

What Does Oil in Triple Digits Mean for India? Macroeconomic Implications and Policy Trade-offs

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Abstract

The Russia-Ukraine conflict is expected to impact India's economy through several channels but we posit first order impacts will emanate from higher crude prices. If crude prices were to average \$100/barrel in 2022, they will constitute a discernible adverse terms of trade shock for India's economy that could shave a percentage point off India's growth, pressure inflation further and widen the current account deficit towards 3% of GDP. How should policy respond? A negative terms of trade shock would argue for a more depreciated equilibrium real effective exchange rate. Policymakers should let this adjustment gradually take place to enable the corresponding "expenditure switching" needed to bring external imbalances back to sustainable levels. A sustained supply shock will make the trade-off for monetary policy more acute, with downside risks to growth accompanied by upside risks to inflation expectations. While the 2022-23 Budget created buffers to protect against shocks, fiscal policy will face its own set of trade-offs in simultaneously attempting to accommodate the shock, support growth and preserve macroeconomic stability. Beyond the near term, policymakers must consider systematically hedging crude price imports in global markets to protect the economy from periods of outsized volatility, apart from the medium-term objective of reducing dependence on imported crude.

Keywords: Commodity Price Impact, Terms of Trade, GDP growth, Exchange Rate, Monetary Policy, Fiscal Policy, Current Account Deficit

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I Russia-Ukraine Conflict: Channels of Transmission

The Russia-Ukraine conflict is likely to impact India's economy through several different channels but it's important to separate the wheat from the chaff. The first-order impact, in our view, emanates from the negative terms of trade (ToT) shock on account of higher commodity prices, particularly crude prices, of which India imports about 85% of its requirements.

There are several other channels: a direct trade channel to the affected region, an indirect trade channel from weaker global -- particularly European -- growth, and a potential tightening of financial conditions and capital flows as global risk appetite ebbs and flows. However, these channels can be expected to be relatively second-order vis-a-vis the commodity price shock¹.

II 1.2% of GDP Terms of Trade shock from oil at \$100

In turn, the bulk of the commodity price shock is expected to flow through crude prices. Upon commencement of the conflict, crude surged past \$100/barrel -- and though there is likely to be an element of overshooting -- there is a growing expectation that, as the conflict gets more entrenched, crude prices could remain elevated for longer. The J.P. Morgan house view, for example, expects crude to average about \$100/barrel for 2022 (calendar year) as of March 15. This would constitute a \$30/barrel increase from the \$70/barrel witnessed in 2021, and thereby constitute a discernible negative terms of trade shock for an oil-importing country such as India. Every \$10/barrel in crude prices increases India's net import bill by 0.4% of GDP. Therefore, crude at \$100/barrel would accumulate into an adverse terms of trade (ToT) impact of 1.2% of GDP in 2022 vis-a-vis 2021. Put simply, the economy would be transferring out an incremental 1.2% of GDP for the same net oil imports (crude imports adjusted for petroleum product exports).² Back in 2014-15, the fall in crude prices at the time had delivered a 2% of GDP windfall across four quarters, as we had documented and analysed at the time (Chinoy and Jain, 2015). Now, the shoe is on the other foot.

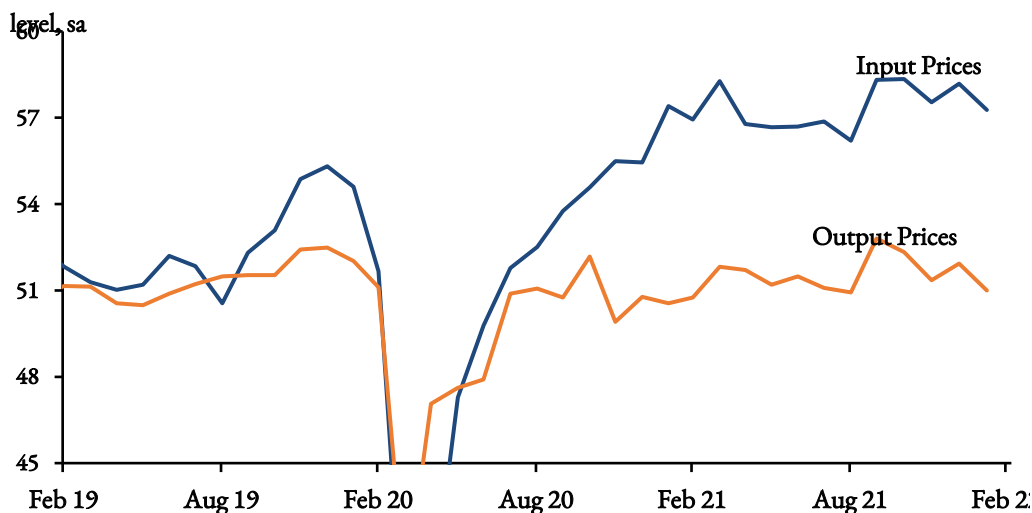
To be sure, there will be impacts from other commodity prices, too. Higher coal and gas prices will add to the negative ToT pressures. In contrast, rising aluminium and steel prices (commodities that India exports) and wheat prices (an agricultural export that India could ramp up significantly) could mitigate some of those pressures. The net impact of these opposing dynamics is therefore likely to be more modest. Instead, the primary impact is likely to flow through oil prices.

III An Adverse Supply Shock

An adverse terms of trade shock is akin to a negative supply shock that simultaneously hurts growth, pushes up inflation and pressures external imbalances. The growth impact will manifest through constraints on fiscal space, an impingement of household purchasing power, and compressed firm margins. For example, if policymakers cut excise duties on petroleum products to ensure retail prices don't increase further (something we discuss more fully below), growth pressures will emanate from less expenditure space for any given fiscal deficit. In contrast, to the extent that retail prices move up further, household purchasing power will be squeezed with implications for private consumption growth. Similarly, if firm input costs rise but firms are unable to pass these on in the form of output

price increases, firm margins and earnings – already under some pressure (see Figure 1) -- will come under further pressure.

Figure 1: India's Composite PMI: Input and Output Prices



Source: Markit

Therefore, the growth impact will manifest across several channels. Importantly, the quantum of the growth hit will be a function of the burden sharing between the government, households, and firms, because of the different marginal propensities to consume across these entities, as we discuss in more detail below.

IV Fiscal has already absorbed one-third of the shock thus far

When oil prices collapsed at the start of pandemic, India's policymakers successively raised excise duties on petroleum products, such that the fiscal garnered much of the oil windfall at the time. Duties on petrol and diesel were raised by Rs13-16/litre, garnering about 1% of GDP in oil tax revenues.

Now, as crude prices have moved up, these duties have been partially rolled back. The government cut duties by Rs10/litre for diesel and Rs5/litre for petrol in November, 2021. The fiscal cost of those cuts will amount to incremental lost revenue of 0.4% of GDP in 2022 over that borne in 2021. Effectively, therefore, the government has already absorbed 0.4% of GDP -- one-third of the 1.2% of GDP hit if oil averages \$100.

This, of course, is not costless. The growth impact is the foregone fiscal expenditure on account of lower revenues. Excise duties were budgeted 0.4% of GDP lower in the 2022-23 Budget, correspondingly reducing space for more spending next fiscal year.

V Burden-Sharing: Three Scenarios and the Growth Impact

Put differently, the fiscal has already absorbed the increase from \$70/barrel to \$80/barrel. The question is how the next \$20/barrel will be shared among the fiscal, households and firms, and what the corresponding growth implications will be?

Table 1 lays out three scenarios of burden-sharing across the different economic entities, to demonstrate how the growth impact is contingent on how the shock is distributed. In Scenario 1, retail prices are kept constant at current levels, such that the entire under-recovery is offset by further excise duty cuts. In essence, the fiscal takes on the entire hit³. The second scenario envisions half the residual hit taken by the fiscal and half passed on to the private sector. The third scenario envisions the entire residual hit passed on to the private sector.

In case of the fiscal absorbing the shock, with the central deficit already pegged at 6.4% of GDP for 2022-23, the growth impact is the foregone expenditure on account of lower revenues from a further cut in excise duties⁴. We agnostically assume a fiscal multiplier of 1, such that the corresponding expenditure hit translates into a commensurate hit to growth. To be sure, authorities could protect expenditures and let the deficit widen by a commensurate amount – which would be tantamount to pushing out the impact to the future and incurring higher public debt -- but that will have other risks and costs, as we discuss later.

In case of households, the growth hit occurs through a purchasing power hit from higher prices, net of any tax cuts⁵. In the first scenario, tax cuts may ensure no change to gasoline and diesel prices, but there are other components of the CPI basket that will still rise from higher crude prices that authorities cannot directly influence. In general, we use the RBI's estimates – that every 10% increase in crude prices pushes up headline CPI by 30 bps -- to quantify the cumulative impact. Finally, we assume a marginal propensity to consume out of income of 0.7 for households. To clarify, this is simply the impact of higher crude prices. To the extent that commodity prices pick up more broadly, the impact on inflation and the household purchasing power will be higher.

By construction, the residual ToT shock – after computing that borne by the public sector and households – is borne by corporates through margin pressures and a hit to profits. Like for households, the marginal propensity to invest from retained earnings is presumed to be less than 1.⁶

VI A 90-110 bps hit on growth

All told, the cumulative hit to growth is estimated to be 90-110 bps under different scenarios of burden-sharing. The greater the fraction borne by the fiscal, the larger the cumulative hit, because the marginal propensity to spend of the budget will be 1 – if this year's deficit target is unchanged – vis-a-vis a smaller marginal propensity to consume/invest for households and firms.

Table 1: Terms of Trade Shock Distribution (% of GDP)

	Scenario 1	Scenario 2	Scenario 3
Fiscal impact	1.0	0.7	0.4
Household	0.0	0.2	0.4
Corporate	0.2	0.3	0.4
<i>ToT Shock</i>	<i>1.2</i>	<i>1.2</i>	<i>1.2</i>
<i>GDP impact</i>	<i>1.1</i>	<i>1.0</i>	<i>0.9</i>

Source: J.P. Morgan

VII Contextualising the growth hit

To put this in perspective, it's important to understand the state of activity before the oil price shock. Recall, GDP contracted 6.6% in the pandemic year and the government's advance estimates peg growth at 8.9% in 2021-22, though downside risks have emerged in light of the Russia-Ukraine geo-political conflict. However, looking at annual growth rates do not necessarily reveal how complete the recovery has been from the COVID-19 shock. Instead, to assess that, we must contrast activity vis-à-vis a counter-factual pre-pandemic path to compare levels.

Figure 3 below maps out a counter-factual GDP path based on 6% growth, absent the pandemic. It then compares the actual GDP path from the pandemic to it. What do we find? That by March 2022, the level of GDP would still be about 7% below its pre-pandemic path. To be sure, all emerging markets will be below their pre-pandemic potential path to different degrees. But a 7% shortfall is meaningful. An oil shock that shaves off a percentage point of GDP growth in 2022 against this backdrop will therefore be non-trivial.

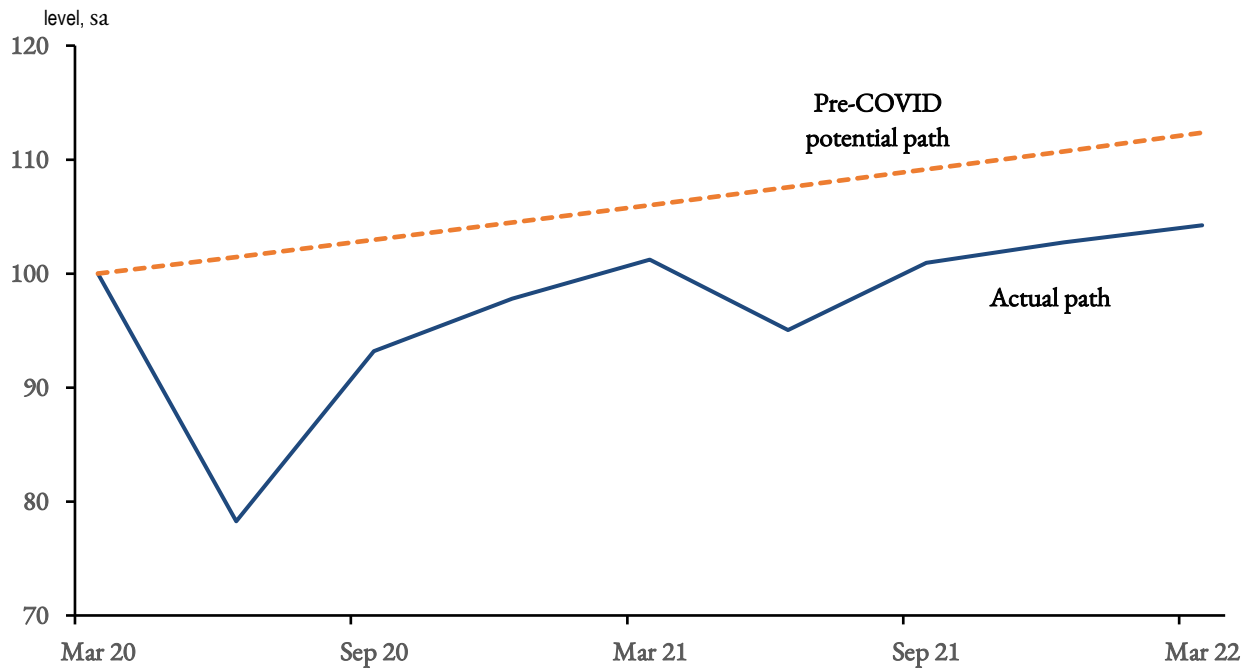
Aggregate shortfalls apart, what was expected to drive growth absent the oil-shock, and how does the latter change the growth-driver calculus? We have long postulated (see, Chinoy and Jain, 2021a) that private consumption and private investment will take time to recover. Even as private consumption has finally surpassed its pre-pandemic levels, it remains much below its pre-pandemic path and has been the slowest to recover across the different constituents of demand. This is unsurprising given evidence of scarring in the labour market and the hit to household balance sheets. Therefore, a more complete jobs recovery will need to serve as a pre-requisite to a sustainable consumption recovery. Rising inflation from a commodity price shock that impinges on household purchasing power will simply serve as an additional headwind to consumption.

In case of private investment, balance sheets have witnessed a significant improvement with large corporates deleveraging in recent years, such that the twin-balance sheet problem appears to be much less of a binding constraint on investment prospects. Instead, the current constraint appears to be demand, with manufacturing utilisation rates still in their mid-60s. Commodity producing sectors will clearly benefit from current developments. But commodity users face the prospect of margin and earnings pressures, quite apart from an increase in macroeconomic uncertainty.

With private consumption and investment expected to take time to recover, the heavy lifting for near term growth was expected to be undertaken by government spending – especially on infrastructure – and exports growth. However, to the extent that global growth will come under pressure from the Russia-Ukraine geo-political conflict, the outlook for exports has become more

uncertain. This simply increases the onus for government spending, and fiscal policy, to support near term growth. But precisely when the onus on government spending has increased, so have the constraints with fiscal space expected to be eaten by higher crude and commodity prices. All this increases the policy challenge and creates several delicate fiscal trade-offs, as we discuss more fully later in this piece.

Figure 2: GDP Levels: Actual Versus Counter-Factual



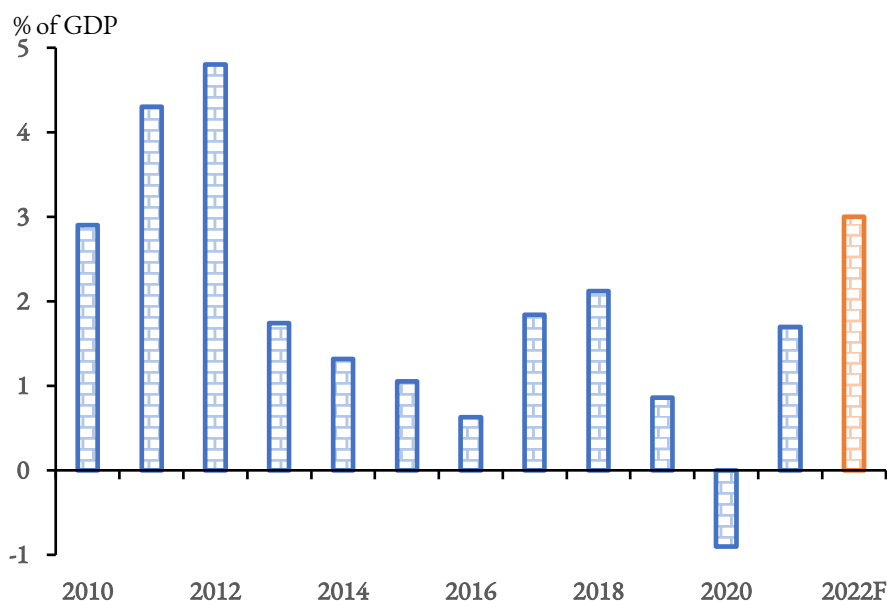
Source: J.P. Morgan

VIII Current Account: A New Normal?

Growth pressures apart, oil prices close to triple digits will also leave a sizeable imprint on the external sector, an area that policymakers have not had to worry about in recent years. India's current account deficit (CAD) has averaged just 1.1% of GDP in the seven years before the pandemic, reflecting, in part, lower crude and commodity prices. This has typically resulted in large BoP surpluses, a "problem of plenty" for the RBI and upward pressures on the rupee. These dynamics were accentuated in the pandemic when the current account went into surplus and the BoP surplus and FX reserves ballooned.

But things are fast changing. The quarterly CAD in the October-December quarter is expected to print close to 3% of GDP in a quarter when crude averaged \$80/barrel. To be sure, it was also a quarter when non-oil, non-gold imports surged as the economy continued to open. There was an expectation that the CAD would mean-revert in 2022 as supply chains and goods prices normalised and global growth re-accelerated. Instead, if crude were to average \$100/barrel (with every \$10 increase adding 0.4% of GDP to the CAD), coal prices remain elevated and the value of gold imports – which have increased sharply over the last two years – remain elevated, the CAD in 2022-23 would be expected to average 3% of GDP, with risks skewed to the upside (Figure 3).

Figure 3: Current Account Deficit

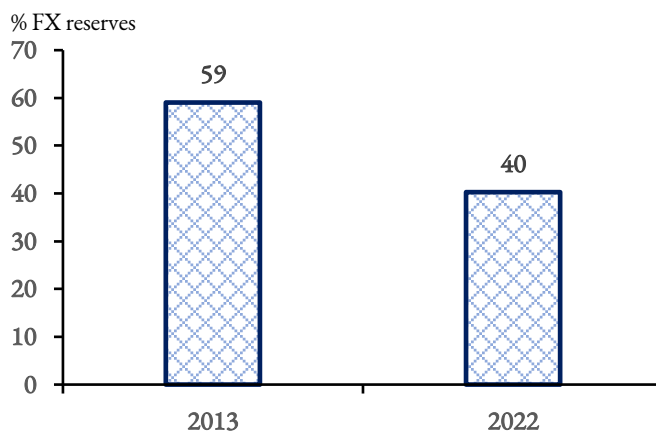


Note: 2022 refers to fiscal year FY23 and is the forecasted CAD based on crude at \$100/barrel

Source: RBI, J.P. Morgan

This, in conjunction with tighter global financial conditions that may slow capital inflows into emerging markets, could presage some pressures on the BoP, for the first time in years. To be sure, there is no imminent macro-stability threat, given the war chest of FX reserves that the RBI possesses. For example, FX Reserves as a multiple of monthly imports is almost twice as large as was the case before the Taper Tantrum of 2013 while short-term debt as a fraction of FX reserves is much lower than in 2013 (see Figure 4).

Figure 4: Short Term Debt (Residual Maturity Basis)



Source: RBI

That said, after a long time, the current account and balance of payments will need close monitoring. Furthermore, these developments will have important implications for exchange rate policy, as we discuss below.

IX Inflation: From One Supply Shock To Another

Finally, rising commodity prices are expected to pressure inflation. Before the recent geopolitical tensions, we had expected headline CPI to average 5% in 2022-23, but this was predicated on oil at \$80/barrel and some normalisation of supply chains in the coming months. The expectation was that services prices would rise as services demand finally normalised (with firms in the non-tradable sector making up for income losses of the last two years against the backdrop of relatively inelastic services demand), but this would be offset by goods prices disinflating as supply chains normalise and households switch expenditures from goods to services as the latter re-opens.

The Russia-Ukraine conflict could materially change this calculus. Not only are energy prices higher, but some supply chains are likely to be disrupted again, resulting in renewed cost push pressures in the goods sector and further margin compression, thereby creating fresh inflation risks. The RBI estimates that every 10% increase in crude prices increases headline CPI by 30 bps (both the direct and indirect impact). Mechanically, the move from \$80 to \$100 should therefore add about 75 bps. However, much will depend on whether taxes are cut and the fiscal absorbs some of this hit, as well as on the ability of firms to pass this on, since growth will also be hit by the oil shock. All told, we expect headline CPI to average between 5.5-6% in FY23, especially because the crude price increase will likely be accompanied by a pickup in other commodity prices, too.

X Policy Implications and Trade-Offs

All told, we find that crude at \$100/barrel in 2022 could shave off 90-110 bps of GDP growth in India, widen the current account deficit to 3% of GDP, and potentially push up CPI by another 50-75 bps. How should policymakers respond and what are the associated trade-offs? We discuss these issues in subsequent sections.

1. External Sector and the Rupee

Perhaps the clearest prescription is on the external front. The widening of the CAD and associated BoP pressures will create some depreciation pressures on the rupee. We believe policymakers should let the Rupee reach this new equilibrium – albeit in a gradual and non-disruptive manner – and not prevent this adjustment. This is because, more fundamentally, a persistent negative terms of trade (ToT) shock will argue for a weaker equilibrium real effective exchange. Enabling this adjustment is therefore important in facilitating the necessary “expenditure switching” to reduce imports, boost exports and help narrow an elevated CAD (Figure 5). All told, a real depreciation of the currency that acts as a shock absorber for the economy is the optimal response to a negative ToT shock.

Figure 5: 40-Currency Real Effective Exchange Rate (REER)

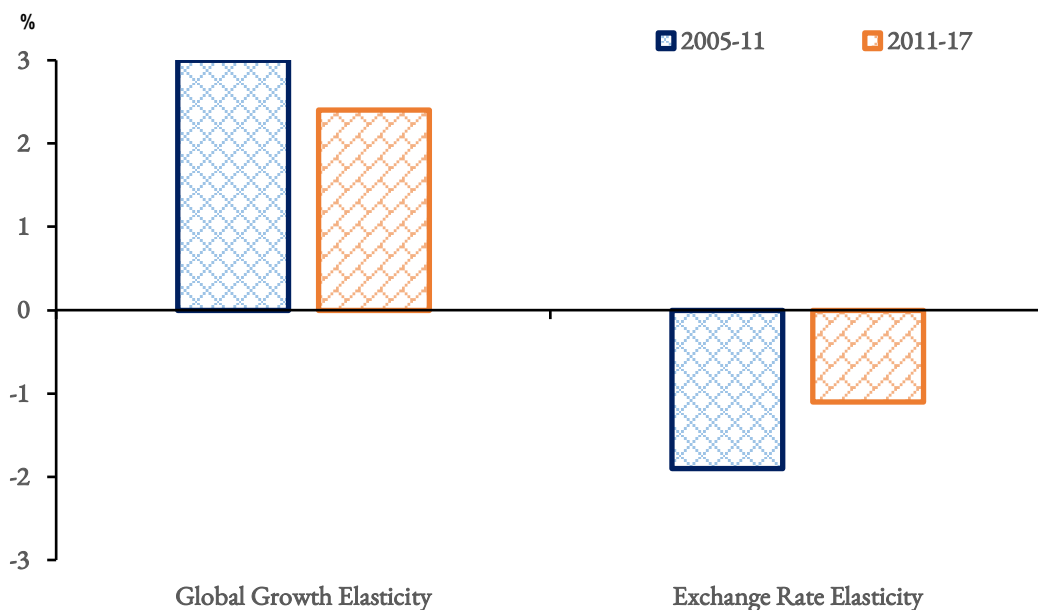
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Source: RBI

All this, however, presumes that exchange rate elasticities of India’s exports and imports are non-negligible and that exchange rate depreciations are not contractionary, wherein balance sheet pressures from depreciation swamp the more beneficial impacts of modest trade elasticities. These concerns should be allayed in the case of India. We have previously found (Chinoy and Jain (2018)) that export elasticities to exchange rate movements, although having attenuated in recent times, still remain very healthy (Figure 6) – a finding robust to different specifications and controls – and consistent with other work on this topic (IMF, 2015). Similarly, work by Hsing (2010) and the RBI (Annual Report, 2015) reveals that exchange rate elasticities also matter on the import side, such that the Marshall-Lerner condition is met. All told, evidence would suggest that a trade-weighted real effective exchange rate depreciation would have a beneficial impact on India’s external imbalances, even if J-curve effects are initially observed.

Figure 6: India's Export Elasticities



Source: Chinoy and Jain (2018)

2. Monetary Policy

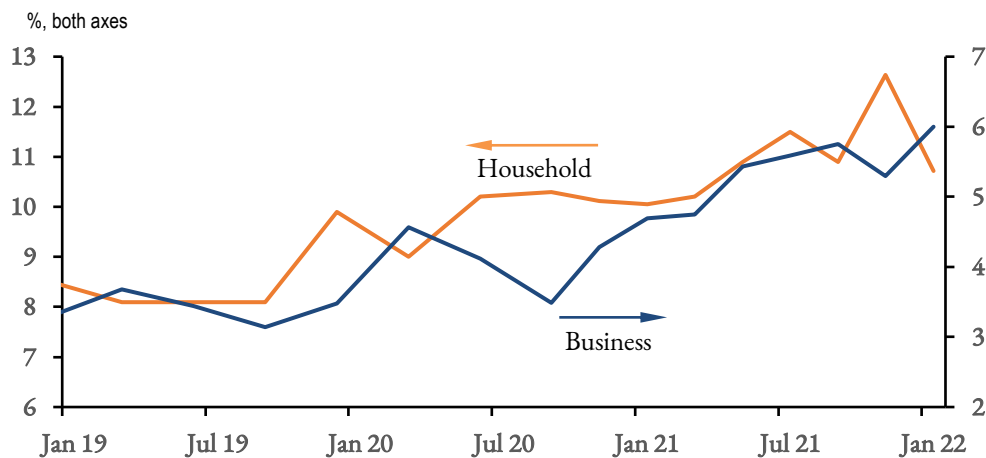
While a real depreciation can be expansionary, it can also be inflationary on account of a greater pass-through of import prices and, more fundamentally, by generating an aggregate demand boost in the wake of an adverse supply shock. With inflation sticky over the last two years, exchange rate depreciation would simply add to these pressures. How, then, should policy respond?

In a critical insight seven decades ago, Nobel laureate James Meade postulated that developing economies must strive to simultaneously achieve both “external balance” and “internal balance.” But two objectives require two instruments. Johnson (1958) and Cordon (1960) labelled these “expenditure switching” and “expenditure control.” In the current context, a real devaluation would help with expenditure-switching to narrow external imbalances. But is expenditure-control – in the form of tighter fiscal and monetary policy – warranted against the backdrop of sticky inflation accentuated by currency depreciation?

The dilemma for monetary policy authorities has been that sticky inflation has been accompanied by discernible slack in the labour market, consistent with the level of GDP still 7% below its pre-pandemic path. The oil shock accentuates this dilemma by simultaneously pushing up inflation and pushing down growth.

How, then, should policy respond? Arguably, monetary policy should look through temporary supply shocks. But what if the adverse supply shock remains persistent, simply morphing from one form to another – a supply shock from COVID-19 for two years replaced by oil prices remaining elevated for a while? The concern, in our view, comes down to inflation expectations. Sticky headline CPI over the last two years has meant that both household and business inflation expectations – notwithstanding some recent softening of household expectations – have hardened discernibly over the last 18 months (Figure 6). This is tantamount to the Philips Curve shifting up and creating a much more unfavourable trade-off between slack and prices for monetary authorities down the line.

Figure 7: Inflation Expectations (1-Year Ahead)

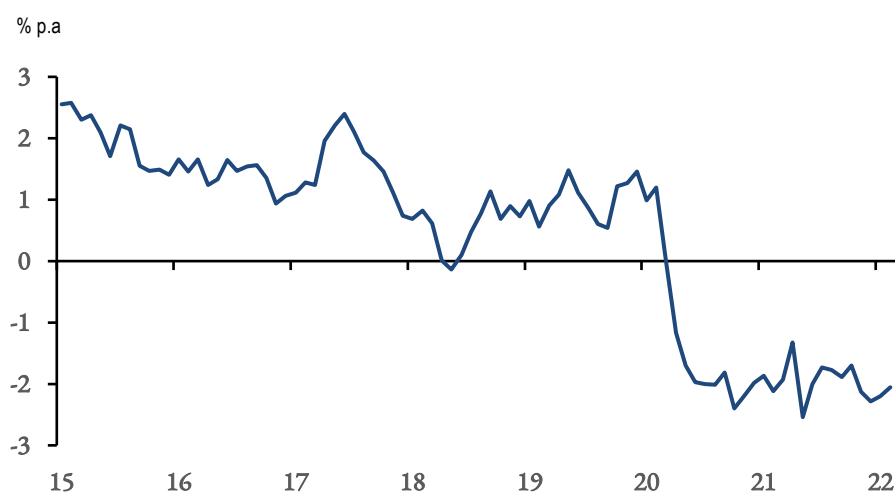


Source: RBI, IIM Ahmedabad survey

Given the juxtaposition of slack, sticky headline and core inflation, and firming inflation expectations, we have therefore previously argued that monetary and fiscal policy, which reinforced each other in the throes of the pandemic, **will now have to evolve from being complements to substitutes.** (Chinoy, 2022).

Even as fiscal policy – better suited to offering targeted support amidst an uneven recovery – tries to remain relatively accommodative, monetary policy should gradually begin to normalise off very accommodative starting points (Figure 7).

Figure 8: Real Policy Rate



Deflated via core-core inflation; Source: MoSPI, J.P. Morgan

3. Fiscal Policy

Fiscal policy will confront its own trade-offs. To be sure, the February Budget created buffers to guard against shocks by making very conservative tax assumption for 2022-23. Even net of excise duties – which were budgeted lower on account of the November tax cuts – gross taxes were budgeted 0.5% of GDP lower in FY23 than the expected outturn in FY22 (Table 2). As a consequence, even if much of the remaining under-recovery from oil at \$100/barrel is absorbed on the budget through further excise duty cuts, a tax buoyancy of about 1 on the non-excise tax component would be enough to bring total tax revenues to budgeted levels. So, budgeted tax receipts could be met, and budgeted expenditures protected, even if more of the oil shock is absorbed on the budget.

But several caveats exist. First, if crude prices climb even higher and/or the fertiliser subsidy increases, pressure on budgeted expenditures will emerge. Second, to the extent that higher oil prices are symptomatic of elevated global uncertainty and corresponding pressure on asset prices, budgeted asset sale revenues could be harder to pull-off such that the revenue implications go beyond the excise duty cuts.

Third, even if budgeted tax and expenditure targets are met, one shouldn't lose sight of opportunity costs. With the deficit pegged at 6.4% of GDP for FY23, absent the oil shock, higher-than-budgeted revenues would have presumably translated into higher-than-budgeted expenditures – an expectation likely baked into growth forecasts for 2022-23. In the wake of the oil shock, if revenue

constraints preclude these extra expenditures from taking place, there would still be foregone growth cost, especially if capital expenditures with their higher growth multipliers come under pressure.

	FY20	FY21	FY22RE	FY22JPM	FY23B
Net Tax Revenues	6.8	7.2	7.6	8.0	7.5
Gross Taxes	10.0	10.2	10.8	11.4	10.7
<i>Gross Taxes ex excise</i>	<i>8.8</i>	<i>8.3</i>	<i>9.1</i>	<i>9.9</i>	<i>9.4</i>
Non-tax Revenues	1.6	1.0	1.4	1.4	1.0
Total Receipts	8.7	8.5	9.4	9.6	8.9
Revenue Expenditure	11.7	15.6	13.6	13.6	12.4
Interest	3.0	3.4	3.5	3.5	3.6
Subsidies	1.3	3.8	2.1	2.1	1.4
R.Exp (x int,sub)	7.4	8.3	8.0	8.0	7.4
Capital Expenditure	1.7	2.2	2.6	2.6	2.9
Total Expenditure	13.4	17.7	16.2	16.2	15.3
Fiscal Deficit	-4.7	-9.2	-6.9	-6.6	-6.4
Nominal GDP growth	6.2	-1.4	17.2	17.2	11.1

Source: Budget Docs, J.P. Morgan

More generally, the greater the oil shock absorbed on the budget, the larger the hit to demand and growth, because of the higher marginal propensity to spend off the fiscal vis-a-vis the private sector. This is not to suggest that policymakers should not consider any excise duty cuts, because higher retail prices could further harden inflationary expectations, increasing the challenges for monetary policy. However, when considering fuel tax cuts, these trade-offs will need to be recognised.

Finally, policymakers could always cut duties, not cut spending, and let the deficit widen commensurately – effectively pushing out some of the ToT costs to the future in the form of higher debt – but negative surprises on the fiscal during periods of heightened macro uncertainty and at a time when India's gross borrowing is already seen as being hefty could generate significant risk premia in markets.

All told, the fiscal will confront several trade-offs and should try to engage in burden sharing and avoid corner solutions. What is clear to us, however, is that as soon as markets begin to stabilise, authorities must plough ahead with planned asset sales/disinvestments to create much-needed fiscal headroom, without trying to perfectly time the market. This will allow the fiscal to protect expenditures even as it takes on some of the oil shock on the Budget.⁷

A persistent adverse supply shock is complicated and challenging to respond to, and the new equilibrium will inevitably need some combination of a weaker rupee, higher rates, and judicious fiscal management. Beyond the very near term, however, we believe policymakers must consider systematically hedging crude price imports in global markets to protect the economy from periods of outsized volatility, apart from the medium-term objective of reducing dependence on imported crude.

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Notes

¹ Net of trade in defense equipment, for example, combined trade with Russia and Ukraine constitutes just 1% and 2% of India's export and import basket, respectively. Instead, the indirect trade channel through weaker European growth is likely to be more significant. India's exports to Europe constitute more than 14% of the export basket and European growth is likely to be meaningfully impacted by Russian-Ukraine conflict.

² Higher domestic prices should induce some behavioural impact in terms of lower import volume growth, but that is likely to be a second-order impact.

³ Because state duties are ad valorem, they would remain unchanged if retail prices remain unchanged. This is just a simplifying assumption. In actuality, we expect the hit to be shared between the Centre and some states.

⁴ To be sure, the Budget had built in fiscal buffers to deal with shocks by budgeting revenues very conservatively. Absent the oil shock, therefore, tax revenues would have been higher than budgeted. With the fiscal deficit fixed, this would have meant higher expenditures/GDP than budgeted, implicitly baked into FY23 GDP forecasts. Post the oil shock, any cut in oil duties will mean expenditures – and therefore growth – will be lower than previously envisioned. Furthermore, to the extent that higher oil prices are symptomatic of elevated global uncertainty and asset prices, budgeted asset sale revenues could also remain under pressures, such that the revenue implications go beyond the excise duty cuts.

⁵ To be sure, the household response to higher crude prices will depend on whether the shock is perceived to be temporary or permanent and/or whether liquidity constraints prevent households from smoothing consumption.

⁶ Demand and utilization rates, rather than balance sheet effects, are currently the binding constraint on growth. Therefore, a surge in profits in the pandemic year did not translate into commensurate investment. Similarly, an income shock is unlikely to translate into a commensurate pull-pack in investment, making a marginal propensity to investment assumption of less than 1 plausible.

⁷ To be sure, selling public sector assets is akin to increasing the economy's net debt (gross debt adjusted for public sector assets). That said, if asset sales are used to finance much-needed physical and social infrastructure with high economic returns, this is akin to a productivity-enhancing swap on the public sector's balance sheet that does not reduce net debt.