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## BACKGROUND NOTE 4: USING THE IPF ANALYTICAL TOOLKIT TO ENHANCE POLICY ASSESSMENTS

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## USING THE IPF ANALYTICAL TOOLKIT TO ENHANCE POLICY ASSESSMENTS

**1. Insights from the IPF workstream can help guide the appropriate policy mix during an inflow surge, based on the shock and country characteristics.** This Background Note describes how the insights from the IPF workstream can help apply the IV framework during surges (right-hand side of Figure 1 in the Board paper).<sup>1</sup> The IPF examines the integrated use of all instruments, i.e., how monetary policy, fiscal policy, FXI, MPMs, CFMs, and CFM/MPMs can be used together. It recommends that when a country is facing large inflows, it is important as a first step to attempt to identify the nature of the underlying shock (fundamental, non-fundamental, or a mix of the two) and the country's characteristics. These factors would help determine the warranted macroeconomic adjustments, and the potential for economic and financial distortions, thereby informing the appropriate mix of policies to respond to the shock.

**2. Inflow surges may be caused by a range of shocks and can take different forms in different countries.** Fundamental shocks, which may be persistent, include changes in global interest rates, productivity, and commodity prices. Non-fundamental shocks include risk-on/risk-off episodes triggered by changes in investors' portfolio constraints that are not directly related to fundamentals.<sup>2</sup> The composition of inflows can also vary by country. For instance, debt flows with short-term remaining maturity, either in FX or domestic currency, can increase rollover risks when capital flows reverse.

**3. The IPF models suggest that warranted macroeconomic policy adjustments depend on the nature of the shock and country characteristics.** If the shock is at least in part fundamental or persistent, it is likely to require some adjustment to monetary, fiscal, and financial policies, and for countries with flexible exchange rate regimes, an adjustment to the nominal exchange rate. The degree of adjustment would depend on country characteristics that determine the economic and financial impact of the shock (e.g., the importance of commodity trade would matter for the response to a commodity price shock).<sup>3</sup> By contrast, if the shock is predominantly or exclusively non-fundamental (e.g., a risk-on/risk-off episode), it is not generally warranted to adjust

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<sup>1</sup> This review does not alter the IV's recommendation of the use of policy instruments during surges. The IPF workstream can help inform the judgments that are already required under the IV.

<sup>2</sup> In practice, multiple shocks may strike simultaneously, with both fundamental and non-fundamental components. Disentangling the shocks may therefore be challenging in real time and requires judgment. Under the current IV and informed by the 2013 Staff Guidance Note, staff analyze the drivers of capital flows using empirical methods supplemented with market and anecdotal information.

<sup>3</sup> The assessment of warranted adjustments should be guided by the indicators of policy space and imbalances used in bilateral surveillance (e.g., inflation expectations, output gap, debt sustainability, the ESA, and reserve adequacy).

macroeconomic policy settings away from levels that are consistent with inflation and growth objectives.<sup>4</sup>

**4. The IPF models point to shocks and country characteristics that make it difficult to effectively respond to surges using only macroeconomic policy and exchange rate adjustment.**

The IPF models suggest that the following frictions may increase the likelihood of overvaluation and overheating (although there may also be other frictions which generate the same distortions):

- *Non-fundamental shocks combined with shallow FX markets.* After fundamental or persistent shocks, irrespective of FX market depth, a rapid appreciation of the currency to its new fundamental level could facilitate external adjustment and reduce the risk of overheating without necessarily generating overvaluation (even if a temporary overshooting could take place). By contrast, for non-fundamental shocks or very large inflows into local currency debt, shallow FX markets make it more likely that an overvaluation emerges. They also make it more likely that the shock transmits into lower premia on local currency debt, leading to overheating via excessive borrowing. As asset markets deepen, the premia become less sensitive to shocks.
- *Weak monetary policy credibility.* If the appreciation is associated with high pass-through and therefore pushes overall inflation down, medium-term inflation expectations may fall excessively even alongside an output expansion driven by credit growth, which may worsen the tradeoff between inflation and output stabilization and amplify the overheating.

**5. The IPF models also suggest that, in the presence of overheating and overvaluation, the use of FXI and CFMs can enhance monetary autonomy in certain circumstances without generating other distortions.**

The models suggest that the combination of overvaluation and overheating is more likely (albeit not exclusively) to arise in countries with shallow FX markets and weakly-anchored inflation expectations after non-fundamental shocks. This combination reduces monetary autonomy: specifically, lowering the policy rate to reduce the overvaluation may exacerbate the overheating. If FX reserves are adequate or more than adequate, the IV suggests that CFMs may be appropriate, and this policy advice remains unchanged in the current review. The IPF provides further insights regarding the policy trade-offs: FXI and CFMs can enhance monetary autonomy by partially insulating the economy from such non-fundamental shocks, provided that their use does not reduce autonomy in other ways or generate other large distortions. Under the IV, the use of CFMs is not limited to enhancing monetary autonomy; in particular, CFMs can limit the degree of overvaluation and overheating by reducing appreciation pressures and external funding.

**6. The relative costs and benefits of FXI and CFMs depend on country-specific factors.** For example, FX reserve accumulation involves carry costs which may increase with the size of reserves.

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<sup>4</sup> The IV does not necessarily assume that the pre-shock policy settings were consistent with domestic and external stability. The IPF interprets this situation as a prior shock or inappropriate policy having caused a deviation from domestic and external stability. Both the IV and IPF would suggest warranted policy adjustments to address both the prior instability and the new shock.

FXI may also create confusion about the nominal anchor, may induce agents to increase their FX risk exposure, and may hinder the development of FX markets.<sup>5</sup> On the other hand, CFMs require developing enforcement mechanisms to administer the controls, and their use may be constrained by international agreements. The choice of CFMs would be informed by the country's legal and administrative infrastructure, and this can affect the costs and benefits of the instruments.

**7. The IPF models also illustrate how surges can lead to a build-up of systemic financial risks.** The IPF models suggest that inflow surges can generate systemic financial risks through:

- *Domestic collateral constraints.* Bubbles in domestic asset prices (e.g., housing) triggered by foreign inflow surges may excessively relax collateral constraints of borrowers that can lead to surges in local currency credit. Systemic financial risks may increase, as the country becomes vulnerable to debt overhang and sharp deleveraging once inflows reverse.
- *FX mismatches.* Surges in FX debt inflows may generate systemic financial risks by causing elevated FX mismatches which may no longer be sustainable once inflows reverse. The riskiest FX debt inflows tend to be short-term.

**8. The IPF workstream connects the appropriate mix of MPMs and CFM/MPMs to the structure of the country's financial system.** In assessing the case for the use of CFM/MPMs, staff should consider how the structure of the financial system affects the effectiveness and the calibration of MPMs. CFM/MPMs can be a useful complement to MPMs in some circumstances, such as when agents borrow from abroad, and risks cannot therefore be addressed by MPMs alone.

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<sup>5</sup> Such confusion may be heightened by ad-hoc FXI without appropriate modalities (e.g., announced objective and timeframe), especially if the monetary framework is not well established.