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Financial Globalization and Fiscal Performance in Emerging Markets

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Abstract

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In recent years financial globalization and benign global market conditions have helped emerging markets in their external financing and budgetary positions. This paper examines three related issues: (i) the importance of the impact of the benign financial environment on fiscal performance; (ii) the likely fiscal impact of a reversal in this environment; and (iii) the potential contribution of fiscal reforms to maintaining favorable market access. The results suggest that the benefits from the benign environment have been substantial and that the potential reversal of the favorable external conditions underlines the need for further fiscal reforms.

JEL Classification Numbers: F3, H5

Keywords: Emerging markets, fiscal performance, global imbalances, interest rate spreads

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I. INTRODUCTION

There is significant evidence regarding an increase in global financial integration of emerging markets over the past decade. This is underlined by marked increases in the external asset and liability positions of a wide range of countries (IMF, 2005a). It has also been reflected in the increase in the quantity of capital flows to emerging countries, as well as in the improvement in their structure and terms. This has had important implications for the countries' capital accounts and their economic growth. Less recognized, however, are the significant implications of such financial integration and the benign global financial market environment in which it occurred in recent years on the countries' budgetary positions. This paper makes a contribution in this context by exploring the impact of the global financial conditions in recent years on emerging market fiscal performance.

A number of emerging markets have undertaken a range of structural reforms to reduce the cost of their external financing, for instance, by lengthening the maturity profile of debts, refinancing high-cost obligations with lower cost ones, or improving investor relations management. This occurred during a time when global interest rates declined; yield spreads narrowed; the U.S. dollar weakened over the past three years, to the considerable benefit of countries whose debts are denominated in dollars, but which have broadly diversified export bases; and relatively high commodity prices boosted growth in many emerging markets and provided (directly and indirectly) additional revenues.

Despite the likely importance of these developments for many emerging markets, there is virtually no systematic evidence on (i) the benefits that these countries may have derived from the benign global environment, or (ii) the impact of a potential reversal in these conditions over the next few years. This paper examines these two questions empirically for 40 emerging markets. In addition, the paper explores the extent to which structural fiscal reforms in these countries are likely to have contributed to improved market access. A key conclusion of the analysis is that most countries' budgets have benefited substantially from the decline in global interest rates and spreads, dollar depreciation, and high commodity prices. The analysis also shows that there are synergies between the fiscal reforms that many countries have pursued and the benefits from global financial integration and benign financial market conditions.

Looking ahead, there is a general expectation of a rise in global interest rates, reflecting both a rebound in global activity, policy factors, and further alignment in the currency markets. How these developments affect countries' external debt situations will depend on a variety of considerations: for instance, the impact of the rise in rates may be ameliorated to some extent by valuation changes attendant on any further dollar deprecation; the relationship between risk premiums and spreads may also change, reflecting changes in investor perceptions regarding the long-run prospects of these economies; and emerging market countries' growth will be affected by changes in the global economic environment. There is an added concern that the most vulnerable countries could be hit hardest by a change in external conditions, given that they tended to benefit most from the benign environment.

The rest of the paper is arranged as follows: Section II outlines an analytical framework for the discussion. Section III examines the increase in global integration, and the channels through which the benign global financial market environment could have helped emerging market fiscal policy. Section IV quantifies the impact on fiscal performance. Section V examines how large is likely to be the adverse fiscal impact of a reversal in the benign global financial conditions. Section VI explores how fiscal reforms can contribute to preserving the benefits of benign financing conditions. A last section concludes.

II. ANALYTICAL FRAMEWORK

This section presents the analytical framework that underlies the empirical discussion in Sections III–IV. The idea is to account for the effects of global interest rates, spreads, and exchange rate movements on the servicing cost of public debt in a standard fiscal accounting relationship linking the debt ratio to the primary balance and the automatic debt dynamics.

Take as a starting point the relationship

$$\frac{\Delta D_t}{\Delta Y_t} = \frac{P_t}{Y_t} + \frac{D_{t-1}^f}{Y_{t-1}} \cdot \frac{\left(e_t / e_{t-1}\right)\left(1+i_t^f\right)-y_t}{1+y_t} + \frac{D_{t-1}^d}{Y_{t-1}} \cdot \frac{i_t^d - y_t}{1+y_t} + SFA_t \qquad (1)$$

which says that the change in the ratio of public debt (D) to GDP (Y) in year t is equal to the ratio of the primary deficit (P) to GDP, plus the automatic dynamics of the existing debt stock denominated in foreign (D^f) and domestic (D^d) currency due to "the" respective average interest rates (i), "the" depreciation rate of the domestic currency $(e_t / e_{t-1} - 1)$, and the rate of GDP growth (y). SFA is the stock-flow adjustment (e.g., privatization receipts). All values are in nominal terms.

Note that the primary deficit is equivalent to borrowing (B) minus amortization (A):

$$P_t = B_t - A_t. \qquad (2)$$

For simplicity, the discussion in this section assumes that all public foreign currency debt is denominated in the same currency and has the same base rate and spreads. In practice, we obviously have to look at weighted averages of exchange rates, interest rates, and spreads. Also note that as we view the debt stock from the debtor's perspective, we think of it in nominal values, implying that there are no market price adjustments.[2]

In this paper, we are interested in the impact of global factors on debt service. Due to data problems, and because the transmission of these global factors to domestic interest rates is likely to vary substantially between countries, we disregard here the impact of the domestic debt portion (including domestic debt in foreign currency). However, to the extent that the

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[2] In line with the *IMF External Debt Statistics—Guide for Compilers and Users (2003)*, paragraph 2.31.

domestic interest rate is a function of the global rates, the effects on domestic debt would go in the same direction as those that we discuss for external debt.

We split up equation (1) to single out changes in the exchange rate, global base interest rates (r), and spreads (s), taking into account that a percentage v of the foreign currency debt is at variable rates (r_t^f), while the rest is at fixed rates (r_0^f), and that a fixed spread (s_0) applies to the percentage p of the foreign currency debt that is owed to private creditors:[3]

$$\frac{\Delta D_t}{\Delta Y_t} = \frac{e_t \cdot B_t^f + B_t^d - e_t \cdot A_t^f - A_t^d}{Y_t} +$$

(3)

$$+ \frac{D_{t-1}^f}{Y_{t-1}} \cdot \frac{(e_t / e_{t-1})\left(1 + \left(v_{t-1} \cdot r_t^f + (1 - v_{t-1}) \cdot r_0^f + p_{t-1} \cdot s_0\right)\right) - y_t}{1 + y_t} + \frac{D_{t-1}^d}{Y_{t-1}} \cdot \frac{i_t^d - y_t}{1 + y_t} + SFA_t.$$

Note that the first term splits up equation (2) into foreign currency borrowing (B^f) and foreign currency amortization (A^f), and the corresponding domestic currency flows.

Equation (3) can now be used to derive the impact of changes in the exchange rate, global base interest rates, and spreads on the public external debt service. This can be done most intuitively by comparing the impact of a change in these variables from a reference period $t^* < t$ to the current period t, holding everything else fixed.

The total impact in changes in the global financial conditions can be calculated as

$$\text{total impact of changes in financial conditons} = \frac{\Delta D_{t^*}}{\Delta Y_{t^*}} - \frac{\Delta D_t}{\Delta Y_t}.$$

(4)

The new borrowing, the domestic currency terms, and the stock-flow adjustment cancel out because they are not affected by the changes in exchange rates, interest rates, and spreads as defined for our purposes. The other terms can be rearranged to derive the

$$\text{exchange rate effect on total debt service} = \left(A_t^f + i_t^f \cdot D_{t-1}^f\right)\left(e_t - e_{t^*}\right)$$

(5)

from a change in "the" exchange rate in which the debt service is denominated relative to year t^* and the

$$\text{interest rate effect on variable - rate debt} = D_{t-1}^f \cdot v_{t-1} \cdot \left(r_t^f - r_{t^*}^f\right)$$

(6)

from a change in "the" interest rate on the variable rate foreign currency debt.

In addition, changes in the fixed base interest rates and spreads between the reference year t^* and the years $s = t^*+1...t$, when the borrowing was committed, affect the debt service in year t.

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[3] Assuming that official creditors do not require a risk premium.

The cumulative effect in year t of such changes in the fixed base interest rate and in the spreads on borrowing from private creditors ($B^{f,p}$) can be expressed as

$$\text{base rate and spread effects on new borrowing} = \sum_{s=t^*+1}^{t-1}\left[B_s\left(r_s^f - r_{t^*}^f\right) + B_s^{f,p}\left(s_s - s_{t^*}\right)\right]. \qquad (7)$$

Combining equation (5), (6), and (7) yields the total effect of changes in financial conditions between the reference period t^* and the current period t,

$$\left(A_t^f + i_t^f \cdot D_{t-1}^f\right)\left(e_t - e_{t^*}\right) + D_{t-1}^f \cdot v_{t-1} \cdot \left(r_t^f - r_{t^*}^f\right) + \sum_{s=t^*+1}^{t-1}\left[B_s\left(r_s^f - r_{t^*}^f\right) + B_s^{f,p}\left(s_s - s_{t^*}\right)\right] \qquad (8)$$

The discussion so far has been only concerned with the existing debt stock. Assessing the fiscal impact of future changes in financial conditions requires accounting for the gradual replacement of the existing debt stock with new debt for which the new prevailing financial conditions apply. However, equation (8) can also be used to calculate the combined effects of changes in exchange rates, base interest rates, and spreads for a future year t.

III. FINANCIAL INTEGRATION AND BUDGETARY COSTS OF EXTERNAL FINANCING

Financial globalization has accelerated noticeably since the early 1990s, for example, by the rapid increase in the size of net capital flows to emerging markets (Figure 1). The net flows to these economies, particularly in Asia Pacific[4] and Latin America, increased markedly from the late 1980s to 1996. While the flows to all four regions declined in the wake of the Asian crisis and the subsequent global downturn, they have again rebounded, and have been at or near record highs for all regions except Latin America.

Over the past two decades, global financial integration and the surges in capital inflows have generally been associated with increased volatility and elevated risk. The experience of the 1990s in particular shows that in virtually all regions large swings in net capital flows, typically the boom-bust cycle, can occur within short periods. Changes in investor risk perceptions and in risk appetite, often abrupt and marked, are an integral part of financial market operations and there is little to suggest that this is likely to change in a fundamental manner in the near future (see Kumar and Presaud, 2002). Nonetheless, it is the case, that at least vis-à-vis some of the largest emerging markets, there may be some structural changes afoot that could have a bearing on the future volatility of capital flows. For instance, the investor base for emerging markets assets has been broadening and deepening with the emergence of dedicated investors. Emerging market assets are being identified as a separate asset class, and institutional investors are beginning to include them systematically in their portfolios, leading to an expectation of more stable capital flows (IMF, 2005b).

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[4] Asia Pacific refers to East and South Asia, while West and Central Asia are included in the Middle East.

Figure 1. Net Capital Inflows, 1970-2005

(US$ billions, totals)
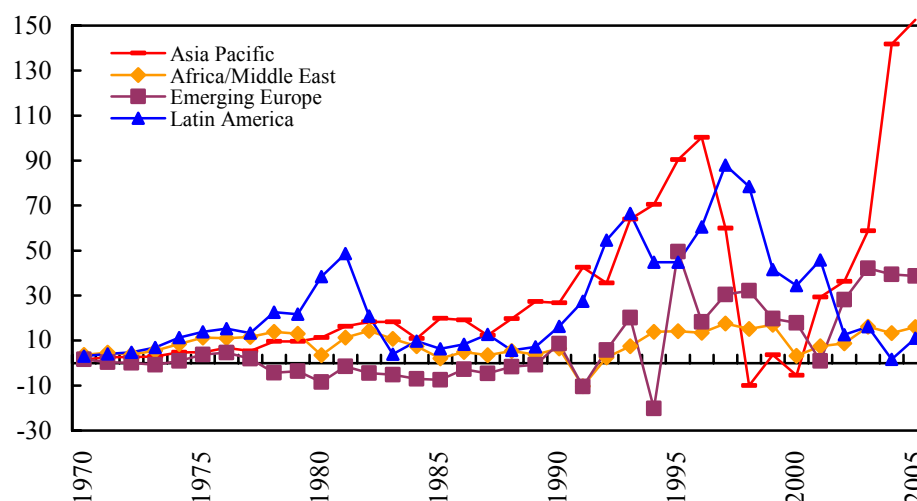
Sources: *World Economic Outlook* (WEO), and authors' calculations.

This deepening of financial globalization has gone in tandem with improved global capital market access for emerging markets. The nominal public external debt stock of the 40 emerging markets studied in this paper grew markedly over the 1990s and particularly since 2000 (Figure 2a). These 40 countries increased their public external debt roughly by US$ 70 billion (1 percent of GDP) both in 2004 and 2005, the highest nominal increase since 1998.

The easier market access is reflected even more clearly in the composition of the debt stock. Debt owed to official creditors has stabilized over the 1990s (Figure 2b), and debt owed to private creditors excluding bonds (largely commercial banks and trade financing) has fallen significantly (Figure 2c). At the same time, bond debt has grown rapidly during the 1990s (Figure 2d), and now makes up a much larger share of developing countries' external debt than at any point in the past three decades (World Bank, 2005). The shift towards bond financing indicates a rising confidence regarding the prospects of emerging markets in the minds of external investors, but is not without risk: for instance, this type of financing is more susceptible to sharp movements in pricing conditions (for new debt) and to risk perceptions than is long-term bank lending at arms length.

Despite rising nominal debt levels and the shift to possibly riskier sources of financing, observers have been generally sanguine about emerging markets taking on more debt as debt-to-GDP ratios have trended down recently in many emerging markets (Figure 3a). (It is worth noting that the median ratio of public external debt to GDP in Latin America remains higher than during most of the 1990s.) How can large increases in nominal debt be reconciled with the sanguine picture from debt-to-GDP ratios?

One explanation lies in exchange rate movements. While the U.S. dollar (the currency in which about 60 percent of emerging market external debt is denominated) strengthened vis-à-vis most

emerging market currencies during a large part of the 1990s, its weakness during more recent years has tended to be directly beneficial to emerging markets. In other words, many emerging markets have benefited from a revaluation effect on their debt stock since 2002 (Figure 3b).[5]

A second explanation lies in strong global economic activity and higher commodity prices that have boosted growth in many emerging markets and pushed up their debt service capacity. World output has expanded at rates above the long-term average in 2003–05, with growth in 2004 the highest since 1976 (Figure 4a). Strong global demand has also pushed commodity prices to record levels (Figure 4b). The impact of commodity prices on the debt-to-GDP ratio can be identified by calculating debt over noncommodity GDP[6] (Figure 3c): on average, debt ratios still trend down, although this masks higher effects in some individual countries; at the same time, some net commodity importers among emerging markets might actually have suffered under high commodity prices. In sum, however, the effect of strong global economic activity on emerging market growth is likely to be substantial.

A third explanation lies in the decline in the interest burden countries had to support, improving the debt services ratio and the fiscal balance. Between 2001 and 2005, interest payments on public external debt have declined by about half a percentage point of GDP in the median country in Asia Pacific and Emerging Europe and more than that in the median country of Africa/Middle East; in Latin America interest payments have kept up, but less than they would have under less benign conditions (Figure 3d).

While exchange rate effects are likely to again account for some of this decline in the interest burden, most of it is probably accounted for by the general decline in interest rates on emerging market debt. This has been brought about by two factors: first, a decline in the level of industrial country interest rates (Figure 4c) reflecting accommodative monetary policies, a decline in inflation expectations, and corporate and developing country saving that has been high relative to investment activity; and second, a decline in emerging market spreads (Figure 4d) reflecting improving fundamentals, high investor risk appetite, and—arguably in part as a consequence of these two factors—structural changes in industrial country investors' asset allocations. The latter also of course reflects a search for higher yields and a need to diversify.

How much of the decline in spreads has been due to improved fundamentals and how much due to market conditions is uncertain. Tentative empirical evidence suggests that market conditions have mattered at least as much as fundamentals: IMF (2004a) models emerging market spreads in recent years by fundamentals, market volatility, and global liquidity.[7] The results suggest that market volatility and global liquidity account for about three-fourths of the decline in spreads during recent years, while fundamentals account for about one-fourth.

[5] The revaluation effect is calculated for year t as $D_{t-1}^{USD} \cdot (e_t^{USD} - e_{t-1}^{USD})$, where D is debt stock denominated in U.S. dollars and e is the end-year exchange rate against the U.S. dollar.

[6] Calculated as nominal GDP minus commodity exports. Note that this estimate is a lower bound because it does not account for revenue-side effects and second-round growth effects in noncommodity sectors.

[7] Demand is also included to account for the mentioned structural shift in asset allocation but is not significant.

Figure 2. Stock of Public and Publicly Guaranteed External Debt, 1990-2005

(US$ billions, totals)

a. Total

b. Official Creditors

c. Private Creditors Excluding Bonds

d. Bonds
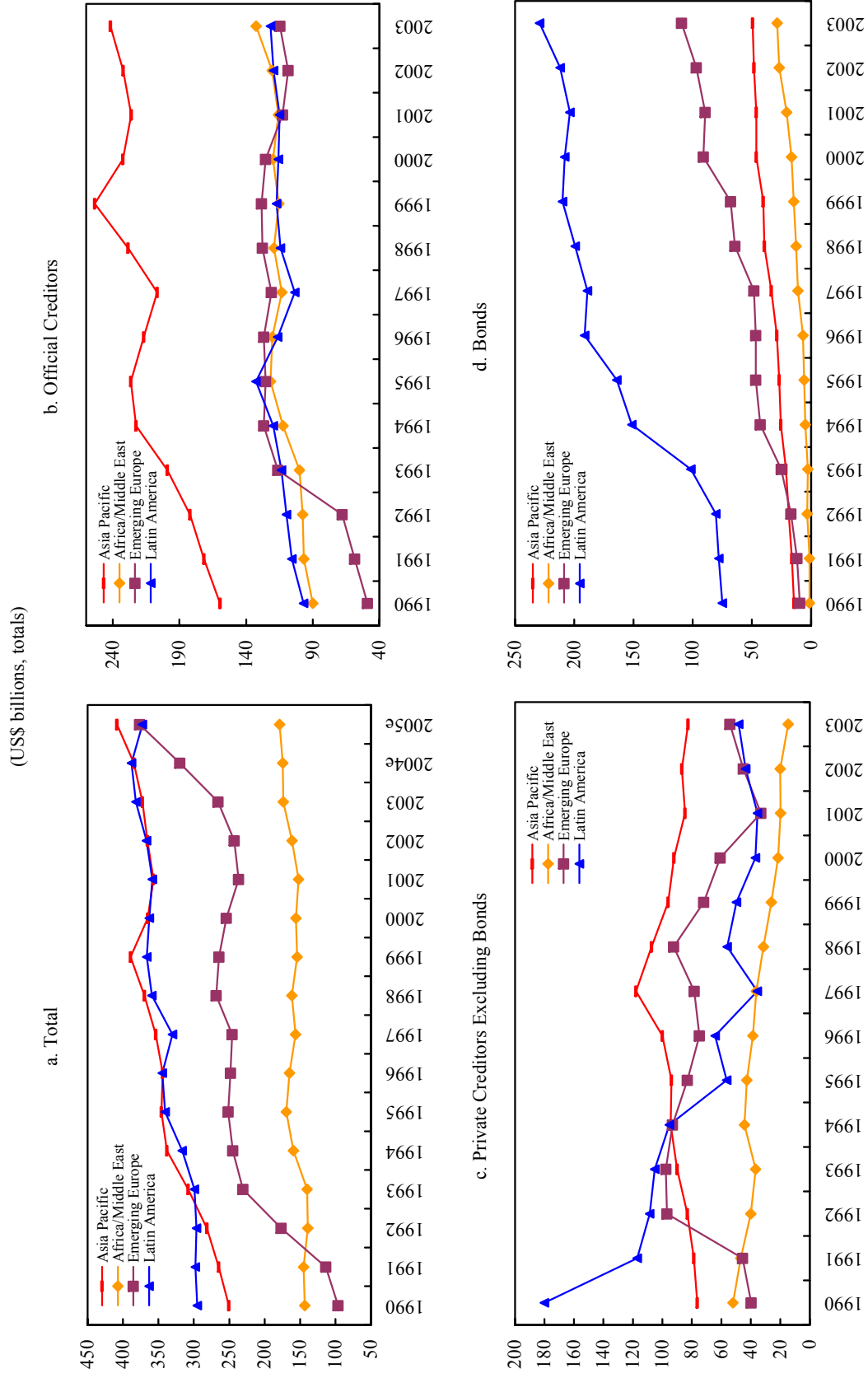
Sources: *Global Development Finance*, WEO, and authors' calculations. Note: e…estimated.

Figure 3. Public External Debt Indicators, 40 Emerging Markets, 1990-2005

a. Total Public External Debt in Percent of GDP (Medians)

b. Revaluation Effect on Debt Stock in Percent of GDP (Medians)

c. Debt Stock in Percent of Noncommodity GDP (Medians)

d. Interest Payments in Percent of GDP (Medians)
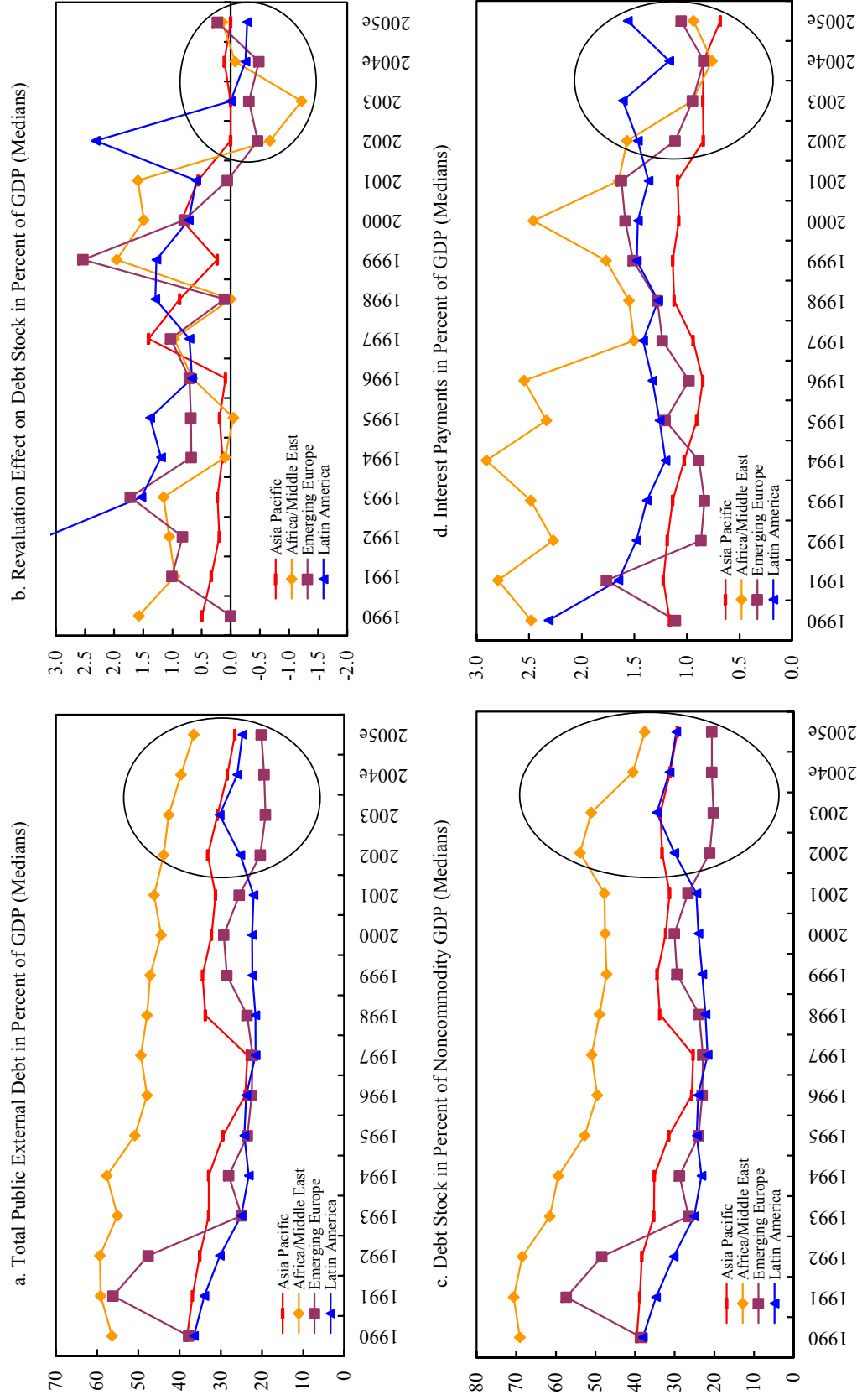
Sources: Global Development Finance, WEO, IMF country reports, and authors' calculations. Note: e…estimated.

Figure 4. Global Financial Conditions, 1990-2005

a. Percentage Change in Global Output

b. Commodity Prices (2000=100)

- All commodities
- Nonfuel commodities

c. Ten-Year Government Bond Yields in Percent

- United States
- Germany

d. EMBI Spread by Regional Composite

- Composite
- Africa
- Asia
- Latin America
- Europe (right scale)
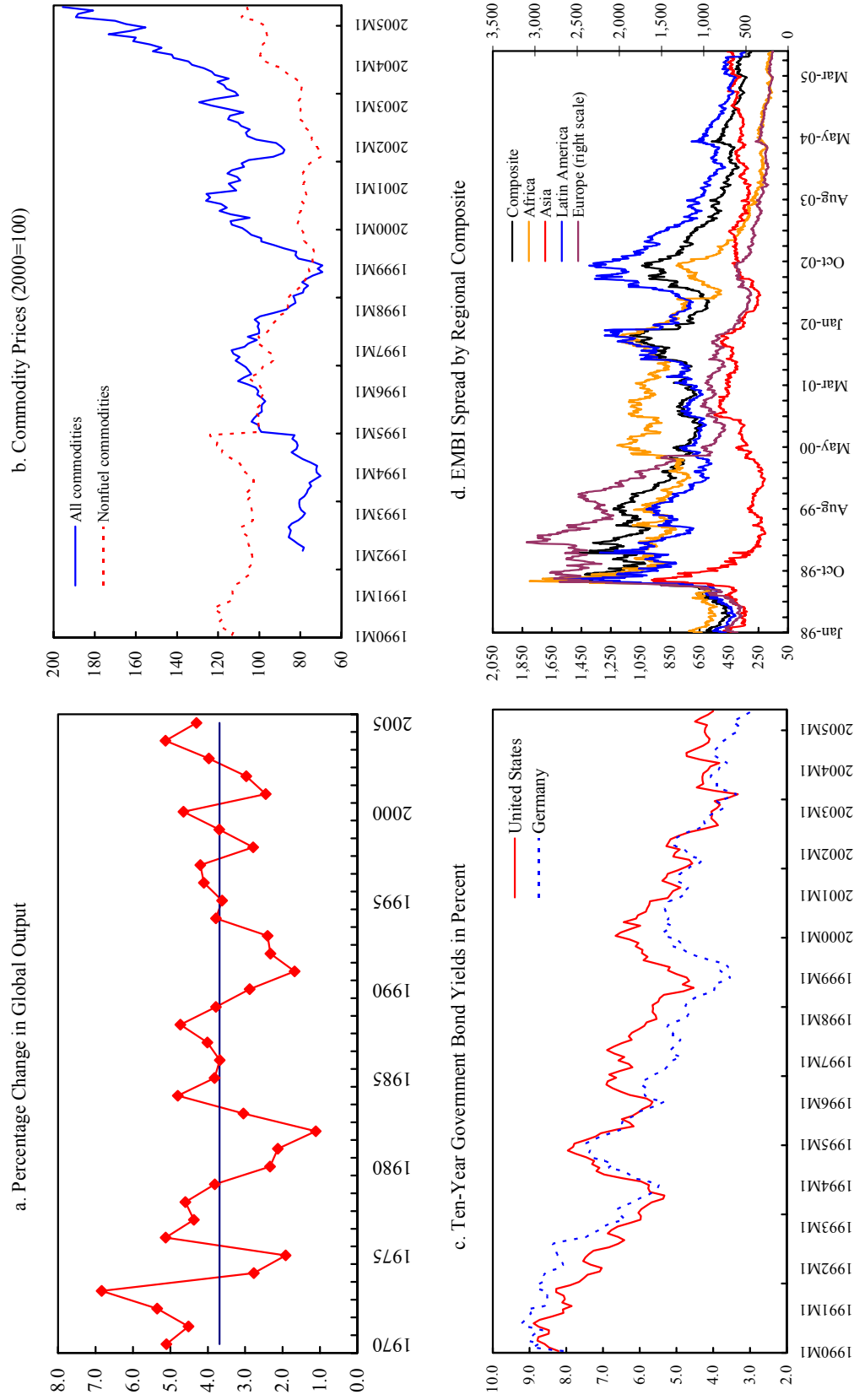
Sources: *International Financial Statistics* (IFS), JP Morgan Chase & Co., WEO, and authors' calculations.

A fourth explanation lies in improvements in the debt structure of many emerging markets. Many emerging markets were able to lengthen the average maturity of their debt, swap old expensive for new cheaper debt, and diversify external financing sources (see, e.g., Box 2.3 in IMF 2004a, and Box 2.2 in IMF 2005b). However, these improvements themselves have arguably been made possible to an appreciable extent by the benign global financial environment, although the improvement in country fundamentals is also likely to have played an important role.

The above discussion suggests that the acceleration of financial globalization in recent years, combined with benign global financial conditions, is likely to have considerably helped emerging markets in their external financing. From a fiscal perspective, this raises at least three important issues. First, how large was the impact of the benign global financial conditions on the improved fiscal performance in different emerging markets in recent years? Second, what is likely to be the magnitude of the potential adverse fiscal impact of a reversal in these global financial conditions? Third, can fiscal reforms contribute to preserving, at least partially, the benign financing terms emerging markets have enjoyed in recent years? We will tackle these three issues in the following Sections IV–VI, respectively.

IV. FISCAL PERFORMANCE UNDER BENIGN GLOBAL CONDITIONS

Based on the analytical framework outlined in Section II, we now examine the extent to which the benign global financial conditions discussed in Section III have benefited budgetary positions in emerging markets through savings on external debt service.

To quantify the impact of the favorable global environment on emerging market debt service, we compare the actual financial conditions (that is, U.S. dollar exchange rates, the level of global interest rates, and spreads on emerging market debt) in 2002–05 to those that prevailed in 2001. It is the case that 2001 may be considered a tough benchmark, but as Figure 4 shows, it is far from the "worst" situation encountered by emerging markets in the past as far as interest rates, spreads, and the strength of the U.S. dollar are concerned. In addition, we calculate the fiscal balance over noncommodity GDP to provide an indication of the impact of commodity prices on the denominator of the fiscal balance.

Favorable Factors

The favorable global financial environment has contributed substantially to the fiscal consolidation observed in many emerging markets in recent years, shown as Table 1 which is based on the framework outlined in Section II and the data described in Appendix Table A1. Looking at the regions' medians, the estimated fiscal savings (gross, that is, excluding any countervailing negative effects) during 2002–05 added up to about 0.9 percent of GDP in Asia Pacific, about 1.8 percent of GDP in Africa/Middle East, and about 1.9 percent of GDP in Emerging Europe and Latin America. The magnitudes are obviously driven by the size of public sector external debt at market terms and denominated in U.S. dollars relative to GDP.

Note how much the size of the effect has increased over recent years: While in 2001 the total gross estimated fiscal savings from the benign global financial environment were still quite small in the median countries of all four regions, in 2005 they amounted to a median of not less than 0.4 percent of GDP in Asia Pacific, 0.7 percent of GDP in Africa/Middle East, 0.9 percent of GDP in Emerging Europe, and 0.8 percent of GDP in Latin America.

It is also remarkable that the size of the effects varies considerably within the country groups: for the most vulnerable countries (the third quartile), total estimated savings in 2005 amounted to 0.7 percent of GDP in Asia Pacific, 1.6 percent of GDP in Africa/Middle East, 1.4 percent of GDP in Emerging Europe, and 1.1 percent of GDP in Latin America. This is an important observation, given that the countries that have benefited most from the benign global financial environment would also be most vulnerable to its reversal.

Turning to the individual effects that we have defined in Section II, the estimated median **interest rate effect on variable rate debt** has been generally the most crucial contributor to lower debt service, with the median countries in the four regions saving between 0.2 percent of GDP (Asia Pacific) and 0.4 percent of GDP (Emerging Europe) in 2005, the size of the impact obviously being driven by the ratio of variable rate debt to GDP.

Table 1. Estimated Fiscal Savings from Benign Global Financial Conditions, 2002–05

(In Percent of GDP, Medians of the Countries in the Regional Groups)

	Asia Pacific					Africa/Middle East				
	2002	2003	2004	2005	TT 2/	2002	2003	2004	2005	TT 2/
Interest rate effect on variable rate debt	0.07	0.10	0.09	0.16	0.41	0.14	0.24	0.20	0.33	0.91
Interest rate effect on new borrowing	0.02	0.07	0.12	0.20	0.41	0.03	0.05	0.11	0.19	0.37
Spread effect on new borrowing	0.00	0.01	0.01	0.01	0.03	0.00	0.02	0.04	0.05	0.12
Exchange rate effect on debt service	-0.02	0.00	0.00	0.00	-0.02	0.00	0.07	0.14	0.16	0.37
Total (gross) estimated fiscal savings 1/	**0.09**	**0.18**	**0.21**	**0.37**	**0.85**	**0.18**	**0.38**	**0.49**	**0.73**	**1.77**
Memorandum items:										
Least vulnerable countries (first quartile)	0.07	0.15	0.17	0.31	0.69	0.12	0.26	0.42	0.52	1.32
Most vulnerable countries (third quartile)	0.35	0.43	0.47	0.68	1.93	0.39	0.87	1.21	1.64	4.11
	Emerging Europe					Latin America				
	2002	2003	2004	2005	TT 2/	2002	2003	2004	2005	TT 2/
Interest rate effect on variable rate debt	0.15	0.23	0.22	0.41	1.00	0.22	0.29	0.21	0.34	1.05
Interest rate effect on new borrowing	0.01	0.07	0.13	0.26	0.48	0.04	0.15	0.22	0.33	0.75
Spread effect on new borrowing	0.00	0.03	0.04	0.06	0.13	0.00	0.00	0.04	0.09	0.13
Exchange rate effect on debt service	0.02	0.06	0.09	0.12	0.29	-0.24	-0.68	-0.56	-0.34	-1.82
Total (gross) estimated fiscal savings 1/	**0.18**	**0.39**	**0.49**	**0.85**	**1.90**	**0.26**	**0.44**	**0.47**	**0.76**	**1.92**
Memorandum items:										
Least vulnerable countries (first quartile)	0.16	0.40	0.44	0.76	1.76	0.24	0.39	0.49	0.77	1.88
Most vulnerable countries (third quartile)	0.32	0.62	0.75	1.38	3.07	0.37	0.63	0.74	1.12	2.86

Sources: *Global Development Finance*, IMF country reports, JP Morgan Chase & Co./Datastream, WEO, and authors' calculations.
1/ Gross total savings exclude negative effects.
2/ Simple sum of the 2002–05 annual numbers that is not adjusted for GDP growth in these years.

The estimated median **interest rate effect on new borrowing** has been the second most important contributing factor to lower debt service. The size of this effect is necessarily growing over time because interest savings on new (cheaper) debt accrue in each future year. The biggest gainers were Emerging Europe and Latin America, with the estimated savings for the median country rising to about 0.3 percent of GDP in 2005. In Asia Pacific and Africa/Middle East, the savings for the median country have risen to about 0.2 percent of GDP in 2005.

The estimated median **spread effect on new borrowing** was less than 0.1 percent of GDP in 2005 in all regions. Although the decline in spreads here is not corrected for improvements in fundamentals, the size of the effect remains quite small, also because it is calculated based only on new private creditor debt, under the presumption that official creditors do not demand a risk premium. It is worth noting, however, that this result masks large differences among countries, with some countries enjoying savings on their interest expenditure of up to an estimated 0.5 percent of GDP in 2005 thanks to a decline in spreads.[8]

There may have been an expectation of a significant **exchange rate effect on total debt service**. However, the impact in fact was virtually zero over 2002–05 for Asia Pacific (including due to the numerous U.S. dollar pegs), and relatively small (0.1–0.2 percent of GDP) in Africa/Middle East and Emerging Europe. In Latin America, the effect was even substantially negative, reflecting high exchange rate volatility and large (U.S. dollar) debt: the median country paid an estimated extra 0.2–0.3 percent of GDP (in 2002 and 2005) to 0.6–0.7 percent of GDP (in 2003–04) in debt service. Note that this is the gross exchange rate effect on debt service and does not account for potential revenue-side effects, as from oil.

Fiscal Performance

We now simulate fiscal performance adjusted for the (gross) savings and for the impact of booming commodity exports on GDP. Figure 5 shows the 2002–05 regional medians of the (i) actual "headline" fiscal deficit (overall balance of the general government) over actual GDP, (ii) the actual fiscal deficit over noncommodity GDP, and (iii) the actual fiscal deficit augmented by the savings on interest expenditure (not including the exchange-rate-driven savings on amortization) estimated above *over* noncommodity GDP. A number of observations can be made:

The median combined impact of the above savings arising from the benign global financial environment was substantially larger than the median impact of high commodity prices, although it is worth noting that the medians mask a much larger impact in some individual

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[8] This decline in spreads was partly "bought" by holding higher international reserves. This, in turn, has a fiscal cost that might have tended to offset some of the fiscal gains from lower spreads (see Hauner, 2005).

countries.[9] However, even the medians show that commodity exports have been more relevant for emerging markets over 2002–05 than during most of the 1990s. Note also that the fiscal impact of high commodity prices estimated here is only a lower bound of the full impact of commodity prices: it does not account for the revenue-side effects of commodity prices or for potential second-round growth effects in the noncommodity sectors.

In the median countries of Asia Pacific, Africa/Middle East, and Emerging Europe fiscal deficits have actually risen over 2002–05 when adjusted for the savings enumerated above and for commodity exports. In 2005, the estimated median adjusted deficit ratio is 4½ percent in Asia Pacific, 3½ percent in Africa/Middle East, and 4.9 percent in Emerging Europe. This represents an increase relative to 2001 by 0.2, 0.7, and 0.8 percentage points, respectively, instead of the decline in the "headline" deficit observed for these three regions. *This suggests that in many countries of these regions, savings from the benign global environment were largely spent instead of being used to reduce the fiscal deficits.* In fact, the estimated median fiscal deficits in Asia Pacific and Emerging Europe would have been even relatively high in 2002–05 by the standard of the 1990s when adjusted for these savings.

In Latin America, median fiscal performance has improved since 2003 even when adjusted for the exogenous factors. However, the median adjusted deficits are more substantial in size (3.1 percent instead of 1.9 percent in 2005) and remain high by 1990s standards.

In sum, fiscal performance in emerging markets has benefited substantially from the savings brought about by the benign global financial conditions prevailing in 2002–05. Fiscal performance adjusted for these exogenous factors in fact deteriorated since 2001 in many emerging markets. However, there is substantial heterogeneity between countries, and there are clearly numerous emerging markets, not least in Latin America, that have also improved their "underlying" fiscal position.

The next section aims to quantify the potential impact of a reversal of the benign global financial conditions on emerging market fiscal performance.

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[9] Note that many of the largest commodity exporters have been running fiscal surpluses in recent years. This includes the only three of the 40 countries for which the estimated difference between the fiscal balance over total GDP and over noncommodity GDP was larger than 1 percentage point in 2004 or 2005.

Figure 5. Estimated Fiscal Impact of Low Interest Rates and Spreads, U.S. Dollar Depreciation, and High Commodity Prices in 40 Emerging Markets

(in percent of GDP, medians)

a. Asia Pacific

Actual deficit over actual GDP
Actual deficit over noncommodity GDP
Deficit excl. savings in 2002-05 over noncommodity GDP

b. Africa/Middle East

Actual deficit over actual GDP
Actual deficit over noncommodity GDP
Deficit excl. savings in 2002-05 over noncommodity GDP

c. Emerging Europe

Actual deficit over actual GDP
Actual deficit over noncommodity GDP
Deficit excl. savings in 2002-05 over noncommodity GDP

d. Latin America

Actual deficit over actual GDP
Actual deficit over noncommodity GDP
Deficit excl. savings in 2002-05 over noncommodity GDP

Sources: *Global Development Finance*, IMF country reports, JP Morgan Chase & Co./Datastream, United Nations Conference on Trade and Development, WEO, and authors' calculations.

V. FISCAL RISKS FROM A CHANGE IN GLOBAL FINANCIAL CONDITIONS

Emerging markets face fiscal risks from rising global interest rates, a widening of yield spreads, and pronounced exchange rate movements. Global long-term interest rates have continued to be remarkably subdued despite a rebound in economic activity, a significant rise in policy rates, and sharply higher oil prices.[10] But it is not unlikely that continued robust global growth, the impact on inflation and inflationary expectations of higher oil prices, and further monetary tightening (particularly in the United States) are likely to lead to a move towards a more "normal" yield curve. These factors are likely to be exacerbated by a partial unwinding of the "global savings glut," that is, high net savings by the industrial country corporate sector and by emerging markets, reflecting primarily subdued investment demand.

It is unclear to what extent rising interest rates in industrial countries will entail also a widening of spreads on emerging market debt, but historical experience indicates that this is likely to be the case. Investors would be less pressed to look for high yield and risk appetite could thus lessen, and credit fundamentals tend to worsen with rising rates. The widening in spreads could be potentially more brisk when, as at the current juncture, spreads for emerging market and corporate debt have declined to relatively low levels and have remained there for an extended period of time. Rising interest rates are also likely to contribute to a slowing of global economic activity and demand for emerging market exports.

Higher global interest rates and higher spreads would affect the public finances of emerging markets through two channels. First, they would increase the cost of servicing existing variable rate debt. Second, they would increase interest rates on new debt commitments through higher base rates and through higher spreads. The fiscal impact of the second effect is increasing from year to year, as old debt at lower rates is being replaced with new debt at higher rates.[11]

The development in the value of the U.S. dollar will also continue to affect fiscal performance in emerging markets—either in a benign or in an adverse way. As discussed in the preceding section, the depreciation of the U.S. dollar against many emerging market currencies has had a benign fiscal impact in these countries. If this trend were to continue, it could buffer or possibly offset the negative fallout from higher interest rates on emerging market fiscal performance. If instead the U.S. dollar were to appreciate against a variety of emerging market currencies, the fiscal fallout could add to the negative implications from higher interest rates.

In the following analysis, we simulate the estimated impact on emerging market fiscal performance in 2006–07 of an increase in global interest rates by 100 to 300 basis points relative to the end-2004 level. This range of potential interest rate hikes is in line with current

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[10] For some analysis of the factors underlying this, see also Hauner and Kumar (2005).

[11] See the Appendix for a discussion of the estimation of future debt flows.

market expectations.[12] The slope of the yield curve for emerging market financing is assumed to remain unchanged.[13] We assume that each 100 basis points increase in U.S. short-term rates entails an extra 50 basis points increase in spreads on emerging market debt, a midpoint of the findings of a number of empirical studies.[14] Although it would be more realistic, we do not differentiate this elasticity by credit rating and by country, as there is a dearth of robust estimates regarding such different elasticities. We also simulate the impact of a change in the U.S. dollar exchange rate of emerging markets by 10–20 percent change relative to the 2005 estimated average exchange rate from IMF (2005a)—also the source of the GDP projections.

We find a substantial negative fiscal impact of future higher interest rates on many emerging markets' future fiscal performance. In the most highly indebted emerging markets, the fiscal impact of a 300 basis points hike in industrial country base interest rates would be in the region of 1½ percent of GDP in 2006–07 and rising as "cheap" debt expires.

With regard to the medians for our four regions, there is considerable variation (Table 2), reflecting different degrees of external indebtedness. The likely additional fiscal burden in 2006 and 2007 of a 300 basis points hike in U.S. policy rates compared to end-2004 would amount to 0.4–0.6 percent of GDP in the respective median country in Africa/Middle East, Emerging Europe, and Latin America, respectively; in Asia Pacific, the median impact would remain a relatively small 0.2–0.3 percent of GDP. If U.S. policy rates were to rise by only 200 basis points relative to end-2004 (they had already risen by 175 basis points by early November 2005), the fiscal impact would be correspondingly more modest.

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[12] For example, the average forecast published by *Consensus Economics* in September 2005 implied an increase in the three-month U.S. T-bill rate of 220 basis points by end-2007 compared to the end-2004 level.

[13] This convenient assumption is not unrealistic in the context of emerging market debt: as World Bank (2005) reports, emerging market spreads appear to track movements in short-term U.S. rates more closely than the longer term (10-year) rates, implying that the orientation of investors in the asset class may be driven more by changes in short-term U.S. rates than by longer-term yield considerations.

[14] Depending particularly on the time period studied, some authors found a statistically significant relationship between U.S. short rates and emerging market spreads (e.g., Arora and Cerisola, 2000; Ferrucci, 2003; IMF, 2004a), while others did not (e.g., Kamin and von Kleist, 1999; Min, 1998; Zoli, 2004). As far as it is significant, the empirical evidence suggests an extra 30–70 basis points in the average secondary market spread on emerging market debt for each 100 basis point rise in U.S. short rates.

Table 2. Estimated Fiscal Impact of Changes in Interest Rates and the U.S. Dollar, 2006–07

(In Percent of GDP, Medians of the Countries in the Regional Groups)

	Asia Pacific		Africa/Middle East		Emerging Europe		Latin America	
	2006	2007	2006	2007	2006	2007	2006	2007
Global interest rates rise by ...								
200 basis points	0.13	0.17	0.24	0.30	0.30	0.35	0.30	0.39
300 basis points	0.20	0.26	0.37	0.45	0.45	0.52	0.45	0.58
US$ appre-/depreciates by …								
10 percent	0.11	0.10	0.13	0.13	0.10	0.08	0.28	0.26
20 percent	0.22	0.19	0.27	0.25	0.20	0.16	0.56	0.51

Sources: *Global Development Finance*, IMF country reports, WEO, and authors' calculations.

We also find that exchange rate changes against the U.S. dollar could either substantially alleviate or aggravate the fiscal impact of higher global interest rates. Table 2 shows the simulated impact of a 10 or 20 percent appreciation or depreciation of the U.S. dollar against emerging market currencies. The potential positive or negative fiscal impact of exchange rate movements against the U.S. dollar would be largest in Latin America (reflecting relatively large U.S. dollar debt), followed by Africa/Middle East, Emerging Europe, and Asia Pacific. In the median country in Latin America, the estimated fiscal impact (positive or negative) of a 10 percent exchange rate change would be in the order of 0.3 percent of GDP in both 2006 and 2007, the impact of a 20 percent change being obviously twice as large. For the median country in Asia Pacific, Africa/Middle East, and Emerging Europe, the estimated impact of a 10 percent exchange rate change would be in the order of 0.1 percent of GDP in 2006–07.

These estimates do not change much under a downside GDP growth scenario which simply assumes that real GDP growth in 2006–07 will only be half the baseline value. This is not surprising, given that the denominator (GDP) is much larger than the change in the numerators (interest, amortization) that we simulate, and that the impact of one year of low growth on the level of GDP is relatively small.

Adding up the potential interest rate effect combined with the spread effect and the potential exchange rate effect yields medium-term (2006–07) fiscal risks of up to 1.1 percent of GDP for the most vulnerable (third quartile) of the 40 emerging markets included here. This would be the estimated impact of an increase of the interest rate level by 300 basis points combined with a 20 percent depreciation of the national currencies against the U.S. dollar. In a more benign scenario combining a 200 basis points hike with a 10 percent depreciation, the impact for the most vulnerable countries would be in the order of 0.8 percent of GDP. With regard to regions, the median fiscal impact is likely to be greatest in Latin America, followed by Africa/Middle East, and Emerging Europe; in Asia Pacific, the median impact is likely to be much smaller than in the other regions.

In sum, the fiscal risks for emerging markets stemming from a reversal in the benign global financial environment are substantial, even more so as a deterioration in global financial conditions could be accompanied by a slowing pace of global activity and lower commodity prices. This increases the onus on emerging markets to aim for a consolidation of their

underlying fiscal position, and to press ahead with fiscal reforms to preserve benign financial conditions for their countries, even if the global financial environment should deteriorate. The next section discusses how fiscal reforms can contribute to improving the external financing conditions of emerging markets.

VI.   Reform of Fiscal Institutions and Financing Conditions

While emerging markets have clearly benefited from the benign global financial environment, fiscal reforms in many countries have also contributed to improved financing conditions. These reforms could potentially set off a virtuous cycle of improved fundamentals and improved investor confidence in the emerging market asset class independent of global conditions. In this sense, sustained fiscal reforms can be seen as "locking in" to some extent the current favorable financing conditions.

With regard to fiscal reforms, considerable attention has been paid to debt management, where many countries have improved the structure of their obligations: they have lengthened the average maturity of their debt; prepaid debt obtained under less favorable market conditions; and broadened their investor base. Also, many countries took measures to deepen local bond markets, such as by the introduction of electronic trading platforms and systems for direct trading of treasury bonds by individuals (see IMF, 2004a, 2005b). It is clear that these reforms have contributed directly or indirectly to better financing terms.

But broader fiscal reforms are also likely to make a difference if they bolster investor confidence. It has been argued for quite some time (see, e.g., Poterba and von Hagen, 1999) that fiscal institutions have an important impact on fiscal performance. This means that if investors indeed pay any attention to the quality of fiscal institutions, an improvement in these could also contribute to better financing conditions. This would reduce yield spreads, the interest bill, and—in a virtuous cycle—ultimately again improve fiscal performance. That potential fiscal savings from lower spreads are worth the effort in many emerging markets has been seen in previous parts of this paper.

But do investors pay attention to fiscal institutions? There is tentative empirical evidence that they do. One measures of the quality of fiscal institutions that is available for a relatively large number of countries is an index of fiscal transparency covering 20 desirable institutional fiscal features, including the quality of budget coverage, the reporting of contingent liabilities, and the prevalence of quasi-fiscal activities; the index is bounded between zero and one.[15]

Figure 6 shows the cross-sectional univariate correlations between fiscal transparency and sovereign ratings and yield spreads, respectively. In both cases there is a clear correlation, although it is stronger for ratings than spreads. However, this correlation could be spurious

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[15] Based on the *Fiscal Transparency Database* derived from information in the published fiscal modules of the IMF's *Reports on the Observance of Standards and Codes* (ROSC). See IMF (2003) for details.

since fiscal transparency is highly correlated with per capita income, which frequently turns out as the most important empirical determinant of ratings (see, e.g., Hameed, 2005). So how important is the impact of fiscal transparency on ratings and spreads when economic fundamentals are taken into account?

Figure 6. Fiscal Transparency and Financing Conditions
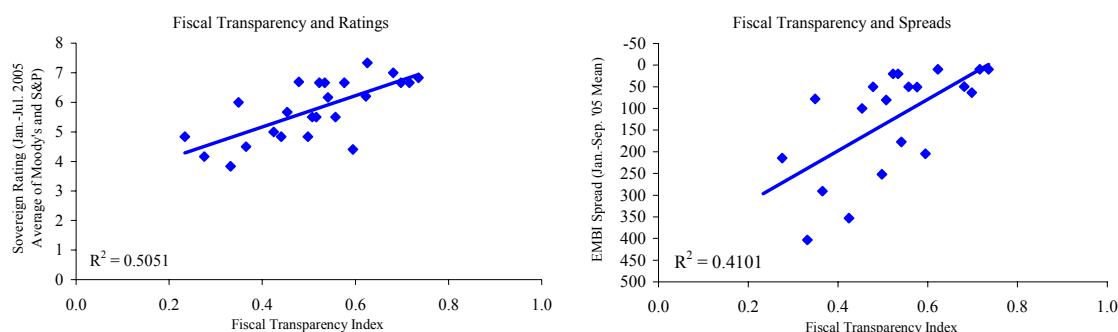
Notes: The ratings are converted to a linear numeric scale; on the S&P scale, "SD"=0 and "AAA"=9.
Sources: FAD Fiscal Transparency Database and IMF (2005b).

Ratings

Hameed (2005) examines the impact of fiscal transparency on sovereign ratings of 31 developing countries in a cross-section controlling for economic fundamentals and finds a significant impact of fiscal transparency on ratings. The size of the coefficient on fiscal transparency implies that—everything else equal—an improvement in the fiscal transparency index by 0.1 points improves the rating on average by 0.82 notches (a full notch change being, e.g., from BB to BB+ on the S&P scale).

How large is the potential "payoff" of institutional fiscal reforms that result in higher investor confidence? An illustrative calculation is as follows: adding two of the twenty good fiscal transparency practices raises the fiscal transparency index by 0.1 points. This raises the expected rating by 0.82 notches. In 2005, a one-notch rating upgrade could be expected to lower spreads by about 40 basis points.[16] (Note that this number is probably on the low end as yield spreads were particularly narrow in 2005.) For the country with the median public external debt ratio among our 40 countries (25 percent of GDP in 2005), the expected fiscal savings from improving its rating by one notch would thus be 0.1 percent of GDP (25 percent of GDP times 40 basis points).

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[16] Based on a cross-section of average spreads in 2005 (first three quarters) on average ratings in 2005 and a constant for the countries included in the analysis here (i.e., without Argentina) with an R-squared of 0.72. While the relationship of ratings and spreads could be nonlinear, it was actually very close to linear in 2005. However, there could still be nonlinearity in the relationship between fiscal transparency and ratings when control variables are taken into account.

Spreads

It is not possible to run a model of spreads that includes fiscal transparency together with all desirable controls due to a lack of degrees of freedom: there are not enough emerging markets that both have had a fiscal ROSC and have international bonds outstanding.[17]

However, we can examine whether the above-noted relationship between fiscal transparency and spreads remains significant when the two variables that have frequently been found to explain most variability in ratings (see, e.g., Hameed, 2005) are controlled for: income per capita and the rate of economic growth. As the following results suggests, the spread-reducing effect of better fiscal institutions as measured by the fiscal transparency index remains robust when these controls are included (Table 3). The coefficient on fiscal transparency remains statistically significant, albeit only at the 10 percent level. However, note that the observations on the fiscal transparency index were made at different points in time, and that the underlying assessments are not always fully consistent among countries.

Table 3. Fiscal Transparency and Spreads

(Cross Section of 20 Emerging Market Countries, 2005)

Variable	Coefficient	Std. Error	t-Statistic	P-Value
Constant	569.46	132.50	4.2978	0.0006
Fiscal Transparency	−399.05	213.02	−1.8733	0.0794
Income per Capita at PPP	−0.0109	0.0033	−3.3166	0.0044
Real GDP Growth Rate	−20.735	9.2459	−2.2426	0.0394

Notes: R-squared = 0.57. The observations for fiscal transparency date from various years.
Sources: Fiscal Transparency Database, WEO, and authors' calculations.

What does the regression imply for the expected "payoff" of fiscal transparency in the form of lower spreads? Note that the index goes from zero to one and covers 20 fiscal transparency practices. Thus the coefficient implies that in 2005 adding two additional fiscal transparency practices would be expected to reduce spreads by about 40 basis points (on average and holding the other regression variables constant). This is the same magnitude as seen above when calculating the expected effect of fiscal transparency on spreads making a detour through ratings and is significant statistically and economically. This is reassuring, also because it means that the fact that we cannot include all desirable controls in the spreads regression (as opposed to the more complete ratings regression in Hameed, 2005) does not seem to materially affect the size of the coefficient on fiscal transparency.

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[17] Most countries have a sovereign rating, but fewer countries have international bonds outstanding. To include at least all emerging markets that both have had a fiscal ROSC and have international bonds outstanding, we added seven more countries (Estonia, Kazakhstan, Korea, Latvia, Lithuania, Pakistan, and Slovenia) to our original 40 emerging markets; Brazil and the Philippines are outliers when it comes to the relationship between fiscal transparency and spreads and are thus excluded; in sum, we have 20 countries.

In sum, there is suggestive empirical evidence that an improvement in the quality of fiscal institutions can be expected to contribute to higher investor confidence, and thus, to more favorable financing conditions for emerging markets. This means that emerging markets have yet another reason to pursue fiscal reforms: they are likely to help lock in gains from a benign global financial environment in the event of its potential future reversal.

VII. CONCLUSIONS

This paper has examined empirically the impact of financial globalization and the benign financial market environment on emerging markets. It based its analysis on four regional country groups to be able to identify developments common to a number of economies. While the results for individual countries can obviously differ substantially, the paper draws three main conclusions about the impact of financial globalization that has continued apace on fiscal performance in emerging markets in recent years:

- Financial globalization has a significant bearing on the fiscal position of many emerging market countries—in part this reflects the impact of changes in the external environment; in part there is some evidence of an improvement in policies attendant on external financial integration.

- Countries pursuing sound policies benefit the most from the integration; this suggests that there can be a virtuous cycle of prudent policies helping to enhance integration without raising vulnerabilities, and improved performance which in turn is a spur for greater policy discipline.

- Given the uncertainties looming ahead, countries that have pursued good policies are likely to be able to deal better with the adverse environment; others that have relied mainly on the benign external environment and might even have increased their "underlying" vulnerabilities could benefit from making better use of the positive environment for emerging markets created by financial globalization in recent years.

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BACKGROUND TABLES

Table A1. Data Sources and Estimates

Acronym	Variable	Description
D_t^f	Public sector external debt	GDF (DTDODDPPGCD); 2004–05 based on IMF country reports.
L_t^{total}	Total long-term external debt	GDF (DTDODDLXFCD)
L_t	Public sector long-term external debt	GDF (DTDODPUBSCD); 2004–05 proxied $L_t = L_{2003} \cdot (D_t^f / D_{2003}^f)$.
d_t^{USD}	US$-denominated share in public sector external debt	Proxied by US$-denominated share in total long-term debt from GDF (DTCURUSDLZS); assumed constant after 2003. All the remaining debt is assumed to be denominated in euros.
v_t	Variable-rate share in public sector long-term external debt (percent)	Proxied by variable-rate share in total long-term debt from GDF (DTDODVTOTCD); assumed constant after 2003.
S_t	Total service of public sector external debt	GDF (DTTDSDPPGCD), where $S_t = A_t + I_t$.
A_t^{total}	Amortization of total long-term external debt	GDF (DTAMTDLXFCD). Note that most projections of amortization in GDF are based on the amount of loan commitments, and the amortization profile of most loans follows a set pattern: the stream of principal payments due is calculated using the first and final payment dates and the frequency of the payments; if future payments are irregular, a schedule is required. The projected debt service obligations are converted into U.S. dollars using the end-December 2003 exchange rates and interest rates as of end-December 2003 for variable interest rate debt.
A_t^f	Amortization of public sector long-term US$ denominated external debt	GDF (DTAMTDPPGCD), 2004–07 proxied by $A_t^f = A_t^{total} \cdot d_{2003}^{USD} \cdot (L_{2003} / L_{2003}^{total})$.
I_t^f	Interest payments on public sector external debt	GDF (DTintDPPGCD), 2004–05 proxied by assuming same change in average interest rate since 2003 as for total external debt as reported in IMF (2005a).
i_t^f	Average interest rate on public sector external debt	$I_t^f = I_t^f / D_t^f$
B_t^f	New commitments of public sector external debt	GDF (DTCOMDPPGCD), 2004–07 calculated based on the estimated equation [$R^2 = 0.49$] $C_t = 1{,}182{,}084{,}666$ [t=13.8]+ 0.547 [t=33.3] * A_t^{total}, assuming that the currency split of new commitments is as for the existing stock, and that all external debt is denominated either in U.S. dollars or in euros.

Table A1. Data Sources and Estimates (concluded)

Acronym	Variable	Description
$B_t^{f,p}$	New commitments of public sector external debt, private creditors	GDF (DTDISPRVTCD)
r_t^f	Treasury bill rate (aop)	IFS (line 60C), the German rate is used for the Euro Area.
s_t	Interest rate spread (aop)	Average of daily EMBI+ spreads from JP Morgan Chase & Co (regional composite for 11 countries with no own index). Here, individual country spreads are compared. While there are some arguments for using the EMBIG Composite to gauge overall market conditions, the results would not change materially, as the medians used here to describe the effects by regional grouping dampen any changes in individual countries' spreads that are very different from the change in the overall EMBIG Composite.
Y_t	Nominal GDP	WEO (NGDPD)
X_t	Commodity exports	Fuel, ores, and metal exports (World Development Indicators)
G_t	General government balance	WEO (GGB), central government where not available.
a_t^{USD}	National currency per USD (aop)	WEO (ENDA)
e_t^{USD}	National currency per USD (eop)	IFS (..AE.ZF...), June=December assumed for 2005.

Source: Authors. Notes: GDF ... World Bank *Global Development Finance*, IFS ... IMF *International Financial Statistics*, WEO ... IMF *World Economic Outlook Database*.

Table A2. Country Groups

Asia Pacific	Africa/Middle East	Emerging Europe	Latin America
Bangladesh	Algeria	Bulgaria	Argentina
China	Côte d'Ivoire	Croatia	Brazil
India	Egypt	Czech Republic	Chile
Indonesia	Lebanon	Hungary	Colombia
Malaysia	Morocco	Poland	Costa Rica
Philippines	Nigeria	Romania	Dominican Republic
Sri Lanka	Pakistan	Russia	Ecuador
Thailand	South Africa	Slovak Republic	El Salvador
Vietnam	Tunisia	Turkey	Mexico
		Ukraine	Peru
			Uruguay
			Venezuela

Source: Authors.

Table A3. Public and Publicly Guaranteed External Debt in Billions of U.S. Dollars

Country	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Algeria	28.4	31.3	31.3	28.7	28.5	25.9	23.3	20.9	21.3	21.7
Argentina	50.6	55.3	62.5	67.1	77.3	84.6	88.2	88.5	92.1	99.3
Bangladesh	14.8	15.1	14.7	13.9	15.1	16.0	15.2	14.7	16.4	18.1
Brazil	95.4	98.3	96.4	87.3	98.2	92.4	93.8	93.9	97.0	95.0
Bulgaria	8.5	8.8	8.2	7.7	8.0	7.8	7.7	7.4	7.5	7.7
Chile	9.0	7.2	4.9	4.4	5.0	5.7	5.3	5.6	6.8	8.1
China,P.R.: Mainland	82.4	94.7	102.3	112.8	99.4	99.2	94.9	91.8	88.6	85.6
Colombia	14.4	13.9	14.9	15.4	16.7	20.2	20.8	21.8	20.7	22.8
Costa Rica	3.2	3.1	2.9	2.8	3.0	3.2	3.3	3.3	3.1	3.6
Côte d'Ivoire	11.2	11.9	11.4	10.4	10.8	9.7	9.1	8.6	9.1	9.7
Croatia	0.6	1.9	3.3	4.3	4.9	5.5	6.1	6.4	7.7	10.1
Czech Republic	7.0	9.7	12.2	12.8	11.6	7.7	6.5	5.7	7.0	8.6
Dominican Republic	3.6	3.7	3.5	3.5	3.5	3.6	3.3	3.8	4.0	5.1
Ecuador	10.5	12.1	12.4	12.9	13.1	13.6	11.3	11.3	11.2	11.4
Egypt	30.0	30.7	29.0	27.0	27.8	26.3	24.5	25.3	25.9	27.3
El Salvador	2.0	2.1	2.3	2.4	2.4	2.6	2.8	3.2	4.7	5.2
Hungary	22.4	24.0	18.7	15.1	15.9	16.9	14.4	12.7	13.6	14.8
India	87.5	80.4	78.0	79.4	84.6	86.4	83.2	83.1	88.2	92.8
Indonesia	63.9	65.3	60.0	55.9	67.3	73.7	69.8	68.7	70.1	73.4
Lebanon	0.8	1.6	1.9	2.3	4.0	5.3	6.6	9.0	13.8	14.8
Malaysia	14.7	16.0	15.7	16.8	18.2	18.9	19.2	24.1	26.5	25.5
Mexico	78.3	93.9	92.8	83.3	87.0	87.9	81.5	77.0	76.3	77.5
Morocco	22.4	23.2	22.4	20.5	20.8	18.9	17.3	15.8	14.8	15.2
Nigeria	28.0	28.1	25.4	22.6	23.4	22.4	30.0	29.2	28.1	31.6
Pakistan	22.7	23.8	23.6	24.0	26.1	28.1	27.2	26.5	28.1	31.4
Peru	17.7	18.9	20.2	19.2	19.3	19.5	19.3	18.9	20.4	22.1
Philippines	29.9	28.5	27.1	26.4	28.9	34.8	33.8	29.5	32.5	36.2
Poland	39.5	41.1	39.2	34.2	35.1	33.2	30.8	25.7	29.4	35.0
Romania	2.9	4.0	5.6	6.3	6.7	6.1	6.9	7.2	9.1	11.7
Russia	107.9	101.6	102.0	106.6	121.6	121.2	111.0	103.8	96.1	98.3
Slovak Republic	2.9	3.5	4.0	4.4	5.4	6.0	6.3	5.5	4.3	4.5
South Africa	7.8	9.8	10.3	11.5	10.7	8.2	9.1	7.9	9.4	9.1
Sri Lanka	6.7	7.2	7.1	7.1	8.1	8.4	7.9	7.5	8.4	9.1
Thailand	16.2	16.8	16.9	22.3	28.1	31.3	29.5	26.2	22.6	17.8
Tunisia	8.0	9.0	9.4	9.3	9.5	9.5	8.9	9.1	10.9	13.1
Turkey	48.4	50.3	48.4	47.5	50.2	50.8	56.4	54.2	60.2	66.3
Ukraine	4.8	6.6	6.6	7.0	9.0	9.6	8.1	8.1	8.3	8.9
Uruguay	3.7	3.8	4.1	4.6	5.1	5.1	5.6	6.1	6.9	7.4
Venezuela, Rep. Bol.	28.0	28.2	27.7	27.4	28.3	28.0	27.7	25.2	23.4	24.5
Vietnam	21.9	21.8	22.0	19.0	19.9	20.5	11.6	11.4	12.2	14.2

Source: *Global Development Finance* .

Table A4. Public and Publicly Guaranteed External Debt in Percent of GDP

Country	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Algeria	67.0	74.4	66.6	59.6	59.1	53.0	42.9	38.0	38.2	32.7
Argentina	19.7	21.4	23.0	22.9	25.9	29.8	31.0	32.9	90.8	78.0
Bangladesh	41.2	38.2	35.3	32.0	33.7	34.4	32.2	31.2	33.1	34.4
Brazil	17.5	14.0	12.4	10.8	12.5	17.6	15.6	18.5	21.1	18.8
Bulgaria	108.0	67.2	83.1	74.6	62.1	59.9	60.7	54.3	47.9	39.0
Chile	16.0	10.0	6.4	5.3	6.3	7.7	7.0	8.2	10.1	11.2
China,P.R.: Mainland	15.2	13.5	12.5	12.6	10.5	10.0	8.8	7.8	7.0	6.0
Colombia	17.6	15.1	15.3	14.5	17.0	23.5	24.8	26.6	25.3	28.8
Costa Rica	30.5	26.7	24.7	21.6	21.5	20.2	20.5	20.0	18.6	20.5
Côte d'Ivoire	135.2	108.2	93.6	89.0	83.8	77.1	85.3	80.1	77.6	68.3
Croatia	4.4	9.9	16.8	21.3	22.8	27.7	33.2	32.4	33.7	34.9
Czech Republic	15.8	17.2	19.5	22.4	18.7	12.9	11.6	9.3	9.5	9.5
Dominican Republic	33.7	30.2	26.0	22.8	21.7	20.4	16.6	17.3	18.7	31.6
Ecuador	56.8	59.8	58.5	54.5	56.3	81.3	71.2	53.5	46.2	41.8
Egypt	57.7	50.9	42.9	35.6	32.8	29.2	24.7	26.6	29.6	33.5
El Salvador	24.9	21.9	22.5	21.5	20.3	21.2	21.1	23.5	32.9	34.9
Hungary	53.4	53.7	40.8	32.7	33.5	35.2	30.9	24.5	20.9	17.8
India	28.2	22.8	20.9	19.5	20.7	19.8	18.1	17.6	17.8	16.1
Indonesia	32.9	29.4	24.1	23.6	64.2	47.9	42.3	41.8	34.9	30.8
Lebanon	8.5	13.9	14.9	15.8	24.9	32.2	40.1	53.7	80.0	81.9
Malaysia	19.7	18.0	15.6	16.8	25.2	23.9	21.3	27.4	27.8	24.6
Mexico	18.6	32.8	27.9	20.8	20.7	18.3	14.0	12.3	11.8	12.1
Morocco	73.6	70.5	61.3	61.2	58.0	53.6	52.0	46.5	41.0	34.8
Nigeria	119.5	101.4	73.0	64.0	71.1	59.9	65.6	61.3	60.9	55.5
Pakistan	40.3	37.9	37.6	38.7	43.5	47.1	44.4	46.2	43.9	42.6
Peru	39.4	35.3	36.3	32.6	34.1	37.9	36.2	35.3	36.2	36.4
Philippines	46.7	38.5	32.7	32.1	44.4	45.7	45.2	42.0	43.0	46.4
Poland	39.0	30.2	25.5	22.2	20.8	20.2	18.5	13.8	15.3	16.7
Romania	9.7	11.2	15.9	18.1	15.8	17.0	18.5	18.0	19.9	20.5
Russia	39.0	32.4	26.0	26.3	44.9	61.9	42.7	33.8	27.9	22.8
Slovak Republic	18.5	18.0	19.0	21.0	24.4	29.3	31.2	26.5	17.7	13.8
South Africa	5.7	6.5	7.2	7.7	7.9	6.1	6.8	6.7	8.5	5.5
Sri Lanka	57.4	55.1	51.2	46.9	51.2	53.5	47.9	47.6	50.8	49.9
Thailand	11.2	10.0	9.3	14.8	25.1	25.5	24.0	22.7	17.8	12.4
Tunisia	51.2	50.0	47.9	49.4	47.9	45.7	45.6	45.4	52.0	52.5
Turkey	35.7	29.1	27.4	25.1	24.4	25.5	27.5	35.3	32.6	27.6
Ukraine	20.3	17.8	14.9	14.0	21.4	30.4	26.0	21.3	19.5	17.7
Uruguay	21.5	19.9	19.9	21.0	22.9	24.3	27.8	32.8	56.0	68.8
Venezuela, Rep. Bol.	48.1	36.5	39.2	31.9	31.0	28.5	23.7	20.5	25.2	29.1
Vietnam	134.2	105.0	89.1	70.8	73.2	71.4	37.2	35.2	34.7	35.9

Source: *Global Development Finance* and WEO.