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Indian Strategy

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# Stimulus, Recovery and Exit Policy G20 Experience and Indian Strategy

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## Executive Summary

The prompt, coordinated global response to the Great Recession was remarkable. However, G20 policy coordination on policies to exit from the stimulus has been less impressive. Differences remain, especially among the advanced G20 countries, about the timing as well as the scale and composition of policies to wind down their stimulus packages.

Most countries introduced their packages in the last quarter of 2008, in the immediate aftermath of the Lehman collapse. But the time it took for countries to turn around in response to the stimulus and start their recovery varied a great deal. In nine countries recovery started within 2 quarters after the stimulus was introduced, and in 3 quarters in another five countries. In Turkey and Italy the response was sharper, and recovery started within less than a quarter after the stimulus was applied. At the other end of the spectrum, Spain did not start recovering until 6 quarters after the stimulus was introduced, and the lag was 5 quarters in the case of Australia and Saudi Arabia. The response lag was 4 quarters in India and Indonesia.

These differences in the time lag between stimulus and response are attributable to differences in the underlying economic environment that may have impacted on the efficiency of the transmission mechanism, differences in the size of the stimulus, and differences in the severity of the crisis in different G20 countries. The severity of the crisis, defined as the absolute difference between the average annual growth rate prior to deceleration and the growth rate at the bottom of the growth trough in the country, has varied a great deal. It has ranged from as little as 31 per cent and 41 per cent in Indonesia and India respectively to over 500 per cent in countries like Italy and Japan. More than half of the G20 countries, mostly advanced countries, experienced growth deceleration in excess of 200 per cent. The two emerging G20 countries in this group include Mexico and Turkey.

As there were large variations in the time taken for the stimulus to get transmitted to the level of real economic activity, it is arguable that there would be similar variations in time lags for the reverse transmission when the stimulus is withdrawn, since it would operate through the same mechanism in reverse. However, other factors that impacted on the pace of the response may also have changed meanwhile, including the growth performance of individual countries. Hence, each country's readiness for stimulus withdrawal depends very much on its current growth, investment climate and other macroeconomic conditions that impact on the robustness or fragility of its recovery. In an integrated global economy, it is essential that the major economies coordinate their policies. But coordination does not imply simultaneous stimulus withdrawal from all G20 countries. Indeed, a phased withdrawal is probably the best guarantee against the risk of a negative global shock leading to another great recession in the event of a simultaneous stimulus withdrawal from all G20 countries.

An assessment of the readiness of different G20 countries to initiate withdrawal of the stimulus is, therefore, critical for successful G20 coordination on this issue. The performance of G20 countries has been assessed in terms of selected macroeconomic indicators. It turns out that there are large variations among them in their readiness for stimulus withdrawal. The broad stylized facts are as follows. Barring some outliers such as South Africa and Saudi Arabia, most of the emerging

G20 countries are growing quite rapidly and ready for withdrawal of their stimulus packages. In some of these countries stimulus withdrawal is also urgent because they have high inflation. In most of these countries the withdrawal needs to focus on the fiscal side. But in some high inflation countries like India, which have a robust financial sector with adequate bank capitalization and low non-performing loan ratios, there is a strong case for monetary tightening as well.

Most of the advanced G20 countries, on the other hand, are not yet ready for stimulus withdrawal since the recovery of growth remains weak and uncertain. Continuing weaknesses in the financial sector raise the risk of double dip recession if there is premature monetary tightening in these countries. However, many of them have high public debt ratios that are rising rapidly because of large primary deficits. This raises concerns about debt sustainability in the absence of early fiscal tightening. Moreover, in some cases the short term external component of this debt is also very high compared to reserves, raising concerns about their solvency – some of which has already been reflected in the international financial markets.

Much of the debate on stimulus withdrawal has focused on this dilemma being faced by the advanced G20 countries. There is a consensus to move cautiously on the monetary side. Fragile recovery in some advanced G20 countries, and continuing recession in others, suggests that fiscal consolidation should also be delayed. However, many of these countries are also quickly running out or have already ran out of the fiscal space necessary to delay fiscal consolidation. Hence a case is being made for announcing credible spending policies that endogenize future spending reversals, such as reform of public spending on entitlements, or to pursue incentive policies that could promote a spurt in private investment.

While interesting in itself, much of this discussion is of limited relevance for stimulus withdrawal in India, and presumably also some of the other emerging G20 countries. First of all growth is robust in these countries, making immediate stimulus withdrawal feasible, and inflation is also high in countries like India making such withdrawal urgent. Second, at least in India, the financial sector is healthy, with well capitalized banks, and there was no extra-ordinary asset acquisition by the central bank as part of its stimulus measures. This suggests that monetary tightening should be the policy of choice for curbing inflationary pressures. Indeed, the Reserve Bank of India has been tightening monetary policy and gradually raising nominal interest rates during the past few quarters. Third, the public debt: GDP ratio is high in India and the fiscal authorities have already announced their commitment to a program to meet the fiscal consolidation targets set by India's Thirteenth Finance Commission.

The Commission has recommended that the consolidated debt-GDP ratio should be reduced from 79 per cent in 2009-10 to 68 per cent in 2014-15. In the Commissions scheme, this translates to a reduction of the combined fiscal deficit of the central and state governments from 9.5 per cent of GDP to 5.4 per cent over the same period. The essential logic of the Finance Commission recommendations is to combine fiscal consolidation with high growth by reducing the fiscal deficit while preserving growth promoting capital expenditure. This is to be accomplished by a gradual compression of revenue expenditure. There is a long held view that in India public investment crowds in private investment. This is supported by evidence of a much strong multiplier effect of government capital expenditure compared to current or revenue expenditure.

The main fiscal challenge in India is to find a strategy that combines the Finance Commission's emphasis on capital expenditure preserving fiscal compression with the present government's emphasis on inclusiveness promoting public expenditure on education and health. It is estimated that maintaining the growth momentum and ensuring inclusiveness in the growth process would require additional government spending of about 6 per cent of GDP over the medium term. Financing additional expenditure of this order while at the same time reducing the fiscal deficit will require bold measures both on the expenditure side as well as on the revenue side. The main reform required on the expenditure side is to drastically reduce explicit and implicit subsidies.

Though economically rational, it is not politically easy to raise substantial resources by levying user charges on non-merit non-public goods and services. Assuming, optimistically, that the government can compress unintended subsidies and raise resources from user charges to the tune of about 3 per cent of GDP, this will leave an additional 7 per cent of GDP to be mobilized on the revenue side over the medium term. The Finance Commission recommends that the Central government should raise about one per cent of GDP from disinvestment of public sector equity. If the plan of divesting up to 10 per cent of public enterprises equity is implemented, it may be possible to meet this goal. This will still require raising additional resources amounting to about 6 per cent of GDP from direct and indirect taxes. In this context, enactment of the Direct Taxes Code is extremely important. The most important tax measure for additional revenue mobilisation, however, is the introduction of GST. If a broad based GST is introduced, supported by a good technology platform to track input tax credit and inter-state transactions, it may be possible to increase the tax: GDP ratio by around three percentage points, leaving an extra financing gap of about 3 per cent over and above the target fiscal deficit.

Thus, even with major reforms in expenditure and revenue there will still be a short fall in the revenues required to meet the multiple goals of a 5.4 per cent fiscal deficit along with increased allocation for capital expenditure as well as education and health, relative to GDP, as indicated in the National Common Minimum Program or NCMP. There is a trade off among these three fiscal policy priorities. Perhaps, instead of loading the entire burden of adjustment on only one of these priorities it may be appropriate to allow some adjustment on all three. Settle for a slightly lower level of social sector spending than 9 per cent of GDP, a slightly lower share of capital expenditure than the 2.4 per cent of GDP additional spending proposed by the Finance Commission, and allow for a slightly higher fiscal deficit than that proposed by the Finance Commission.

# Stimulus, Recovery and Exit Policy G20 Experience and Indian Strategy

## Introduction

The prompt, coordinated global response to the Great Recession, even before the G20 had formally emerged as the main platform for global policy coordination in the international financial architecture, was quite remarkable. It prevented the potential transformation of the Great Recession into another protracted global depression like that of 1929. The worst is now over and most economies have turned around, some more and others less. However, G20 policy coordination on policies to exit from the stimulus has been less impressive. Differences remain, especially among the advanced G20 countries, about the timing as well as the scale and composition of policies to wind down their stimulus packages. There are large variations among the G20 countries in their deceleration experiences, transmission mechanisms and their current macroeconomic outlook. Hence, this paper argues that each country needs to set the timing, scale and composition of its stimulus withdrawal keeping in mind its own macroeconomic outlook. In an integrated global economy, it is essential that the major economies coordinate their policies. But coordination does not imply simultaneous stimulus withdrawal from all G20 countries. Indeed, a phased withdrawal is probably the best guarantee against the risk of a negative global shock leading to another recession in the event of a simultaneous stimulus withdrawal from all G20 countries. Part 2 of this paper summarizes the varieties of deceleration experience across G20 countries. The key macroeconomic indicators of the G20 are discussed in part 3 to classify these countries in terms of their readiness for stimulus withdrawal. A stimulus withdrawal strategy for India is then discussed in part 4. Part 5 concludes.

## 2. Varieties of Deceleration Experience

Growth was adversely affected in all G20 countries. However, there were large variations among them in the timing and severity of deceleration; the timing, scale and composition of stimulus packages; and the response lag before they began to turn around. We refer to the 'deceleration' experience rather than recession because as many as five out of 20 countries, or 25 per cent of the G20, continued to register positive growth throughout the crisis period, while the others went into recession, in some cases a very deep recession.<sup>1</sup>

The beginning of growth deceleration in each G20 country, the point at which a stimulus package was first introduced (in some cases these were followed by a second or even a third package), and the point at which the country began its recovery after bottoming out have been marked in *Figure 1*, which tracks the

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<sup>1</sup> Spain is being counted as one of the G20. Though it is not among the original G20, it has been attending G20 meetings with the country occupying the EU chair as leading the EU delegation vacating its country chair for Spain in each meeting.

annualized growth rate for each quarter from 2006:Q1 to 2010:Q1.<sup>2</sup> Some countries like Indonesia, Saudi Arabia, Brazil, and Argentina did not experience any deceleration until the last quarter of 2008, i.e., after the collapse of Lehman Brothers in September 2008. In other countries the GDP growth rate had actually started decelerating more than a year earlier, by 2007:Q2 or Q3.<sup>3</sup> However, among them a distinction has to be made between those countries such as the US and France, where deceleration was triggered by their high exposure to early events of the financial crisis, i.e., the sharp rise in subprime housing mortgage loan defaults in the US, and those where deceleration was set off by other factors such as the spike in food and petroleum prices.

Collateral data on stock price indices, capital flows, exchange rate movements, and anecdotal information on their limited exposure to the US sub-prime mortgage loan market, suggest that countries like Australia and India belong to this latter category. The initial decline in growth, triggered by other factors, was later overtaken by the effects of the crisis. But the precise time from which the crisis started driving the decline remains a matter of judgment. In our view, this shift occurred in 2008:Q4 in Australia and 2008:Q3 in India.

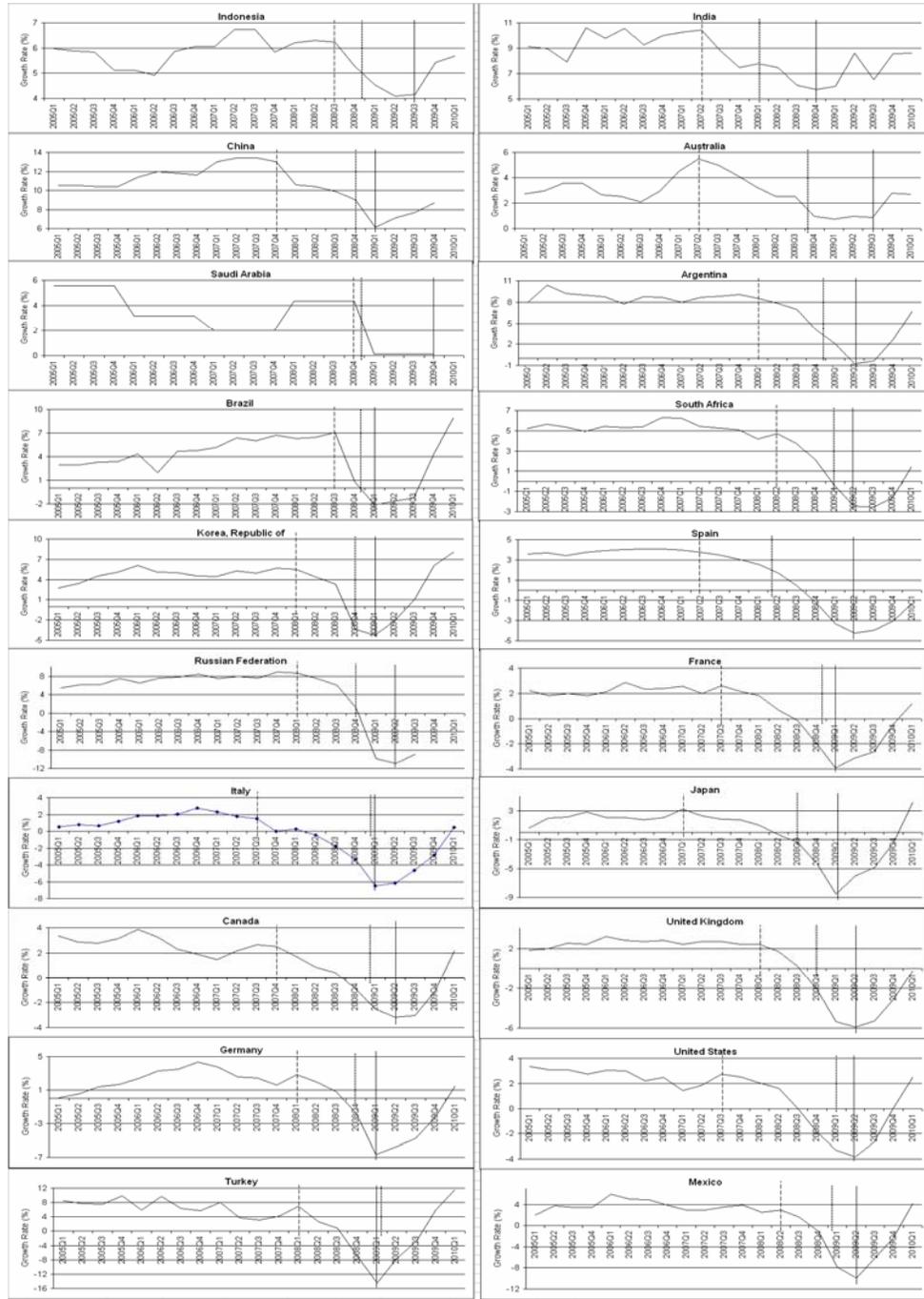
The introduction of stimulus packages was closely coordinated. Most countries introduced their packages in the last quarter of 2008, in the immediate aftermath of the Lehman collapse. There are some outliers. Japan and Spain already had stimulus packages in place by the second quarter of 2008. India introduced its 'official' stimulus package in 2008Q4. But its real and much larger stimulus, in the form of a large planned fiscal deficit, was already introduced in February 2008 in the budget for 2008-2009, though it was not presented at the time as a stimulus package. The time it took for countries to turn around in response to the stimulus and start their recovery varied a great deal. In nine countries recovery started within 2 quarters after the stimulus was introduced, and in 3 quarters in another five countries. In Turkey and Italy the response was sharper, and recovery started within less than a quarter after the stimulus was applied. At the other end of the spectrum, Spain did not start recovering until 6 quarters after the stimulus was introduced, and the lag was 5 quarters in the case of Australia and Saudi Arabia. The response lag was 4 quarters in India and Indonesia.

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<sup>2</sup> This is the last quarter for which data on growth rates are available for most G20 countries in our source, IMF (2010e) at the time of writing. For a few countries the data are available only up to 2009Q3 or 2009 Q4.

<sup>3</sup> In India, for example, the deceleration had started in 2007Q2, but was much sharper after the Lehman crisis. On this point see Rakshit (2009) and Mukherjee (2009) among others.

**Figure I: G20 Countries: Growth Deceleration, Stimulus and Recovery**



**Note:** Beginning of Growth Deceleration (-----), Beginning of Stimulus (.....) & Beginning of Recovery (\_\_\_\_\_).

**Table1:** G 20 Countries: Timing and Intensity of Growth Deceleration and Recovery

| Country                   | Time of Deceleration | Time of first Stimulus | Time Lag        | Time of Recovery | Time Lag        | Average Annual Growth Rate <sup>1</sup> | Minimum Growth Rate <sup>2</sup> | Maximum Deceleration        | Size of Stimulus (in Billion) |
|---------------------------|----------------------|------------------------|-----------------|------------------|-----------------|---|----------------------------------|-----------------------------|-------------------------------|
| Col(1)                    | Col(2)               | Col(3)                 | Col(4)= (3)-(2) | Col(5)           | Col(6)= (5)-(3) | Col(7)                                  | Col(8)                           | Col(9) = 100[{(7)-(8)}/(7)] | Col(10)                       |
| Indonesia                 | 2008Q3               | 2008Q4                 | 1 Quarters      | 2009Q4           | 4 Quarters      | 5.93                                    | 4.16                             | 31.16                       | 6.5 US\$                      |
| India                     | 2007Q2               | 2008Q1                 | 3 Quarters      | 2009Q1           | 4 Quarters      | 9.60                                    | 5.76                             | 40.57                       | 4.1 US\$                      |
| China Mainland            | 2007Q4               | 2008Q4                 | 4 Quarters      | 2009Q2           | 2 Quarters      | 11.70                                   | 6.10                             | 48.23                       | 196 US\$                      |
| Australia                 | 2007Q2               | 2008Q4                 | 6 Quarters      | 2009Q4           | 4 Quarters      | 3.31                                    | 0.87                             | 77.62                       | 52.4 US\$                     |
| Saudi Arabia <sup>3</sup> | 2008Q4               | 2008Q4                 | 0 Quarter       | 2010Q1           | 5 Quarters      | 3.77                                    | 0.15                             | 96.02                       | 17.5 US\$                     |
| Argentina                 | 2008Q3               | 2008Q4                 | 1 Quarter       | 2009Q3           | 3 Quarters      | 8.55                                    | -0.77                            | 109                         | 36.5 US\$                     |
| Brazil                    | 2008Q3               | 2008Q4                 | 1 Quarter       | 2009Q2           | 2 Quarters      | 4.85                                    | -2.13                            | 143.95                      | 94.8 US\$                     |
| South Africa              | 2008Q2               | 2009Q1                 | 3 Quarters      | 2009Q3           | 2 Quarters      | 5.36                                    | -2.47                            | 147.77                      | 3.7 US\$                      |
| Korea, Republic of        | 2008Q1               | 2008Q4                 | 3 Quarters      | 2009Q2           | 2 Quarters      | 4.79                                    | -4.30                            | 189.61                      | 11 US\$                       |
| Spain                     | 2007Q2               | 2008Q2                 | 4 Quarters      | 2009Q3           | 5 Quarters      | 3.83                                    | -4.22                            | 210.27                      | 29 Euro                       |
| Canada                    | 2007Q4               | 2009Q1                 | 5 Quarters      | 2009Q3           | 2 Quarters      | 2.68                                    | -3.18                            | 218.52                      | 43.5 US\$                     |
| United States             | 2007Q3               | 2009Q1                 | 6 Quarters      | 2009Q3           | 2 Quarters      | 2.63                                    | -3.83                            | 245.23                      | 787 US\$                      |

**Table1:** G 20 Countries: Timing and Intensity of Growth Deceleration and Recovery (contd.)

| Country            | Time of Deceleration | Time of first Stimulus | Time Lag           | Time of Recovery | Time Lag           | Average Annual Growth Rate <sup>1</sup> | Minimum Growth Rate <sup>2</sup> | Maximum Deceleration               | Size of Stimulus (in Billion) |
|--------------------|----------------------|------------------------|--------------------|------------------|--------------------|---|----------------------------------|------------------------------------|-------------------------------|
| Col(1)             | Col(2)               | Col(3)                 | Col(4)=<br>(3)-(2) | Col(5)           | Col(6)=<br>(5)-(3) | Col(7)                                  | Col(8)                           | Col(9) =<br>100[{(7)-<br>(8)}/(7)] | Col(10)                       |
| Russian Federation | 2008Q1               | 2008Q4                 | 3 Quarters         | 2009Q3           | 3 Quarters         | 7.44                                    | -10.94                           | 247.11                             | 20 US\$                       |
| France             | 2007Q3               | 2008Q4                 | 5 Quarters         | 2009Q2           | 2 Quarters         | 2.24                                    | -3.93                            | 275.42                             | 33 US\$                       |
| Turkey             | 2008Q1               | 2009Q1                 | 4 Quarters         | 2009Q2           | 1 Quarter          | 6.75                                    | -14.45                           | 314.23                             | 9.84 US\$                     |
| United Kingdom     | 2008Q1               | 2008Q4                 | 3 Quarters         | 2009Q3           | 3 Quarters         | 2.52                                    | -5.90                            | 334.2                              | 30 US\$                       |
| Mexico             | 2008Q2               | 2009Q1                 | 3 Quarters         | 2009Q3           | 2 Quarters         | 3.68                                    | -9.97                            | 371.03                             | 20 US\$                       |
| Germany            | 2008Q1               | 2008Q4                 | 3 Quarters         | 2009Q2           | 2 Quarters         | 2.34                                    | -6.70                            | 386.66                             | 29 US\$                       |
| Japan              | 2007Q1               | 2008Q3                 | 6 Quarters         | 2009Q2           | 3 Quarters         | 2.10                                    | -8.57                            | 508.48                             | 150 US\$                      |
| Italy              | 2007Q3               | 2009Q1                 | 6 Quarters         | 2009Q2           | 1 Quarter          | 1.55                                    | -6.52                            | 519.56                             | 2.56 US\$                     |

**Source:** Authors' calculation based on GDP data from IMF, IFS, July 2010. Size and timing of stimulus for each country collected from respective country reports and various press releases (see Appendix-A).

**Notes:** 1- Simple average growth rate based on GDP data from 2004:Q1 to one quarter before the time of deceleration.

2 - Growth rate when the country experienced maximum fall in the GDP growth rate.

3 - Interpolation method has been used to derive the quarterly numbers for Saudi Arabia

These differences in the time lag between stimulus and response are attributable to differences in the underlying economic environment that may have impacted on the efficiency of the transmission mechanism, differences in the size of the stimulus<sup>4</sup>, and differences in the severity of the crisis in different G20 countries. The severity of the crisis in a country is frequently measured by the maximum output gap, the gap between potential output and actual output, when the country bottomed out. However, potential output is known to decline in a recession (Zhang & Zhang 2009) and there is some ambiguity about how best to measure potential output in a recession, hence also the output gap. In this paper, severity of the crisis has been measured as the absolute difference between the average annual growth rate and the growth rate at the bottom of the growth trough in the country. The average annual growth rate has been estimated from 2004:Q1 to the last quarter before the country experienced a sustained, usually monotonic, decline in growth rates. These estimates are also presented in *Table 1*. It turns out that the decline in growth, compared to the pre-crisis average annual growth rate, has also varied a great deal. The smallest declines of 31 per cent and 41 per cent were recorded in Indonesia and India respectively, followed by 48 per cent in China. At the other end of the range, the relative decline in growth has been as much as 520 per cent in the case of Italy, and 508 per cent in the case of Japan. More than half of the G20 countries experienced growth deceleration in excess of 200 per cent, most of them being advanced countries. The two emerging G20 countries that are in this group include Mexico (371 per cent decline) and Turkey (314 per cent decline).<sup>5</sup>

There were large variations in the time taken for the stimulus to get transmitted to the level of real economic activity, partly because of these large differences in the severity of the crisis and partly because of differences in the size and composition of the stimulus and other conditions. It is arguable that there would be similar variations in time lags for the reverse transmission when the stimulus is withdrawn, since it would operate through the same mechanism in reverse. However, other factors that may have impacted on the pace of the response may have changed meanwhile, including the growth performance of individual countries. Hence, each country's readiness for stimulus withdrawal depends very much on its current growth, investment climate and other macroeconomic conditions that impact on the robustness or fragility of its recovery. Any 'one size fits all' type proposition that all G20 countries must simultaneously initiate withdrawal of the stimulus, or that none of them is ready to initiate such withdrawal, seems quite arbitrary and irrational. Enforcing any such herd behavior on the G20 runs the risk of either another global deceleration triggered by a G20 wide negative shock of simultaneous stimulus

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<sup>4</sup> The size of the stimulus and its composition in different G20 countries has been presented in Appendix A. However, the data presented here has been compiled from multiple sources and has to be handled with caution. Different packages have continued to be introduced from time to time, with some countries having several packages. Further, there is ambiguity about what constitutes a stimulus. Technically, on the fiscal side, any increase in public expenditure is a stimulus, even if it is fully financed by additional revenues, because of the balanced budget multiplier. In actual fact stimulus packages in most countries have typically involved large deficits. However, large budget deficits have not always been counted as a part of the stimulus package, as for instance in the case of India's FY 2008-09 budget cited above. Similarly, on the monetary and financial side, any policy intervention that encourages greater private spending, whether it lowers the cost of funds or raises the value of real balances, is a part of the stimulus but these have not always been officially recorded as such.

<sup>5</sup> For an analysis of cross-country differences in the impact of the financial crisis see Berkmen P., G. Gelos, R. Rennhack, and J.P. Walsh (2009).

withdrawal, or of overheating and high inflation in the countries ready for stimulus withdrawal if the withdrawal is postponed.

### 3. Readiness for Stimulus Withdrawal

An assessment of the readiness of different G20 countries to initiate withdrawal of the stimulus is, therefore, critical for successful G20 coordination on this issue. Selected macroeconomic indicators of the G20 countries have been presented in *Table 2*. The performance of a country in terms of each of these indicators has also been graded. The exercise is analogous to that which rating agencies undertake to rate sovereign country risk, except that our exercise is much simpler, and undertaken for purposes of assessing a country's readiness for withdrawal of the stimulus.

The countries have been grouped primarily according to their growth performance, since recovery of output and employment growth was the main objective of the stimulus packages. In the first group we have eight countries with high growth performance, all of them being emerging economies. Growth rates in these countries are well above 5 per cent, and mostly over 8 per cent. They are clearly ready for withdrawal of the stimulus. In some of these countries, e.g., India, such withdrawal is even urgent because the inflation rate (CPI) is high. Withdrawal of the stimulus in India is also urgent because it has a large primary deficit (central and state governments combined) and a large public debt in excess of 80 per cent of GDP (IMF definition), though the sovereign external debt is quite modest. The health of the financial sector, reflected here in the ratio of non-performing loans, is quite robust in India. This allows room for monetary tightening, in addition to fiscal consolidation, without much risk of a collapse of the financial sector.

An interesting case in this group of countries is Turkey, which was one of the worst affected by the crisis (*see Table 1*). It has recorded nearly 12 per cent growth in 2010:Q1, the highest among all G20 countries, implying a very sharp 'V' shaped recovery. This is partly due to its IMF assistance program. Inflation is also high in Turkey, making stimulus withdrawal both feasible and urgent. The primary deficit is quite modest in Turkey, as also its public debt, and sovereign external short term debt is negligible. However, it has a high proportion of non-performing loans, which suggests that stimulus withdrawal initially could focus on fiscal measures, without too much pressure on the monetary-financial side. Argentina is another high growth emerging economy with high inflation, which makes stimulus withdrawal urgent. While it has a primary surplus, and a moderate public debt-GDP ratio, a fairly large part of public debt is short term external debt, which reinforces the case for further fiscal strengthening at an early date.

Next we have a group of three countries, Mexico, Japan and Australia with moderate growth performance and moderate or low inflation, implying there is no immediate urgency to withdraw their stimulus packages. If such growth is sustained, then these countries could also move towards withdrawal of the stimulus. This may be particularly important in the case of Japan, which has a large primary deficit, over 9 per cent of GDP, on top of a very high public debt-GDP ratio, much larger than for any other G20 country, a significant proportion of which is short term external debt.

**Table 2: G 20 Countries: Selected Macroeconomic Indicators**

|                    | GDP Growth <sup>1</sup> | Inflation Rate <sup>4</sup> | Primary Balance as % of GDP <sup>5</sup> | Gross Government Debt as % of GDP <sup>5</sup> | Non-Performing Loans as % of Total Loans <sup>6</sup> | Current Account Balance as % of Total Reserve Assets <sup>8</sup> | Short-term Gross External Debt of Govt as % of Total Reserve Assets <sup>13</sup> |
|--------------------|-------------------------|-----------------------------|--|--|---|---|---|
|                    | 2010 Q1                 | 2010 Q1                     | 2009                                     | 2009   | 2009  | 2009 Q4   | 2010 Q1   |
| Turkey             | H (11.65)               | P (9.29)                    | M (-1.0)                                 | M (45.5)                                       | L (5.7)   | L (-6.07)   | H (0.0)   |
| Brazil             | H (8.95)                | M (4.86)                    | H (2.1)                                  | L (68.9)                                       | L (4.5)   | L (-5.13)   | H (0.0)   |
| China              | H (8.70) <sup>2</sup>   | H (2.20)                    | M (-2.60)                                | H (18.9)                                       | H (1.6)   | H (12.25) <sup>9</sup>  | -   |
| India              | H (8.60)                | P(15.32)                    | L (-4.90)                                | P (80.8)                                       | M (2.4)   | L (-4.30) <sup>10</sup>   | H (0.54)  |
| Republic of Korea  | H (8.10)                | H (2.69)                    | H (1.50)                                 | H (32.6)                                       | H (1.5)   | H (3.91)  | H (0.0)   |
| Argentina          | H (6.76)                | P (9.02)                    | H (0.20)                                 | M (59.8)                                       | M (3.1)   | H (3.12)  | M (14.66)   |
| Indonesia          | H (5.69)                | M (3.43)                    | H (0.10)                                 | H (28.6)                                       | M (3.8)   | H (5.45)  | H (0.0)   |
| Mexico             | M (4.30)                | M (4.75)                    | M (-1.40)                                | M (44.9)                                       | M (3.4)   | M (-0.69)   | H (2.87)  |
| Japan              | M (4.22)                | H(-1.16)                    | P (-9.10)                                | P (217.7)                                      | H (1.8)   | H (0.00)  | L (24.28)   |
| Australia          | M (2.71)                | H (2.89)                    | L (-4.10)                                | H (15.5)                                       | H (1.1)   | P(-20.64) <sup>11</sup>   | H (3.58)  |
| United States      | L (2.50)                | H (2.36)                    | P (-10.70)                               | P (83.2)                                       | L (5.4)   | M (-0.08)   | P (574.11)  |
| Canada             | L (2.21)                | H (1.61)                    | L (-5.10)                                | P (82.5)                                       | H (1.2)   | P (-10.31)  | L (43.54)   |
| Germany            | L (1.52)                | H (0.81)                    | M (-0.90)                                | L (72.5)                                       | M (2.8) <sup>7</sup>                                  | H (0.04)  | P (60.46)   |
| South Africa       | L (1.43)                | M (5.65)                    | L (-3.60)                                | H (31.5)                                       | L (5.5)   | L (-6.41)   | H (0.0)   |
| France             | L (1.21)                | H (1.32)                    | L (-5.80)                                | L (77.4)                                       | M (2.8) <sup>7</sup>                                  | M (-0.02)   | P (190)   |
| Italy              | L (0.48)                | H (1.29)                    | M (-0.80)                                | P (115.8)                                      | P (6.2)   | P(-18.96) <sup>12</sup>   | P(75.47)  |
| Saudi Arabia       | L (0.15) <sup>2</sup>   | M (4.47)                    | M (-1.40)                                | H (16.3)                                       | H (1.4) <sup>7</sup>                                  | H (5.55) <sup>9</sup>   | -   |
| United Kingdom     | P (-0.23)               | M (3.95)                    | P (-9.10)                                | L (68.2)                                       | M (3.3)   | M (-0.00)   | L (46.95)   |
| Spain              | P (-1.30)               | H (1.10)                    | P (-10.10)                               | M (55.2)                                       | L (5.1)   | P(-76.52) <sup>12</sup>   | P (250.06)  |
| Russian Federation | P(-8.90) <sup>3</sup>   | L (7.21)                    | L (-5.90)                                | H(9.0)   | P (9.6)   | H (3.63)  | H (0.10)  |

**H = High, M = Medium, L = Low, P = Poor**

GDP growth: **H** >5%, **M** <5% and > 2.5%, **L** 0<2.5% **P** <0%

Inflation: **H** <3%, **M** 3% <6%, **L** 6%<9%, **P** >9%

Primary Balance: **H** >0%, **M** 0<(-3%), **L** (-3%) <(-6%), **P** <(-6%)

Public Debt/GDP: **H** <40%, **M** 40% < 60%, **L** 60% < 80%, **P** >80%

Non-performing Loans/ Total Loans : **H** <2%, **M** 2% <4%, **L** 4%<6%, **P** >6%

Current account Balance/Reserves: **H** >0%, **M** 0 <(-)4%, **L** 4% < (-) 8%, **P** <(-)8%

ShortTerm External Debt of the Government /Reserves: **H** <5%, **M** 5%<20%, **L** 20%<50%, **P** > 50%

**Notes & Source:** 1- GDP Volume, Percentage change over corresponding period in the previous year. (Source: IMF, 2010e) ; 2- Data for China and Saudi Arabia correspond to 2009 Q4. 3- Growth rate for Russia 2009 Q3. 4- CPI Percentage change over corresponding period of the previous year. (Source: IMF, 2010e) 5- Source: IMF, 2010d. 6- Source: Statistical Appendix Table 24, Global Financial Stability Report, April 2010, IMF. 7- Data for France, Germany and Saudi Arabia correspond to 2008. 8- Source: IMF, 2010e. 9- The calculations for China and Saudi Arabia are based on annual figures. 10- Current Account data for India obtained from the latest RBI bulletin. 11- Data for Australia corresponds to 2009 Q2. 12- Data for Italy and Spain is for 2010 Q1. 13- Source: Joint External Debt Hub, www.jedh.org

Next, we have a group of seven low growth countries, mostly advanced G20 countries but also including South Africa and Saudi Arabia. It would be premature to withdraw the stimulus in these countries, since the prospects of sustained recovery remain uncertain. Also, none of these countries is subject to strong inflationary pressures at present. On the other hand, some of these countries like Italy have a large public debt stock, and a significant portion of it is short term external debt, raising concerns about solvency. The US has a large primary deficit of nearly 11 per cent of GDP and a high public debt-GDP ratio, which is projected to rise further until the primary deficit is reduced. Also, it has a very high ratio of short term sovereign external debt to reserves. This would have raised very serious concerns about solvency but for the fact that the US dollar happens to be the world's reserve currency. The situation is more challenging for France, which also has a high public debt-GDP ratio, projected to grow further because of a large primary deficit. A large part of this is also short term sovereign external debt, and the French franc is not the world's reserve currency, raising serious solvency concerns.

Finally, we have three G20 countries that are still in recession. These are U.K., Spain, and the Russian Federation (in Russian Federation the output is still shrinking by nearly 9 per cent a year). Inflation is moderately high in Russia at over 7 per cent, but it has a very low public debt-GDP ratio, with a negligible external debt component and a weak financial sector, as reflected in a nonperforming loan proportion of nearly 10 per cent. Clearly, Russia is far from being ready for withdrawal of the stimulus package. The macroeconomic situation is in some ways even more challenging in Spain and, to a lesser extent, in U.K. Output is still declining in both countries. On the other hand these countries have large public debt-GDP ratios, which are projected to grow further because of their large primary deficits of around 10 per cent of GDP. Spain also has a very high ratio of short term sovereign external debt to reserves at 250 per cent, the highest among all G20 countries barring U.S.A., and that raises serious questions about its debt sustainability and solvency. Similar, though less urgent, concerns arise about U.K., which has an equally large and rapidly growing public debt-GDP ratio and a short term sovereign external debt to reserves ratio of about 47 per cent.

To summarize, the broad stylized facts are as follows. Barring some outliers such as South Africa and Saudi Arabia, most of the emerging G20 countries are growing quite rapidly and ready for withdrawal of their stimulus packages. In some of these countries stimulus withdrawal is also urgent because they have high inflation. In most cases, the withdrawal needs to focus on the fiscal side. But in some high inflation countries like India, which have a robust financial sector with adequate bank capitalization and low non-performing loan ratios, there is a strong case for monetary tightening as well. Most of the advanced G20 countries, on the other hand, are not yet ready for stimulus withdrawal since the recovery of growth remains weak and uncertain. Continuing weaknesses in the financial sector raise the risk of double dip recession if there is premature monetary tightening in these countries. However, many of them have high public debt ratios that are rising rapidly because of large primary deficits, which raises concerns about debt sustainability in the absence of early fiscal tightening. Moreover, in some cases the short term external component of this debt is also very high compared to reserves, raising concerns about their solvency – some of which has already been reflected in the international financial markets.

The ongoing debate about stimulus withdrawal has to be seen in the context of this background, particularly the challenges being faced by some of the advanced

G20 countries. Much of the debate has focused on the dilemma being faced by several advanced G20 countries. There is a consensus to move cautiously on the monetary side because of at least three reasons. First, it is possible that significant asset losses have not yet been discovered. Second, central banks may find it difficult to quickly unload the assets acquired in the course of extraordinary measures to shore up the financial market at the height of the crisis. Third, sudden monetary tightening and a sharp increase in interest rates could adversely affect the yield curves of banks that may be borrowing short and lending long (Giavazzi 2010; Minegishi & Courmede 2010; IMF 2010a).

On the fiscal front, the uncertain recovery of some advanced G20 countries, and continuing recession in others would suggest that the fiscal consolidation should also be delayed. However, many of these countries are also quickly running out, or have already ran out of the fiscal space they need in terms of tolerable levels of public debt to delay fiscal consolidation (*Table 3*).<sup>6</sup> Several papers from the IMF suggest that the advanced countries should aim at a stable public debt: GDP ratio of 60 per cent, and based on likely debt dynamics this will eventually require a massive 8 per cent reduction in structural primary deficits on average (IMF, 2010b; 2010d). In a related argument Corsetti and others explain, with the help of a model that includes financially excluded households, that in the absence of an announced fiscal consolidation plan a stimulus based on short term tax relief measures will have a declining impact. They therefore make the case for announcing credible spending policies that endogenize future spending reversals (Corsetti G., A. Meier, and G.J. Muller, 2009).

**Table 3:** Deterioration in Fiscal Balances and Debt Position in G20 Countries 2007-2010

|                        | 2007 | 2008 | 2009  | 2010  | (Per cent of GDP)<br>Deterioration<br>in 2020 from<br>2007<br>(Percentage<br>Points) |
|------------------------|------|------|-------|-------|--|
| <b>Fiscal Balance</b>  |      |      |       |       |  |
| (i) Advanced G 20      | -1.7 | -4.3 | -9.4  | -8.9  | -7.2   |
| (ii) Emerging G 20     | 0.3  | -0.4 | -4.8  | -3.7  | -4.0   |
| (iii) All G 20         | -0.9 | -2.7 | -7.5  | -6.8  | -5.9   |
| (iv) India             | -4.4 | -7.9 | -10.5 | -9.2  | -4.8   |
| <b>Primary Balance</b> |      |      |       |       |  |
| (i) Advanced G 20      | 0.2  | -2.4 | -7.6  | -7.0  | -7.2   |
| (ii) Emerging G 20     | 2.6  | 1.8  | -2.5  | -1.8  | -4.4   |
| (iii) All G 20         | 1.1  | -0.7 | -5.5  | -4.8  | -5.9   |
| (iv) India             | 1.1  | -2.6 | -4.9  | -3.6  |  |
| <b>Gross Debt</b>      |      |      |       |       |  |
| (i) Advanced G 20      | 77.9 | 84.1 | 96.9  | 104.4 | 26.5   |
| (ii) Emerging G 20     | 37.3 | 35.0 | 37.4  | 37.0  | -0.3   |
| (iii) All G 20         | 61.3 | 64.0 | 72.5  | 76.8  | 15.5   |
| (iv) India             | 79.2 | 77.0 | 80.8  | 79.0  | -0.3   |

Source: IMF, 2010d

<sup>6</sup> For an analysis and definition of fiscal space in terms of the projected level of public debt based on debt dynamics simulation, compared to the tolerable levels of public debt see Ostry J.D., A.R. Ghosh, J.I.Kim, and M.S. Qureshi (2010). Also see Freedman C., M. Kumhof, D. Laxton, D. Muir, and S. Mursula (2010)

Actual fiscal consolidation has to be postponed since the recovery remains fragile in these countries, leading to a further increase in public debt: GDP levels. At the same time, continuing the stimulus may not be effective, for, the fear of tax increases to balance the budget in the future may lead to a decline in current private consumption. It is therefore important to endogenize future spending reversals. How is this to be accomplished? There seems to be a wide consensus that the credible pre-commitment to future spending reversals should focus on entitlement spending reforms, particularly reform of public spending on pension and health (Barrel R., I.Hurst and S. Kirby 2009; Giavazzi F., 2010, IMF 2010d). The compelling argument made here is that just a 2 year increase in the retirement age and consequent postponement of pension liabilities could bring down the public debt-GDP ratio by as much as 40 per cent.

In an alternative perspective, Giavazzi (2009) points out that US savings are likely to rise from zero to about 4 per cent as a consequence of financial sector reforms, withdrawal of extraordinary monetary policy measure and the fiscal stimulus, reflecting a corresponding reduction in consumer spending. This raises the risk of another slump unless there is a matching increase in demand elsewhere. Given uncertainties about public investment, Giavazzi (2009) underlines the importance of increased private investment to adjust the production structure of the US economy to match the shift in the structure of global demand with the emergence of very large but low per capita income economies like China and India. He recommends public policies to support a spurt in private investment to re-structure the US economy.

While interesting in itself, much of the foregoing discussion is of limited relevance for the issues that matter regarding stimulus withdrawal in India, and presumably also some of the other emerging G20 countries. First of all growth is robust in these countries, making immediate stimulus withdrawal feasible, and inflation is also high in countries like India making such withdrawal urgent. Second, at least in India, the financial sector is healthy, with well capitalized banks, and there was no extra-ordinary asset acquisition by the central bank as part of its stimulus measures. This suggests that monetary tightening should be the policy of choice for curbing inflationary pressures. Indeed, the Reserve Bank of India has been tightening monetary policy and gradually raising nominal interest rates consistently during the past few quarters.

Third, the public debt: GDP ratio is high in India and the fiscal authorities have already announced their commitment to a program of fiscal consolidation, which can include measures to both raise revenue as well as compress expenditure, in order to meet the fiscal consolidation goals set by the Thirteenth Finance Commission. The issue that really matters in the Indian context is the feasibility of a program that can combine fiscal consolidation with high and inclusive growth.

#### **4. India: A Strategy for Fiscal Consolidation with High Inclusive Growth**

As a prelude to the discussion of India's fiscal consolidation strategy, it is useful to review the specifics of India's deceleration experience and the policy response to date. The impact of the global crisis on the Indian economy was much lower, and the revival of the economy has been much faster, than in most other G 20

countries. The slowdown had already started in India in the second quarter of 2007, but for reasons unrelated to the financial crisis.<sup>7</sup> The crisis led to a much sharper deceleration from the last quarter of 2008. However, it bottomed out within two quarters. Furthermore, the deceleration was relatively shallow compared to most G20 countries, with the growth rate declining by about 41 per cent from the second quarter of 2007 to the bottom of the cycle in the last quarter of 2008.

A major reason for the relatively low impact of the crisis in India, and its quick revival, is the fact that India had actually started its expansionary fiscal policy, long before the global crisis peaked. The global financial meltdown unfolded following the collapse of Lehman Brothers on September 16, 2008, but India's expansionary fiscal stance had already been introduced in the Budget for 2008-09 presented by the Finance Minister in February 2008. The combined impact of expansion in the scope of the National Rural Employment Guarantee Act, waiver of farm loans, implementation of the Sixth Pay Commission recommendations for Central Government employees, and the additional provision for food and fertilizer subsidies was to increase the fiscal deficit of the Central Government budget from 2.6 per cent in 2007-08 to 6.1 per cent in 2008-09.

Adding in off budget liabilities, the Central Government deficit increased by over 5 percentage points in 2008-09 compared to the previous year. In addition, there was substantial spending by political parties on the eve of the 2009 general elections through formal channels, and possibly even more through non-formal channels, though this is difficult to quantify. Although these expenditures were not declared as part of the stimulus package, they greatly helped in easing the impact of the crisis and in the fast recovery. By comparison, the formally announced stimulus package that is usually cited for India, mainly consisting of cuts in the union excise duty and service tax rates, amounted to less than 0.5 per cent of GDP.

As noted earlier, there are several factors that make early fiscal consolidation imperative for India. First, growth has been robust at 7.2 per cent in 2009-10 and it is projected at 8.5 per cent for 2010-11. Thus the gap between past average growth and the current actual growth rate is modest, even though the external demand for Indian exports has not revived. Second, there are strong inflationary pressures in India which require fiscal compression to support monetary tightening. Third, both the fiscal deficit and the public debt stock in India are quite high. According to the IMF Fiscal Monitor (IMF, 2010d), the cyclically adjusted (CA) fiscal deficit for India in 2009 was 10.5 per cent and it is estimated at 9.2 per cent for 2010. This is more than double the average for emerging G20 economies (*Table 3*). India also has a high public debt-GDP ratio of over 80 per cent compared to an average of only 37.4 per cent for emerging G 20 countries. Most of this debt is internal, with little impact on India's solvency on the external account. However, servicing this debt consumes a high proportion of revenue, thereby crowding out other spending that could promote inclusive growth.

Thus, there are compelling reasons to withdraw the fiscal stimulus along with the withdrawal of the monetary stimulus that is already underway. For the medium term, the government has accepted the fiscal consolidation recommendations of the Thirteenth Finance Commission (*Table 4*). The Commission has recommended that the consolidated debt-GDP ratio should be reduced from 79 per cent in 2009-10 to 68 per cent in 2014-15. In the Commission's scheme, this translates to a reduction of

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<sup>7</sup> See the discussion in section 2 above

the fiscal deficit from 9.5 per cent of GDP to 5.4 per cent over the same period. The Commission has also recommended separate targets for the central and state governments. For the Central government, it has recommended that the revenue deficits should be eliminated and capital expenditures should be increased by 2.4 percentage points during the period. In the case of the States, those with revenue surpluses in 2009-10 are required to maintain the surpluses and those with deficits are required to eliminate them, such that the consolidated fiscal deficit of the States in 2014-15 is limited to 2.4 per cent of GDP.

The essential logic of the Finance Commission recommendations is to combine fiscal consolidation with high growth by reducing the fiscal deficit while preserving growth promoting capital expenditure. This is to be accomplished by a gradual elimination of the revenue deficit, i.e., a compression of revenue expenditure.<sup>8</sup> There is a long held view that in India public investment crowds in private investment. Supporting evidence on the strong multiplier effects of government capital expenditure compared to current or revenue expenditure is provided by Das (2007) and more recently Guimaraes (2010). The latter estimates the initial multiplier for current government expenditures at 1, which declines to 0.5 after four or five quarters. In contrast the estimated multiplier for capital expenditure is greater than 1 initially and remains so even after 16 quarters. Recent simulation exercises by Mundle, Bhanumurthy and Das (2010) also confirm the strong multiplier effect of government capital expenditure via the crowding in of private investment. Additionally, over the medium term infrastructure investment can also ease capacity constraints on the supply side in a country like India, where poor infrastructure is often a binding constraint on growth.

The main fiscal challenge in India today is to combine the Finance Commission's emphasis on capital expenditure preserving fiscal compression, i.e., compressing revenue expenditure, with the present government's emphasis on inclusiveness promoting public expenditure on education and health. Public spending on education in 2009-10 relative to GDP was about 3.2 per cent as against the National Common Minimum Programme (NCMP) target of 6 per cent and on healthcare it was 1.4 per cent as against the NCMP target of 3 per cent. This implies that public spending on human development will have to actually increase by 3-4 per cent of GDP in the medium term. There will also be additional expenditures on account of food security. This is on top of the 2.4 per cent of GDP increase in government capital expenditure recommended by the Finance Commission to promote growth. In other words, the expected bill of additional expenditure to achieve high and inclusive growth would add up to about 6 per cent of GDP over the medium term.

This expenditure program has to be somehow made consistent with the fiscal consolidation targets. Fiscal adjustment in 2009-10 was relatively easy for the central government because of the automatic elimination of large one time expenditures of the previous year on payment of arrears following pay revision in government and commitments on loan waivers. There were also significant one time non-tax revenue receipts on account of the first telecom spectrum sale and divestment of public sector equity. This is again true for the current year 2010-11, the base year of the Finance Commission reference period, thanks to the very large one time receipts from telecom spectrum auction and a buoyant trend in revenue from direct taxes and customs duties. However, for the next four years the fiscal consolidation effort will

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<sup>8</sup> For the model simulations underlying this logic see Mundle, Bhanumurthy and Das (2010)

have to be much more concerted if the Finance Commission targets are to be met along with the increase in spending necessary to meet the requirements of high and inclusive growth.

**Table 4:** Consolidated Fiscal Reform Path of Centre and States

|  | (Per cent of GDP) |             |             |             |             |             |
|--|-------------------|-------------|-------------|-------------|-------------|-------------|
|  | 2009-<br>10       | 2010-<br>11 | 2011-<br>12 | 2012-<br>13 | 2013<br>-14 | 2014-<br>15 |
| Fiscal Deficit – States                | 2.8               | 2.6         | 2.5         | 2.5         | 2.4         | 2.4         |
| Fiscal Deficit – Centre                | 6.8               | 5.7         | 4.8         | 4.2         | 3.0         | 3.0         |
| Net Central Loans to<br>States         | 0.1               | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| Aggregate Fiscal Deficit               | 9.5               | 8.3         | 7.3         | 6.7         | 5.4         | 5.4         |
| Debt Stock – States                    | 27.1              | 26.6        | 26.1        | 25.5        | 24.8        | 24.3        |
| Debt Stock – Centre                    | 54.2              | 53.9        | 52.5        | 50.5        | 47.5        | 44.8        |
| Outstanding Central Loans<br>to States | 2.5               | 2.2         | 2.0         | 1.7         | 1.5         | 1.3         |
| Consolidated Debt                      | 78.8              | 78.3        | 76.6        | 74.3        | 70.8        | 67.8        |

**Source:** Thirteenth Finance Commission:2010-2015, table.9.7, page.141

Thus, maintaining the growth momentum and ensuring inclusiveness in the growth process would require additional government spending of about 6 per cent of GDP over the medium term. In addition, according to the fiscal consolidation plan of the Finance Commission, compared to 2009-10 the fiscal deficit will have to be reduced by 4 per cent of GDP by 2014-15. Financing additional expenditures of this magnitude, while at the same time achieving the deficit reduction target set by the Finance Commission, will require bold measures both on the expenditure side as well as on the revenue side.

The most important reform the government will have to introduce on the expenditure side is to drastically reduce explicit and implicit subsidies. Mundle and Rao (1991) estimated that the unrecovered cost of providing social and economic services amounted to 15 per cent of GDP in 1987-88. Other studies that have followed (Mundle, 2007) suggest that this proportion, if anything, may have increased. There is certainly a strong case for revising user charges on non- public good or non-merit services, revising administered prices in line with the market for several public monopolies, and targeting food and fertilizer subsidies along the lines indicated in the Economic Survey, 2009-10. At the state level, a major problem continues to be the burgeoning losses of electricity utilities arising from free and unmetered supply of power to the farmers. This hemorrhage clearly needs to be plugged. However, though economically rational, it is not politically easy to raise substantial resources by levying user charges on non-merit non-public goods and services. Assuming, optimistically, that the government is able to compress unintended subsidies and raise resources from user charges to the tune of about 3 per cent of GDP, this will require an additional 7 per cent of GDP to be mobilized on the revenue side over the medium term to achieve the fiscal consolidation target. The Finance Commission recommends that the Central government should raise about one per cent of GDP from disinvestment of public sector equity. If the plan of divesting up to 10 per cent of public enterprises equity is implemented, it may possible to meet this goal. This will still require raising additional resources amounting to about 5 per cent of GDP from direct and indirect taxes.

In this context, the two major tax reform initiatives, the enactment of Direct Taxes Code and the introduction of goods and services tax (GST) are extremely important. On the former, with the government withdrawing many of the base broadening measures earlier envisaged, additional revenue mobilization in the short and medium term may be difficult, though simplification of the laws is likely to reduce arrears from litigations. The most important tax reform for additional resource mobilization is introduction of the GST. If a broad based GST is introduced, supported by a good technology platform to track input tax credit and inter-state transactions, it may be possible to generate significant additional revenues. It should be noted in this context that a major factor which contributed to significant fiscal consolidation during the period 2003-04 to 2007-08 was the spectacular growth of income tax revenues. On average, income tax revenue increased at over 30 per cent per year. As a proportion of GDP, the revenue from personal and corporation income taxes increased from 3.8 per cent in 2003-04 to 6.5 per cent in 2007-08. This was partly attributable to general buoyancy of the economy, but a significant proportion was also due to the application of new technology through the introduction of the electronic tax information network (TIN).

The impact of this innovation on tax revenues has been estimated by regressing the revenue from income tax on GDP from non-agricultural incomes in a log-linear regression model over the period from 1990-91 to 2009-10 with dummies introduced to capture the impact of TIN. Dummy variables were specified for both the intercept and change in the slope from 2003-04. The regression results are summarised below:

$$\text{Ln}(Y) = -6.2323 + 1.2214 \text{Ln}(\text{NAGDP}) - 3.9290 \text{D1} + 0.2791 \text{D2} * \text{Ln}(\text{NAGDP})$$

(-14.27) (38.16) (-3.24) (3.40)

Adj R-squared = 0.997                      F( 3, 16) = 2081.31

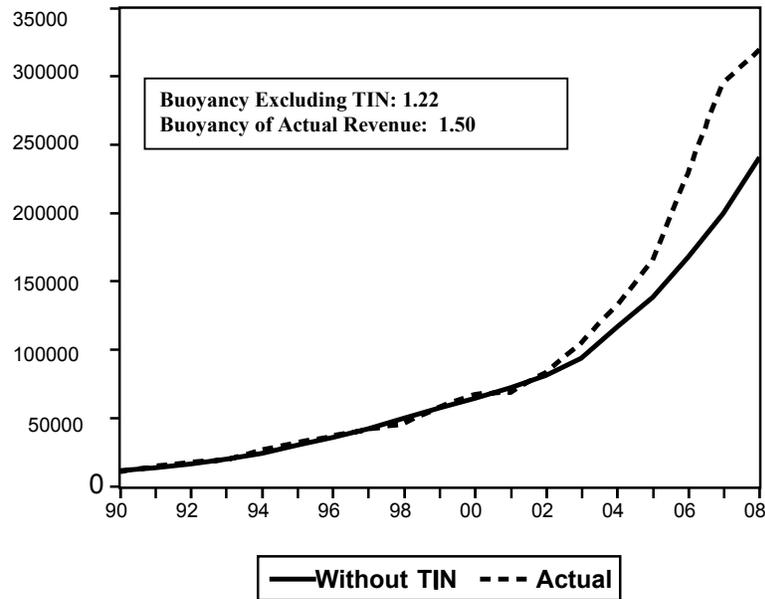
- Y = Direct tax revenue;
- NAGDP = Non-agricultural GDP;
- D1 = Intercept Dummy for technology from 2003-04.
- D2 = Slope Dummy for technology.

The regression coefficient of the slope dummy is positive and significant. The analysis shows that buoyancy of income tax revenue with respect to non-agricultural GDP increased from 1.22 for the period prior to the introduction of TIN to 1.50 for the period after its introduction (*Figure 2*). The application of TIN technology led to an increase in the probability of detection, and this significantly increased tax compliance. Not surprisingly, the revenue from income tax as a ratio of GDP increased by 2.8 points in just 4 years. These results underscores the importance of technology in tax administration. The introduction of GST, if supported by a good technology platform, could raise tax compliance significantly, and perhaps make it possible to increase the tax: GDP ratio by around three percentage points.

Even with these reforms in expenditure and revenue there will still be a short fall in the revenues required to meet the Finance Commission's target of reducing the fiscal deficit to 5.4 per cent, raise the allocations relative to GDP for capital expenditure and also for education and health as indicated in the NCMP. There is a trade off between these three fiscal policy priorities. Perhaps, instead of loading the entire burden of adjustment on only one of these priorities it may be appropriate to allow some adjustment of all three. Settle for a slightly lower level of social sector

spending than 9 per cent of GDP, a slightly lower share of capital expenditure than the 2.4 per cent of GDP additional spending proposed by the Finance Commission, and allow for a slightly higher fiscal deficit than that proposed by the Finance Commission.

**Figure 2:** Impact of Tax Information Network (TIN) on Income Tax Revenue



**Table 5:** Impact of Tax Information Network on Income Tax Revenue

| Years   | Actual revenue From Income Tax (1) | Revenue excluding the effect of TIN (2) | Percentage of Income tax revenue due to TIN (3)=100*{(2)-(1)}/(1) |
|---------|------------------------------------|---|---|
| 2003-04 | 104949                             | 94106.91                                | 10.3  |
| 2004-05 | 131948                             | 117086.7                                | 11.3  |
| 2005-06 | 164906                             | 138701.5                                | 15.9  |
| 2006-07 | 229007                             | 167891.8                                | 26.7  |
| 2007-08 | 295555                             | 199990.2                                | 32.3  |
| 2008-09 | 319441                             | 241143.4                                | 24.5  |

**Source:** Estimated from the Regression Equation.

## 5. Conclusion

There were large variations in the timing and intensity of growth deceleration and the recovery lag of G20 countries following the financial crisis of 2010. This variety of deceleration experience suggests that 'a one size fits all' approach to withdrawal of the stimulus would be flawed. In fact the negative shock of such a simultaneous withdrawal of the stimulus from all G20 countries could seriously raise the risk of double-dip recession. Instead, it is essential that the program for stimulus withdrawal be tailored to the specific circumstances of each G20 country. As it turns out, barring some outliers, most emerging G20 economies are ready for withdrawal of the stimulus, and in some cases it is even urgent because of high inflation and other factors. In contrast, most advanced G20 countries are not yet ready for stimulus withdrawal. Recovery has been tentative in most of these countries, and some of them are still in recession. At the same time, the existing high levels of public debt, including external sovereign debt, and the debt dynamics of large primary deficits make it difficult to postpone fiscal consolidation without risking unsustainable levels of debt.

To deal with this dilemma, several strategies have been proposed, especially the introduction of reforms in entitlement spending such as pensions and health expenditure that would endogenize future expenditure reversals without immediately withdrawing the stimulus. This discussion of approaches to address the dilemma of the advanced G20 countries, however, is not very relevant to countries like India that are not only ready for withdrawal of the stimulus, but urgently need it to curb over heating and high inflation. Apart from gradual withdrawal of the monetary stimulus, India has also initiated a strategy of fiscal consolidation with high growth as proposed by the Thirteenth Finance Commission. Essentially, it entails phased reduction of the fiscal deficit, while preserving and even enhancing growth promoting capital expenditure.

The main fiscal challenge in India today is to combine this strategy with the National Common Minimum Program of the present government that focuses on enhanced social spending to make growth more inclusive. Despite strong reform measures on both the expenditure and revenue side, it turns out that a realistic program of fiscal consolidation with high and inclusive growth may require some downward adjustment in all these three fiscal priorities.

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## Appendix A: Timing and Size of Fiscal stimulus in G-20 Countries

| Name             | Timing of stimulus  |
|------------------|---|
| <b>Argentina</b> | 1. December 2008, a package of US\$ 3.9 billions to spur consumption and exports<br>2. September 2010, US\$32.65 billions through investments in infrastructure   |
| <b>Australia</b> | 1. A stimulus of A\$10.4 billion in October 2008 to protect pensioners and parents<br>2. A stimulus worth of A\$ 42 billions in February 2009 through cash transfers (for workers and families to cope with crisis) and investments in infrastructure |
| <b>Brazil</b>    | 1. December 2008, US\$94.8 billions through forex intervention.<br>2. January, 2010, through exemptions and reduction of taxes (for renewable energy)   |
| <b>Canada</b>    | 1. January 2009, a package of US\$35.5 billion through tax relief and expenditure on housing sector and additional US\$ 8 billions on skill development   |
| <b>China</b>     | 1. November 2008 with stimulus package worth around 4% of GDP in 2009. The stimulus is largely for investment purpose   |
| <b>France</b>    | 1. December 2008, US\$ 33 billion for car makers and public sector investments  |
| <b>Germany</b>   | 1. November 2008, a package worth of US\$29 billion through tax breaks and concessional loans<br>2. March 2009, through 'Pact for Employment and Stability in Germany' program  |
| <b>India</b>     | 1. December 2008, US\$4.1 billions for enhancing development expenditures, cheaper credit to housing.<br>2. July 2009, through cuts in taxes, increasing spending in rural infrastructure and through JNNURM  |
| <b>Indonesia</b> | 1. December 2008, income tax relief to 8 industries<br>2. February 2009, US\$6.5 billions   |
| <b>Italy</b>     | February 2009, US\$ 2.56 billions through creating incentives for car makers and homes  |
| <b>Japan</b>     | 1. First stimulus in August 2008 to mitigate the global food & fuel prices<br>2. Second in December 2008 to protect job losses due to crises.<br>3. April 2009, US\$ 150 billion package through subsidies and tax breaks                             |
| <b>Korea</b>     | 1. November 2008, US\$ 11 billions through public expenditure and tax reductions<br>2. February 2009, US\$660 millions through special loans for infrastructure   |
| <b>Mexico</b>    | 1. January 2009, a US\$ 54 billion package through reducing gasoline prices and increasing spending on public works.<br>2. May, 2009, a package of US\$ 1.3 billions for the tourism industry following outbreak of AH1N1 flu                         |
| <b>Russia</b>    | 1. November 2008, a package of US\$ 20 billion through tax cuts, hike in pensions and unemployment benefits   |

|                       |   |
|-----------------------|---|
|                       | 2. April 2009, with US\$ 90 billions through tax cuts and social welfare funding  |
| <b>Saudi Arabia</b>   | 1. No specific package. But in December 2008, the public spending of US\$ 127 billions approved (for 2009), which is rise of 16% over the year, a highest in the history of the country.<br>1. Again in December 2009, the spending for 2010 was enhanced by 16%, thus continuing the fiscal stimulus measures. |
| <b>South Africa</b>   | 1. February 2009, US\$ 3.7 billion for saving job losses, tax relief and infrastructure spending  |
| <b>Spain</b>          | 1. April, 2008, a 18 billion Euro package through tax cuts and spending on housing<br>2. November, 2008, 11 billion Euros package for infrastructure and auto industry  |
| <b>Turkey</b>         | 1. March 2009, of US\$ 9.84 billions for financial support to companies to curb lay-offs and for infrastructure spending  |
| <b>United Kingdom</b> | 1. November 2008, a package worth of US\$ 30 billion (1.4% of GDP). This is through reduction in VAT and through Lending Panel  |
| <b>United States</b>  | 1. 17 <sup>th</sup> February 2009, US\$ 787 billion stimulus package (for 10 years)   |