain extremely high. This is partly motivated by large unremunerated reserve requirements and the general high cost of doing business in Haiti.²⁷ Monetary transmission is

²⁶ Haiti has 9 commercial banks remaining with the largest three banks holding 80 percent of capital. There are no government securities, no secondary market for BRH bonds, no stock exchange, and pension funds, insurance and microfinance remain unregulated.

²⁷ Haiti's reserve requirements are 31 percent for gourde and dollar deposits. For dollar deposits, 30 percent of the requirement must be held in gourdes and the rest in dollars. There is a prudential limit on dollar lending of 50 percent of dollar deposits, but no requirement that the borrower prove income in dollars.

also hampered by widespread dollarization, with operations in key sectors such as real estate, consumer durables, and construction taking place almost exclusively in dollars.

33. **Recent policy interest rate reductions have been combined with low money supply growth, giving rise to conflicting signals on the direction of monetary policy.** In light of a sharper-than-expected downward fall in inflation, the policy interest rate was lowered by 500 basis points from December 2006 through June 2007, in an effort to revive credit growth. Meanwhile, money supply growth (y/y) has been almost flat, as a result of a drop in the stock of net credit to the government due to less-than-expected spending. In other words, the interest rate easing is not being reflected on the side of the money supply, and given the weak transmission of interest rates, is unlikely to do much to ease monetary conditions.

Challenges Going Forward

34. **To entrench a low-inflation environment, the authorities face the challenge of addressing some of the remaining weaknesses of the monetary policy regime.** Maintaining price stability is necessary for sustainable growth and also protects the poor from the inflation tax which hits them disproportionately hard. While the current regime and available instruments were sufficient to bring inflation down from high levels, they may be less effective for maintaining stability and, importantly, for deepening financial markets and increasing financial intermediation.

35. **This chapter focuses on two aspects of this challenge.** First, strengthening the analytical framework for monetary policy decision-making, particularly the capabilities for inflation forecasting. Second, making the policy regime more coherent and its instruments more effective. The specific issue of liquidity forecasting, which is key for making BRH bond auctions and the monetary regime more effective is not addressed in detail here, but the authorities have requested Fund technical assistance on the matter. Also, the issue of dollarization, including its sources and possible prudential risks are not further discussed in this chapter. However, the ongoing FSAP, which is jointly conducted by the IMF and the World Bank, is expected to provide some information on these matters.

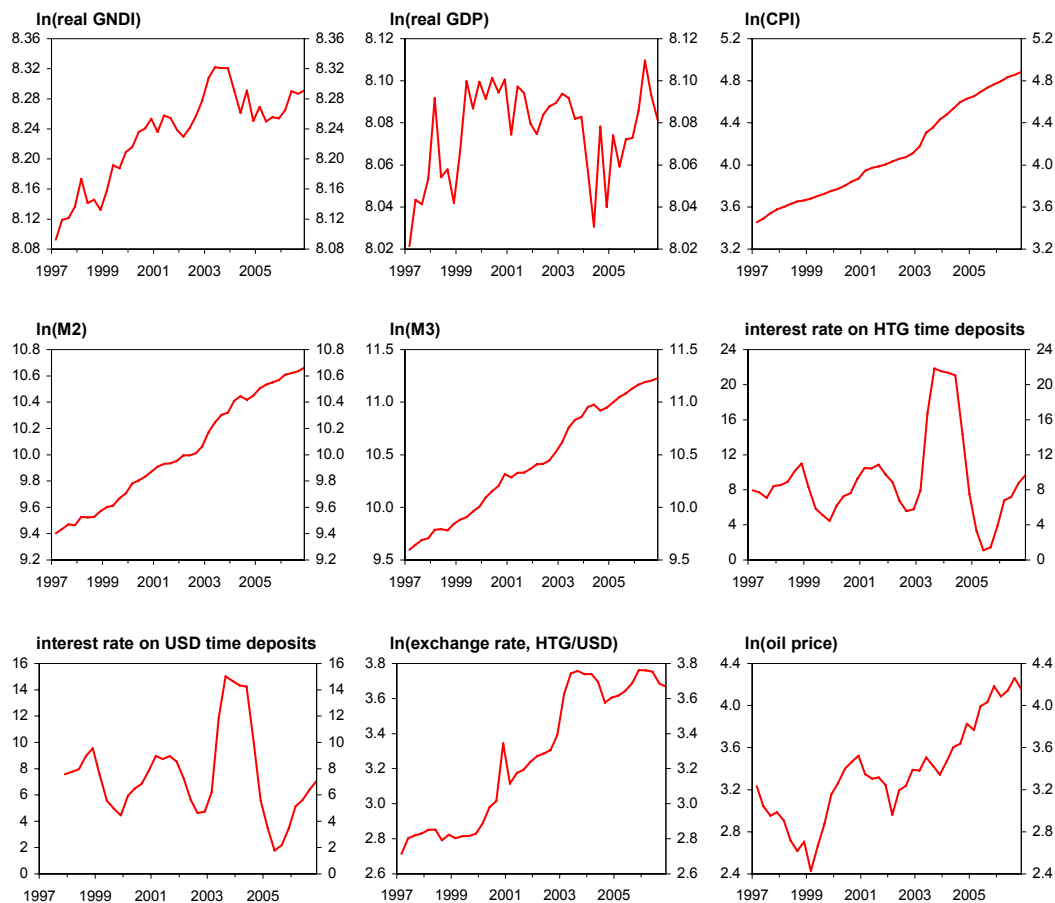
C. Strengthening the Analytical Framework for Monetary Policy

36. **Time-series econometric techniques were applied to analyze the factors influencing inflation in Haiti.** Vector Error-Correction Models (VECMs) were used for long-run analysis to test the quantity theory of money, by checking for cointegration between money, output and inflation. Vector Auto-Regressions (VARs) were used to identify the main determinants of inflation in Haiti, and to study the dynamics of monetary policy transmission.

Data

37. **The main data constraint for the empirical work is a lack of high-frequency national income accounts data.** The analysis was carried out using both quarterly and monthly data for the period September 1996 - April 2007. The variables included were money aggregates (M1, M2, and M3), dollar and gourde interest rates on time deposits, the world price of oil, the gourde-dollar exchange rate, CPI, real GDP, and real gross national domestic income (GNDI), which includes transfers. However, Haiti only produces national income accounts data on an annual basis. Therefore, the real income series were generated using the Chow-Lin (1971) methodology, and could only be included on a quarterly frequency.²⁸ The variables in the dataset are presented in Figure 5. All variables, except real GDP and the interest rates, were found to be non-stationary.

Figure 5. Variables in the Dataset



Source: Haitian authorities, IMF Information Notice System, IMF World Economic Outlook.

²⁸ In essence, the methodology of Chow-Lin allows constructing quarterly series that sum to the annual aggregate and evolve in line with quarterly indicators selected as regressors. See Annex 1 for details.

Use of VECMs to Test Quantity Theory

38. **Long-run analysis provides evidence of cointegration between money, prices, and real income broadly in line with quantity theory.**²⁹ Table 1 presents VECMs where, despite Haiti's high degree of dollarization, both M3 (including dollar deposits) and M2 (excluding dollar deposits) enter the long-run relation with a coefficient close to -1, as predicted by the quantity theory. The coefficient on real income is higher than unity, and hence not entirely in line with the theory, but it is of the right sign and significant.³⁰ When allowing the exchange rate and the world oil price to affect the short-run dynamics of the model (columns 3 and 4), we obtain income elasticities somewhat closer to theory, and in line with studies on other countries.³¹

39. **However, the long-run results are vague and hard to make operational.** Error correction happens mainly through money rather than prices, with the adjustment coefficient for inflation insignificant and of the wrong sign in most specifications. Adjustment to equilibrium takes several years, and the cointegration results are strongest for M3, which includes dollar deposits and cannot be directly controlled by the central bank.³² In Haiti's case, it is difficult to correctly estimate the links between real income and the nominal variables in the VECM models, due to large and frequent exogenous shocks over the sample and the lack of quarterly GDP data. One factor contributing to the high estimated income elasticity may also be that the national accounts underestimate the growth of the informal sector.³³

²⁹ Assuming constant velocity, the quantity theory implies that inflation equals money growth minus real income growth.

³⁰ No cointegrating relation was found with real GDP as income measure.

³¹ For example, studies on Albania (Rother, 2000), Armenia (Grigorian et al., 2004) or Russia (Oomes, and Ohnsorge, 2005) found income elasticity in a model with broad money of respectively 2.3, 2.7 and 1.8. In neighboring Dominican Republic, a study finds income elasticity of 1.5 (Adedeji and Williams, 2005).

³² This is in line with Berg and Borensztein (2000), who find that broader monetary aggregates that include dollar assets contain more information about inflation than those that do not.

³³ When the national accounts were rebased in 2000, GDP figures were raised by 10 percent to better account of the informal sector. A survey of the informal sector is underway in order to prepare for the rebasing of national accounts scheduled for 2007 or 2008.

Table 1. Vector Error Correction Models

Model	(1)	(2)	(3)	(4)
Cointegrating Equation:				
ln (real GNDI)	2.62 (0.21) [12.91]	2.07 (0.19) [10.83]	2.25 (0.14) [16.45]	1.68 (0.11) [15.65]
ln(CPI)	1	1	1	1
ln(M3)	-1.09 (0.02) [-51.08]	...	-1.07 (0.01) [-74.22]	...
ln(M2)	...	-1.33 (0.03) [-51.72]	...	-1.30 (0.01) [-89.82]
ln(oil price)	...	...	0	0
ln (exchange rate)	...	...	0	0
constant	-14.22	-7.82	-11.53	-4.86
Error Correction Coefficients:				
Δ ln(real GNDI)	-0.304786 (0.11) [-2.82]	-0.28252 (0.11) [-2.66]	-0.401835 (0.13) [-2.99]	-0.318106 (0.15) [-2.17]
Δ ln(CPI)	0.01 (0.12) [0.05]	0.05 (0.11) [0.45]	-0.04 (0.12) [-0.33]	0.05 (0.13) [0.40]
Δ ln(M3)	0.54 (0.21) [2.58]	...	0.60 (0.16) [3.68]	...
Δ ln(M2)	...	0.48 (0.14) [3.35]	...	0.76 (0.14) [5.41]

Note: Standard errors in parenthesis and t-statistics in brackets. All models estimated with two lags in differences, using 37 observations after adjustment. Juselius (2005) argues that, in most cases, a lag length of 2 is sufficient to describe a very rich dynamic structure. The Cholesky ordering of variables is from top to bottom in the table.

LR test probabilities of binding restrictions: 0.33 for model (3), and 0.21 for model (4).

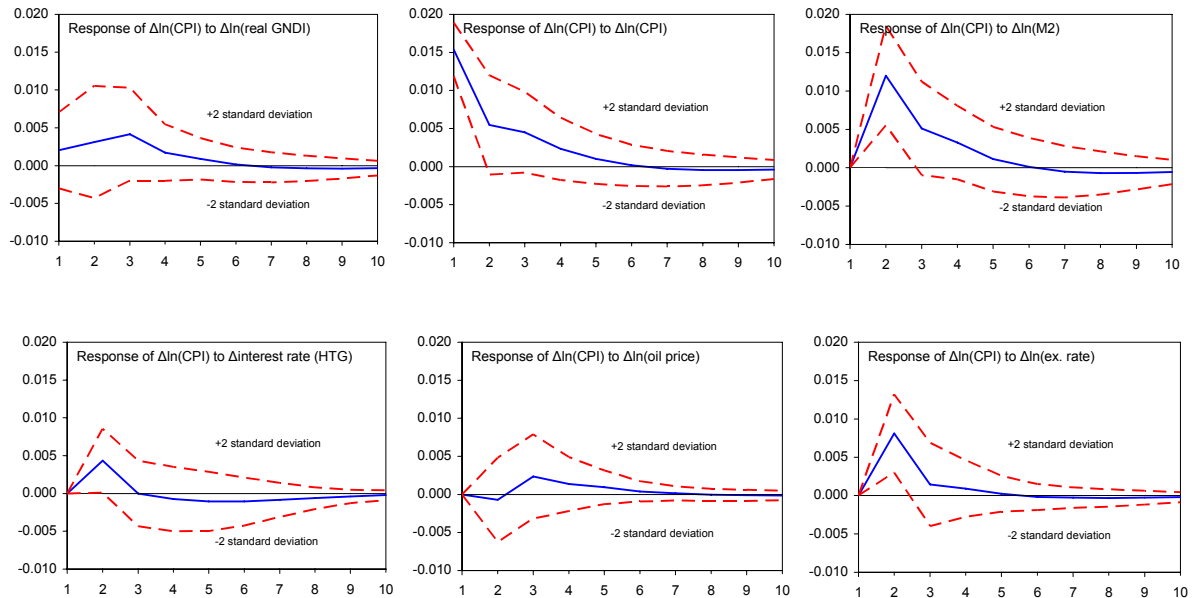
Source: IMF staff estimates.

Determinants and Dynamics of Inflation using VARs

40. **Relaxing the structure imposed on the estimation, vector auto-regressions in first differences indicate that money growth and exchange rate fluctuations have been the main historical drivers of inflation in Haiti.** Figures 6 and 7 show that:³⁴

- Inflation has responded strongly and significantly to money and exchange rate shocks, with full transmission within 6 quarters. The results hold with either M2 or M3 in the models. A dummy variable added for December, when cash spending normally rises, further strengthened the result for money in the monthly dataset;
- Inflation responses to oil prices and output are weaker but of the expected sign,³⁵
- The estimated response of inflation to interest rates is insignificant and of the wrong sign. Furthermore, interest rates appear to follow rather than lead inflation.

Figure 6. Impulse Responses in the Quarterly VAR Model
VAR ($\Delta \ln GNDI$, $\Delta \ln CPI$, $\Delta \ln M2$, i , $\Delta \ln P_{oil}$, $\Delta \ln EX$)

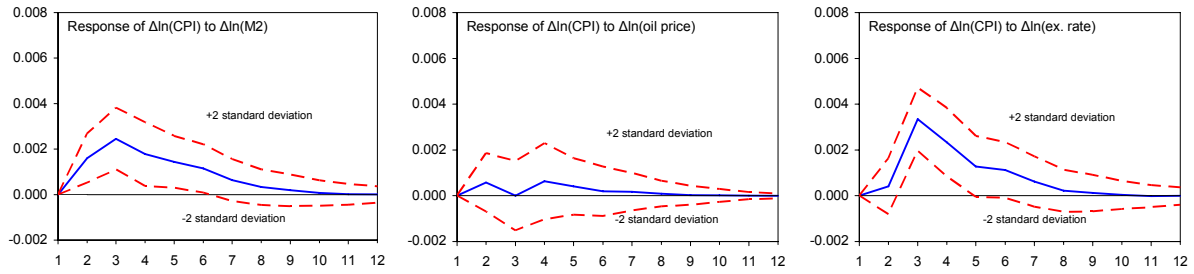


Source: IMF staff estimates.

³⁴ The quarterly model was estimated in first differences with 1 lag (AIC), using 38 observations after adjustments. For full impulse responses, see Appendix 2. The monthly model was estimated in first differences with 3 lags (AIC), using 123 observations after adjustments. For full impulse responses, see Appendix 3.

³⁵ The estimated response of inflation to oil price shocks contrasts with the current state of play where the oil price plays a large role for inflation. Until 2004, domestic oil prices were subsidized, so that oil prices likely affected inflation via money first.

Figure 7. Impulse Responses in the Monthly Preferred VAR Model
VAR ($\Delta\ln CPI$, $\Delta\ln M2$, $\Delta\ln P_{oil}$, $\Delta\ln EX$)



Source: IMF staff estimates.

41. **Variance decomposition reinforces the finding that shocks to money and the exchange rate are what really matters for the dynamics of inflation in Haiti.** Table 2 shows that the quarterly model attributes 30 percent of the variance in inflation to monetary shocks, whereas the monthly model ascribes 22 percent of the variance in inflation to exchange rate shocks.

Table 2. Variance decomposition of $\Delta\ln(CPI)$

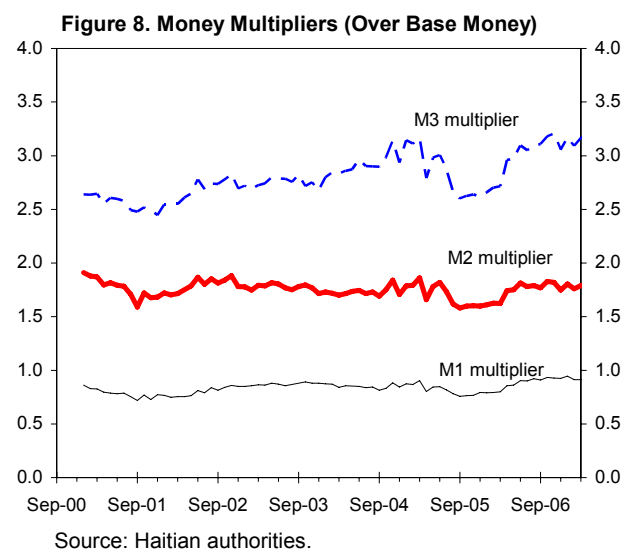
	Quarterly VAR Model	Monthly VAR model
$\Delta\ln(\text{real GNDI})$	6%	...
$\Delta\ln(CPI)$	48%	60%
$\Delta\ln(M2)$	30%	17%
$\Delta\text{interest rate (HTG)}$	4%	...
$\Delta\ln(\text{oil price})$	1%	1%
$\Delta\ln(\text{ex. rate})$	11%	22%
Total	100%	100%

Source: IMF staff estimates.

42. **Timely forecasts to help inform monetary policy could be produced with a model specification that includes monthly data of M2, the exchange rate, and oil prices.** From a central bank perspective, M2 is the most relevant of the tested monetary aggregates, since it is significant and can be controlled by the monetary authorities. To save on parameters, interest rates can be excluded from the specification, given their lack of significance in the estimations. Forecasting with a quarterly VAR model would not be practical, since the construction of real income series requires annual observations (see Appendix 1).

Stability of Multipliers

43. **Multipliers of base money to M1 and M2 exhibit considerable stability, suggesting that base money could be used as an instrument to steer the overall money supply.** Unit root and cointegration tests indicate that money multipliers (over base money) for M1 and M2 have been stable since 2000, whereas the M3 multiplier has been non-stationary over the same period, partly as a result of exchange rate movements (Figure 8).



Summary of Empirical Conclusions

44. **The empirical analysis indicates that historically the money supply and the exchange rate have been the most important factors in determining inflation in Haiti.** It also confirms the hypothesis that the interest rate channel has been weak. The analysis suggests that output has not had a significant impact on inflation, although this result should be interpreted with caution because of the inadequacy of data and the large and frequent exogenous shocks that have impacted GDP. More generally, the loss of information from not having adequate output data is a serious limitation for the empirical analysis. Overall, the results obtained are consistent with cross country evidence from a large sample of dollarized economies, as presented in IMF (2003), which found strong correlations of monetary aggregates with the rate of inflation and significant pass-through of exchange rates (albeit variable, depending on the degree and type of dollarization).

D. Steps for Strengthening the Monetary Policy Regime

45. **Haiti's monetary policy regime could be strengthened through a two-step approach.** The weak interest channel and the strong historical relationship between monetary aggregates and inflation indicate that monetary policy could become more effective in the short term through an increased focus on controlling inflation via the supply of base money. In addition, the institutional foundations for the conduct of monetary policy could be strengthened through measures to increase central bank autonomy. Over time, as steps are taken to encourage financial market deepening and the interest rate transmission channel strengthens, transition to a more advanced monetary policy regime could be considered, including an inflation targeting regime.

Monetary Policy

46. **The monetary policy framework with a stronger focus on quantity management could operate as follows.** Consistent with inflation objectives, the BRH would determine intermediate objectives for M2. Given the historically stable multiplier, base money supply could be “steered” to achieve these M2 objectives. This would require close collaboration with the fiscal authorities for the purposes of liquidity forecasting in order to accurately control the supply of base money. Under this framework, at least in the short term, the authorities would cease to use interest rates as a policy instrument.

47. **The BRH bond auction would need to be reformed to set volumes in line with money supply targets, with interest rates determined competitively.** The authorities have expressed the point that participation in bond auctions should be widened to ensure competitive price determination.³⁶ Given that a few banks derive considerable profits from their bond holdings and the market-clearing interest rate is likely to be quite a bit lower than the current rate, consideration could also be given to moving to a competitively-determined price on a gradual basis.

48. **Deepening financial market infrastructure should be a medium-term goal, including to improve the functioning of the interest rate transmission channel.** BRH bond auction reform would be a first step, but other measures are possible to reduce the costs of intermediation (e.g. reducing reserve requirements, eliminating the existing obligation to fulfill part of the reserve requirements for dollar deposits in gourdes, and establishing an interbank market), and providing more diversified financial services. The ongoing IMF-World Bank FSAP is expected to produce recommendations on this matter. The BRH should also work on gradually acquiring the know-how and expertise that would be required under a more sophisticated monetary policy framework, including strengthening inflation forecasting capacity, establishing more formal public communication, and developing instruments to gauge inflation expectations.

49. **While the exchange rate is a significant determinant of inflation, a formal exchange rate anchor does not seem appropriate in light of international experience and the specific circumstances of Haiti.** In view of the strong exchange rate pass-through, the authorities cannot fully neglect exchange rate developments, and they should continue to build reserves from their current low levels, among other things to attain additional capacity to smooth temporary swings. However, equilibrium exchange rate appreciation pressures from high and still rising remittances inflows (see Chapter I of this Selected Issues paper) would pose challenges for the operation of an exchange rate anchor.

³⁶ Currently only commercial banks can participate in the bond auctions and three commercial banks hold 90 percent of outstanding BRH bonds.

Strengthening Central Bank Independence

50. **The main objective for strengthening central bank independence is to create stronger safeguards that episodes of fiscal dominance will not recur.** A key aspect in this regard is removing balance sheet considerations from monetary policy decision-making. The central bank would thus need to be recapitalized, and should disengage from involvements in non-essential activities (e.g. the ownership of the Telecom company). These steps are already considered in the authorities' PRGF-supported program. There is also room to strengthen the BRH's legal independence, including by establishing more stringent limits to government borrowing from the central bank and establishing mechanisms to ensure compliance with them. Another step would be development of a Treasury securities market to allow the government to borrow directly from the private sector instead of going through the central bank.

Data Issues

51. **The lack of reliable quarterly GDP data and more frequent activity indicators poses a serious constraint on the ability, among other things, to forecast inflation.** Thus, the production of quarterly national income accounts data and more reliable monthly activity indicators are areas of priority for further developing Haiti's system of economic statistics.

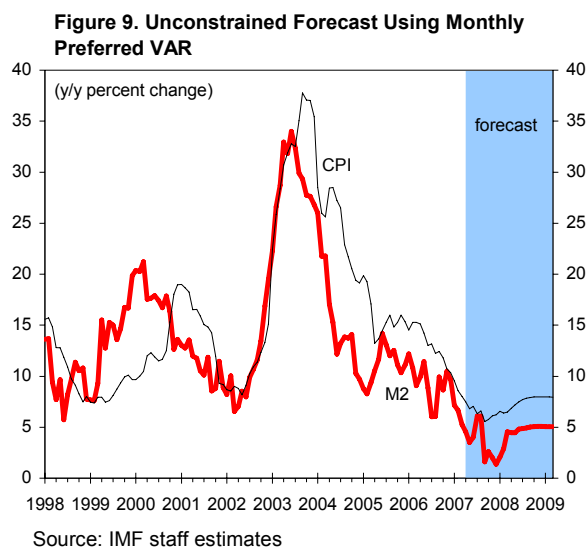
E. Implementation Issues

Forecasting inflation

52. **Forecasts from a monthly vector auto regressions could help inform monetary policy decisions, both in a policy framework where money is the main instrument for controlling inflation and at a later stage when formal inflation target is envisaged.**³⁷ Taking oil prices as exogenously given by the WEO forecast, Figure 9 reveals that an unconstrained forecast using the monthly preferred VAR model implies a dip in inflation for the remainder of FY2007, with an increase in FY2008.³⁸ By mid-2008, the forecast reverts to a level of approximately 8 percent. This illustrative forecast implies that, under current policies, the September 2007 target of 8 percent would be met, but the September 2008 target of 7.5 percent would be marginally exceeded.

³⁷As noted previously, the quarterly VAR model is not practical for the purpose of producing timely forecasts, since the construction of real income series requires annual observations (see Appendix 1).

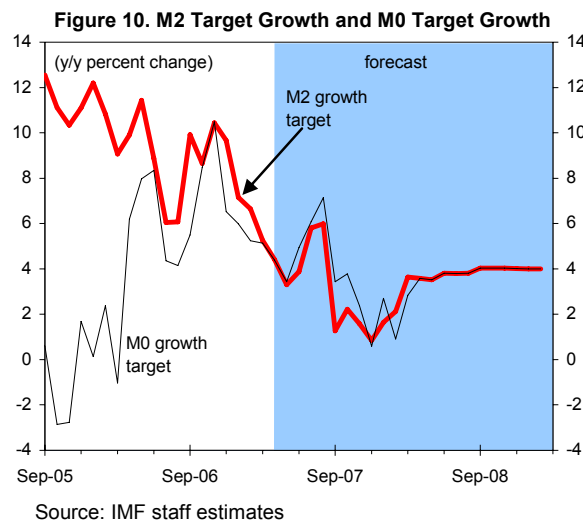
³⁸ Given that the model is mean-reverting, a structural dummy variable for the start of the second EPCA-supported program at end-September 2005 was added to reflect the end of inflationary central bank financing.



Solving for Money Growth

53. **As a guide for determining money targets, the model can also be solved for the money growth path that would result in a targeted inflation path.** Figure 10 shows the money growth path that according to the monthly VAR model would result in 7.5 percent inflation by September 2008, assuming that oil prices develop as stipulated, that no shocks occur during the forecast horizon, and that the exchange rate develops as implied by the model. The implied base money growth can be backed out using the stable multiplier for M2. The presented illustrative forecast assumes that oil prices increase by 14 percent between March 2007 and September 2008, in line with World Economic Outlook (WEO) assumptions, and would imply some further nominal exchange rate appreciation from current levels by September 2008.³⁹ It is also important to note that the forecast, by excluding GNDI in the estimation, implicitly assumes that economic growth will remain stagnant in line with its trend over the sample period.

³⁹ With an inflation differential vis-à-vis the U.S. of 5 percent, the implied annual real exchange rate appreciation is around 14 percent by the end of the forecast horizon. The indicative forecast is thus broadly compatible with Chapter I of this Selected Issues paper, which finds that appreciation of Haiti's real exchange is an equilibrium phenomenon, likely to continue over the medium term.



54. **While real income cannot be incorporated into the monthly dataset, it needs to be taken into account in setting base money growth targets.** The model suggests base money growth of around 4 percent would be needed over the medium term. Growth is expected to be around 4.5 percent in FY2008; In light of the income elasticity estimated for money demand in Haiti, and assuming that growth in the real sector materializes as expected, base money could probably grow around 5 percent more during FY2008 than implied by the model without compromising the inflation target.

F. Conclusions

55. **The Haitian authorities have done well in curtailing fiscal dominance and reducing inflation, but the current monetary policy regime may prove inadequate for consolidating stability gains and encouraging financial market deepening.** Thus, forward-looking challenges for the authorities include strengthening the analytical underpinnings for monetary policy and clarifying the monetary policy regime.

56. **Empirical analysis suggests that the money supply, exchange rates, and world commodity prices have been important determinants of inflation, while interest rates have not been.** Therefore, in the near term, the authorities are likely to better achieve inflation objectives through an increased focus on quantity management, using M2 as the intermediate target and base money as the instrument. Switching toward the proposed approach would require reforming the existing bond auction mechanism and improving liquidity forecasting. Extending participation in the auction would be desirable, to ensure that interest rates are determined on a competitive basis. Over time, as the financial markets are deepened and the interest channel strengthens, the authorities could transition to a more advanced monetary regime such as formal inflation targeting. The exchange rate remains an important determinant of inflation, but given the prospects of continuing strong transfers inflows, an exchange rate anchor could be costly and is therefore not advisable.

57. **Further strengthening of central bank autonomy would be important to reduce the risk of future episodes of fiscal dominance.** Removing balance sheet considerations from monetary policy decision-making would enable the BRH to better focus on the control of base money. This will require recapitalizing the central bank. In addition, tightening of legal limits on credit to the government would be desirable, as well as developing a market for Treasury securities .

58. **Finally, there is scope to further expand the presented analytical work, to further develop Haiti's inflation forecasting capacity.** This would also require efforts to improve the quality and frequency of data on economic activity.

Annex 1. The Chow-Lin Methodology

National accounts data are only available on an annual basis, but the IHSI and the BRH produce quarterly indicators relevant for the analysis of economic activity. Quarterly time series for real GDP and for real Gross National Domestic Income (GNDI) have been created using the Chow-Lin (1971) methodology. This methodology consists in estimating a relation between the annual aggregate and the annualized value of a selection of indicators; a quarterly value for the aggregate of interest using the estimated relation is then constructed such that quarterly values sum up to obtain the annual aggregate. Below is explained how the quarterly series for real GDP was constructed using the IHSI's quarterly indicator of construction activity.

With $Y_{t,A}$ denoted as the annual national account series for real GDP, and as $Indic_{t,A}$ as the annualized value of the quarterly indicator of real activity in the construction sector. To evaluate the link between GDP and annualized construction, the following relation is estimated:

$$(1) Y_{t,A} = \alpha + \beta Indic_{t,A} + \varepsilon_{t,A}$$

Using parameters from the previous regression, a quarterly value for GDP is derived:

$$(2) Y_{t,Q}^{Initial} = \hat{\alpha} / 4 + \hat{\beta} Indic_{t,Q}$$

However, the sum of quarterly aggregates differs from the annual aggregate because of the residual in equation (1). To compute quarterly residuals, the following program is solved which smoothes residuals over time and ensures that they sum up in a given year to obtain the annual residual:

$$(3) \begin{aligned} & \text{Min} \sum_{A,Q=2,3,4} (\varepsilon_{t,A,Q} - \varepsilon_{t,A,Q-1})^2 + \sum_A (\varepsilon_{t,A,1} - \varepsilon_{t,A-1,4})^2 \\ & \text{subject to: } \sum_{Q=1}^4 \varepsilon_{t,A,Q} = \varepsilon_{t,A} \end{aligned}$$

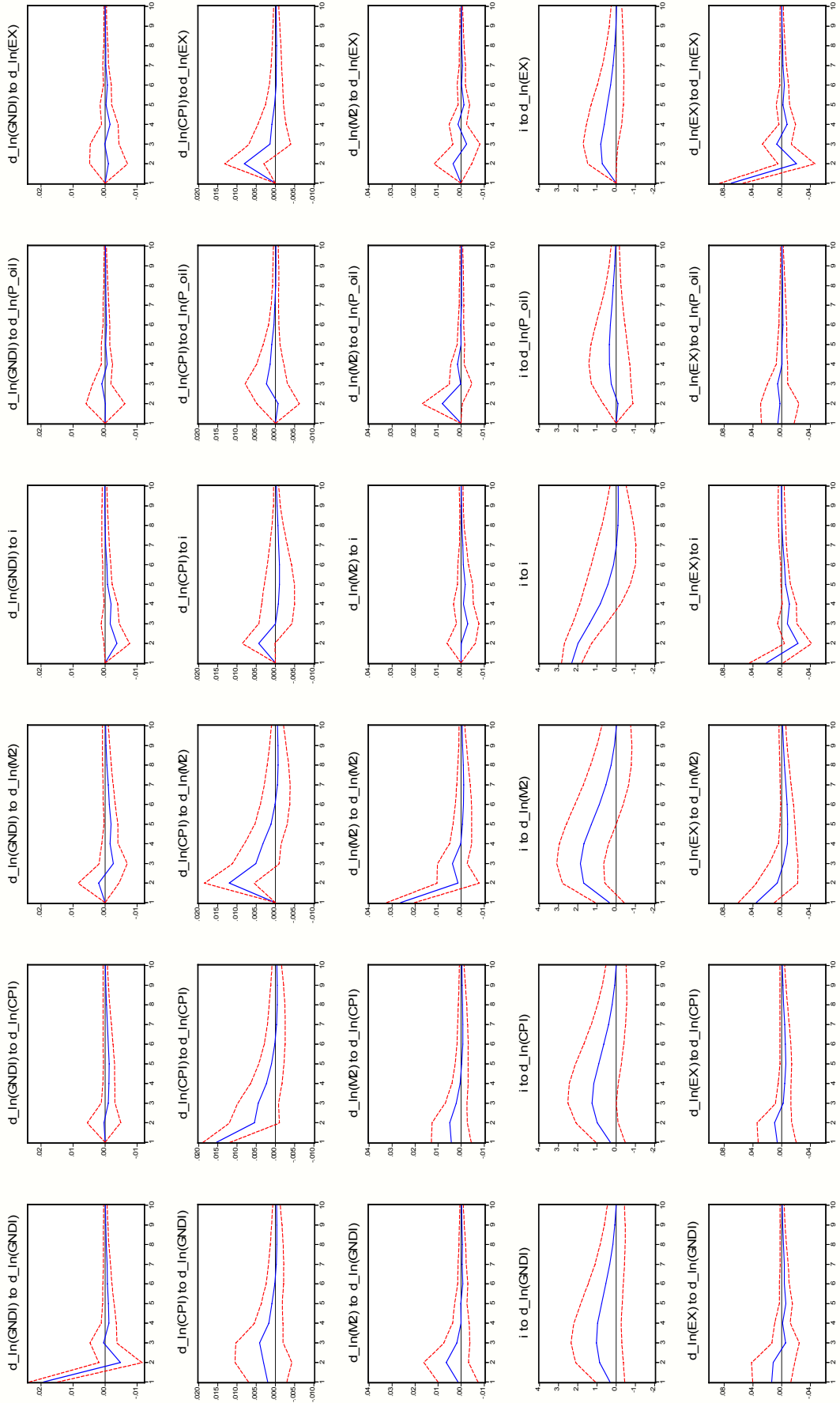
Finally, an adjusted quarterly series for GDP is constructed by adding the quarterly residual:

$$(4) Y_{t,Q}^{Corrected} = \hat{\alpha} / 4 + \hat{\beta} Indic_{t,Q} + \varepsilon_{t,Q}$$

To construct a quarterly time series for GNDI, the same methodology is applied with remittances (converted into domestic currency and deflated by the GDP deflator) as the dependent variable, and U.S. real GDP as the regressor. The quarterly value for private remittances is then added to the quarterly value for real GDP.

**Annex 2. Full Impulse Responses in the Quarterly VAR model
VAR ($\Delta \ln GNDI$, $\Delta \ln CPI$, $\Delta \ln M2$, i , $\Delta \ln P_{oil}$, $\Delta \ln EX$)**

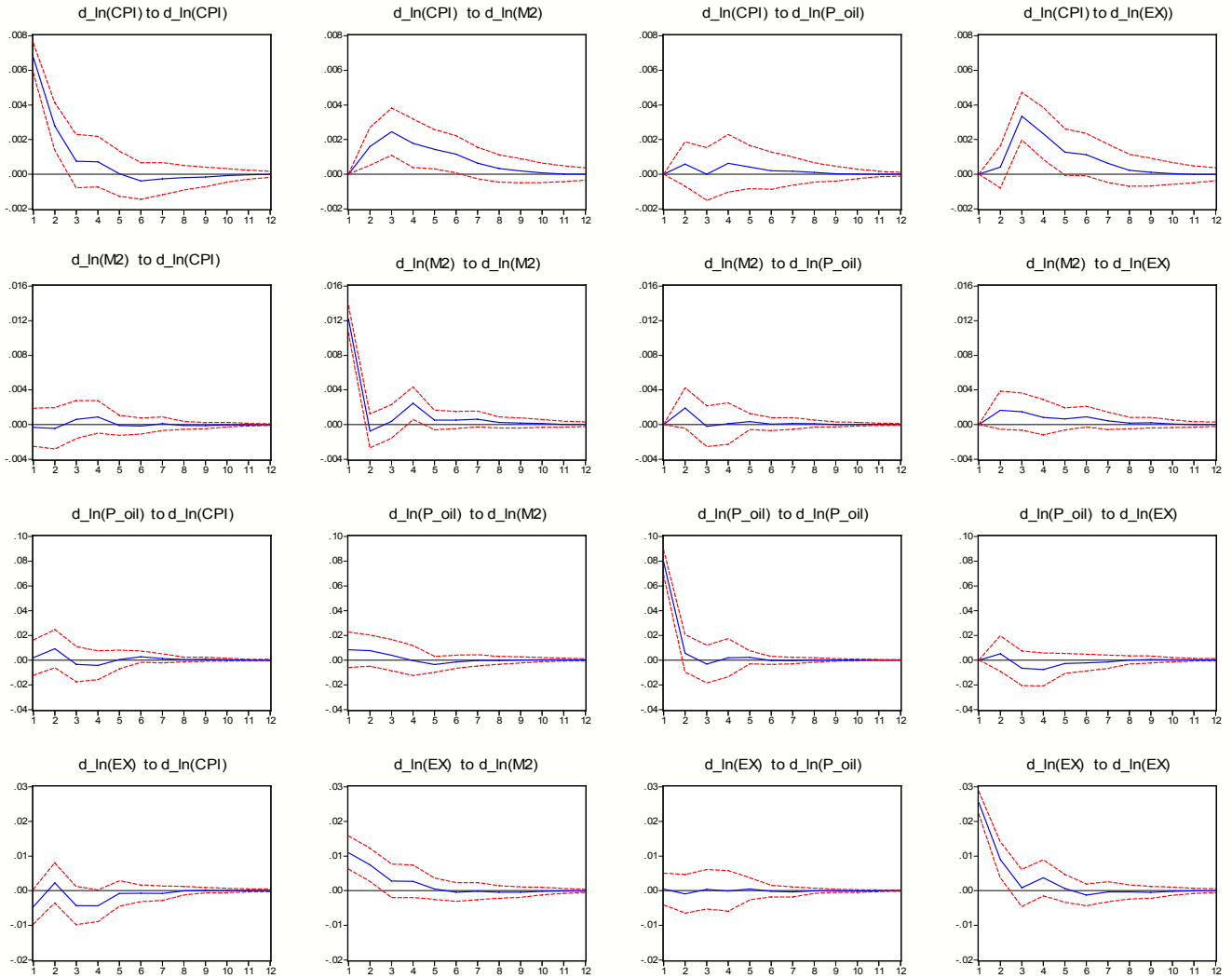
Response to Cholesky One S.D. Innovations ± 2 S.E.



Source: IMF staff estimates.

Annex 3. Full Impulse Responses in the Monthly VAR model
VAR ($\Delta \ln CPI$, $\Delta \ln M2$, $\Delta \ln P_{oil}$, $\Delta \ln EX$)

Response to Cholesky One S.D. Innovations ± 2 S.E



Source: IMF staff estimates.

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III. REVENUE MOBILIZATION IN A POST-CONFLICT ENVIRONMENT⁴⁰

59. **The absence of a functioning state and public institutions remains a significant constraint to Haiti's growth potential.** The low historical growth performance—Haiti's economy grew annually by less than 0.5 percent since 2000 and per capita real GDP has contracted for several decades—has been to a large extent caused by lacking provisions of some of the most basic public goods and services, including security, proper judicial processes, health, education, electricity, water supply, and road and transportation systems. This situation has been the result of prolonged internal conflict and political unrest that has weakened—though not totally destroyed—key government institutions. Rebuilding and strengthening these institutions will be critical for economic recovery and development, as has been shown by other post-conflict countries (Box 1).

60. **Enhancing social and physical infrastructures will require significant investment outlays in the coming years.** A comprehensive tally and costing of investment needs is expected to emerge from the Poverty Reduction Strategy Paper (PRSP) that is currently under preparation. Preliminary estimates of the investment programs presented by the government in July 2006, put the country's immediate investment needs at about US\$5-7 billion. Sectoral investment needs were subsequently presented at a number of donor conferences, and the authorities hope that development partners will provide most of the required financing.⁴¹

61. **Even if financing for the initial investments can be secured, resources will be needed to cover recurrent costs of these projects,** for items such as wages, regular infrastructure maintenance, goods and services, etc.⁴² According to a recent study, annual recurrent expenditure following any investment in the transportation, energy, health, and education sectors could reach between 5 and 33 percent of initial investment expenditure.⁴³ For Haiti, this means that even in a relatively conservative scenario government spending could increase by 2-3 percent of GDP on a permanent basis, as a result of a large public investment push.

⁴⁰ By Gamal El-Masry and Katja Funke.

⁴¹ Recent donor conferences took place in November 2006 in Madrid and in March 2007 in Washington, D.C.

⁴² For a discussion of the impact of additional externally financed investment on current expenditure, see Gupta, Powell, and Yang (2006).

⁴³ Hood, Husband, and Yu (2002).

Box 1: Revenue mobilization in post-conflict countries

Haiti is emerging from an extended period of social and political unrest. Experience in many “conflict countries” has shown that government operations are severely impacted by conflicts and prolonged social strife. Such countries typically experienced sharp drops in government revenue during the period of the conflict, but also rapid recovery once the conflict ended. The disturbances in Haiti were less intense—in terms of loss of life and property—than in some countries that were involved in armed conflicts. Nevertheless, the prolonged period of instability kept revenues subdued.

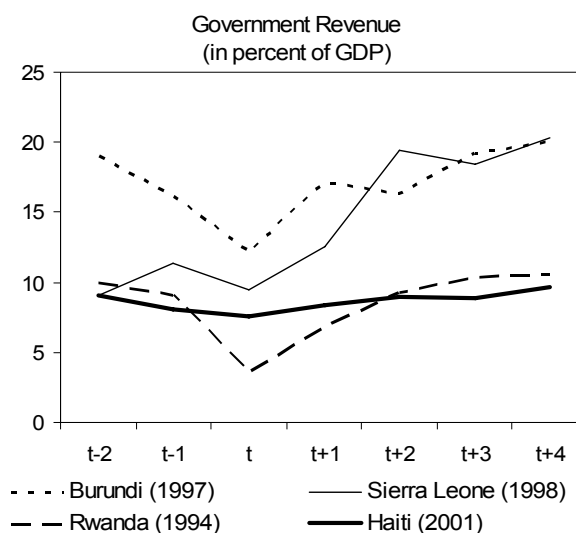
Haiti’s basic fiscal institutions and legal framework survived the conflict, albeit considerably weakened. Post-conflict countries often face a total collapse of the institutions that make a stable society function. In Haiti, most government institutions suffered, including from human capital drain, but for most part did not disintegrate.

Rebuilding the weakened fiscal institutions is key to reestablishing a functioning government and thus a precondition for revenue mobilization and economic recovery (IMF, 2004; and Brahim, 2007). The process of rebuilding fiscal institutions essentially entails three steps: (i) creating a proper legal and regulatory framework; (ii) strengthening the fiscal authorities; and (iii) designing appropriate revenue and expenditure policies, while simultaneously strengthening revenue administration and public expenditure management. In the Haitian context, fiscal reforms should focus on strengthening tax administration, including reestablishing control and security over the country at large, in particular key border entry points, and modernizing existing procedures and policies.

Experience in a number of conflict countries also suggests that policymakers should be mindful of other aspects that will critically affect the success of revenue reform efforts:

- **Close coordination of technical assistance** among donors is needed to ensure that foreign support is mutually reinforcing and evenly distributed across key sectors which should advance in unison.
- **The authorities’ implementation capacity should guide the pace of reform.** Domestic capacity constraints call for simple regulations and administrative ease, to allow a successful implementation of relevant rules and regulations with available resources. In the meantime, long-term advisors can help build domestic capacity.
- **Revenue efforts must go hand in hand with stronger public financial management and expenditure execution capacity.** From a macroeconomic perspective, it is important that revenue enhancing measures go in tandem with higher levels of spending to remove existing development bottlenecks and avoid a contractionary impact on economic activity. Furthermore, from a political perspective, ensuring the improved delivery of essential services and public goods will garner the necessary public support to advance the reform agenda.

Government revenue in post-conflict countries (year of conflict in brackets)¹

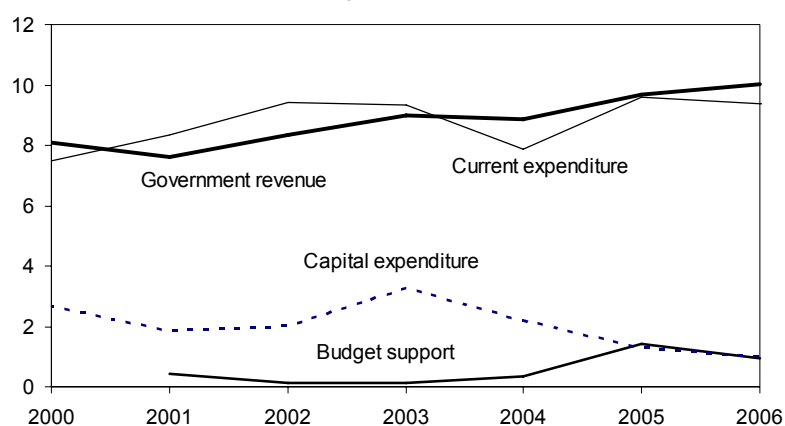


Source: IMF staff calculations.

¹ For the purpose of this chart, the conflict year is defined as the year with the largest decline in government revenue.

62. **At present, central government revenue covers current expenditure but leaves little room for domestically financed investment or new recurrent expenditure** (Figure 1). In 2006, the central government collected 10 percent of GDP in revenue, of which more than 9 percent of GDP paid for current expenditure. Domestically financed investment expenditure amounted to less than 1 percent of GDP and was partly financed by foreign budget grants. The vast majority of capital expenditure—4.4 percent of GDP—was executed in the form of foreign-financed projects. Thus, to finance additional recurrent expenditures and to reduce the dependence on foreign aid flows, the government needs to strengthen its domestic revenue effort substantially.

Figure 1: Central Government Operations Excluding Foreign Financed Projects (in percent of GDP)



A. Stylized Facts of Revenue Collection in Haiti

63. **Central government revenue collection in Haiti is low by international standards.** Haiti collects 10 percent of GDP in revenue, significantly less than similar low-income countries (LICs),⁴⁴ whose revenue-to GDP ratio amount on average to about 20 percent of GDP (Figure 2a). Haiti's revenue collection is also low compared to middle-income countries of similar size in the Western Hemisphere (Figure 2b).⁴⁵ These countries collect on average almost 18 percent of GDP in revenue (16 percent of GDP if countries with substantial revenue from energy production and exports are excluded).⁴⁶ The significant

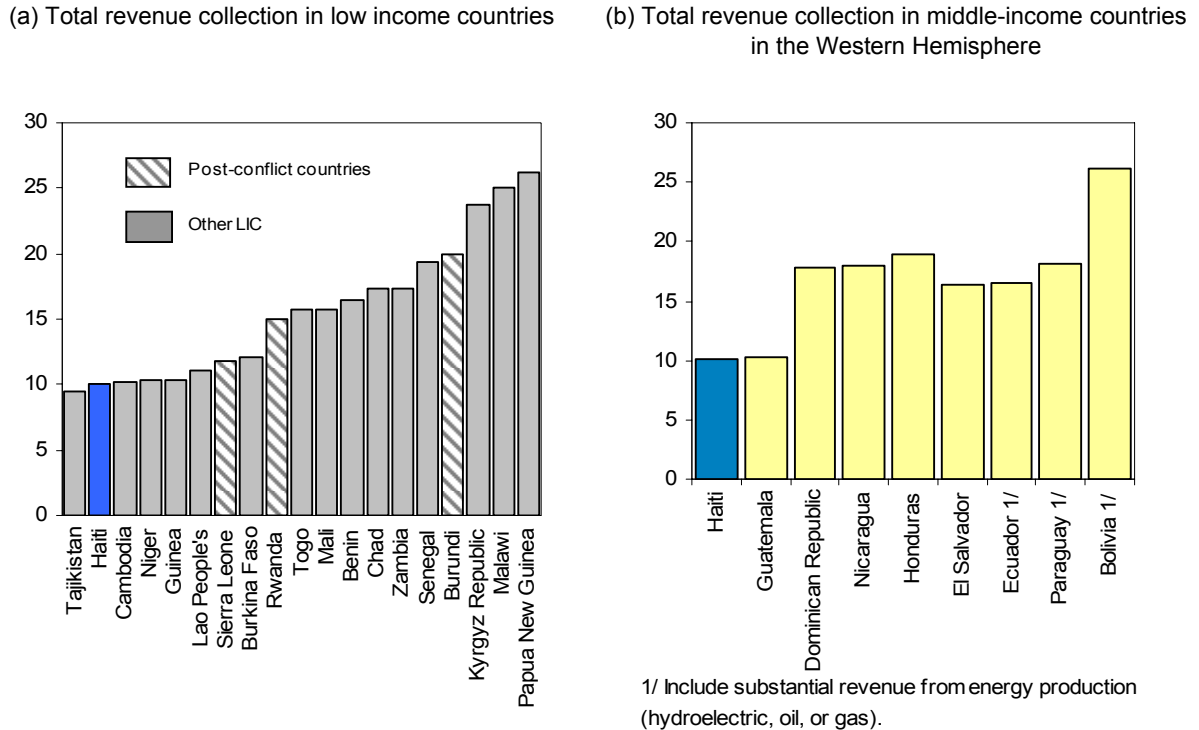
⁴⁴ According to the World Bank definition, LICs are countries with a per capita income of less than US\$875. The LIC comparator group includes countries with a population of 5-15 million, similar to Haiti (9.1 million). These are: Benin, Burkina Faso, Cambodia, Chad, Guinea, Haiti, Kyrgyz Republic, Lao People's Dem. Rep, Malawi, Mali, Niger, Papua New Guinea, Rwanda, Senegal, Sierra Leone, Tajikistan, Togo, Zambia, Zimbabwe. See World Bank (2005).

⁴⁵ The comparator group of Western Hemisphere countries includes Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, and Paraguay.

⁴⁶ The latter are Bolivia and Ecuador (hydrocarbons), and Paraguay (hydroelectric power).

variation in revenue levels across LICs suggests that a low income level *per se* is not necessarily a hindrance to revenue collection.⁴⁷

Figure 2: Revenue collection in a across-country comparison (in percent of GDP)



Source: IMF, FAD tax data base.

64. **The structure of government revenue in Haiti is generally comparable to that of other countries in the region.**⁴⁸ Indirect taxes, including excises, value-added taxes (VAT), sales taxes, customs duties, and other taxes account for 75 percent of total revenue in Haiti—compared to 65 percent in regional comparator countries (Figure 3).⁴⁹ The share of direct taxes in total revenue is the same (20 percent), while Haiti's collection of non-tax revenue (5 percent of total revenue) is somewhat smaller than in comparator countries (15 percent). Overall, Haiti's broadly similar revenue structure but weak collection across all types of revenue suggest that there is significant room to improve collection from all sources.

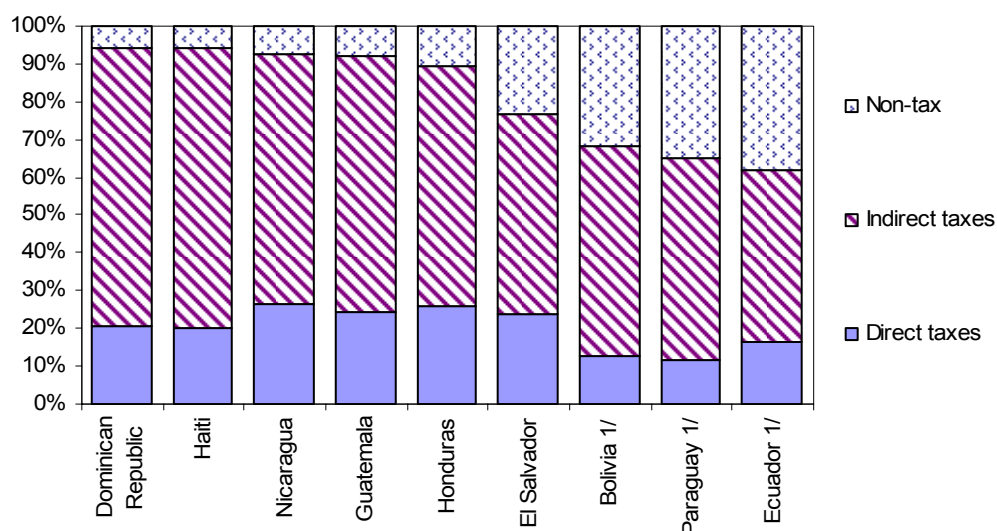
Figure 3: Revenue structure in middle-income countries in

⁴⁷ The post-conflict countries in our sample reach revenue levels of up to 20 percent of GDP, which confirms that a strong recovery of revenue collection is possible after conflict situations.

⁴⁸ Similar in terms of population.

⁴⁹ Excluding the resource-rich countries, namely Bolivia, Ecuador, and Paraguay.

the Western Hemisphere (percent of total revenue)



1/ Include substantial revenue from energy production (hydroelectric, oil, or gas).

Source: IMF, FAD tax data base.

65. **In Haiti, like in many other countries, the VAT is the single most important source of government revenue** (Table 1).⁵⁰ In 2006, the VAT generated almost 33 percent of all revenue. The second and third largest contributors were “other taxes on international trade” and customs duties, with 16.7 and 16 percent of total revenue, respectively.

66. **More than two-thirds of total revenue is collected at the border, which is quite high.** This reflects in part Haiti’s low domestic production base and high import dependence (32 percent of GDP in 2006), which is fueled by a large inflow of remittances (20.7 percent of GDP in 2006).⁵¹ The customs authority (Administration Générale des Douanes, AGD) therefore plays a crucial role in revenue collection, especially of indirect taxes.

⁵⁰ While officially known as a turnover tax (TCA), this consumption tax is akin to a VAT.

⁵¹ In 2006, the external trade and services deficit was 22 and 7 percent of GDP, respectively. Accordingly, about 30 percent of domestic demand could not be covered by domestic production.

Table 1: Central government revenue by collecting agency and tax in 2006

	Revenue collected by tax authorities		Revenue collected by customs authorities		Total revenue	
	million Gourdes	percent of total revenue	million Gourdes	percent of total revenue	million Gourdes	percent of total
Income tax	3,500	18.3	508	2.7	4,009	21.0
Corporate income tax	1,810	9.5			1,810	9.5
Personal income tax	1,690	8.8			1,690	8.8
Other income tax			508	2.7	508	2.7
Wage tax	118	0.6			118	0.6
Property tax	163	0.9			163	0.9
Taxes on goods and services	2,161	11.3	6,025	31.5	8,186	42.9
VAT	1,616	8.5	4,655	24.4	6,271	32.8
Excises	126	0.7	1,220	6.4	1,346	7.0
Other taxes on goods and services	419	2.2	150	0.8	569	3.0
Other tax revenues	198	1.0			198	1.0
Non tax revenue	81	0.4	5	0.0	87	0.5
Customs duties			3,058	16.0	3,058	16.0
Other taxes on international trade*			3,187	16.7	3,187	16.7
Penalties			92	0.5	92	0.5
Total	6,222	32.6	12,875	67.4	19,097	100.0

* Mostly (over 85 percent) verification fees.

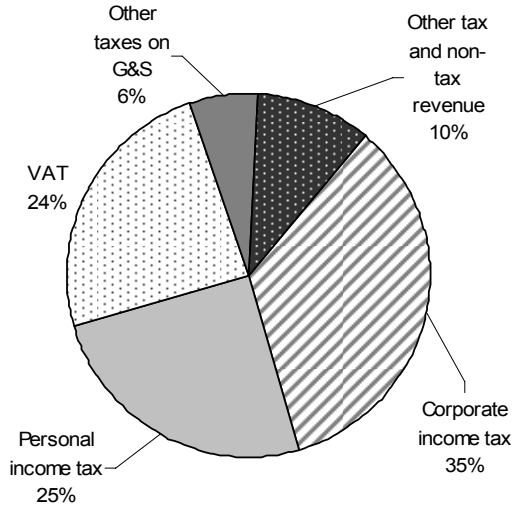
Source: Haitian authorities.

67. **The overwhelming majority of revenue is collected in the nation's capital.** The AGD collects 90 percent of total revenue through its offices in Port-au-Prince, including the international airport (Figure 4). Similarly, 97 percent of total revenue collected by the tax authority (Direction Generale des Impôts, DGI) originate from the larger Port-au-Prince area. Of this, 75 percent is collected by the large taxpayer unit (LTU), with the balance gathered in the central tax office (17 percent) and a few smaller tax offices in the greater Port-au-Prince area. The high degree of revenue concentration reflects the importance of the Port-au-Prince area for the economy and weak tax administration and customs enforcement capacities outside of the capital city. This suggests, that there might be considerable room to increase revenue through a strengthening of basic collection functions in the provinces, even though further strengthening tax administration in Port-au-Prince will also be important given the high revenue base there.

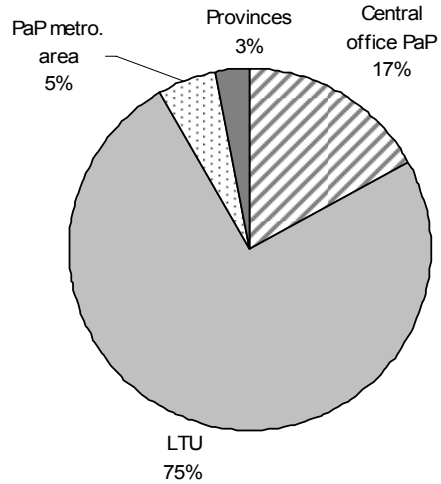
Figure 4: Revenue gathered by collecting agency FY 2005/06

Revenue collected by DGI (total G 6,571 million)

(a) Revenue collection by type of revenue

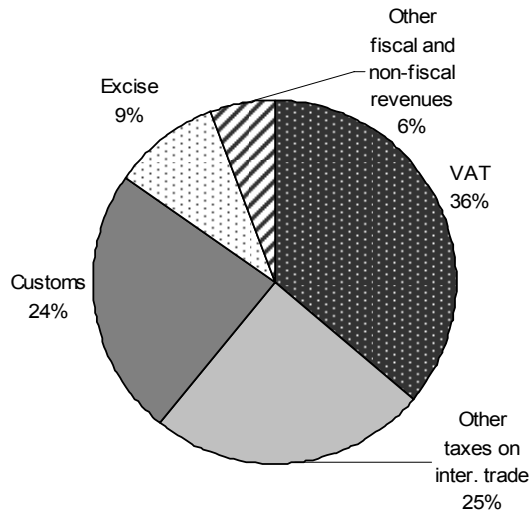


(b) Revenue collection by tax offices

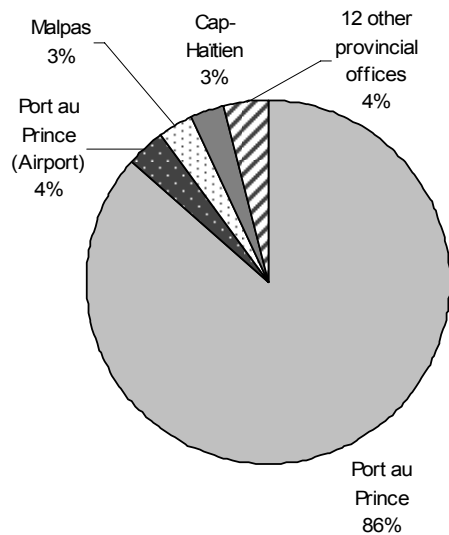


Revenue collected by AGD (total G 12,997million)

(c) Revenue collection by type of revenue



(d) Revenue collection by customs offices



Source: Haitian authorities.

B. Strengthening Revenue Collections in Haiti⁵²

68. **The Haitian government intends to increase revenue collection to about 12 percent of GDP by 2008 and 15 percent of GDP by 2015** (IMF, 2006b). Experience in other low-income countries has shown that achieving a ratio of this order is a reasonable medium-term target.⁵³ Few LICs have sustained minimally acceptable living standards at tax ratios below 10 percent, and most countries find that increasing revenue beyond 15 percent of GDP requires an expansion of the tax base that can be difficult, both politically and technically.

69. **Revenue collection could be strengthened by improving tax administration and broadening the tax base, as well as adjusting selected tax rates.** The range of appropriate reform measures depends on initial conditions—status of the tax legislation and its implementation—for specific taxes and custom duties. Therefore, the composition of administrative and policy reforms may vary from tax to tax. Nevertheless, improving the administration of the DGI and the AGD will help to enforce revenue collection across all revenue sources.

70. **The impact of any reform on revenue collection will depend on the proper sequencing of tax policy and revenue administration measures.** While both tax administration and tax policy-related reforms might be necessary, their proper phasing will be critical. Tax rate increases, create incentives for tax evasion and avoidance. Therefore, the first priority should be to strengthen revenue administration and broaden the revenue base. Tax rate adjustments should be implemented only once the revenue administration is sufficiently robust to offset the additional incentives for evasion.

The authorities' plans for improving revenue administration

71. **Recognizing that revenue administration reform is key to boosting collections across all sources, the authorities are making strong efforts to strengthen the tax and customs authorities.**

- **The DGI has formulated a strategic modernization plan and is working on an tactical plan to guide its implementation.**⁵⁴ The strategic plan sets major objectives and performance indicators that would guide the efforts to improve the internal revenue administration (Table 2).

⁵² This sections draws on technical assistance that was provided to Haiti in 2005 by the IMF's Fiscal Affairs Department (FAD) (IMF, 2006a).

⁵³ IMF (2005).

⁵⁴ See also IMF (2006b).

Table 2: Strategic objectives and activities to reform the DGI

Strategic objectives	Strategic activities
Enhance DGI's organizational structure	<ul style="list-style-type: none"> ▪ Elaborate a new organizational law for DGI ▪ Standardize and codify administrative procedures ▪ Encourage decentralization ▪ Use an integrated information management system
Contribute to the revision and harmonization of tax legislations	<ul style="list-style-type: none"> ▪ Simplify and harmonize tax laws ▪ Develop a tax code ▪ Prepare a handbook of tax laws ▪ Prepare a charter of the Rights and Duties of the Taxpayer
Promote and facilitate the voluntary respect of tax obligations	<ul style="list-style-type: none"> ▪ Define an effective education and information program for the taxpayers ▪ Secure the loyalty of and encourage regular taxpayers ▪ Provide adequate assistance to the taxpayers ▪ Enhance the quality of the services offered to the taxpayers
Fight fiscal fraud and use appropriate techniques to minimize tax avoidance	<ul style="list-style-type: none"> ▪ Maximize the level of integration of informal sector ▪ Strengthen the regime of sanctions in tax laws ▪ Strengthen internal controls ▪ Establish international tax agreements
Develop a data base of qualified human resources	<ul style="list-style-type: none"> ▪ Develop a program of continuing training ▪ Define the particular status of the DGI agents ▪ Create better working conditions ▪ Prepare an ethics code
Organize a management system using the new information and communication technologies	<ul style="list-style-type: none"> ▪ Develop and update a central and reliable data base of taxpayers ▪ Review DGI's computer master plan ▪ Intensify the computerization of tax operations and develop a network system between the services and the management

Source: DGI

- **Similarly, the AGD has developed a reform plan to reinforce customs control in the provinces and improve customs administration.** As a first step, the plan foresees establishing an adequate level of security to allow for an efficient implementation and enforcement of customs controls. To achieve this goal, customs—with interim support from the national police and the United Nations forces—will form its own security unit. In a second step, the plan envisages reinforcing infrastructure and implementation capacity in the provincial offices. Major elements of this second step include: (i) evaluation of available human resources; (ii) measures to fight corruption; (iii) provision of physical infrastructure, like office buildings, equipment, etc.; (iv) increased controls and supervision; (v) extension of the pre-shipment inspections facility to offices in the provinces; (vi) installation of SYDONIA in provinces;⁵⁵ (vii) improved procedures for the informal sector; and (viii) development of control statistics. In a third step, a risk

⁵⁵ SIDONIA is a customs automation system developed by UNCTAD.

management system would be implemented; the WTO evaluation scheme put into place; and post-clearance controls enforced. Furthermore, at this stage, the strategy to combat smuggling would be revised. It is envisaged that the implementation of the strategic plan will progress sequentially, starting with the most important, high import-volume customs stations, and then moving on to the smaller posts.

72. The above reform strategies provide a sound basis for strengthening revenue administration at the DGI and the AGD, thus promising significant improvements in revenue collection. The authorities are committed to implementing these reforms steadfastly, including by devoting sufficient resources, in particular senior staff, who would be freed from their day-to-day operations so as to dedicate their efforts to overseeing the implementation of these reforms. The experience in other countries has shown that the deployment of long-term external advisors at these key agencies could ensure proper and timely implementation of the reform agenda.

Direct taxes: Personal and corporate income tax

73. The efficiency of income tax collection in Haiti is quite low by comparative standards. Revenue collected from corporate and personal income tax amounted to about 2 percent of GDP in 2006. With a maximum tax rate of 30 percent for personal income, and 35 percent for corporate income, the corresponding income tax efficiency amounts to 3 percent.⁵⁶ This level is significantly lower than in other Latin American countries, where the average efficiency amounts to almost 15 percent in 2003.⁵⁷ Income tax rates are, however, broadly in line with IMF recommendations and regional standards, and suggest that rate adjustments would not seem advisable.⁵⁸

⁵⁶ In general, tax efficiency measures are used to assess the performance of a particular tax. The perfectly efficient tax would lead to an efficiency ratio of 100 percent if a uniform tax rate is applied and tax collection is measured in percent of the tax base. In the case of an income tax, the appropriate tax base would be the GNP, and in the case of a consumption based tax like a VAT, the appropriate tax base would be domestic consumption. For this paper, income tax efficiency is measured as the ratio of income tax revenue (as a percent of GDP) to the sum of the highest personal and corporate income tax rates. This measure is useful for cross-country comparisons, but its level should not be interpreted as a gauge of absolute collection efficiency. The use of the sum of corporate and personal income tax rates in the denominator to calculate the efficiency ratio implies that income would have to be fully taxable under both corporate and personal income taxes to achieve an efficiency ratio of 100 percent, which is not a desirable feature in any income tax system.

⁵⁷ See Cárdenas, Lora, and Mercer-Blackman (2005).

⁵⁸ The average top tax rate for personal and corporate income tax in Latin America, the Caribbean, and Bermuda is 30 percent. (see IMF, FAD data bases on “income tax rate”).

Box 2: Major features of the income tax and the 2006 reform⁵⁹

In 2006, income tax rates and tax brackets were adjusted. The reform harmonized the maximum level of personal and corporate income tax rates, and the multi-rate structure of the corporate income tax was converted into a revenue-neutral single proportional rate (see table below). Personal income tax brackets were adjusted upward to take into account the effect of past inflation on the taxable base.

The tax prepayment mechanism for businesses with a turnover of above G 1.25 million and corporations was also revised. Since October 2006, these businesses and corporations have to make three equal installments over the year to cover 75 percent of the previous year's tax payments. This replaces a scheme that required the payment of a single installment of 1 percent of the previous year's profits plus 1 percent of the current value of imports. Since FY 2007 is the first year during which these reforms are effective, the impact of the reforms will not be known until the full-year assessments have been completed.

Comparison of the income tax rate system before and after the 2006 reform

Before October 2006		Since October 2006	
Tax brackets (in gourdes)	Tax rates (in percent)	Tax brackets (in gourdes)	Tax rates (in percent)
Personal income tax			
1 to 20,000	0	1 to 60,000	0
20,001 to 100,000	10	60.001 to 240.000	10
100,001 to 250,000	15	240.001 to 480.000	15
250,001 to 750,000	25	480.001 to 1.000.000	25
750,001 and above	30	1.000.001 and above	30
Corporate income tax			
1 to 20,000	10	1 and above	30
20,001 to 100,000	15		
100,001 to 250,000	20		
250,001 to 750,000	30		
750,001 and above	35		

Source: Lois Fiscales – Impôt sur le Revenu (MEF 2007) and Le Moniteur (Spécial No. 10, October 5, 2005).

74. **As with revenue in Haiti in general, strengthening income tax administration and broadening the tax base hold the promise of significantly improving income tax productivity and thus raising tax collection.** Weak tax administration and generous tax exemptions are the major causes for Haiti's low income tax efficiency. To enlarge the tax base, corporate tax exemptions should be phased out and investment incentives streamlined, including by replacing tax holidays with investment allowances (Box 3). In addition, the personal income tax base could be expanded to include fringe or non-cash benefits received by an employee who is also a shareholder or director of a company.

⁵⁹ See Le Moniteur Spécial (No. 10, October 5, 2005).

75. **Broadening the tax base could significantly increase revenue collection from direct taxes.** If income tax efficiency was raised closer to the regional average as a consequence of these actions, revenue could rise significantly. As an illustration, increasing tax efficiency only marginally to 5 percent—assuming unchanged maximum tax rates of 30 percent for both personal and corporate income taxes—could boost revenues by about 1 percent of GDP.

Box 3: Tax incentives in Haiti

According to the investment law, incentives can be granted by the Commission Interministérielle des Investissements to qualified investors in the following sectors: export and re-export, agriculture, arts, national industry, tourism and related services, businesses in free economic zones, and other sectors and special regimes.

Available incentives are fairly generous and include: (i) a 100 percent exemption from income taxes for up to 15 years, followed by a gradual phasing out of the exemptions over 6 years; (ii) accelerated depreciation of between 10 percent (buildings) and 100 percent per year (software, etc.); (iii) exemption from communal taxes for up to 15 years; (iv) exemption from taxes on wages and salaries and other direct taxes for up to 15 years; (v) duty free import of equipment; and (vi) exemption from verification fees.

Furthermore, special withholding rates of 20 percent are granted on payments to non-residents; some specific entities, for example offshore banks, non-profit organizations, and charitable organizations, benefit from duty free imports, exemption from taxes on wages and salaries, and income taxes; and loss-carry forwards are granted for up to 5 years.

Indirect taxes

Value-added tax (VAT)

76. **Haiti collects almost 3 percent of GDP in the form of a VAT, which is about one-third of total revenues.** Almost 75 percent of VAT is collected by the AGD at the boarder, reflecting Haiti's open economy and the relative ease of collecting VAT at the point of import.

Box 4: Main features of the VAT in Haiti

The VAT of 10 percent of the price of goods and services, including other duties and taxes is levied on goods (including agro-industrial), on the provision of services (including water, electricity, and local bank premiums and charges), and on imports, calculated at each stage in the production/distribution/import chain, with credit for tax paid on purchases. The VAT system allows for the deduction of tax collected on inputs (not investment goods) of a taxable operation from the tax applicable to that operation. Tax credits can be carried forward but no refund mechanism for excess credits exists.

The following goods are exempted from the VAT: (1) business persons with a turnover of less than G 100,000; (2) service providers with a turnover of less than G 100,000; (3) international services (transportation equipment maintenance); (4) interest on bank loans and on banking and insurance operations; (5) wages and education and health care expenses; (6) operations of nonprofit organizations; (7) exports and reexports; (8) imported petroleum products; (9) equipment and inputs for agriculture, livestock, and fisheries; and (10) supplies for education.

77. **Haiti's VAT collection efficiency of less than 30 percent is lower than that of other countries in the region, even though the gap is smaller than in the case of income tax efficiency.**⁶⁰ Middle income countries in the Western Hemisphere, with the exception of the Dominican Republic, exhibit on average a VAT efficiency of 45 percent (Figure 5). moreover, a wider comparison shows that Haiti's consumption-based VAT efficiency ratio is lower than that of any other region (Table 4).

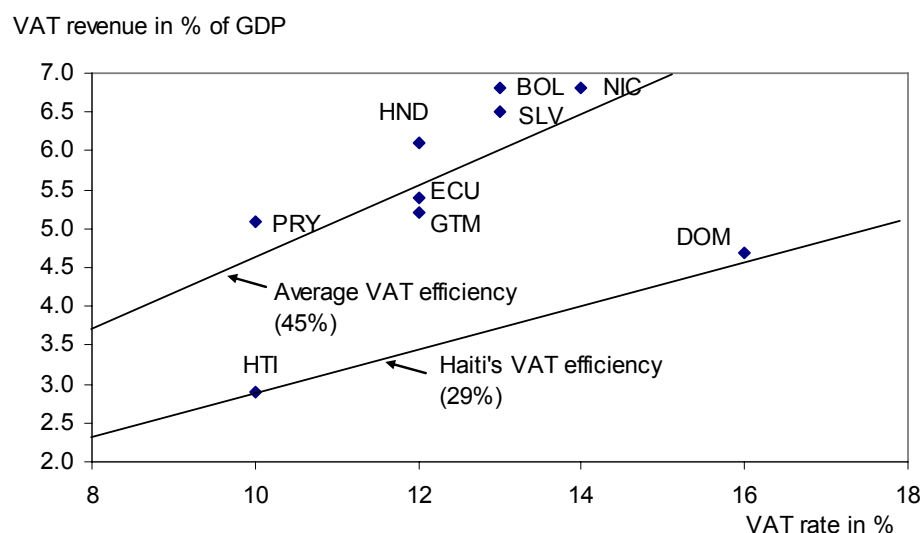
Table 3: VAT efficiency ratio by region in percent

	Haiti	Africa (26 countries)	Asia and Pacific (18 countries)	Western Hemisphere (24 countries)	Europe (38 countries)	Middle East and Central Asia (17 countries)
Efficiency. ratio ¹	29	32	48	50	53	35

Sources: IMF; FAD data base (2007), and IMF staff calculations.

¹ The Efficiency ratio relates VAT collections to private consumption rather than GDP. Because of large foreign transfers, Haiti's private consumption is almost 100 percent of GDP.

⁶⁰ VAT efficiency is calculated as total VAT revenue (as a percentage of GDP), divided by the VAT standard rate.

Figure 5: VAT efficiency in Haiti and Latin American middle income countries of similar size

Note: Latest data available. BOL=Bolivia, DOM=Dominican Republic, ECU=Ecuador, GTM=Guatemala, HND=Honduras, HTI=Haiti, NIC=Nicaragua, PRY=Paraguay, SLV=El Salvador.

Source: IMF, FAD data base and Staff calculations (2007).

78. **As with other taxes, Haiti's low VAT efficiency is attributable to a narrow tax base and weak tax administration.** VAT exemptions include international services (transportation equipment maintenance); interest on bank loans and on banking and insurance operations; wages and education and health care expenses; operations of nonprofit organizations; exports and re-exports; imported petroleum products; equipment and inputs for agriculture, livestock, and fisheries; and supplies for education; and non profit activities. By initially excluding imported inputs and subsequently exempting exports of final goods, the current VAT system also creates incentives for leakage of tax-exempt goods into the domestic economy.

79. **A number of steps could be taken to broaden the tax base and address administrative weaknesses.** To avoid revenue leakage, all imports should be subjected to standard VAT and exports zero rated, while introducing an efficient VAT refund mechanism (see below). The tax productivity could also increase over time, if the VAT threshold would be increased from currently G 30,000 to at least G 1 million (or about US\$28,000). This would discharge the revenue authorities and allow them to reallocate their scarce human resources to focus on improving compliance of significant contributors. It is estimated that these measures could improve administration sufficiently to raises the VAT efficiency from 29 to 40 percent (i.e., closer to the regional average), thereby boosting revenue collection by about 1 percent of GDP.

80. **A moderate adjustment of the standard VAT rate would also carry considerable revenue potential.** At 10 percent, Haiti's standard VAT rate remains among the lowest in the region. It is also significantly lower than the rate of its direct neighbor, the Dominican Republic, which in 2004 increased its VAT rate from 12 to 16 percent. An increase of the VAT rate from 10 percent to the regional average of 14 percent could be envisaged in the medium term, and would (even at the current low efficiency level of 29 percent) yield additional revenue of about 1 percent of GDP. As with the other tax rate increases, such an adjustment should only take place after tax administration and enforcement have been strengthened, to contain the risk of a pick-up in tax evasion and smuggling.

81. **Haiti does not have a refund mechanism in the VAT system, which poses a burden on the competitiveness of exporters.**⁶¹ If VAT refunds are not paid to exporters in full and within a reasonable time, the VAT becomes embedded in the exporter's costs, reducing their competitive edge in international markets. In developing and transition economies, refund levels are typically 2-20 percent of gross VAT collections—significantly lower than in developed countries where refunds can exceed 40 percent of gross VAT collections.⁶² For Haiti, establishing a well-functioning refund system will be all the more important, once all imports, including inputs for the exporting sector, are subjected to the VAT. The refund system should be simple yet efficient. This could be achieved by (i) setting VAT registration threshold at a sufficiently high level to keep the number of taxpayers at manageable levels; and (ii) refunding exporters or enterprises that export a large share of their products promptly, while requiring taxpayers, as appropriate, to carry forward their excess credits for up to six months. Initially this could have a negative impact on revenue collection, but reduced leakage into the domestic market should help to increase revenue in the medium term.

Excise taxes

82. **Excise taxes account for about 7 percent of total revenue, almost 90 percent of which are collected by the AGD.** Excises apply to products like tobacco, alcoholic and carbonated beverages as well as on petroleum products, and imported vehicles. Because of their low income and price elasticities of demand, these products have traditionally been viewed as ideal candidates on efficiency grounds for revenue-generating excise taxes. In Haiti, about 50 percent of excises taxes are collected on petroleum products and 25 percent on imported vehicles.

⁶¹ Imported inputs for export are VAT exempted but domestically purchased inputs are subject to VAT. Exporters can deduct any VAT credit from VAT obligations but no refund is granted if VAT credits exceed VAT obligations, which is often the case for companies that mainly export their products..

⁶² See Harrison and Krelove (2005).

83. **To generate more revenue, the authorities could consider a moderate adjustment of some excise rates.** Excise are applied at both ad-valorem and specific rates. Many of the specific taxes have remained largely unadjusted, and their real value has been eroded over time by the cumulative effects of inflation. The excise tax regime relating to tobacco products and alcoholic beverages was adjusted in 2003, when specific taxes were replaced by relatively low ad-valorem rates of 12 percent and 4-5 percent, respectively. The Dominican Republic levies ad-valorem excise taxes of 20 percent and 7.5 percent on tobacco and alcoholic beverages, respectively, on top of specific excises. Thus, there might be room to adjust these and other excises moderately, to levels that are closer to those of the Dominican Republic. For example, an upward adjustment of excise taxes by 20 percent could boost revenues by 0.6 percent of GDP.

Customs duty

84. **Almost 50 percent of the revenues collected by the AGD are related to taxes on international trade.** The majority of trade-related revenues is collected in the form of fees and charges, and less than 50 percent of trade-related revenues come from customs duties. The trade tariff structure currently includes six rates (0, 3, 5, 10, 15 and 58 per cent) which were lowered noticeably in the early 2000s. The maximum rate of 58 per cent applies to imports of gasoline (see below).

85. **As a full member of the WTO (since 1996) and of CARICOM (since 2002) Haiti is committed to apply the rules of these organizations.**⁶³ In June of this year, the Haitian government submitted to parliament a new customs code that introduces the transaction evaluation system required by the WTO. In its latest trade review of Haiti in 2003, the WTO noted that trade liberalization has been a main component of Haiti's reforms and praised the simplification of its tariff structure. At the same time, the report highlighted other duties and charges (in particular inspection fees) as relatively high. However, Haiti generally applies tariffs below CARICOM's common external tariff arrangements, which might need to be harmonized with the common external tariff regime. This could provide additional revenues to the government that have yet to be specified, albeit this would come at some cost for the economy in terms of efficiency in resource allocation.

Petroleum

86. **All petroleum products consumed in Haiti are imported, and revenues on these products are collected at the point of entry.** The gasoline prices are determined by an automatic, yet relatively complex pricing mechanism (Table 5). Government revenues from petroleum products comprise a combination of customs duty, excise taxes (fix and variable)

⁶³ While Haiti is a member of CARICOM, it has yet to apply the regulations of the CARICOM Single Market and Economy (CSME).

and other charges.⁶⁴ The government collects revenue equivalent to about 76 percent of the CIF landed costs on normal and premium gasoline, with most of the revenue collected in the form of customs duty. Diesel and kerosene are not subject to customs duty, and the government take on these products amounts to about 16 and 9 percent of their landed cost, respectively.

Table 4: Petroleum pricing and taxation, April 2007 (in US dollars per gallon)

	Govern. Take	Normal 91	Premium 95	Diesel	Kerosene
CIF cost		2.16	2.18	1.89	2.07
Financing fees (4.5% of CIF)		0.10	0.10	0.08	0.09
Landed cost		2.26	2.27	1.97	2.16
Verification fees	*	0.11	0.11	0.10	0.11
Customs duty (58% of landed cost)	*	1.31	1.31	0.00	0.00
Fixed port fees	*	0.01	0.01	0.01	0.01
Fixed excise tax	*	0.09	0.09	0.08	0.07
Price ex-customs		3.78	3.80	2.16	2.34
Fixed motor fuel charge	*	0.03	0.03	0.03	0.00
Company margin		0.21	0.26	0.20	0.17
Transportation to provinces		0.03	0.03	0.03	0.03
Distribution margin		0.28	0.26	0.20	0.17
Subtotal		4.33	4.38	2.62	2.72
Variable excise tax (to round up price in gourde)	*	0.17	0.17	0.09	0.02
Retail pump price		4.50	4.55	2.71	2.74
Government take	*	1.71	1.72	0.31	0.20
<i>In percent of landed cost</i>		<i>75.7%</i>	<i>75.9%</i>	<i>15.7%</i>	<i>9.4%</i>
<i>In percent of retail price</i>		<i>38.0%</i>	<i>37.8%</i>	<i>11.4%</i>	<i>7.3%</i>
Customs duty		1.31	1.31	0.00	0.00
Excise taxes		0.26	0.26	0.17	0.08
Other fees and charges		0.15	0.15	0.13	0.12

Source: Haitian authorities.

⁶⁴ Variable excises are used to stabilize the retail pump price. They are adjusted for each oil delivery to maintain a stable retail pump price, unless the landed cost deviates by more than 5 percent from the previous shipment, in which case the retail pump price is raised or lowered accordingly.

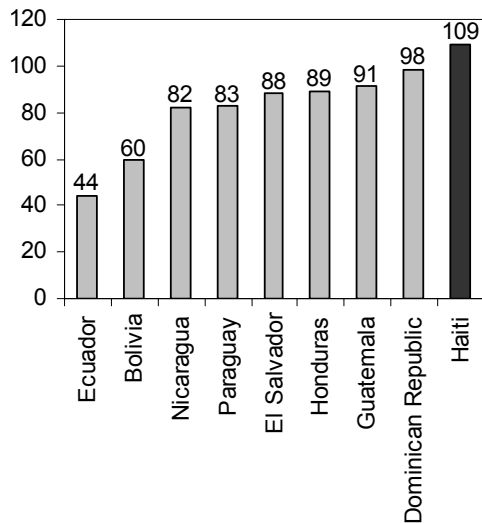
87. **High ad-valorem rates on normal and premium gasoline make government revenue vulnerable to volatile world market prices.** To reduce the volatility of revenue from petroleum products, the pricing mechanism should be changed to replace the ad-valorem customs duty with a revenue-neutral fixed excise tax. Because excises are domestic consumption taxes, replacing the high customs duty on gasoline (58 percent) with excises would eliminate the highest customs duty rate—reducing the number tariff rates from 6 to 5, and allow for more flexibility to possibly adjust external tariffs in line with WTO or CARICOM commitments without compromising revenue from petroleum products.

88. **Gasoline prices in Haiti are the highest in the region** (Figure 6a). Consumption data for Haiti shows that over the past five years, diesel consumption has risen, while consumption of other gasoline products stagnated or declined (Figure 6b). This reflects the increased demand for diesel for energy generation, but the substitution of normal gasoline with the less expensive diesel may also play a role.⁶⁵ A modest adjustment in diesel taxation could help to contain further substitution, and thus minimize potential losses of revenues from diverting demand from normal gasoline to diesel.

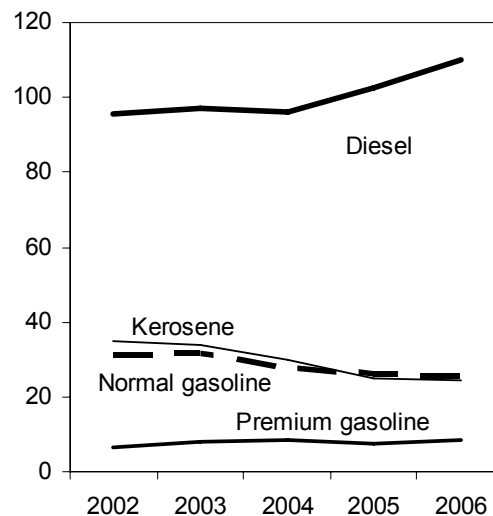
Figure 6: Gasoline prices and consumption

(a) Regional comparison of end consumer price of normal gasoline

(US\$ per gallon, end-2005)



(b) Haitian gasoline imports (in millions of gallons)

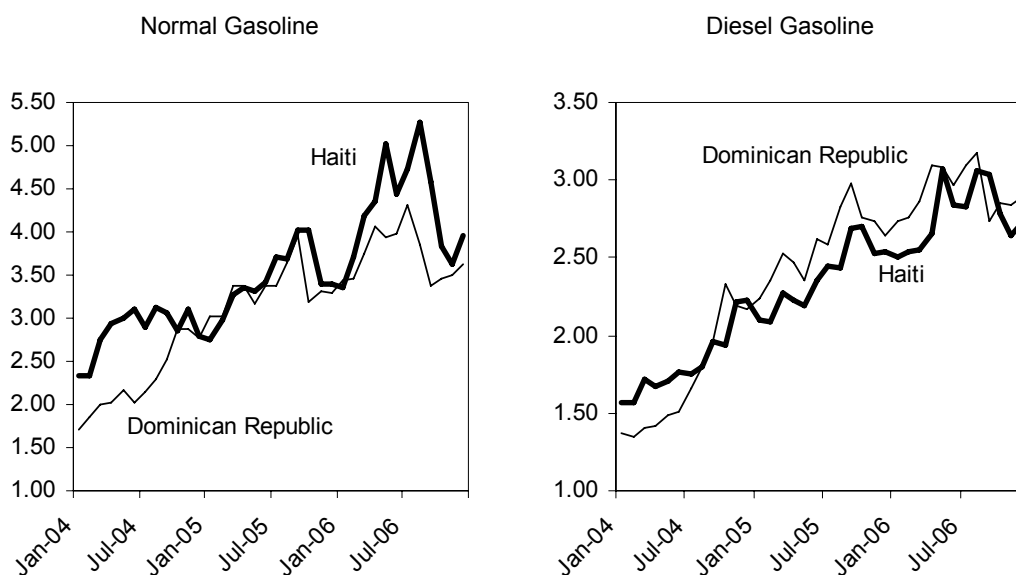


Source: IMF staff estimates.

⁶⁵ Diesel purchased by the electric company Ed'H for the purpose of generating electricity is tax free.

89. **Compared with the Dominican Republic, gasoline prices are higher in Haiti, while diesel prices are lower** (Figure 7). This suggests that a modest increase in diesel taxation could be introduced, with limited risks in terms of added incentives for smuggling. Increasing the fiscal take on diesel from 16 percent to about 25 percent would close the gap between diesel prices in the Dominican Republic and Haiti, and enhance government revenue by about 0.4 percent of GDP. However, before such an adjustment is implemented, its impact on low-income and vulnerable groups should be carefully studied, given that diesel is widely used for road transportation and self-generation of electricity.

Figure 7: Petroleum price comparison – Haiti and Dominican Republic
(in US dollars per gallon)



Sources: IMF staff estimates.

“Nuisance taxes”

90. **The authorities could also consider eliminating a number of so-called “nuisance taxes.”**⁶⁶ These are taxes and fees that generate insignificant revenue (less than 1 percent of GDP), but exact a considerable burden on taxpayers and tax authorities alike. Examples for nuisance taxes are the excise tax on matches, the wreckage tax, the withholding tax on entertainment expenses, and the burial permit fee, to name but a few. While eliminating these taxes will not increase revenue collection directly, it would free up the revenue administration’s scarce resources, thereby allowing their more efficient and productive use.

⁶⁶ See also IMF (2006a).

Summary of revenue measures

91. **The implementation of a substantial part of the outlined tax administration and tax policy reforms could yield additional revenue of at least 3 percent of GDP in the medium term** (Table 6). Broadening the tax base for income taxes by eliminating tax exemptions and adding fringe benefits to the taxable base could yield additional revenue of up to 1 percent of GDP. With respect to indirect taxes, raising the VAT rate closer to the regional average, boosting the fiscal take on diesel imports, and increasing excise taxes by about an average of 20 percent could yield additional revenue of up to 2 percent of GDP. Strengthening revenue administration, and thus improving tax and customs efficiency, could further improve collections across all forms of tax and custom revenues by an additional 1 percent of GDP.

Table 6: Summary of revenue impact of tax administration and tax policy measures

	Expected additional revenue yield (percent of GDP)	Time frame of implementation (years)
Direct taxes		
Broaden tax base	1.0	1-3
Indirect taxes		
VAT: raise tax rate to 14%	1.0	2-3
Introducing VAT refund mechanism	Not determined	2-3
Petroleum: simplify taxation, increase government take on diesel to 25%	0.4	0.5-1
Adjust other excises (alcohol, etc.)	0.6	1-2
Eliminate nuisance taxes	Neutral	1-3
Strengthen tax and customs administration	1.0	1-3
Non-tax revenue		
Improve management of SOE	Not determined	3-4
Adjust fees and charges to inflation	Not determined	1-2

Source: IMF staff estimates.

C. Conclusions

92. **Well-sequenced fiscal reforms could help increase revenue collection to the levels envisaged in the authorities' economic program.** Increasing revenue collection from slightly more than 10 percent of GDP to about 15 percent of GDP over the next 8 years would require addressing both weaknesses in revenue administration and tax policy. Major reform measures that could help achieve this target are summarized in Table 7. As a general principle, revenue administration reforms would have to precede measures that increase the fiscal pressure, to minimize the risks of increased evasion and smuggling.

93. **Encouragingly, revenue administration reforms are well under way.** The DGI and the AGD have already developed reform plans and are working on their implementation. If implemented successfully, these reforms will improve the efficiency and effectiveness of internal and external revenue administration. This would allow the authorities to increase productivity across revenue sources, and thus bring productivity levels closer to international standards.

94. **Fiscal reforms should be based on a comprehensive review of tax policies and be mindful of their social impact.** A comprehensive review of the whole tax regime would help ensure consistency and efficiency across all revenue sources. In designing the fiscal reform program, it would also be important to understand how its elements affect the poor and other vulnerable groups, so as to allow the authorities to mitigate any adverse impact on their well-being. To this end, the authorities could usefully consider to conduct an integrated poverty and social impact analysis (PSIA), which is a basic technique to evaluate the effect of economic policies on vulnerable population subgroups.

95. **An ambitious fiscal reform agenda will stretch Haiti's limited implementation capacity and resources, and progress in revenue mobilization will therefore partly hinge on continued effective support from the international community.** Over the past few years, Haiti has received technical assistance and financial support for tax policy and revenue administration from a number of donors, including the IMF, IDB and the US Treasury. Many of the recent measures, including the income tax reform, revision of the customs code, and the formulation of reform plans for the DGI and AGD have been supported by donor assistance. The continuation of this support and its effective coordination will be necessary to help overcome remaining capacity constraints, including the still limited pool of qualified human resources and poor technological and physical infrastructure.

Table 7: Summary of reform measures by type of tax

	Revenue administration	Tax policy measures	
		Broadening revenue base	Adjusting tax rates
Direct taxes			
Personal income tax	* Simplify system * Eliminate loopholes of tax exemption for imports	Include fringe benefits in taxable base	No additional action (new rates in effect since October 2006)
Corporate income tax		Replace tax holidays with investment allowances	No additional action (new rates in effect since October 2006)
Indirect taxes			
VAT	* Expand customs control * Introduce refund mechanism for exporters	Eliminate tax exemption of imported inputs for exports	Increase tax rate from 10 to 14 percent
Excises			Asses status quo and increase rates to adjust for past inflation and to regional standards
Customs	Expand customs control to the provinces		Keep rates in line with WTO and CARICOM regulations
Petroleum pricing			* Increase diesel taxation to raise price equal to equal price in the Dominican Republic. * Replace ad-valorem customs duty with specific excise tax
Nuisance taxes		Eliminate	

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IV. STATISTICAL APPENDIX

Table 1. Haiti: National Accounts at Current Prices 1/
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of gourdes)					
Gross domestic product	94,028	119,758	140,387	168,034	200,456
Consumption	92,140	121,378	143,162	167,291	200,186
Central government	6,908	8,643	9,213	10,513	12,913
Other	85,232	112,736	133,949	156,778	187,273
Gross domestic investment	23,570	36,758	38,386	46,072	57,861
Public sector	4,057	8,351	9,491	11,968	10,689
Private sector	19,514	28,407	28,895	34,104	47,172
Balance of trade in goods and nonfactor services	-21,682	-38,378	-41,160	-45,329	-57,591
Exports	11,865	18,947	20,271	23,281	28,665
Imports	-33,548	-57,326	-61,432	-68,610	-86,255
(Annual percentage change)					
Gross domestic product	9.7	27.4	17.2	19.7	19.3
Consumption	9.7	31.7	17.9	16.9	19.7
Central government	6.9	25.1	6.6	14.1	22.8
Other	9.9	32.3	18.8	17.0	19.5
Gross domestic investment	6.4	56.0	4.4	20.0	25.6
Public sector	20.9	105.9	13.6	26.1	-10.7
Private sector	3.8	45.6	1.7	18.0	38.3
Balance of trade in goods and nonfactor services	7.8	77.0	7.2	10.1	27.0
Exports	12.5	59.7	7.0	14.8	23.1
Imports	8.2	70.9	7.2	11.7	25.7
(In percent of GDP)					
Consumption	98.0	101.4	102.0	99.6	99.9
Central government	7.3	7.2	6.6	6.3	6.4
Other	90.6	94.1	95.4	93.3	93.4
Gross domestic investment	25.1	30.7	27.3	27.4	28.9
Public sector	4.3	7.0	6.8	7.1	5.3
Private sector	20.8	23.7	20.6	20.3	23.5
Balance of trade in goods and nonfactor services	-23.1	-32.0	-29.3	-27.0	-28.7
Exports	12.6	15.8	14.4	13.9	14.3
Imports	-35.7	-47.9	-43.8	-40.8	-43.0

Sources: Haitian Institute of Statistics (IHSI); Bank of the Republic of Haiti; and Fund staff estimates.

1/ Based on the new national accounts published by the IHSI in April 2001.

Table 2. Haiti: National Accounts at Constant Prices 1/
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
	(In millions of 1986/87 gourdes)				
Gross domestic expenditure	24,904	25,218	24,302	24,803	25,703
Consumption	20,514	20,691	19,921	20,359	21,162
Gross domestic investment	4,390	4,526	4,381	4,444	4,541
Balance of trade in goods and nonfactor services	-11,936	-12,203	-11,745	-12,020	-12,624
Exports	2,821	3,023	3,318	3,430	3,536
Imports	-14,757	-15,225	-15,063	-15,450	-16,160
Gross domestic product at market prices	12,968	13,015	12,557	12,783	13,079
	(Annual percentage change)				
Gross domestic expenditure	-0.6	1.3	-3.6	2.1	3.6
Consumption	-1.2	0.9	-3.7	2.2	3.9
Gross domestic investment	2.5	3.1	-3.2	1.4	2.2
Exports	-2.1	7.1	9.8	3.4	3.1
Imports	-1.2	3.2	-1.1	2.6	4.6
Gross domestic product at market prices	-0.3	0.4	-3.5	1.8	2.3

Sources: Haitian Institute of Statistics (IHSI); Bank of the Republic of Haiti; and Fund staff estimates.

1/ Based on the new national accounts published by the IHSI in April 2001.

Table 3. Haiti: Origin of Gross Domestic Product
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of constant 1986/87 gourdes)					
Primary sector	3,340	3,348	3,187	3,269	3,323
Secondary sector	2,016	2,041	1,997	2,046	2,072
Manufacturing	999	1,003	978	994	1,017
Electricity and water	61	63	70	75	58
Construction and public works	957	975	949	977	997
Services sector	6,691	6,703	6,450	6,533	6,723
Transportation and communications	763	775	781	806	846
Commerce, restaurants, and hotels	3,509	3,529	3,305	3,350	3,451
Government	1,400	1,380	1,336	1,358	1,379
Other	1,019	1,020	1,028	1,019	1,047
Gross domestic product at factor prices	12,048	12,093	11,634	11,849	12,118
Indirect and import taxes	920	923	923	934	961
Gross domestic product at market prices	12,968	13,015	12,557	12,783	13,079
(Percentage change over previous year)					
Primary sector	-3.7	0.2	-4.8	2.6	1.6
Secondary sector	1.3	1.2	-2.2	2.5	1.3
Manufacturing 2/	1.6	0.5	-2.6	1.7	2.3
Electricity and water	2.1	3.2	11.5	6.9	-22.7
Construction and public works	0.9	1.9	-2.6	2.9	2.0
Services sector	1.1	0.2	-3.8	1.3	2.9
Transportation and communications	-0.3	1.6	0.9	3.2	4.9
Commerce, restaurants, and hotels	2.9	0.6	-6.3	1.4	3.0
Government	1.1	-1.4	-3.2	1.6	1.6
Other	-4.0	0.1	0.8	-0.8	2.7
Gross Domestic Product at market prices	-0.3	0.4	-3.5	1.8	2.3
(Percentage distribution)					
Primary sector	25.8	25.7	25.4	25.6	25.4
Secondary sector	15.5	15.7	15.9	16.0	15.8
Manufacturing 2/	7.7	7.7	7.8	7.8	7.8
Electricity and water	0.5	0.5	0.6	0.6	0.4
Construction and public works	7.4	7.5	7.6	7.6	7.6
Services sector	51.6	51.5	51.4	51.1	51.4
Utilities, transportation, communications	5.9	6.0	6.2	6.3	6.5
Commerce	27.1	27.1	26.3	26.2	26.4
Government	10.8	10.6	10.6	10.6	10.5
Other	7.9	7.8	8.2	8.0	8.0
Indirect and import taxes	7.1	7.1	7.3	7.3	7.3
Gross domestic product at market prices	100.0	100.0	100.0	100.0	100.0

Sources: Haitian Institute of Statistics; Bank of the Republic of Haiti; and Fund staff estimates.

Table 4. Haiti: Savings and Investment
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
	(In millions of gourdes)				
Gross domestic investment	23,570	36,758	38,386	46,072	57,861
Public sector 1/	4,057	8,351	9,491	11,968	10,689
Private sector 1/	19,514	28,407	28,895	34,104	47,172
Gross domestic savings	22,762	34,898	36,141	50,515	57,833
Public sector	-1,036	-410	1,894	2,469	3,207
Private sector	23,798	35,308	34,248	48,047	54,626
Current account 2/	-808	-1,860	-2,244	4,444	-28
External savings	-808	-1,860	-2,244	4,444	-28
Official capital (net) 3/	-667	-129	-416	1221	2111
Private capital (net) 4/	-463	1216	3959	-3475	1552
Change in arrears	828	381	796	-1688	387
Changes in net foreign assets (increase -)	1111	392	-2095	-501	-4022
	(In percent of GDP, at current market prices)				
Gross domestic investment	25.1	30.7	27.3	27.4	28.9
Public sector	4.3	7.0	6.8	7.1	5.3
Private sector	20.8	23.7	20.6	20.3	23.5
Gross domestic savings	24.2	29.1	25.7	30.1	28.9
Public sector	-1.1	-0.3	1.3	1.5	1.6
Private sector	25.3	29.5	24.4	28.6	27.3
External savings	-0.9	-1.6	-1.6	2.6	0.0
Official capital (net)	-0.7	-0.1	-0.3	0.7	1.1
Private capital	-0.5	1.0	2.8	-2.1	0.8
Change in arrears	0.9	0.3	0.6	-1.0	0.2
Changes in net foreign assets (increase -)	1.2	0.3	-1.5	-0.3	-2.0
Memorandum item:					
Nominal GDP (in millions of gourdes)	94,028	119,758	140,387	168,034	200,456

Sources: Haitian Institute of Statistics; Bank of the Republic of Haiti; and Fund staff estimates.

1/ Fund staff estimates for 2002-06.

2/ Including grants.

3/ Includes trust fund, publicly guaranteed capital, SDR allocation, and other unrequited earnings.

4/ Includes monetary capital and net errors and omissions.

Table 5. Haiti: Changes in Consumer Prices by Category /1
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
Total	9.3	26.7	28.3	16.8	14.2
Food	9.2	32.2	28.2	17.9	14.8
Clothing	8.5	22.4	18.0	14.9	10.0
Housing	10.9	20.8	24.5	8.4	23.8
Furniture and household items	9.5	24.1	19.7	12.9	15.8
Services					
Health	8.2	21.5	19.8	15.2	11.8
Education	11.6	15.4	18.7	18.9	8.5
Transportation	8.3	28.9	46.5	21.8	11.3
Other goods and services	7.7	23.4	30.8	14.0	7.6

Sources: Haitian Institute of Statistics; Bank of the Republic of Haiti; and Fund staff estimates.

1/ Percentage change in annual average index.

Table 6. Haiti: Minimum Wage Rates
(Fiscal year ending September 30)

	Standard Wage Rate (Gourdes per day)	Real Wage Index 1/
1990	15.0	66.1
1991	15.0	57.2
1992	15.0	47.9
1993	15.0	37.0
1994	15.0	26.9
1995	36.0	49.6
1996	36.0	40.6
1997	36.0	35.0
1998	36.0	31.0
1999	36.0	28.7
2000	36.0	25.8
2001	36.0	22.1
2002	36.0	20.3
2003	70.0	29.8
2004	70.0	23.4
2005	70.0	20.2
2006	70.0	17.9

Sources: Ministry of Social Affairs; Haitian Institute of Statistics; and Bank of the Republic of Haiti.

1/ Last quarter of 1981=100. Deflated by consumer price index for Port-au-Prince until 1991. Deflated by an index covering the whole country beginning in 1992.

Table 7. Haiti: Central Government Current Revenue
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
	(In millions of gourdes)				
Total current revenue	7,437	10,750	12,457	16,233	20,061
Customs	2,069	2,762	3,481	4,091	6,342
Internal	5,232	7,462	8,769	11,304	13,057
General sales tax	2,609	3,372	3,648	4,189	6,267
Internal	651	842	960	1,122	1,594
Customs	1,958	2,530	2,688	3,068	4,673
Taxes on income and profits	1,314	1,849	2,619	3,798	3,519
Corporate	551	671	1,164	1,454	1,786
Individual	763	1,178	1,454	2,345	1,733
Taxes on property	0	0	0	92.99	136.85
Other taxes and fees	1,309	2,240	2,502	3,224	3,134
Excise	575	896	1,176	1,246	1,346
Petroleum	369	647	870	926	883
Cigarette	28	27	108	112	113
Other excises	178	222	198	209	351
Motor vehicles		358	302	70	66
Consular services					
Other	734	986	1,025	1,907	1,721
Other	136	526	207	837	662
	(In percent of GDP)				
Total current revenue	7.9	9.0	8.9	9.7	10.0
Customs	2.2	2.3	2.5	2.4	3.2
Internal	5.6	6.2	6.2	6.7	6.5
General sales tax	2.8	2.8	2.6	2.5	3.1
Internal	0.7	0.7	0.7	0.7	0.8
Customs	2.1	2.1	1.9	1.8	2.3
Taxes on income and profits	1.4	1.5	1.9	2.3	1.8
Corporate	0.6	0.6	0.8	0.9	0.9
Individual	0.8	1.0	1.0	1.4	0.9
Taxes on property	0.0	0.0	0.0	0.1	0.1
Other taxes and fees	1.4	1.9	1.8	1.9	1.6
Memorandum item:					
Nominal GDP (millions of gourdes)	93,840	119,616	140,346	168,034	200,456

Sources: Ministry of Economy and Finance; and Bank of the Republic of Haiti.

Table 8. Haiti: Sectoral Distribution of Commercial Bank Credit 1/
(Fiscal year ending September 30)

	2002 /2	2003	2004	2005
(In millions of gourdes)				
Total	12,160.0	16,008.4	19,684.7	23,492.4
Retail and wholesale trade	8,717.1	10518.1	6486.93	6950.41
Loans to individuals	1,622.0	1859.6	2091.1	2940.48
Manufacturing	1,306.7	2464.9	3449.38	4745.23
Electricity, gas, and water	12.9	133.1	348.58	300.34
Construction	357.7	352.1	269.9	491
Insurance and real estate	90.5	76.1	2487.45	2786.16
Transport and communication	23.0	542.3	810.87	498.54
Agriculture	0.2	0	7.58	1.86
Other services	29.9	62.2	3732.92	4778.41
(In percent of total credit)				
Total	100.0	100.0	100.0	100.0
Retail and wholesale trade	71.7	65.7	62.5	29.6
Loans to individuals	13.3	11.6	15.3	12.5
Manufacturing	10.7	15.4	13.7	20.2
Electricity, gas, and water	0.1	0.8	0.8	1.3
Construction	2.9	2.2	1.9	2.1
Insurance and real estate	0.7	0.5	2.1	11.9
Transport and communication	0.2	3.4	3.2	2.1
Agriculture	0.0	0.0	0.0	0.0
Other services	0.2	0.4	0.6	20.3

Source: Bank of the Republic of Haiti.

1/ Excludes loans below G 75,000.

2/ As of June 30.

Table 9. Haiti: Interest Rates /1

	Gourde Denominated				Dollar Denominated			Annual Inflation 3/
	Deposits 2/		Lending 2/	91-day BRH Bonds	Deposits 2/		Lending 2/	
	Time	Savings			Time	Savings		
2002								
March	8.0	2.5	26.0	12.0	2.8	1.5	12.0	8.5
June	7.6	2.3	26.0	10.0	2.5	1.4	11.3	8.4
September	7.6	2.3	24.0	10.2	2.5	1.4	10.5	10.1
December	7.6	2.3	26.0	15.6	2.8	1.4	13.0	14.8
2003								
March	14.0	2.3	30.0	27.5	3.3	1.3	13.0	37.0
June	14.5	3.3	30.0	27.8	3.1	1.3	17.0	41.7
September	15.0	3.3	33.0	27.8	3.4	1.3	15.5	42.5
December	14.5	3.3	31.0	27.8	3.3	1.3	13.0	40.4
2004								
March	15.0	2.3	33.0	27.8	3.6	1.3	13.0	20.8
June	14.0	2.3	36.5	20.0	2.6	1.3	14.5	24.1
September	7.5	1.5	33.0	7.6	3.6	1.3	14.0	22.5
December	3.5	1.4	33.0	7.6	2.6	0.9	14.5	20.2
2005								
March	2.4	1.1	33.0	7.5	2.3	0.6	13.0	17.1
June	2.4	1.1	22.5	13.4	2.9	0.6	11.5	14.5
September	4.5	1.1	23.5	15.6	2.8	0.9	11.5	14.8
December	6.3	1.1	23.5	18.9	2.8	0.9	11.5	15.3
2006								
March	6.0	1.1	27.0	18.9	3.0	0.9	14.0	15.3
June	6.8	1.1	31.5	17.8	4.6	0.9	14.0	13.0
September	6.0	1.1	31.5	17.8	3.5	0.5	13.0	12.4
December	6.3	1.1	34.5	16.7	3.5	0.5	13.3	10.3

Source: Bank of the Republic of Haiti.

1/ In percent per annum.

2/ Interest rates shown here are a simple average of the lowest and highest end-of-period deposit and lending rates reported by the commercial banks.

3/ Change in consumer price index compared to same period 12 months earlier.

Table 10. Haiti: Reserve Position of the Commercial Banks
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of gourdes)					
Deposit liabilities	30,576	43,585	48,076	57,743	63,932
Actual reserves	6,531	9,518	13,174	13,558	15,017
Required reserves	6,491	8,806	10,075	11,397	12,598
Excess/deficiency (-)	39	712	3,099	2,160	2,419
(In percent of deposit liabilities)					
Actual reserves	21.4	21.8	27.4	23.5	23.5
Required reserves	21.2	20.2	21.0	19.7	19.7
Excess/deficiency (-)	0.1	1.6	6.4	3.7	3.8

Sources: Bank of the Republic of Haiti; and Fund staff estimates.

Table 11. Haiti: Composition of Exports
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of U.S. dollars)					
Total exports, f.o.b.	274.4	333.2	378.3	458.9	494.4
Agricultural exports	19.9	20.9	24.2	27.9	31.3
Coffee	2.9	3.6	4.3	3.8	5.9
Sugar/Melasse	1.2	1.6	1.0	1.2	0.9
Mango	5.5	4.7	6.6	8.9	8.8
Cocoa	5.5	6.1	6.5	6.9	4.9
Essential oils	4.8	5.1	5.9	7.2	10.8
Light manufactures 1/	226.5	283.0	324.4	402.2	440.4
Domestic inputs	5.8	4.9	4.3	5.4	5.5
Imported inputs	220.8	278.1	320.1	396.8	435.0
Other items	28.0	29.2	29.6	28.7	22.7
(In percent of total exports)					
	7.3	6.3	6.4	6.1	6.3
Agricultural exports	82.5	84.9	85.8	87.7	89.1
Light manufactures 1/	10.2	8.8	7.8	6.3	4.6
Others					
(Annual percentage changes)					
Total exports	-9.9	21.4	13.5	21.3	7.7
Agricultural exports	41.1	5.1	15.8	15.3	11.8
Light manufactures 1/	-13.9	24.9	14.6	24.0	9.5

Sources: Bank of the Republic of Haiti; and Fund staff estimates.

1/ Includes valuation and classification adjustments made by the Bank of the Republic of Haiti.

Table 12. Haiti: Composition of Imports
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of U.S. dollars)					
Total imports, c.i.f.	1054.2	1200.0	1301.6	1406.9	1664.8
Food and others 1/	337.4	362.7	450.0	423.0	479.6
<i>Of which</i>					
Food	235.9	267.7	355.8	330.7	373.6
Fuel and lubricants	157.3	196.5	218.0	313.5	397.1
Machines and transport equipment	159.8	165.3	173.2	156.6	245.8
Raw Materials	21.0	19.1	19.3	15.1	19.4
Manufactured goods	293.9	346.9	337.8	376.2	377.5
Other imports	84.9	109.6	103.3	122.6	145.4
(In percent of total)					
Food and others	32.0	30.2	34.6	30.1	28.8
Fuel and lubricants	14.9	16.4	16.7	22.3	23.9
Machines and transportation	15.2	13.8	13.3	11.1	14.8
Raw materials	2.0	1.6	1.5	1.1	1.2
Manufactured goods	27.9	28.9	26.0	26.7	22.7
Other imports	8.1	9.1	7.9	8.7	8.7
(Annual percentage change)					
Total	-7.1	13.8	8.5	8.1	18.3
Food and others	-14.2	7.5	24.1	-6.0	13.4
Fuel and lubricants	-4.0	24.9	10.9	43.8	26.7
Machines and transportation	-4.9	-8.9	1.2	-21.8	28.2
Raw materials	-6.3	18.1	-2.6	11.3	0.4
Manufactured goods	26.8	29.1	-5.8	18.8	18.6

Sources: Bank of the Republic of Haiti; U.S. Department of Commerce; and Fund staff estimates.

1/ Includes beverage, oils and fats, pharmaceutical and chemical products.

Table 13. Haiti: Stock of External Public Debt 1/
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
(In millions of U.S. dollars)					
Total	1,216.1	1,304.4	1,359.2	1,365.2	1,463.2
Medium and long-term debt	1,166.9	1,245.7	1,280.5	1,329.8	1,418.5
Bilateral creditors	180.3	202.2	211.5	234.4	244.0
United States	9.4	8.7	8.0	15.1	14.4
France	43.3	50.9	56.4	64.1	68.1
Others	127.6	142.6	147.2	155.2	161.5
Multilateral creditors	956.6	1,026.0	1,057.8	1,073.6	1,142.1
IBRD/IDA	495.5	528.4	540.5	504.2	512.2
IFAD	25.6	28.8	30.9	31.7	33.2
IDB	430.3	462.7	481.4	534.0	593.5
OPEC special fund	5.2	6.1	5.0	3.7	3.2
IMF and IMF trust fund	30.0	17.5	11.2	21.8	32.4
Other debt 2/	49.2	58.6	78.7	35.4	44.7
Short term	0.0	0.0	0.0	0.0	0.0
Arrears	49.2	58.6	78.7	35.4	44.7
(In percent of GDP)					
Total	67.8	85.6	74.3	62.0	58.9
Medium and long-term debt	66.3	83.6	72.1	61.2	58.0
Bilateral creditors	5.2	6.8	6.0	5.4	5.0
United States	0.3	0.3	0.2	0.3	0.3
France	1.2	1.7	1.6	1.5	1.4
Others	3.7	4.8	4.2	3.6	3.3
Multilateral creditors	27.6	34.7	29.9	24.9	23.6
IBRD/IDA	14.3	17.8	15.3	11.7	10.6
IFAD	0.7	1.0	0.9	0.7	0.7
IDB	12.4	15.6	13.6	12.4	12.3
OPEC Special Fund	0.1	0.2	0.1	0.1	0.1
IMF and IMF trust fund	0.9	0.6	0.3	0.5	0.7
Other debt 2/	1.4	2.0	2.2	0.8	0.9
Short term	0.0	0.0	0.0	0.0	0.0
Arrears	1.4	2.0	2.2	0.8	0.9
Memorandum item:					
Nominal GDP (millions of U.S. dollars)	3,472.2	2,960.3	3,537.7	4,310.3	4,836.4

Sources: Bank of the Republic of Haiti; and Fund staff estimates.

1/ Includes concessional and commercial public debt, officially guaranteed debt, and central bank liabilities, including use of Fund resources.

2/ Excludes overdue suppliers' credits in dispute ("dette en litige").

Table 14. Haiti: Scheduled External Public Debt Service /1
(Fiscal year ending September 30)

	2002	2003	2004	2005	2006
Total scheduled payments	48.2	57.4	50.7	56.9	63.3
Interest	13.5	16.7	17.7	18.1	20.1
Bilateral creditors	3.8	5.8	4.7	4.1	4.0
United States	0.7	0.7	0.5	0.6	0.6
France	1.0	1.0	1.5	1.1	1.2
Others 2/	2.2	4.2	2.6	2.5	2.1
Multilateral creditors	9.6	10.9	13.0	14.0	16.1
IMF	0.6	0.3	0.4	0.3	1.3
IBRD/IDA	4.0	4.0	3.5	4.4	3.8
IDB	4.8	6.3	8.6	8.5	10.4
OPEC Fund/IFAD	0.3	0.3	0.5	0.8	0.7
Amortization payments	34.7	40.7	33.1	38.8	43.2
Bilateral creditors	4.2	4.2	5.4	6.6	6.6
United States	0.5	0.5	0.5	0.5	0.3
France	3.0	3.0	3.9	3.7	3.4
Others 2/	0.6	0.6	1.0	2.4	2.9
Multilateral creditors	30.5	36.5	27.6	32.2	36.5
IMF	13.8	14.9	4.4	4.4	4.6
IBRD/IDA	8.0	9.7	10.0	12.4	13.5
IDB	7.0	10.3	11.3	13.1	16.6
OPEC Fund/IFAD	1.7	1.7	1.8	2.2	1.8

Sources: Bank of the Republic of Haiti; and Fund staff estimates.

1/ In millions of U.S. dollars

2/ The main other creditors are Canada, Italy, Spain and Taiwan.