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IMF Advice on Capital Flows: Multilateral Issues

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IMF Advice on Capital Flows: Multilateral Issues

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ABBREVIATIONS

AE	advanced economy
ARA	assessment of reserve adequacy
AREAER	Annual Report on Exchange Arrangements and Exchange Restrictions
ASEAN	Association of Southeast Asian Nations
BIS	Bank for International Settlements
BIT	bilateral investment treaty
BRICS	Brazil, Russia, India, China, and South Africa
CDIS	Coordinated Direct Investment Survey
CFM	capital flow management measure
CPIS	Coordinated Portfolio Investment Survey
DGI	Data Gaps Initiative
EBA	external balance assessment
EMDE	emerging market and developing economy
ESR	External Sector Report
EU	European Union
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
G7	Group of Seven
G20	Group of Twenty
GDP	gross domestic product
GFC	global financial crisis
GFSR	*Global Financial Stability Report*
GLEI	global legal entity identifiers
IIP	international investment position
ISD	Integrated Surveillance Decision
IV	Institutional View on the Liberalization and Management of Capital Flows
LEI	legal entity identifiers
MCM	Monetary and Capital Markets Department (IMF)
MPM	macroprudential measure
OECD	Organization for Economic Cooperation and Development
REO	*Regional Economic Outlook*
RES	Research Department (IMF)
SPR	Strategy, Policy, and Review Department (IMF)
USMCA	United States-Mexico-Canada Agreement
WEO	*World Economic Outlook*
WTO	World Trade Organization

I. INTRODUCTION

1. In recent decades, the IMF's multilateral approach to overseeing cross-border capital flows and related policies has evolved considerably in response to the progressive liberalization of capital account restrictions, the massive increase in the speed and reach of cross-border capital flows, and the crises that these flows helped trigger.[1] These events helped push the Fund to improve its ability to monitor cross-border capital flows, to better understand the dynamics of capital account crises, and to fill gaps and inconsistencies in its own policy advice.

2. Some of the most important of these changes were made in response to the global financial crisis (GFC).[2] An Integrated Surveillance Decision (ISD), adopted in 2012 (IMF, 2012b), built on the 2007 Surveillance Decision by extending the scope of the Fund's bilateral and multilateral surveillance to take account of the spillovers from individual country policies on the broader international monetary system. The Integrated Surveillance Decision was closely followed by the issuance of the Institutional View (IV) on the Liberalization and Management of Capital Flows (IMF, 2012d), which provided a framework for Fund policy advice in the areas of capital account liberalization and capital flow volatility. The Fund has correspondingly intensified its measurement and analysis of capital flows and related policy measures. The IV has continued to guide Fund advice on capital flow management during the COVID-19 crisis, while efforts to integrate more closely the Fund's advice on capital flow management measures (CFMs) with other macro-financial policies have continued (see background paper by Batini, 2020).

3. This paper reviews these changes to the Fund's framework for monitoring and assessing cross-border capital flows and discusses how they have impacted IMF multilateral surveillance. Following a brief description of the institutional background in Section II, three issues are covered:

- The Fund's approach to monitoring and benchmarking capital flows and capital account measures (Sections III and IV);
- The Fund's coverage and analysis of spillovers from policies affecting capital flows, both in source and recipient countries (Section V); and
- The coherence of the Fund's approach with those of other multilateral agencies, especially the Organization for Economic Cooperation and Development (OECD) (Section VI).

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[1] For example, the Tequila crisis in 1994, the Asia crisis in 1998, a series of crises affecting a range of other emerging markets in the early 2000s, and the global financial crisis in 2007.

[2] The Fund's performance in this period was described by the IMF's Independent Evaluation Office (IEO) in its evaluations of *IMF Financial Surveillance* (IEO, 2019a) and *IMF Performance in the Run-Up to the Global Financial Crisis* (IEO, 2011).

4. The assessment is based on both a desk review of public documents and extensive interviews. The documents covered include the many policy papers presented to the IMF's Executive Board on issues related to capital flows, as well as the Fund's principal multilateral surveillance reports—the *Global Financial Stability Report (GFSR)*, *World Economic Outlook (WEO),* External Sector Reports (ESR), and Spillover Reports. Interviews were held with a large number of the staff members involved in producing these reports and developing the IMF's policies, as well as with staff members of the Bank for International Settlements, the Financial Stability Board, and the Organization for Economic Cooperation and Development; academics; and market participants. The assessment has also benefited from the country-specific case studies that are among the background papers for the present evaluation.

II. THE IMF'S MULTILATERAL FRAMEWORK FOR CAPITAL FLOWS

5. The IMF's interest in capital flows and related policies stems naturally from its underlying legal framework and is inherently of a multilateral nature.[3] In particular, Article I of the IMF's Articles of Agreement defines one of the purposes of the Fund as to maintain "orderly exchange arrangements among members, and to avoid competitive exchange rate depreciation." And Article IV enjoins members of the Fund to "promote stability by fostering orderly underlying economic and financial conditions and a monetary system that does not tend to produce erratic disruptions" and to avoid "manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage."

6. However, the Fund's capacity to influence policies affecting international capital flows has been overshadowed by an asymmetry in members' rights and obligations under the Fund's Articles:

- On the current account side, the Articles clearly prohibit Fund members from maintaining "restrictions on the making of payments and transfers for current international transactions." They also enable the Fund to sanction members that are in breach of these obligations by making them ineligible to draw on Fund resources, suspending their voting rights, or expulsion.

- But the Fund lacks a similar jurisdictional responsibility for the capital account. Although the Articles define the essential purpose of the international monetary system as providing "a framework that facilitates the exchange of goods, services, and capital," Article VI explicitly enables members to "exercise such controls as are necessary to regulate international capital movements," insofar as these do not involve a restriction on current payments. There is no other legal basis for the Fund to limit or discourage restrictions on capital flows.

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[3] See IMF (2010c) for a discussion.

7. This jurisdictional constraint was compounded by differences of view among the Fund's members on the costs and benefits of capital account liberalization and on the appropriateness of the use of capital flow restrictions. This lack of consensus led to the failure of efforts during the 1990s to amend the IMF Articles in a manner that would impose a general obligation on members to liberalize capital flows (IMF, 2010a).

8. Nonetheless, the growth in cross-border capital flows and a heightened concern regarding the volatility of flows and the contagiousness of capital account crises spurred important adaptations to the Fund's policy framework. In particular, the 2007 Surveillance Decision (IMF, 2007) called for Fund surveillance to assess "external stability" in a manner that included consideration of both a member's financial sector policies and the size and sustainability of capital flows. And it specifically required Fund surveillance to take account of "the introduction or substantial modification for balance of payments purposes of restrictions on, or incentives for, the inflow or outflow of capital." However, the extent to which these changes applied to the Fund's multilateral mandate was still limited, since they required consideration of "the impact of a member's policies on other members [only] to the extent that the member's policies undermine the promotion of its own external stability."

9. On the heels of the GFC—which provided further evidence of the risks to the international monetary system posed by cross-border capital flows and financial interconnectedness—the 2012 ISD significantly expanded the Fund's multilateral oversight in the area of capital flows.[4] The new decision required the Fund—under its multilateral surveillance mandate—to cover "spillovers arising from policies of individual members that could significantly influence the effective operation of the international monetary system," with explicit refence to "policies respecting capital flows." Consistent with this requirement, Article IV consultations with individual members were charged with raising concerns about the potential for their policies to have such spillover effects on other countries—albeit still without any obligation on members to amend their policies in response.

10. The Institutional View on capital flows sought to provide a more coherent and consistent framework for IMF advice on capital account liberalization and the policies needed to cope with capital flow volatility. The IV closely followed the positions taken in several previous staff policy papers on the issue and the principles that had been established by the "G20 Coherent Conclusions for the Management of Capital Flows Drawing on Country Experiences" that had been issued at the Cannes G20 Summit of Heads of State in 2011.[5] Building on these foundations, the IV clarified the Fund's position on when and how capital flow measures should

[4] See Pasricha (2017) for a discussion.

[5] The conclusions are available at http://www.g20.utoronto.ca/2011/2011-finance-capital-flows-111015-en.pdf.

be introduced and applied, taking into account both the external pressures that countries might be facing and their domestic policy positions (Box 1).[6]

Box 1. The Institutional View—Key Elements

The IV is broad and explicit in its coverage of issues related to capital account policy issues (see IMF, 2018b):

- **Definition of capital flow measures:** CFMs are defined as measures that are designed to limit capital flows and either (i) affect cross-border financial activity and discriminate on the basis of residency; or (ii) do not discriminate on the basis of residency but nonetheless are intended to limit capital flows.
- **Policy guidelines:** Under the IV, "capital flows should be primarily handled through macroeconomic policies, which in turn need to be supported by sound financial supervision and regulation and sound institutions." But in certain circumstances, "CFMs can be useful to support macroeconomic adjustment and safeguard financial stability," so long as they "do not substitute for warranted macroeconomic adjustment." For example, CFMs should not be used "to influence the exchange rate to gain unfair competitive advantage" (IMF, 2012d).

  In the case of **capital inflow surges,** CFMs may play a useful role when:

  - the room for other macroeconomic policies is limited (i.e., the exchange rate is overvalued and the economy is overheating),
  - appropriate policies may require time to implement or take effect,
  - the inflow surge may contribute to financial instability, and/or
  - there is heightened uncertainty about underlying macroeconomic conditions.

  In the case of **disruptive capital outflows,** the IV envisages a role for CFMs in the case of crisis/near-crisis conditions and in the context of a broader policy package to address the root causes of the crisis.
- **Desirable features:** The IV specifies that CFMs, when used, should be temporary, transparent, and nondiscriminatory on the basis of residence. CFMs on capital inflows should be targeted, while CFMs on capital outflows may need to be comprehensive to prevent their circumvention.
- **Macroprudential measures:** The IV clarifies that macroprudential measures, which are typically geared to address systemic financial sector risk, may also be classified as CFMs if they have also been designed to limit capital flows.
- **Capital account liberalization:** The IV recommends members take an integrated approach to liberalizing the capital account, in a manner that is well timed and is sequenced with supporting regulatory and other policies (including macroprudential policies), to limit the risk of financial instability.

11. Subsequently, the Fund further clarified how its institutional view on CFMs was related to its policy advice on macroprudential measures (MPMs)—i.e., measures used to manage and mitigate systemic financial sector risks. A guidance note (IMF, 2017) reiterated that MPMs could reduce the build-up of systemic risks not just from their effects on domestic activity but also from the effects on cross-border capital flows, so that in some cases policies could be classified

[6] The recent IEO evaluation of *IMF Advice on Unconventional Monetary Policies* (IEO, 2019b) reviewed the IV and concluded that while the IV reflected compromises to accommodate differing views among the membership, it had succeeded in becoming the "central framework for policy discussions on responding to capital flows between the Fund and the members."

as both CFMs and MPMs. The extent to which an MPM could also be considered a CFM could depend on country circumstances and the calibration of the measure. All "residency-based" CFMs would be necessarily classified as CFMs; a "currency-based" MPM (i.e., a prudential measure that discriminated on the basis of currency) would also be classified as a CFM if it was deemed to have been tightened in response to capital flows.[7]

12. The IV laid out the manner in which the framework would be applied in Fund bilateral surveillance, taking account of the fact that it did not represent a change in members' rights and obligations. In particular, largely keying off the Integrated Surveillance Decision, it stated that in Article IV surveillance "capital flows and policies related to them need to be assessed when they are judged to have a significant impact on domestic or balance of payments stability" (IMF, 2013). And it reiterated the ISD's requirement (in para 22) that the Fund should thoroughly review and possibly discuss with members "the introduction or substantial modification for balance of payments purposes of restrictions on, or incentives for, the inflow or outflow of capital."

13. The IV also clarified the Fund's multilateral responsibilities in the area of capital flows, again largely drawing on the ISD. Capital flows or related policies were to be discussed in Article IV consultations when their spillovers risked adversely affecting global economic and financial stability and/or the effective operation of the international monetary system. And the Fund's multilateral surveillance products were to "assess the extent of push factors and structural changes in global capital flows (IMF, 2013)," including to ensure consistency among country assessments and multilateral surveillance. Finally, the ISD was to be used as a basis for helping ensure consistency between the Fund and other international bodies—including the Financial Stability Board, the Bank for International Settlements, and the Organization for Economic Cooperation and Development—in their approaches to policies affecting capital flows, regulatory reform, and filling data gaps.

14. The Fund is in the early stages of rethinking its framework for policy advice in the area of capital flows in the context of working on an Integrated Policy Framework for handling external shocks, including managing capital flow volatility. This new approach considers monetary policy, foreign exchange intervention, capital flow measures, and macroprudential policies in an integrated manner that allows for tradeoffs between these four instruments in addressing policymakers' ability to achieve their various objectives. [8] Since this work is still nascent, it has not been evaluated as part of this review.

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[7] The guidance note associated with the IV (IMF, 2013) provides the example of a country facing capital inflows that are being intermediated by the domestic banking sector and are causing a credit and asset price boom. A measure restricting banks' foreign borrowing (such as a required reserve on foreign exchange liabilities) would be seen as limiting both capital inflows and systemic risk and would be classified as both an MPM and a CFM.

[8] See Adrian and Gopinath (2020) for a description of this work and some recent references.

III. Filling Data Gaps and Improving Capital Flow Monitoring

15. An important result of the global financial crisis was a multilateral recognition of the need to address data gaps and strengthen the monitoring of capital flows. In 2009, the G20 called on statistical agencies, led by the IMF and the Financial Stability Board, to address data deficiencies through the Data Gaps Initiative (DGI). The first phase of the DGI included efforts to improve the monitoring of international capital flows (by instrument and institution), including in the context of revamped balance sheet and flow-of-funds data (IMF and FSB, 2009). The second phase of the initiative was launched in 2015 (DGI-2), with the mandate to continue work on the original recommendations, but with added emphasis on compiling data on cross-border derivatives exposures and direct investment and improving data sharing.

16. The DGI built on the long-standing key role played by the Fund in multilateral efforts to improve the monitoring of capital flows and cross-border exposures. Aspects of this role have included:

- *Establishing standards for, and disseminating, balance of payments statistics,* including through leadership since 1992 of the Committee on Balance of Payments Statistics.

- *Coordinated Portfolio Investment Survey (CPIS):* This initiative is led by the IMF, and involves a global survey of cross-border portfolio investment holdings, with data available from 2013.[9] The data include cross-border holdings of equities and long- and short-term debt securities classified by the issuer's economy of residence, as well as the sectoral type of issuer and investor.[10] Presently, 83 countries report annual data, and most G20 countries now also report semiannually.

- *International Investment Position (IIP):* The IMF has led efforts to improve the measurement of IIPs, which measure the stock of assets and liabilities held by residents vis-à-vis other countries, including in the context of the IMF's 2013 Balance of Payments Manual. Provision of IIP data has improved significantly, with quarterly data now reported for more than 120 countries. Efforts are under way to enhance the coverage of offshore financial centers and to require data on the currency denomination of financial assets and liabilities.

- *The Coordinated Direct Investment Survey (CDIS):* The IMF has also led efforts to improve the tracking of foreign direct investment, which resulted in the establishment of the CDIS

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[9] The CPIS was first conducted for year-end 1997 data and then annually from 2001. In response to the global financial crisis, the survey was enhanced and reporting was encouraged on a semi-annual basis.

[10] "The Coordinated Portfolio Investment Survey (CPIS) is a voluntary data collection exercise conducted under the auspices of the IMF that collects an economy's data on its holdings of portfolio investment securities (data are separately requested for equity and investment fund shares, long-term debt instruments, and short-term debt instruments). All economies are encouraged to participate."
http://datahelp.imf.org/knowledgebase/articles/505725-what-is-the-coordinated-portfolio-investment-surve

in 2008. Since 2009 this annual survey has covered countries' inward and outward direct investment positions, including separate reporting of equity and debt investments, and by country counterpart.

- *Tracking exposures of global systemically important banks:* With the Financial Stability Board and the Bank for International Settlements, the Fund helped launch the initiative to track detailed, institution-to-institution funding exposures for global systemically important banks. Given the confidentiality of the data, the Fund's role has mainly been to assist in the design of reporting templates and to define the data needed for effective multilateral surveillance of financial stability. The data hub resides within the Bank for International Settlements, and only anonymized and aggregated data are available to the IMF.

- *Global legal entity identifiers (GLEIs):* A joint public and private initiative was established to define global legal entity identifiers that can now uniquely identify legal entities engaging in financial transactions. The IMF participated in the development of the GLEI system and has observer status in the Legal Entity Identifier Regulatory Oversight Committee (https://www.leiroc.org/).

17. The Fund has been actively engaged in multilateral efforts to establish a global flow of funds database, including in the context of its leadership of the Committee on Balance of Payments Statistics. This work is part of a broader IMF effort to enhance the use of balance sheet analyses in its bilateral and multilateral surveillance, which has recently been supported by a new online tool for Fund staff (Harutyunyan and Muñoz, 2018). These data collection efforts have facilitated the development by Fund staff and outside researchers of an External Wealth of Nations database containing detailed cross-country information regarding the stock of domestic and foreign assets (Lane and Milesi-Ferretti, 2018). These data have been highly influential in academia as well as in the Fund's assessments of capital account openness and the effects of financial market integration.

18. There are other examples, albeit sometimes less structured and formal, of the Fund's monitoring and dissemination of data on capital flows. The balance of payments data for the *World Economic Outlook* are regularly published, and the data underlying the figures for the *WEO* and *Global Financial Stability Report* are also made available online. Numerous separate datasets are prepared for the periodic analyses of capital flows in the Fund's multilateral surveillance publications, although they are typically unpublished and not updated regularly. Finally, the Monetary and Capital Markets Department prepares several (unpublished) monitors that cover capital flows: the daily Global Market Monitor covers global capital market developments; a monthly Emerging Markets Capital Flows Monitor tracks monthly cross-border portfolio flows to and from emerging markets, albeit partly based on secondary sources (including the Institute for International Finance); and a monthly Fintech Update aggregates news and data on the fintech sector.

19. The advances described above represent important contributions to strengthening the data available on international capital flows. Nevertheless, the DGI is set to conclude in 2021, which risks weakening the multilateral and high-level commitment to improving the ability of the Fund and other agencies to effectively monitor cross-border capital flows, and thus affect their capacity to develop appropriate policy responses. Key areas of concern include:

- *Global flow of funds and balance sheets*: Considerably more work is needed to develop the "from-whom-to-whom" data that will provide an effective basis for measuring cross-border financial flows and their balance sheet effects. As has been documented in the regular DGI updates by the IMF–FSB, the challenges are many and include: effective tracing and monitoring of cross-border derivatives transactions, tracking the currency composition of international investment positions, ensuring the funding and independence of statistical agencies and their ability and willingness to share data.

- *Financial centers, corporate structures, and tax avoidance:* IMF research suggests that tax arbitrage and the use of "special purpose entities" can obscure the direction and purpose of cross-border capital flows. Damgaard, Elkjaer, and Johannesen (2019) report that official statistics on foreign direct investment flows are highly misleading, since nearly one third of these flows are "phantom" and simply represent the booking of investments in so-called "tax havens."[11] This can distort the data on the direction and potential volatility of capital flows, with corresponding effects on the ability of the Fund and others to assess macroeconomic and other vulnerabilities.[12]

- *Non-G20 financial centers:* The Data Gaps Initiative has improved data collection from the G20 but does not cover a number of other important financial centers. The DGI interagency working group has sought to fill this gap by including Hong Kong Special Administrative Region, the Netherlands, Singapore, and Spain in its deliberations, but lack of universality could undermine the DGI's ability to encourage provision of data on capital flows from other offshore financial centers.

- *Legal constraints and confidentiality concerns:* Although Fund members are obligated to provide the data necessary for the Fund to exercise its surveillance responsibilities, Article VIII, Section 5 expressly exempts members from providing information on "individuals or corporations." At the same time, jurisdictions vary in the extent to which they can require individual banks or other institutions to provide detailed data on

[11] Further, U.S. Federal Reserve Board researchers (Bertaut, Bressler, and Curcuru, 2019) argue that the Coordinated Portfolio Investment Survey and standard balance of payments data are distorted by the fact that many firms, including those from emerging market economies, will incorporate subsidiaries outside their home jurisdictions and issue debt and other securities in order to improve market access; they also point to the fact that mutual fund shares are treated as equities and are assigned to the country of incorporation in balance of payments statistics, regardless of where the funds are invested.

[12] Issues related to the effect of tax avoidance on fiscal revenues and international tax cooperation are discussed in IMF (2019a).

counterparty exposures, and they may face legal constraints on their ability to share these data. This has meant, for example, that the Fund does not have access to detailed information on the cross-border counterparty exposures of the global systematically important banks—a lack that may constrain its ability to exercise effectively its multilateral surveillance mandate (a point also raised in IEO, 2019a).

- *Specific sectoral challenges:* The experience of the past decade has shown that the size of spillovers from capital inflows (and concomitant pressures to adopt CFMs) depends on which sector is feeling the inflow. But, at the same time, these sectors may be ones where data on the extent of non-resident activity are not readily available. A case in point is the housing sector, where a number of countries in recent years have felt demand and price pressures that appear to be stemming from non-resident investors, but where data on the residency of purchasers may not be easily available. This suggests a possible role for the Fund to encourage the collection and dissemination of these types of data.[13]

- *Timeliness and frequency:* Public statistical agencies typically collect data on cross-border capital flows only quarterly, and sometimes only annually, and publication lags can be significant. The low frequency and significant reporting lags mean that these data are of limited use for the purposes of surveillance. As a result, the IMF has often had to rely on commercial and other data providers to provide higher frequency and more timely data, though these cover only a narrower set of flows. The Monetary and Capital Markets Department's Capital Flow Monitor is an example of efforts to overcome these handicaps and merits wider dissemination and institutional investment.

- *Access to commercial databases:* The IMF (and most other policy institutions) rely heavily on commercial data providers for information on the volume and price of cross-border capital flows, particularly debt and equity portfolio flows. The cost of subscribing to these data services is high, subscriptions to multiple services are often required for comprehensive analysis, and copyrights limit the scope for sharing these data even internally. IMF staff members complain that budget constraints have limited their access to these services, risking the possibility that the IMF's capacity to monitor and assess cross-border capital flows is lagging behind that of other official and private sector institutions.

- *Application of balance sheet analysis:* The Fund's commitment to deepening its analysis of balance sheets dates back to at least 2002 and was revived as part of the 2014 Triennial Surveillance Review (IMF, 2014b). Although attention to balance sheets has undoubtedly increased since the global financial crisis, access to the data necessary to conduct this type of analysis is still difficult for many countries, and even in those cases where the data

[13] Recognizing the importance of housing-market-related issues, the Fund started in 2014 posting price indexes and other valuation metrics on a "Global Housing Watch" website, which is updated quarterly.

do exist, external balance sheets and cross-sectoral risk analysis are not yet a regular part of Fund surveillance (IMF, 2015c).[14]

- *Sustainability:* The Fund staff has built a number of datasets on capital flows (including for the *GFSR*), but in many cases these have been to support one-off projects—which means that they are not updated regularly and therefore are not useful for ongoing surveillance and policy analysis.[15] In other cases, influential databases are being maintained by individual Fund departments, but do not seem to have been coupled with the explicit institutional commitment, or coordination with the Fund's Statistics Department, to ensure their coherence and longevity.[16]

IV. Monitoring and Benchmarking Capital Account Openness

20. The IMF leads internationally in monitoring and disseminating information on countries' use of capital account restrictions. The Fund's Articles of Agreement require an annual report on exchange restrictions (Article XIV.3), and the Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) has been published since 1950.[17] That report contains detailed information on members' restrictions on current international transactions, capital account restrictions (since 1952), exchange rate arrangements, and monetary policy frameworks.[18] It is largely based on annual self-reporting by member countries as well as information gathered by IMF Article IV missions.

21. The AREAER's role as an authoritative source of information on capital account restrictions has led to its widespread use for constructing indexes of capital account openness. Some of these indexes have been prepared by IMF staff members—e.g., the index constructed by Schindler (2009) and subsequently extended by Fernández and others (2016)—but the Fund has

[14] Balance sheet analyses do feature prominently in FSAP assessments and in the IMF's training programs for country officials, such as the Systemic Macro Financial Risk Analysis course provided by MCM staff to country officials in the Vienna and Singapore training institutes.

[15] Examples include the analytical chapters in the *GFSR*, which often rely on commercial databases to examine firm-level balance sheet data.

[16] Examples include the Emerging Markets Capital Flows Monitor, managed by MCM, and the database on the External Wealth of Nations, produced by RES staff with outside researchers (see Lane and Milesi-Ferretti, 2018).

[17] Note that the annual report required by Article XIV need only cover exchange restrictions and multiple currency practices maintained pursuant to that article (i.e., transitional arrangements); the AREAER is a much more wide-ranging report that goes well beyond that requirement.

[18] The 2018 AREAER defines capital controls as "measures (including taxes and regulations) affecting cross-border financial activity that discriminate on the basis of residency," and distinguishes these from measures "which do not discriminate on the basis of residency but are nonetheless designed to limit capital flows (FN 29)." Although the AREAER does include some measures that differentiate on the basis of currency, it only includes measures that fit within the AREAER's taxonomy, and thus does not report on all the measures that the IMF may have termed capital flow measures.

not established or disseminated a globally recognized measure of capital account openness.[19] As a result, the most widely used indexes are those prepared by outside researchers, especially those based on the approaches of Chinn and Ito (2006) and Quinn (1997).[20] Batini and Durand (2020), in their background paper for the present evaluation, provide a detailed discussion of the AREAER and the indexes derived from this source.

22. The Quinn and Chinn-Ito indexes of capital account openness play an important role in two key benchmarks for IMF multilateral and bilateral surveillance:

- *Assessments of reserve adequacy (ARA)*. Partly in response to an IEO evaluation (IEO, 2012), the Fund revised its approach to assessing reserve adequacy for emerging market economies in 2015, establishing benchmarks that took greater account of countries' economic circumstances, including attention to capital flows and capital controls. In particular, for countries that impose significant restrictions on residents' ability to transfer assets abroad, the assessment of reserve adequacy halves the weight it places on broad money, thereby reducing its estimate of what constitutes an adequate level of reserves.[21] Countries with significant capital controls are identified using the Chinn-Ito index, the Quinn index, and an "IMF share" index.[22] The ARA thresholds (and the underlying data) are published on the Fund's website.

- *Current account and exchange rate misalignment:* These benchmarks are based on an external balance assessment (EBA) methodology that calculates the gap between a country's actual current account balance and the level consistent with its "fundamentals and desired policies over the medium term." This gap is then used to infer (using standard elasticities) the amount of exchange rate misalignment (Cubeddu

[19] Variants of the Schindler (2009) approach calculate separate indexes for controls on inflows and outflows. The index of controls on inflows is based on the average of zero–one dummies for restrictions on five categories of non-resident and resident transactions that involve capital inflows. The index for outflows is calculated similarly. The index of Fernández and others (2015) is a further refinement of this approach. Jahan and Wang (2016) proposed an index that extends coverage to a wider set of countries, but while these data are available on the Fund's "IMF DataMapper" website, they do not appear to be updated on a regular basis.

[20] The Quinn index attempts to reflect the intensity of measures by applying five values between zero and one, depending on the degree of capital account restrictions (both inflows and outflows) in the AREAER. The Chinn-Ito index is based on a principal component analysis of five binary indicators from the AREAER for: (i) "multiple exchange rates;" (ii) "current account;" (iii) "surrender of export proceeds;" and (iv) five-year average of restrictions on the capital account.

[21] This adjustment is based on empirical analysis of past crisis episodes that calculates the probability of broad money loss for countries with high and low levels of capital account openness.

[22] The median of these three indexes is used, to avoid outliers. The IMF share index is described as an average of binary indicators of restrictiveness in 62 categories of capital transactions, distinguishing between inflows and outflows. The index takes values between zero and one; higher values represent more restricted cross-border capital flows.

and others, 2019).[23] The methodology takes account of the effect of capital account restrictions (proxied by the Quinn index) on the estimated equilibrium current account balance through multiple (and potentially offsetting) channels: (i) their impact on the effectiveness of foreign exchange intervention; (ii) the extent to which they limit the ability of capital flows to move to equilibrate cross-country differences in productivity; and (iii) the extent to which the restrictions affect the impact of increases in global risk aversion on domestic savings.[24]

23. The ARA and EBA metrics play an important role in IMF multilateral and bilateral surveillance and policy advice, including in the context of the Institutional View. Assessments against these metrics are expected to be included in all Article IV reports, and they are used to help judge the extent to which domestic policies are consistent with external sustainability. They also play a key role in the Fund's annual cross-country assessment of external imbalances—the External Sector Report—and inform the semi-annual *World Economic Outlook* and its policy positions. And both the EBA assessments of exchange rate misalignment and ARA assessments of reserve adequacy are used by the Fund staff for judging whether a country's use of CFMs is consistent with the IV (IMF, 2013, para 17).

24. Despite the comprehensiveness of the AREAER, and the unique information it contains, the Fund has not shown a strong institutional commitment to this product. Preparation of the publication requires specialized expertise in the area of exchange controls, including to review the annual country survey responses and ensure that these are accurate and consistent. The limited number of staff members in MCM with this expertise seems to have at times strained the Fund's capacity to maintain and publish the AREAER in a timely and consistent manner; to provide advice to its members (including those in crisis) on the effective use of CFMs; or to undertake operationally relevant research on CFMs.

25. More also could be done to improve access to this information. In a welcome move, the Fund made access to its eLibrary freely available beginning in 2020, enabling access to the AREAER and its underlying data without subscription. But the Fund does not compile and publish indexes of capital account openness on a regular basis, leaving this task to outside researchers. For example, the index of Fernández and others (IMF, 2016) is available on the NBER's website.

26. The Fund's willingness to leave to others the responsibility for construction of key indexes of capital account openness raises questions. These outside indexes have played a significant role in IMF assessments of the costs and consequences of capital controls, which in

[23] The analysis covers a sample of 49 countries that represent more than 90 percent of global GDP, and so it is argued that it ensures multilateral consistency of current account assessments. The approach is supplemented by models that directly estimate equilibrium real exchange rates.

[24] Equilibrium current accounts and exchange rates are defined after setting policies to a measure of their desired levels. However, in the case of capital account restrictions, the index is simply set at the smaller of the contemporaneous cross-country average level or the country's actual level.

turn have influenced the Fund's Institutional View. And they play a critical ongoing role in the Fund's day-to-day policy advice, including assessments of reserve adequacy and exchange rate equilibria. Developing and promulgating in-house measures would have several advantages, including reducing operational and reputational risk.

27. The AREAER-based indexes used by the Fund could usefully be further adapted to take greater account of the intensity of application or effect of capital account measures. Presently, these indexes do not (or only partially) make this distinction, which diminishes their operational and analytical value. For example, the 2016 Article IV Report for India acknowledged (in a Selected Issues paper) that the AREAER-based indexes could be overstating the extent to which that country's capital account was closed, given the large size of actual capital flows. To overcome this problem, the Fund has sometimes used alternative measures of capital account openness based on actual flows (so called de facto measures), including those that build on the Lane and Milesi-Feretti Wealth of Nations database. However, the usefulness of these alternatives has been questioned, since capital flows typically depend on many factors and not just the intensity of capital account measures.[25] Nonetheless, given the importance of measures of capital account openness for Fund surveillance, more work in this area would seem worthwhile.

28. Questions also arise around the Fund's use of indexes of capital account openness in its benchmarks for reserve adequacy and exchange rate misalignment. For example, it appears that the indexes used in applying the reserve adequacy benchmark do not distinguish between controls on inflows and outflows, though restrictions on outflows would seem more relevant for measuring the sufficiency of reserves (IMF, 2015b, Box 2). The same issue arises in the construction of external balance assessment benchmarks for exchange rate misalignment. In addition, the various descriptions of that methodology or its country applications do not make clear how large an effect capital account restrictions have on these measures.

29. Moreover, the AREAER and its databases do not fully encompass all measures that fit within the IV's definition of capital flow measures (see the background paper by Batini and Durand, 2020, for a fuller discussion). In particular, although the AREAER's definitions are consistent with regard to the IV's definition of a residency-based capital flow measure, the AREAER does not cover all currency-based CFMs that fall outside its taxonomy, nor does it cover all other CFMs that may apply to the nonfinancial sector. These discrepancies are a potential source of confusion and inconsistency, including between the indexes of capital account openness and the Fund's CFM label.

[25] The IMF's 2015 paper on the ARA (IMF, 2015b) considered the relative merits of de jure and de facto measures and concluded that "while the use of de facto measures of capital controls would have been preferable, such measures are not directly available, and are at best often approximated by measures based on external assets and liabilities. These are inadequate for this exercise, as they measure external and financial openness, which is a function of many factors, and may bear little relation to legislated controls."

V. MULTILATERAL SPILLOVERS AND CAPITAL FLOWS

30. Key objectives of the Integrated Surveillance Decision and the Institutional View are to enhance the coherence and coverage of the Fund's multilateral surveillance of capital flows and their multilateral policy implications. This section examines the progress made in this area across four dimensions: the Fund's multilateral surveillance products; the integration of these with bilateral and regional surveillance; deflection and demonstration effects; and the Fund's coverage of financial plumbing and regulatory issues.

A. The Multilateral Surveillance Products

31. As noted in Section II above, the ISD and the IV require IMF multilateral surveillance to take account of the impact of domestic policies, including capital account measures, that cause significant spillovers to other countries. In response, the Fund's principal multilateral products—the *GFSR*, the *WEO*, and periodic surveillance notes provided to the G7/G20—began to place increased emphasis on the effects of advanced economies' monetary policies on capital flows (IEO, 2019b).

32. In addition, the Fund established new flagship products to provide a platform for its increased attention to cross-border issues. Spillover Reports were released on a stand-alone basis annually between 2011 and 2015 and then were integrated as separate chapters into the *WEO*. And, beginning in 2012, annual External Sector Reports were produced, which provided assessments of the extent to which external positions among the major advanced economies and the emerging market economies were mutually consistent, based on the external balance assessment methodology described above.

33. This increased emphasis on spillovers reflected not just a new IMF policy framework but also concern that the extraordinary monetary policy stimulus measures that the United States and other advanced economies had enacted were "pushing" capital to emerging market and other economies in ways that could be destabilizing, including by funding excessive credit growth. And, in subsequent years the Fund's multilateral surveillance raised the concern that the eventual normalization of advanced economy monetary policy could cause a disruptive reversal of these flows.

34. In response to these concerns, Spillover Reports, the *GFSR*, and the *WEO* included significant analysis of the global financial cycle and its impact on cross-border capital flows. They featured empirical assessments of the extent to which advanced economies' monetary policies were driving capital flows and yields, as well as the frequent application of simulation models to illustrate the effects of different policy responses on capital flows to emerging market economies. For example, a chapter in the April 2016 *WEO* assessed the factors that were causing a slowdown in capital flows to emerging markets, and recently the *GFSR* has introduced a "capital-flows-at-risk" measure for assessing the probability that emerging markets (as a group)

could face a sudden stop resulting from advanced economy financial conditions.[26] Most recently, the flagship documents (e.g., the June 2020 *World Economic Outlook*) have acknowledged that the forceful actions by major central banks have helped to stabilize global financial conditions and support the supply of credit.

35. This work helped shape the Fund's multilateral policy advice. For example, the 2012 Spillover Report used empirical analyses to argue that emerging markets were not facing an unusual "wall of money," in order to support the Fund's view that the unconventional monetary loosening by advanced economies was on balance supportive of a global recovery. Even so, the Fund encouraged "more complete" policies by the advanced economies (including fiscal policies) to avoid them having to place an undue reliance on monetary stimulus that would risk adverse spillovers (see, for example, the 2013 Spillover Report). And, especially after the 2013 "taper tantrum," the Fund's multilateral publications stressed the importance for emerging market and developing countries of adopting macroeconomic and prudential policies to reduce their vulnerability to global shocks.

36. This said, the coverage by the Fund's multilateral products of cross-border capital flows has tended to be of a more macro nature, and IMF warnings to source countries about the implications of spillovers for their policy mix could have come earlier and been more forceful (as argued by IEO, 2019a, for example). In particular, while the *WEO* and *GFSR* have examined outflows to (or inflows from) the emerging markets, either as a group or in cases when individual countries were affected, and have coupled this with policy prescriptions for recipient countries, less attention has been given to which countries were the source of the flows and whether spillover effects could be mitigated by a shift in policy mix. And even though an important cause of the global financial crisis was capital flows between the advanced economies, including purchases of U.S. subprime market debt instruments by euro area financial institutions, intra-AE flows have not been a significant focus of subsequent analysis or monitoring.

37. Moreover, the Fund's multilateral surveillance products have been limited in their discussion of capital account measures, either in reviewing specific countries' usage or in considering the possible use of such measures in the face of the intensified risk of capital flow reversals. For example, the *WEO* has not covered capital account measures in individual country cases, except with passing references to the fact that open capital accounts heighten vulnerabilities to sudden reversals of capital inflows (as in the reference to Mexico in the

[26] See October 2018 *GFSR*, Online Annex 1.1. This measure provides an estimate of the probability distribution of emerging market net portfolio inflows and calculates the value at the 5 percent tail as "capital-flows-at-risk." The model "explains" capital flows principally as a function of international investor risk aversion, proxied by the U.S. BBB-rated corporate bond spread, the (detrended) level of the U.S. ten-year Treasury rate, and the U.S. dollar. Real GDP growth in emerging market countries (excluding China) is also included as a proxy for domestic economic conditions.

October 2018 *WEO*). Similarly, the *GFSR* has typically not covered the use of these measures by specific countries, relying mostly on general references consistent with the IV's policy line.[27]

38. The Fund's multilateral products have nonetheless included interesting and useful cross-country analyses that bear on the costs and benefits of capital account measures The October 2012 *WEO* contained a chapter on the resilience of emerging market economies that considered the effects of capital account openness on the length of economic expansions and found that greater financial openness tended to slow recoveries. The October 2013 *WEO* contained a cross-country analysis of the factors that support "resilience"—i.e., stability of the current account, GDP, and consumption in the face of capital inflows—and found that capital controls are not a significant factor. The April 2019 *GFSR* contained analysis of the effects of cross-border capital flows on housing markets and suggested that capital flow measures could be effective to stem inflows and house price appreciations. And the October 2019 *WEO* contained an interesting cross-country analysis of structural reform, which showed the positive effects on GDP of reforms to "external finance," but without acknowledging that this variable was equivalent to capital account liberalization and without referring to the IV.

39. The multilateral products have tended to focus their attention on the capital accounts of the larger emerging markets. In particular, there has been good analysis of countries such as China, Brazil, and Mexico, including assessments of the extent to which flows have been driven by global push versus domestic pull factors. Coverage of smaller emerging market and developing countries has been more limited, though a notable exception was Chapter 2 of the April 2016 *WEO*, which contained a detailed analysis of the post-global financial crisis slowdown in cross-border capital flows to these economies, concluding that countries with more open capital accounts had been hit the hardest.[28]

40. This gap in country coverage is partly filled by External Sector Reports, which address capital account issues for a wider set of countries. Although these reports' conceptual focus is on current account and exchange rate misalignments, they have included analysis of capital flows and have (more obviously than most other Fund analyses) incorporated descriptive references to "stock positions." In addition to an overview of cross-country developments, ESRs include separate write-ups on individual countries, which describe current and capital account developments, including references to capital account measures.

[27] Chapter 1 of the April 2020 *WEO* and Chapter 3 of the April 2020 *GFSR* described the sharp and sudden capital flow reversal to EMDEs following the onset of the Covid-19 pandemic, while providing advice on use of CFMs consistent with guidance in the IV on their use by countries facing a crisis or imminent crisis (IMF, 2020a and 2020b; and Batini (2020). Helpfully, the *GFSR* included CFMs in its listing of the pandemic-related monetary and financial policy responses for 30 AE and EM countries.

[28] Chapter 3 of the April 2020 *WEO* contains useful empirical analysis of the beneficial effects of macroprudential policies on GDP and exchange rate volatility for a large sample of emerging markets, but without providing country-specific conclusions. And Chapter 3 of the April 2020 *GFSR* also contains useful analysis of the drivers of portfolio flows to EMs and frontier market economies, including in the context of the renewed volatility in 2020.

41. Even so, the ESRs' coverage of capital account measures and capital flows has been largely descriptive and contained limited analysis of their significance for the assessment of current account or exchange rate misalignments. In particular, although the external balance assessment methodology includes a measure of capital account openness (the Quinn index), the ESRs have never made clear how large an impact capital account openness has on misalignments, nor the extent to which the estimates of misalignment change over time in response to changes in capital account restrictions. Moreover, the country-specific write-ups have tended not to vary much year-to-year: references to capital account measures or the appropriate pace of capital account liberalization have been relatively limited (except in the case of China), and descriptions of possible policy options have not typically considered the use of these measures.

B. Integration with Bilateral and Regional Surveillance

42. The Fund has built on existing internal processes to ensure the consistent application of the Integrated Surveillance Decision and Institutional View across its bilateral and multilateral surveillance products. The Strategy and Policy Review Department and the Monetary and Capital Markets Department have taken the lead role in monitoring country teams' application of the IV and helped ensure consistency of the labeling of capital flow measures, while the Research Department has taken the same responsibility with regard to assessments of current account sustainability, exchange rates, and reserve adequacy. RES also organizes an interdepartmental External Sector Coordinating Group to help improve the understanding of its external balance assessments and ensure that these have taken country-specific factors into account. A Capital Flows Group was established in 2010 to provide a forum for disseminating research on capital flow issues, and provides regular reports to Fund management on the discussions.

43. Coverage of financial spillovers now seems to be an integral part of country-specific surveillance. Zettelmeyer (2018) notes a relatively close correspondence between the multilateral messages of the *WEO* and *GFSR* and those of the bilateral U.S. and euro area teams covering outward spillovers. And the recent Article IV staff reports for the United States, China, Japan, and the euro area have all referenced the risks that their domestic monetary policies and financial sector vulnerabilities posed for other countries. The 2019 U.S. Staff Report repeated the warning that an abrupt tightening of U.S. financial conditions—including from an unanticipated tightening of monetary policy—could adversely affect non-U.S. corporates and others with large U.S. dollar debts. The 2019 China Staff Report contained analysis that showed how equity markets in other emerging market economies had become more sensitive to Chinese equity price developments, and the 2018 Japan Staff Report noted the potential for Japan's easy monetary policy to offset the effects on capital flows of a normalization of U.S. monetary policy. However, as IEO (2019a) highlighted, this spillover analysis has yet to gain significant policy traction at the bilateral policy level with source countries.

44. Departmental *Regional Economic Outlook* reports (*REOs*) have provided a useful vehicle for country-specific and granular assessments of cross-border capital flows. For Sub-Saharan

Africa, the *REO* of April 2018 included a proxy for capital controls in its empirical cross-country model for private investment, and the *REO* of October 2019 contained a detailed analysis of the global factors driving capital flows to that region. For Asia and the Pacific, the October 2019 *REO* contained a detailed analysis of the policy options for managing capital flows in that region, and the April 2015 issue examined financial integration and the drivers of bilateral capital flows in the region, including the effects of capital flow measures. However, *REOs* have tended not to comment on the use of capital account restrictions in specific countries.

45. Another venue for integration is the weekly interdepartmental surveillance committee meeting that is hosted by the First Deputy Managing Director. These meetings provide an opportunity for departments to share recent analysis and to help ensure consistency of policy lines. For example, a review of the documents prepared for these meetings since 2010 suggests that capital flows and the related spillovers were a relatively frequent topic of discussion, and much of the material presented was subsequently issued either as part of the Fund's multilateral surveillance reports or in the context of country-specific Article IV reports. However, it is not clear what impact these meetings have had on the Fund's country-specific or broader policy lines.

46. The Fund staff has also undertaken significant analysis of capital flows and related regulatory issues in the European Union (EU). Although the EU prohibits the use of capital controls among its members, the apparent lack of capital market integration within the Union has been an important focus of the Fund's regional surveillance.[29] For example, the annual Article IV reports for the euro area have covered carefully the fragmentation of the EU's capital markets and its effects, including with regard to investment and monetary policy. A 2019 Staff Discussion Note documented the underdevelopment of European capital markets and offered detailed proposals for alleviating the regulatory, tax, and other impediments (Bhatia and others, 2019).

C. Deflection and Demonstration Effects

47. The IV refers specifically to the multilateral consequences of capital flow measures, including with regard to a deflection of capital flows to other recipient countries, the potential for contagion from countries experiencing crises or near crises, or the possibility that the imposition of CFMs could encourage other countries to take the same actions (i.e., a demonstration effect). It correspondingly calls for bilateral and multilateral surveillance to assess and to encourage countries to "moderate their use of CFMs if these lead to costly spillovers" (IMF 2012d, para 52).

48. IMF research suggests that these effects can be significant. In particular, Giordani and others (2014) find that the capital account measures introduced by Brazil in 2009 had a significant and positive effect on capital flows to South Africa. However, there was limited evidence that these measures prompted a response by other countries through demonstration

[29] Notwithstanding the prohibition, capital controls are permitted in cases of threats to "public policy or public security," and controls were used by Cyprus and Greece in 2012 and 2015, respectively.

effects.[30] Similarly, event studies by Forbes and others (2012) and Lambert, Ramos-Tallada, and Rebillard (2011), as well as a cross-country study by Pasricha and others (2018), show that capital account measures adopted by individual BRICs have had significant, albeit temporary, spillovers to other emerging markets especially since the global financial crisis.

49. However, neither the Fund's bilateral nor its multilateral surveillance reports have included explicit assessments of the possible adverse spillover effects from capital flow management measures. Part of the reason may be that, while the IV calls for CFM policies to be considered as a topic for surveillance when they are "considered to significantly influence the effective operation of the international monetary system" (paras 58–60), the IV does not provide a specific metric for defining "significance." And while this test does not appear to have been applied in any formal sense, discussions with Fund staff members suggest that the lack of coverage of spillover effects of the CFMs that have been adopted since 2011 reflects the fact that these measures have been mostly temporary in nature and a judgment that their impact has not been systemically important.

50. The Fund staff has contributed to the growing literature on spillover effects—which could be adverse or positive—of macroprudential policies. Adverse spillovers could arise if tighter regulations in one country led to the relocation of risky financial activities to other countries (Vinals and Nier, 2014). However, as with capital account measures, there could also be positive spillovers if greater resilience to shocks as a result of macroprudential regulations fosters less volatile trade and financial linkages with other countries. The Fund staff has been active in studying the extent of spillovers in several specific cases and, while there is evidence—based on the work conducted at the Fund and elsewhere—for both adverse and positive spillovers, the magnitude of the effects so far has been small (see Kang and others, 2017; Choi, Kodres, and Lu, 2018). That said, the work to date is far from the final word. In fact, the staff's recent work has stressed the importance of reexamining these findings as "the quality of macroprudential data continues to improve" and as longer time series permit better modeling of "dynamic effects and for a richer interplay of macroprudential regulation with other policy tools and country characteristics" (IMF, 2020a).

D. Market Structure and Regulatory Issues

51. Especially since the global financial crisis, interest has increased in the extent to which market structures and regulation can affect cross-border capital flows. This question was given prominence by then-Governor of the Bank of England Mark Carney (Carney, 2019), who highlighted the growing reliance of emerging market economies on market-based (as opposed

[30] The lack of evidence of demonstration effects is explained as possibly due to fears of the stigma attached to capital controls, or to the possibility that the index used (the Schindler index) did not capture changes in the intensity of controls. Note, too, that an earlier IMF study (IMF, 2011) found only inconclusive evidence that CFMs caused a deflection of capital from countries using CFMs, or an impact on equity returns in similar countries, arguing that this may have reflected investor fears that CFMs could be imposed elsewhere.

to bank-based) financing. While the overhaul of banking regulations in Basel III has laid the foundations for improved resilience of international banks, less has been done to address concerns about possible vulnerabilities in securities and other financial markets. Concerns include the rising importance of exchange-traded funds, mutual funds, and institutional investors in driving cross-border capital flows to emerging market economies, as well as the systemic importance of central clearing parties. This trend has been argued to leave these economies more vulnerable to duration mismatches, herding behavior, and a loss of confidence in financial infrastructure.

52. These market structure issues had already received considerable coverage in the IMF's multilateral surveillance, especially in the *GFSR*. For example, the April 2017 *GFSR* noted that portfolio flows to emerging markets were increasingly dominated by retail and other "flighty" investors. The October 2016 issue noted the increased role of advanced economy mutual funds in emerging market economies' debt markets and analyzed the vulnerabilities stemming from the participation of asset management companies. The April 2015 and April 2016 issues explored the spillover risks stemming from the investment activities of large insurance companies. The April 2015 issue also showed that the increased trend toward "subsidiarization" of large banks could reduce the volatility of cross-border bank lending. Most recently, the April 2020 *GFSR* contained detailed analysis of the reversal of capital flows following the onset of the COVID-19 pandemic and the vulnerabilities for emerging markets stemming from their reliance on cross-border portfolio flows.

53. In addition, the Fund has undertaken periodic assessments of financial interconnectedness and the risks that this may pose. One of the more comprehensive exercises was contained in an IMF policy paper (IMF, 2010b) that coupled data on cross-border bank exposures with the IMF's CPIS and commercially available data on the exposures of global asset management companies. This enabled a mapping of cross-border interconnections and illustrated the important role of offshore and other financial centers in intermediating capital flows. This paper also highlighted the growing concentration of settlement platforms and the associated risks. Although this type of network analysis has continued to be featured in the IMF's bilateral surveillance—especially in FSAP assessments—the operationally useful framework for mapping multilateral risks that was promised in the 2012 Financial Surveillance Strategy (IMF, 2012c) has remained elusive.

54. Some of the Fund's multilateral and other reports have explored the implications of post-global financial crisis financial regulatory reform for capital flows. For example, the 2011 Spillover Report referred to the possibility that the U.S. Dodd-Frank legislation could encourage regulatory arbitrage, and suggested that U.K. financial regulation reforms could reduce the risk of adverse financial spillovers, including by avoiding "trapped pools of liquidity." The 2012 Report warned of a potential for the U.S. "Volcker rule" to reduce the depth and liquidity of markets for non-U.S. government securities. The 2013 Spillover Report emphasized the need for cross-border consistency of macroprudential policies, including with regard to reciprocity. And the 2014

Report specifically dealt with spillovers from regulatory reforms among the advanced economies, warning that the post-GFC reforms could cause large banks to curb their lending and other activities in other countries, especially as monetary policy normalized. More recently, Dell'Ariccia and others (2018) looked at the potential spillover effects of national bank resolution regimes, and drew lessons for cross-border regimes, including ex ante planning on the amount and location of loss-absorbing capital held by cross-border banks.

55. The IMF has actively explored the potential implications of fintech for various aspects of its work, albeit with less attention so far to the implications for capital flows. The Bali Fintech Agenda was launched with the World Bank in 2018, with emphasis to be placed on fintech's legal and regulatory implications; its effects on financial inclusion, monetary policy, and financial stability; and the roles of the IMF and World Bank in fostering global dialogue and information sharing on these issues. The two institutions have followed up with analysis, training, and capacity development. A 2019 survey showed that a large majority of country officials viewed fintech as having a potentially large impact on cross-border capital flows and spillovers, but these latter aspects have garnered less attention by the two institutions (IMF and World Bank, 2019).

56. The effect of corporate tax arbitrage on foreign direct investment flows has been an important topic of Fund policy analysis. For example, the Fund has highlighted the extent to which FDI flows and stocks were distorted by being driven to (or through) low-tax jurisdictions, with particularly damaging effects on the tax bases for lower-income countries (IMF, 2014a). The same policy paper (and subsequent follow-ups) emphasized the importance of multilateral tax coordination (including in the context of the G20/OECD Base Erosion and Profit Shifting Initiative (see IMF, 2019a). As noted in Section III above, these distortions can also severely complicate the interpretation of balance of payments and international investment position data, and therefore undermine the quality and effectiveness of multilateral surveillance.

E. Assessment

57. In recent years, the Fund has made impressive strides in strengthening the coverage and analysis of capital flows and related polices in its multilateral surveillance. The increased attention to cross-border capital flows has facilitated a more consistent and structured approach to addressing spillovers; the Fund has provided important assessments of the risks to emerging markets and others of the shifts in capital market structures and regulations; and progress seems to have been made in making sure that the Fund's multilateral and bilateral surveillance are consistent and mutually supportive.

58. Despite these achievements, some important challenges remain:

- Although IMF research on capital account measures has been considerable and influential, the Fund has yet to establish a consistent and integrated basis for gauging the spillover effects of these measures, such as from deflection and demonstration effects.

And discussion of such effects has played a relatively small role in the Fund's multilateral flagship products and its bilateral Article IV consultations.

- Earlier commitments (e.g., IMF, 2012c) to strengthen ongoing multilateral (and bilateral) surveillance based on a clear identification of the scale and scope of financial interconnectedness have remained elusive.

- The Fund's analysis of how source-country policies affect capital flows and macroeconomic conditions in receiving countries is handicapped by the lack of models that effectively incorporate financial channels. As a result, most of this analysis has been based on ad hoc shocks to the term premiums built into interest arbitrage equations (see Klein, 2019, for a detailed discussion of this issue in the context of an assessment of the Fund's work on unconventional monetary policies). And while this shortcoming is hardly unique among policy institutions, it risks undermining the Fund's ability to assess the drivers of capital flows and to advise its members on appropriate policy responses.

- Similarly, the Fund does not have a well defined framework for assessing the effects of financial regulations on capital flows. Especially in light of the multilateral push for regulatory reforms following the global financial crisis, there would seem to be merit in giving more attention to the effects of these policies on the stability and resilience of flows both from banks and from securities markets.

- These analytical gaps are compounded by the sectoral complexity of capital flows. In recent years, many countries have not necessarily faced a "wall of money," but instead have experienced sector-specific flows, with effects that were not obviously of a macroeconomic nature. The most notable example was the pressure that many advanced economies felt from foreign inflows into their housing sectors and the fears that this was having social consequences by reducing housing affordability. This diversity and absence of clarity about where these flows were coming from may make it harder to identify surges when they occur, strain the applicability of the IV, and potentially undermine the effectiveness of Fund policy advice.

- Despite the fact that capital flows feature in a key benchmark for Fund policy advice—i.e., external balance assessments—it is not at all clear whether the Fund's views on exchange rates are influenced significantly by countries' capital account measures.

- The impact of the Fund's new framework on policymakers and policies remains to be seen. As noted by the IEO (2019b), although the Integrated Surveillance Decision provides a basis for staff to engage country authorities on the impact of their policies on the rest of the world, it is not obvious that these discussions have affected the thinking of domestic policymakers.

59. These challenges may have been compounded by aspects of the design of the IV and the ISD, including:

- The IV focuses on measures introduced since its introduction, which has tended to limit the attention the staff pays to the effect of preexisting measures. As noted in the Fund's 2016 review of the IV, "[i]n practice, policy advice on CFMs in response to managing capital inflow surges or disruptive outflows would mainly apply to CFMs introduced to previously open portions of the capital account" (IMF, 2016: 15). This de-emphasis of the effects of existing measures risks undermining the ability of the staff to provide an integrated set of policy prescriptions and/or could jeopardize the evenhandedness of Fund advice—for example, if the Fund were to criticize the introduction by one country of a measure while ignoring the long-standing use of the same measure by another country.

- There is imprecision about when Fund policy advice should encompass the effects of spillovers from capital flows. Under the ISD, multilateral surveillance is supposed to focus on spillovers arising from policies of individual members or in combination with spillovers from other members to the extent that these may "significantly influence the effective operation of the international monetary system" (IMF, 2012b, para 12). This means that—as noted in the 2015 Surveillance Guidance Note—"judgment is required to assess whether a country's policies are sufficiently powerful to affect global stability" (IMF, 2015a). Similarly, the IV calls for CFMs to be considered in multilateral surveillance when they are having a significant influence on the "effective operation of the international monetary system" (paras 58–60), but without guidance on defining significance.

VI. Coherence with the OECD and with Other International Agreements

60. An important aspiration of the IV was to "play a vital role in promoting a more consistent approach towards the treatment of CFMs under other international agreements (para 65)."[31] For example, the World Trade Organization's General Agreement on Trade in Services prohibits its signatories from imposing capital controls, because of the possible limiting effect of these controls on trade in services.[32] Bilateral and multilateral free trade agreements and bilateral investment treaties (BITs) also typically limit the ability of parties to introduce capital controls. This is particularly evident in agreements with the United States, although more recent free trade agreements and BITs do provide for the use of capital controls in the event of balance of payments difficulties (IMF, 2010c). The EU's Lisbon Treaty "enforces open capital accounts across

[31] See IMF (2010c), Annex 2, for an overview of relevant international agreements.

[32] Article XI of the General Agreement on Trade in Services states that a signatory country "shall not impose restrictions on any capital transactions inconsistently with its specific commitments regarding such transactions..." In other words, capital account restrictions may not be imposed when they have the effect of limiting the flow of services, including financial services (for a discussion see Tucker, 2010; Pabian, 2015).

the union and requires that members not restrict capital transactions with other countries" (Grabel, 2014), albeit with an escape clause on the grounds of public policy or public security.[33]

61. However, perhaps the longest standing and most prominent jurisdictional interest in capital account liberalization is that of the OECD. This was enshrined at its inception in 1961 in the OECD Code of Liberalization of Capital Movements, which established a legal obligation for OECD members to avoid additional restrictions and to pursue progress toward further liberalization. However, the Code does allow adherents to introduce restrictions when faced with "temporary economic and financial difficulties" provided that (i) the OECD is notified within 60 days; (ii) measures do not discriminate between member countries; (iii) measures are temporary; and (iv) measures are subject to a peer review.[34] The reach of the Code has expanded over the years, both because of the increased membership in the OECD and as a result of the opening of the Code in 2011 to non-OECD members.

62. With the adoption of the IV in 2012, questions arose about potential inconsistencies between the IMF's definition of CFMs and the OECD's definition of capital account restrictions subject to the Code. These questions were heightened by countries' increasing use of macroprudential measures that were currency- and/or residency-based, including those that were introduced under Basel III, and had not necessarily been anticipated by the OECD Code.[35] As a result, in February 2015 the G20 asked the OECD and IMF "to assess whether further work is needed on their respective approaches to measures which are both macroprudential and capital flow measures, taking into account their individual mandates."[36] This resulted in joint OECD–IMF notes to the G20 to describe the differences between the two institutions' approaches and clarify their respective definitions of capital flow and macroprudential measures.

63. The OECD Code underwent a major revision that was completed in 2019 and partly aimed at addressing questions about its treatment of macroprudential measures and the

[33] The ASEAN Charter, while calling for "the free flow of goods, services, and investment," only encourages "the freer of capital (para 6)." Nonetheless, the ASEAN has established a policy dialogue process that is aimed at promoting gradual movement toward capital account liberalization.

[34] The Code separates capital transactions into List A and List B. The former are of a longer-term nature, while List B covers short-term transactions. Countries are allowed to impose restrictions on List B transactions with only a notification requirement, while restrictions on List A transactions require a "derogation" if the country has not already included the specific transactions as a "reservation" when adopting the Code (see OECD, 2016 for an explanation).

[35] One specific trigger was the IMF's endorsement of Korea's currency-based MPMs, which subsequently were found to contravene its commitments under the old Code. See the background paper by Everaert and Genberg (2020).

[36] The inconsistencies seem to have been seen differently by different members of the G20: the 2017 and 2018 reports by the G20 International Financial Architecture Working Group noted that at least some members of the Group called for more coherence between the approaches of the two institutions, while others seemed to view the differences as appropriately reflecting the "different purposes and mandates" of the two institutions, and underscored the need to "maintain the high standards of the OECD Code."

differences with the IMF's approach. The revision included close consultation with the IMF staff in the context of the OECD's Advisory Task Force, a process that staff members of both institutions reported as having been very helpful.[37]

64. Several important changes in the revised Code have helped improve its coherence with other multilateral frameworks. Greater clarity was provided for the treatment of macroprudential measures, including with reference to the IMF's IV and reciprocity and other measures taken under Basel III. Greater scope was provided for the OECD to apply judgment (on a case-by-case basis) when assessing non-residency-based restrictions on financial institutions' foreign currency liabilities. And in the context of the revisions to the Code, the OECD defined a methodology for identifying capital inflow surges that might then be used to underpin an OECD member's request for a derogation from its commitments under the Code so as to allow it to use capital account restrictions. The assessment and governance processes were also updated, to strengthen the OECD Secretariat's monitoring role, to improve the transparency of the review mechanisms, and to avoid the possibility that conclusions regarding conformity to the Code could be blocked by a single member.

65. Discussions with Fund staff members suggest that the Fund and OECD have not seen a need to ensure full consistency between the Code and the operation of the IV; nor does the new Code require a full alignment with the IV. Indeed, the two frameworks are fundamentally different—the former is a legal requirement while the latter is designed to guide policy dialogue with the IMF's members.[38] Moreover, the OECD's membership is composed mainly of advanced economies, so that the strong interest in promoting capital account liberalization that is enshrined in the Code is distinct from the interests of the Fund's more diverse membership. For these reasons, it is not likely that either institution would be willing or able to defer to the other the responsibility for assessing whether capital account restrictions might be necessary for balance of payments stability. However, the new Code helpfully promotes cooperation between the two bodies, including through the Fund's participation in the Advisory Task Force and the option for the OECD's Investment Committee to request the views of the Fund on a country's balance of payments and international reserves position.

66. Though welcome steps have been taken to achieve greater coherence between the OECD Code and the IMF's IV, including as a result of effective collaboration between the staffs of the two institutions during the Code's review, there remains potential for friction. For example, the revised Code now assigns a greater role to the OECD Secretariat in determining whether the adoption of capital account restrictions is warranted by macroeconomic circumstances—

[37] See OECD (2019c) for a description.

[38] For example, by contrast with the IV, the Code's User Guide states that "Macroprudential measures typically fall outside the scope of the Code, even if they may have an impact on capital flows. For a measure to have a bearing on the Code's obligations, it does not suffice that it has an impact on capital flows or capital mobility; measures which do not target the specific operations covered by the Code fall outside the scope of the agreement" (OECD, 2019b).

judgments that may conflict with the Fund's. Moreover, there remains the potential for Fund advice to one of its members on CFMs that would be consistent with the IV but in contravention of that member's obligations under the Code. Background papers by Batini, Borensztein, and Ocampo (2020), and Everaert and Genberg (2020) for the present evaluation discuss how this type of issue arose in the case of past Article IV consultations for Brazil and Korea, respectively.

67. The potential for inconsistency stems at least partly from the fact that the IV requires the Fund staff to decide on whether an MPM is also a CFM based on a staff judgment of whether the measure was designed to limit capital flows, its scope and intensity, and other country-specific circumstances. The Fund staff (IMF, 2017) has acknowledged that this can mean that a measure can be classified differently across countries or over time, but it also implies that staff's judgment may differ from the OECD's. Moreover, the IV acknowledges the possible usefulness of CFMs to counter capital inflow or outflow "surges," but unlike the OECD Code it has not established a metric for defining a surge (OECD, 2018). And as noted above the IV—unlike the Code—does not include a "carve-out" for Basel III-compliant measures.

68. These factors argue for continued close collaboration between the two institutions as regards their frameworks and their application. To this end, there would seem merit in Fund staff briefing the IMF's Board on the OECD Code and its implications for the Fund. Consideration could also be given to institutionalizing the Fund's collaboration with the OECD in this area in the context of a cooperation agreement, similar to the agreements that cover the Fund's relations with many other organizations.

69. Indeed, the cooperative processes that have been built between the IMF and the OECD are less formal than those that exist between the World Trade Organization (WTO) and the IMF. WTO decisions on balance of payments restrictions require consultation with the IMF and acceptance of the Fund's findings on "facts relating to foreign exchange, monetary reserves and balance-of-payments."[39] Moreover, a WTO/IMF cooperation agreement, established in 1996, requires the Fund to participate in the WTO Committee on Balance of Payments Restrictions, and to inform the WTO of any decisions approving current account restrictions, multiple currency practices, or requests by the Fund to an IMF member to "exercise controls to prevent a large and sustained outflow of capital."[40]

70. Despite its initial intention, the IV does not appear to have prompted efforts by Fund staff to promote a more consistent approach towards the treatment of CFMs under other international trade and investment agreements. For example, the staff does not appear to have been engaged on this issue with the WTO, nor in the context of recently negotiated trade and investment agreements (e.g., the Trans-Pacific Partnership or the recent agreement (USMCA)

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[39] For details see https://www.wto.org/english/tratop_e/bop_e/bop_info_e.htm.

[40] See 1996 "Agreement Between the International Monetary Fund and the World Trade Organization," posted at https://www.imf.org/external/pubs/ft/history/2012/pdf/3b.pdf.

between Canada, Mexico, and the United States). Moreover, the Fund staff does not seem to have had much engagement on these issues with ASEAN, which has set itself the strategic objective of capital account liberalization and has recently published its own analysis of the use of capital account measures by ASEAN countries and how this has differed from IV's recommended approach.[41]

71. The potential for tensions stems from the fact that bilateral and regional trade and investment treaties have often prohibited the use of outflow restrictions that may be permissible under the IV. And in those cases where capital account restrictions are permissible in the event of macroeconomic crises, these agreements may require the IMF to offer its view on whether macroeconomic conditions warrant the exception (for example, the 2016 Canada–EU Comprehensive Economic and Trade Agreement and the 2019 USMCA).[42] Nonetheless, these treaties have typically been concluded with limited if any consultation with the Fund, nor have their implications for capital account restrictions been a focus of Fund analysis or comment.

72. Staff members interviewed for this evaluation commented that the continuing spread of bilateral and regional agreements has raised a host of questions about their implications for countries' capital account policies and about their consistency and coherence with the IMF's IV, and that they are now reviewing these issues in-house. This work could provide the basis for a renewed effort to work with shareholders to seek coherent approaches to capital account issues across the IMF and international trade and investment agreements.

73. Finally, there are tensions between the IV and the international financial regulatory architecture. For example, reciprocity arrangements are supported in Basel III (and the Fund's MPM framework), but the IV appears to require these to be classified as outflow CFMs, given that they discriminate on the basis of residency, and therefore discourages their use except in near-crisis circumstances. Moreover, the Basel III rules governing liquidity coverage ratios and net stable funding ratios may also be inconsistent with the IV, since these may be applied differently to non-resident deposits (or liabilities more broadly) relative to resident deposits. This is in contrast to the recently revised OECD Code of Liberalization of Capital Movements, which provides an explicit carve-out for macroprudential measures under Basel III (see further discussion of the OECD Code below).

VII. CONCLUSIONS

74. The Fund has taken important strides over the past decade in improving its ability to monitor capital flows, to assess their implications for growth and financial stability, and to

[41] However, a staff analysis of ASEAN's approach to capital account liberalization was included in an IMF working paper by Almenkinders and others (2015). The background paper by Honohan (2020) describes the coordination between the Fund and the EU on the recent capital account measures implemented in Cyprus and Iceland.

[42] In practice, no case has ever come forward under any agreement based on violation of the free transfer clause when a country claimed the balance of payments crisis safeguard.

provide coherent and consistent policy advice. The changes have yielded significant improvements in the credibility of both its bilateral and multilateral surveillance, by enhancing the depth and consistency of its policy analysis. These efforts have benefited significantly from the Fund's coordination and cooperation with the other key agencies involved in this space.

75. However, the discussion above has suggested a number of areas where more could be done to strengthen the Fund's approach to capital flows in the context of its multilateral surveillance:

- *Assessing the multilateral consequences of capital flow measures:* There seems room to strengthen the analytical and empirical bases for judging the multilateral spillover effects of CFMs. Access to better data and stronger analytical capacity would help the Fund to take a clearer position on existing CFMs in its bilateral and multilateral policy advice. Where this gap is most obvious is in the Fund's workhorse model for assessing exchange rate and current account sustainability, which pays relatively little attention to capital flows and has not been used systematically to assess the significance of the impact of capital account restrictions on the consistency of current account positions or exchange rates with fundamentals.

- *The policy framework and its impact on source country policies:* The ISD and the IV were important steps forward in providing the Fund a clearer role for assessing the spillover and other effects of capital flows. However, it has been difficult to translate spillover analysis into impactful policy advice for "source" countries (see IEO, 2019b). Moreover, especially in light of the multilateral push for regulatory reforms following the global financial crisis, there would seem to be merit in giving more attention to the effects of these policies on the stability and resilience of flows both from banks and from securities markets.

- *Monitoring and measurement of capital account openness:* The AREAER represents an important public good, and greater investment in its ongoing maintenance would improve its timeliness, reduce reputational risk, and give greater scope for the experts involved to provide needed support for Fund policy advice and analysis on capital flow management. For similar reasons, there would seem to be merit in constructing in-house the indexes of capital account openness that are used for core surveillance benchmarks, rather than delegating this task to others.

- *Monitoring capital flows and data needs:* Progress has been made in improving the Fund's ability to monitor capital flows, but significant handicaps remain. Continued multilateral efforts, including in the context of the G20 Data Gaps Initiative, are called for, but the Fund may need to devote greater resources to ensuring that it has an effective capacity to monitor both bank and (especially) non-bank flows. This could entail acquiring commercially available data, making a greater commitment to coordinating the data-gathering efforts of individual IMF departments to ensure their robustness and sustainability, and working more closely with other multilateral agencies to ensure that data sharing is more seamless.

76. *Coherence with other multilateral agencies and with other international agreements:* Tensions between the OECD Code and the Fund's IV have been reduced, including with the recent revisions to the Code, but also as a result of continued close collaboration at the staff level and a recognition that the different memberships and mandates of the two institutions warrant different approaches. Nonetheless, given the overlaps in the responsibilities and interests of the Fund, the OECD, and possibly the other international institutions in this field, sustaining strong cooperation in the area of capital account restrictions among the key agencies involved will be essential. In this vein, consideration could be given to briefing the Fund's Board on the implications of the OECD's new Code and possibly to establishing a cooperation agreement with the OECD to institutionalize the bases for collaboration. More broadly, renewed effort could be directed both internally and externally to ensure coherence between the IMF's approaches and those embodied in international trade and investment and to address tensions that have arisen between the IV and the Basel III framework (and with the Fund's own MPM framework).

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