BACKGROUND PAPER

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IMF Advice on Capital Flows to the Republic of Croatia, Israel, and the Republic of Poland

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IMF Advice on Capital Flows to the Republic of Croatia, Israel, and the Republic of Poland

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ABBREVIATIONS

ARA	Assessment of Reserve Adequacy
BoI	Bank of Israel
CESEE	central, eastern, and southeastern Europe
CFM	capital flow management measure
CHF	Swiss franc
CNB	Croatian National Bank
EBA	External Balance Assessment
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EIB	European Investment Bank
EM	emerging market
EU	European Union
FCL	Flexible Credit Line
FDI	foreign direct investment
FX	foreign exchange
GDP	gross domestic product
GFC	global financial crisis
ICT	information and communications technology
ISD	Integrated Surveillance Decision
IV	Institutional View on the Liberalization and Management of Capital Flows
MCM	Monetary and Capital Markets Department (IMF)
MPM	macroprudential measure
NEER	nominal effective exchange rate
NIS	Israeli shekel
OECD	Organization for Economic Cooperation and Development
QE	quantitative easing
REER	real effective exchange rate
SDR	Special Drawing Right
URR	unremunerated reserve requirement
WEO	*World Economic Outlook*

I. INTRODUCTION

1. Over the past 20 years, a large part of Europe has chosen a path of greater integration, including of capital markets, both within the continent and with the rest of the world.[3] This process has involved significant liberalization of capital accounts. Most notably, the Treaty Establishing the European Community (Article 56) states that "all restrictions on the movement of capital between Member States and between Member States and third countries shall be prohibited," and these provisions have become progressively pervasive within Europe as the numbers of members (and pre-accession candidates) have increased.[4] Moreover, commitment to capital account liberalization is also a legal obligation for countries that are members of the Organization for Economic Cooperation and Development (OECD) or for those that aspire to membership.

2. Although capital market integration in Europe has lagged somewhat relative to the ambitions of the Treaty, especially with regard to equity markets, liberalization has contributed to considerable foreign direct investment (FDI) and cross-border debt flows, as well as the integration of banking systems.[5] And these cross-border linkages, coupled with the effects of the global financial crisis (GFC) and the European sovereign debt crisis, meant that most countries in Europe have faced considerable capital flow volatility during the past ten years, for the most part in the absence of capital controls.[6]

3. This paper studies the experience of three countries that faced this challenge during the past decade: Croatia, Israel, and Poland.[7] Croatia and Poland are members of the European Union (EU), and Israel and Poland are members of the OECD. In other respects, the macroeconomic and institutional circumstances of these three countries are quite different, and the economic challenges they had to cope with during the past decade also were distinct. Thus, they provide a useful cross-section of the Fund's policy advice during this period:

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[3] Note that Israel is considered as part of Europe for the purposes of this paper, mirroring its inclusion in the group of countries monitored by the IMF's European Department.

[4] Article 59 does allow for a temporary use of capital controls: "Where, in exceptional circumstances, movements of capital to or from third countries cause, or threaten to cause, serious difficulties for the operation of economic and monetary union, the Council, acting by a qualified majority on a proposal from the Commission and after consulting the ECB, may take safeguard measures with regard to third countries for a period not exceeding six months if such measures are strictly necessary." Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12002E/TXT.

[5] See Rapaso and Lehmann (2019) for a discussion of capital market integration in Europe and the factors that have dampened cross-border equity market financing.

[6] See the background paper by Honohan (2020) for a discussion of the cases of Cyprus, Iceland, and the Ukraine and their use of capital account restrictions during crisis periods.

[7] This paper was prepared prior to the onset of the COVID-19 pandemic crisis in March 2020, and therefore does not cover developments during this recent crisis.

- Israel faced considerable capital flow volatility, including as a result of its status as a regional "safe haven," but was able to escape the effects of the global crisis largely unscathed, including in the context of its flexible exchange rate framework.

- Poland successfully navigated the pressures that arose during the GFC, partly owing to the confidence engendered by its Flexible Credit Line arrangement (FCL) with the Fund, but still faced considerable pressures related to the large share of domestic debt that was denominated in foreign currencies and the heavy reliance of many of its banks on funding from their Western European parents.

- Croatia faced even more pressures as a result of the crisis, owing both to the heavy euroization of its financial system and pressures on foreign bank funding, but also as a result of its commitment to a quasi-pegged exchange rate to the euro.

4. This review of the Fund's work with these three countries is undertaken against the background of two key policy changes introduced in 2012 that have helped frame the staff's work in the area of capital flows: the Integrated Surveillance Decision (ISD) and the Institutional View on the Liberalization and Management of Capital Flows (IV). The ISD (IMF, 2012a) built on earlier efforts to introduce a firmer responsibility for Fund monitoring and analysis of capital flows and related policies, including capital flow management measures (CFMs). Importantly, the ISD also required that Fund bilateral and multilateral surveillance and policy advice take account of the impact of domestic policies on other countries (i.e., "spillover effects") including through their effects on capital flows. The IV (IMF, 2012b) built on the evolution in Fund policies since the Asian and other crises in the 1990s, and it was intended to provide greater clarity on the Fund's approach to capital account liberalization and to ensure the consistency of staff advice with regard to capital flow management.

5. For this reason, this assessment reviews the Fund's performance in the three countries against key benchmarks defined by these policy frameworks. The first is the extent to which the Fund effectively monitored and assessed the capital flows, their drivers, and related risks, including with regard to spillovers from the rest of the world. The second is the extent to which the Fund integrated analysis of capital flows into its assessments of exchange rate and current account sustainability, as well as its advice on the adequacy of foreign exchange (FX) reserves. And finally, this paper considers the advice that was given by the Fund on capital flow management policies.

6. The assessment relies on both a desk review of key documents and interviews. The documents covered include Article IV staff reports, Selected Issues papers, and other documents related to the Fund's Article IV, as well as a selected review of regional outlooks issued by the European Department. Interviews were conducted in Jerusalem, Washington DC, Warsaw, and Zagreb with relevant (current and retired) officials in the three countries covered, as well as with relevant (current and retired) Fund staff members. The review has also benefited from the analysis of the other papers that have been prepared for this evaluation.

7. The paper covers the experience of the three countries separately in sections below, providing an assessment of the Fund's performance in each case. It then concludes with a summary of the cross-cutting themes and lessons learned.

II. CROATIA

A. Background

8. Croatia experienced a significant build-up of macro-financial vulnerabilities prior to the GFC. These were fueled by a boom in household and corporate debt, roughly 75 percent of which was denominated in euros and Swiss francs, which was spurred partly by the improved confidence and capital flows ahead of Croatia's accession to the European Union in 2013.[8] Domestic credit was funded by euro-denominated debt issued largely by foreign-owned banks, and this prompted a fiscal consolidation and a tightening of prudential measures, including higher risk weights for FX liabilities and hikes in unremunerated marginal reserve requirements on foreign borrowing (see Vujčić and Dumičić, 2016 for details). However, the scope for a monetary policy response was limited by a quasi-peg of the kuna to the euro.[9]

9. Croatia's vulnerabilities—especially those related to euroization—were the highest among its regional peers and meant that Croatia was relatively hard hit by the GFC.[10] The country experienced a six-year recession during 2009–14, which was exacerbated by legal and other structural impediments to corporate debt restructuring.[11] Capital inflows weakened significantly, especially with regard to foreign direct investment and medium- and long-term loans (Figure 1). The fiscal position also deteriorated in the early crisis period. Despite a subsequent consolidation effort starting in 2012, public debt reached more than 80 percent of GDP by 2014; more than half of it was denominated in foreign currencies. The current account deficit widened in 2009, but narrowed quickly thereafter, but external debt still rose to more than 100 percent of GDP in 2014 (Figure 2).

10. The 2015–18 period saw a strong growth recovery, driven by improved exports. The fiscal position also improved further, reaching a structural surplus in 2017, and public debt fell below 75 percent of GDP in 2018. Corporate debt fell as a share of GDP, partly owing to the effect on loan supply of the bankruptcy of a major domestic conglomerate and the still negative net worth

[8] Croatia applied for EU membership in 2003 and was made a candidate for membership by the EU in 2004. Croatia formally applied for OECD membership in 2017 and in this context is in the process of adherence to the OECD's Code of Liberalization of Capital Movements.

[9] The Croatian National Bank has maintained a managed float of the kuna against the euro. The regime has been formally classified by the IMF as a "stabilized arrangement" (which means that the exchange rate is judged to have remained within a range of 2 percent for six months or more).

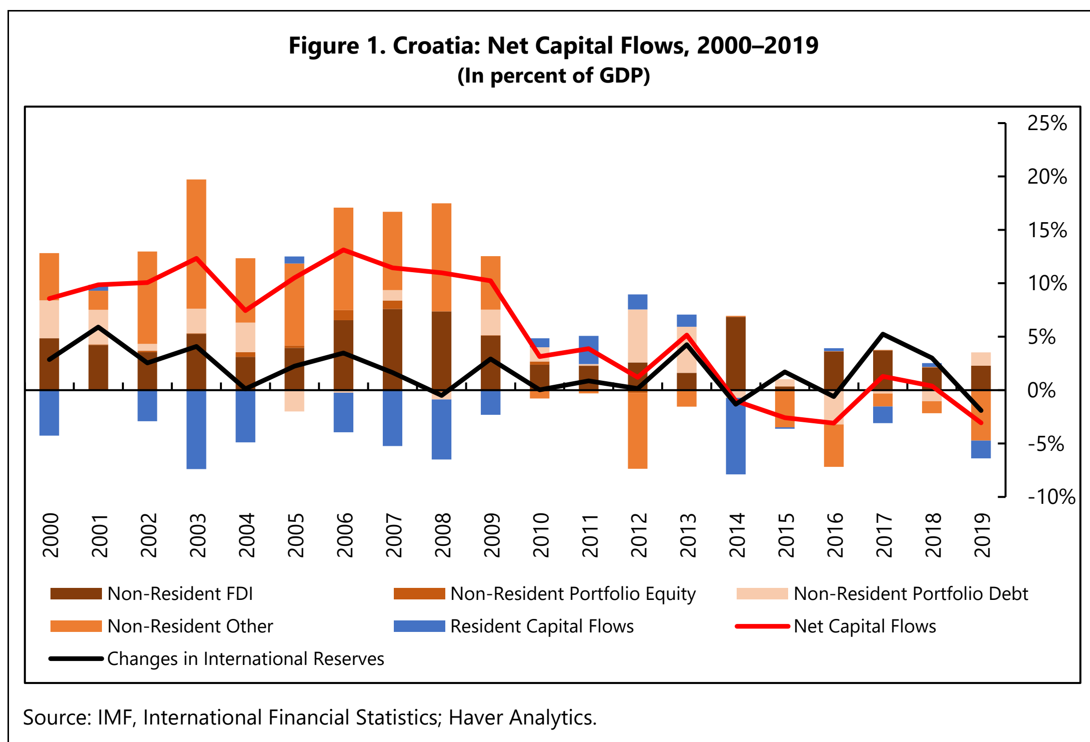
[10] See Geng, Scutaru, and Weigand (2018) for a discussion of the regional balance sheet vulnerabilities associated with euroization.

[11] Unlike the household sector, whose net foreign currency exposures were modest owing to large foreign currency-denominated deposits, the corporate sector was much more heavily exposed.

position of the corporate sector.[12] But banks made progress in reducing their non-performing loans and the share of loans denominated in FX, although both still remained high.

11. During the run-up to the GFC, Croatia benefited from significant capital inflows, which were largely in the form of foreign direct investment and medium and long-term loans in anticipation of EU membership. These net inflows peaked at around 13 percent of GDP in 2006 before dropping to an average of around 3½ percent of GDP in 2010–13, owing to the effect of spillovers from the GFC and the euro area crisis. Despite these pressures, Croatia was still able to launch a five-year sovereign Eurobond in the amount of EUR 755 million in 2010, after a five-year absence from the Eurobond market. The bond launch helped offset the diminution of private capital inflows. Since then, net capital flows have tended to fluctuate around a roughly balanced position, with positive FDI inflows being offset by portfolio and other investment outflows.

Figure 1. Croatia: Net Capital Flows, 2000–2019
(In percent of GDP)



Source: IMF, International Financial Statistics; Haver Analytics.

12. Croatia's ability to avoid a sudden turnaround in funding from parent banks headquartered in the euro area was at least partly due to the success of the Vienna Initiative (Box 1). This was a multilateral effort to discourage a disorderly deleveraging from central, eastern, and southeastern European (CESEE) countries, and it involved a number of relevant multilateral agencies including the European Bank for Reconstruction and Development (EBRD) and the IMF, officials from the euro area and CESEE, and the affected banks. And by 2012, once credit lines had stabilized, the Initiative launched consultations with individual CESEE countries—

[12] The Agrokor Group—a large and regionally important food processor and distribution company—was placed into receivership in 2017 and that year's IMF Staff Report estimated its debt at about 7 percent of GDP.

including Croatia—to address concerns that the tightened supervisory standards in the euro area were dampening cross-border capital flows.

Box 1. The Vienna Initiative

The Vienna Initiative was launched in 2009 by the EBRD in cooperation with the European Investment Bank, the European Commission, and the IMF and was aimed at stemming the sudden withdrawal of cross-border bank lending by European banks to central Europe following the onset of the GFC. The Initiative aimed at avoiding an uncoordinated collapse in funding that could trigger a broader failure of the financial system in Europe and its neighbors.

In 2009 and 2010, the Initiative—in cooperation with country supervisory authorities—set principles for burden sharing, most notably expectations that parent banks would maintain funding for their subsidiaries in the central and eastern European regions, including by recapitalizations if needed. For example, a joint letter was signed by six parent banks of Hungarian banks to "maintain our overall exposures to Hungary" in the context of the IMF-supported program. Similarly, letters were signed by the parent banks of banks in Romania, Serbia, Bosnia and Herzegovina, and Latvia. And in some cases, subsidiaries were also provided recapitalizations through the EBRD.

The group also established a framework for collecting and sharing information on flows within banking groups to limit the incentives for individual banks to attempt to withdraw funds ahead of others. And efforts were made to work with parent banks to discourage a drawdown of bank funding from other countries in the region beyond the five that were covered by more formal exposure commitments.

With renewed pressures for cross-border deleveraging as a result of the euro area crisis, the initiative was relaunched as the Vienna 2.0 Initiative in early 2012. The group established basic principles for home-host coordination among supervisory authorities, sought to establish a greater role for host country authorities in the case of resolutions of large cross-border banks, and encouraged the establishment of procedures to speed the resolution of non-performing loans.

The IMF's ongoing involvement has included support and participation that was directed from the Fund's regional office in Warsaw, high-level participation in the steering committee, and the production of regular reports on cross-border credit flows and lending trends within the CESEE region.

[1]Details on the Vienna Initiative can be found at http://vienna-initiative.com/. See also the historical review in EIB (2019).

13. The significant depreciation of the kuna against the Swiss franc ultimately forced Croatia to implement measures in 2015 to force the conversion of domestic, Swiss franc denominated loans. This involved substantial balance sheet losses for banks, but their sizable buffers meant that the systemwide capital ratio remained well above the regulatory minimum. The Croatian National Bank (CNB) also helped offset the impact by easing liquidity requirements.

14. Croatia began to liberalize its capital account in the mid-1990s. After restrictions on the corporate sector's ability to participate in the FX market were lifted in 2001, the capital account was significantly liberalized. Some restrictions remained, but these were largely eliminated in

2010 in the context of EU accession negotiations. The IMF's 2018 Staff Report stated that Croatia maintained no capital account restrictions.[13]

B. IMF Engagement

15. Croatia became a member of the IMF in 1992 and benefited from a series of IMF lending arrangements that were aimed at assisting its transformation to a market-based economy after the breakup of the former Yugoslavia. Following the expiration of the 2004–06 precautionary Standby Arrangement, the Fund's involvement with Croatia has been principally in the context of its annual Article IV surveillance. The Fund's advice was focused on helping Croatia cope with the spillovers from the GFC (and the crisis in the euro area), but was shaped by the fact that monetary and other policies were circumscribed by Croatia's quasi-peg to the euro. This exchange rate anchor was viewed by the authorities as essential in view of the balance sheet vulnerabilities posed by the extensive euroization of bank and corporate balance sheets.

16. The Fund staff's advice in the face of capital flow volatility therefore emphasized the need for tighter fiscal policies, structural measures to boost underlying growth, and prudential policies to limit systemic financial risks. There did not seem to be significant differences of view between the staff and the authorities on these points, but officials resisted the staff's suggestions—especially after the crisis—to allow greater two-way exchange rate flexibility and to boost external FX reserves.

17. Regarding the analysis of capital flows, Article IV staff reports focused extensively on the balance sheet vulnerabilities faced by Croatian households and corporates, and possible risks of a sudden stop in bank funding. Well before the GFC, the vulnerabilities associated with the exuberance in financial markets ahead of EU accession and the boom in cross-border, euro-denominated lending had been identified and shaped the Fund's policy advice. The 2008 Staff Report highlighted that "Croatia has significant vulnerabilities: a large current account deficit and high external debt, alongside balance-sheet exposures to currency risk."[14] And once the crisis broke, as pressures on the exchange rate emerged and access to funding by Croatian banks from their parent banks became more difficult (and expensive), the staff placed an even greater emphasis on Croatia's balance sheet vulnerabilities. For example, the staff appraisal in 2010 stated "The pre-crisis growth model, fueled by foreign capital and domestic absorption, has created mounting vulnerabilities."

[13] The Chinn-Ito index of capital account openness—which is often used in IMF surveillance—shows a marked opening in 2003 and no change thereafter, whereas the Quinn and "IMF share" indices that are also used for the purposes of the IMF's assessments of FX reserve adequacy show further liberalization after these dates. See the background paper by Batini and Durand (2020) for a discussion of this and other commonly used indices of openness.

[14] Croatia applied for EU membership in 2003 and accession negotiations began in 2005. The IMF's 2008 Staff Report documented the sharp rise in stock prices that this helped encourage.

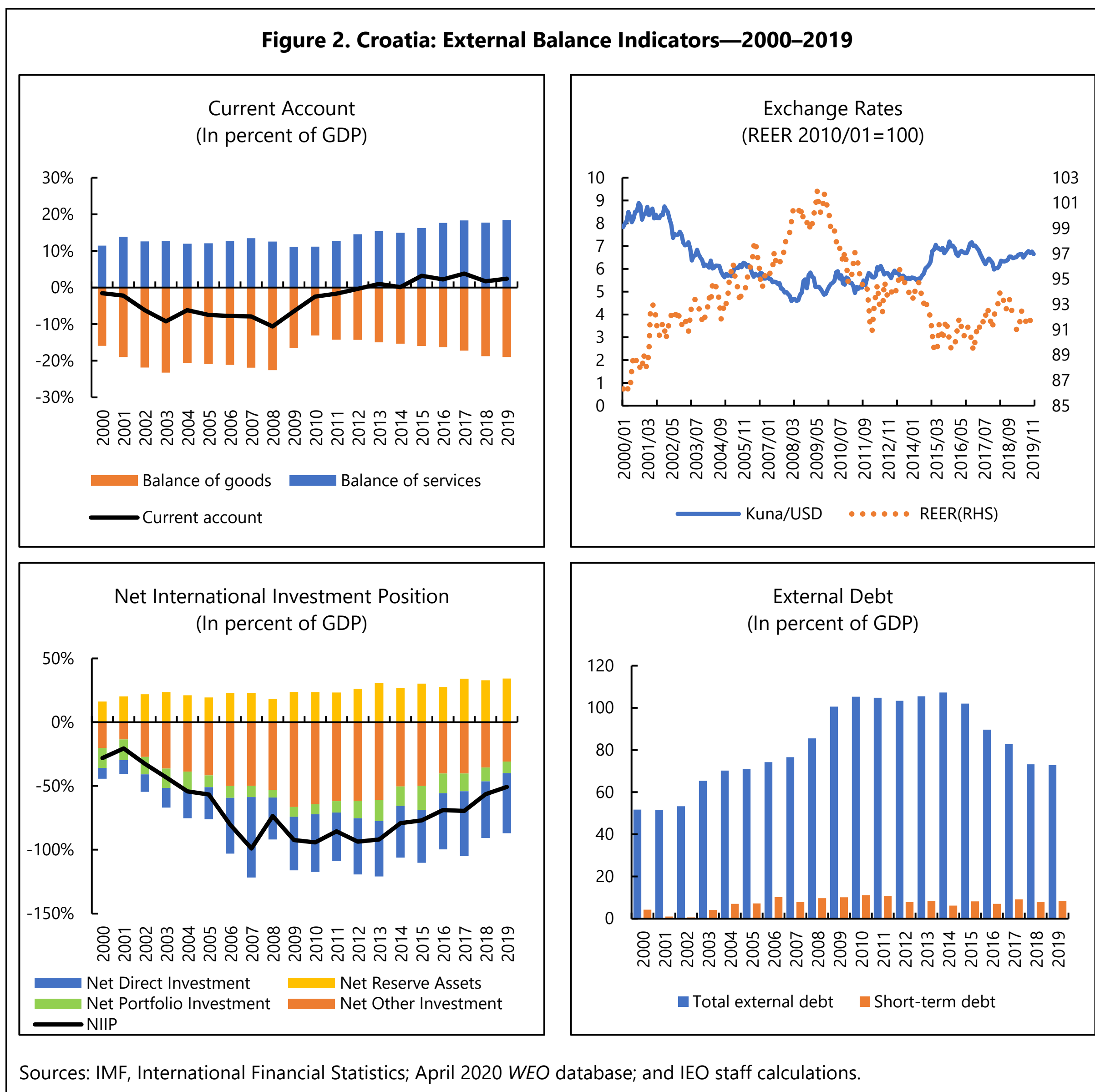


Figure 2. Croatia: External Balance Indicators—2000–2019

Sources: IMF, International Financial Statistics; April 2020 *WEO* database; and IEO staff calculations.

18. With the Executive Board adoption of the Integrated Surveillance Decision in 2012, which mandated spillover analysis, staff reports began to include more explicit reference to spillover risks, including with regard to the euro area crisis and its impact on euro area banks and cross-border lending. This increased attention to spillovers was illustrated in the Selected Issues paper for the 2018 consultation, which used balance sheet analysis and stress tests to illustrate the still-large cross-sectoral dependencies, including the FX debt exposures of corporates, households, and the government.

19. The staff's views on the appropriateness of Croatia's exchange rate regime were shaped to a significant degree by the implications for capital flows and balance sheet vulnerabilities. At the beginning of the GFC, the staff endorsed a continuation of the authorities' policy of tightly

managing the kuna/euro rate, agreeing that allowing more flexibility would be too risky given the large euro-denominated liabilities of (especially) the corporate sector. For example, the 2008 Staff Report stated that "Staff and the authorities agreed on the benefits of a tightly managed exchange rate in light of balance-sheet exposures." However, by 2010 this support had become somewhat more nuanced, with the Staff Report cautioning that "reduced perceptions of the exchange rate risk had contributed to overleveraging in foreign currency," and that maintaining the peg would require "a sustained period of inflation below those of partner countries." And the 2012 Staff Report "encouraged the CNB to continue allowing increased exchange rate flexibility, while agreeing that large exchange rate movements would be harmful."[15]

20. However, the calls by the staff for flexibility seemed to diminish thereafter, possibly reflecting the lack of traction that this position seemed to have with the authorities, but also because of fears associated with the continued large corporate FX exposures and the potential for spillovers from the euro area crisis. And by 2016, the Staff Report stated that there was no viable alternative to the quasi-peg given the high level of euroization. This position was cemented in the 2018 Staff Report in light of the authorities' preparations for joining the European Exchange Rate Mechanism, as a precursor to euro adoption.

21. Throughout this period, the staff generally viewed the level of Croatia's exchange rate as broadly in line with fundamentals, even though the basis for this judgment seemed to change over time. In particular, assessments based on the staff's multilaterally consistent External Balance Assessment (EBA) methodology yielded estimates that varied over time and that staff appeared to be uncomfortable with. As a consequence, staff reports typically contained (often difficult to understand) descriptions of the adjustments that had been made to the model estimates, including with regard to the large residuals in the model estimates, the effects of EU accession, and the relatively low level of foreign value added in exports (2018 Staff Report). And since the staff did not view the exchange rate as obviously misaligned, this analysis did not seem to factor into its policy recommendations or its assessment of capital flows. Exchange rate issues were important, however, for the staff's views on structural policies, since the staff consistently expressed concern that structural impediments were holding back Croatia's competitiveness—a view that was supplemented with frequent analysis of Croatia's unit labor costs relative to those of regional peers.

22. Macroprudential measures (MPMs) received considerable attention in the staff's engagement with Croatia. In particular, in 2008 the staff welcomed the introduction of credit controls and other prudential measures to contain credit growth in foreign currencies, but by 2009 it warned that these may have had the unintended consequence of encouraging external borrowing. In 2010 it cautioned that the authorities' relaxation of prudential measures in the face of the severe economic downturn ran the risk of undermining credit underwriting standards. The following year, it again seemed to disagree with the CNB's efforts to stimulate credit, which

[15] This was tempered by an acknowledgement of the financial stability risks, and the 2011 Selected Issues paper that was attached to the Staff Report contained a detailed examination of balance sheet issues.

included an easing of macroprudential constraints, arguing that these efforts could undermine confidence in the exchange rate objective.

23. By 2014, the staff seemed more comfortable with the Central Bank's "use of a limited but effective set of monetary policy instruments, aimed at maintaining exchange rate and credit availability."[16] In subsequent years, MPMs were typically reviewed carefully in staff reports, and in 2017, 2018, and 2019 the staff emphasized the use of MPMs as one of the preferred policy responses to capital flow volatility in the Risk Assessment Matrix.[17]

24. Capital flow management policies did not seem to have been considered as a policy option by the staff (or the authorities) during the period in question. Capital account restrictions were relatively modest ahead of the GFC—including on the basis of conventional indicators—and steady further steps were taken to reduce these in preparation for Croatia's 2013 EU accession. For example, regulations were eased on securities issuance domestically by non-residents, and an unremunerated marginal reserve requirement on foreign liabilities that was introduced in 2004 was eliminated in October 2008. Since these measures predated the Fund's 2012 Institutional View and were not tightened after this date, they were exempt from the IV's requirement for an IMF staff assessment.[18]

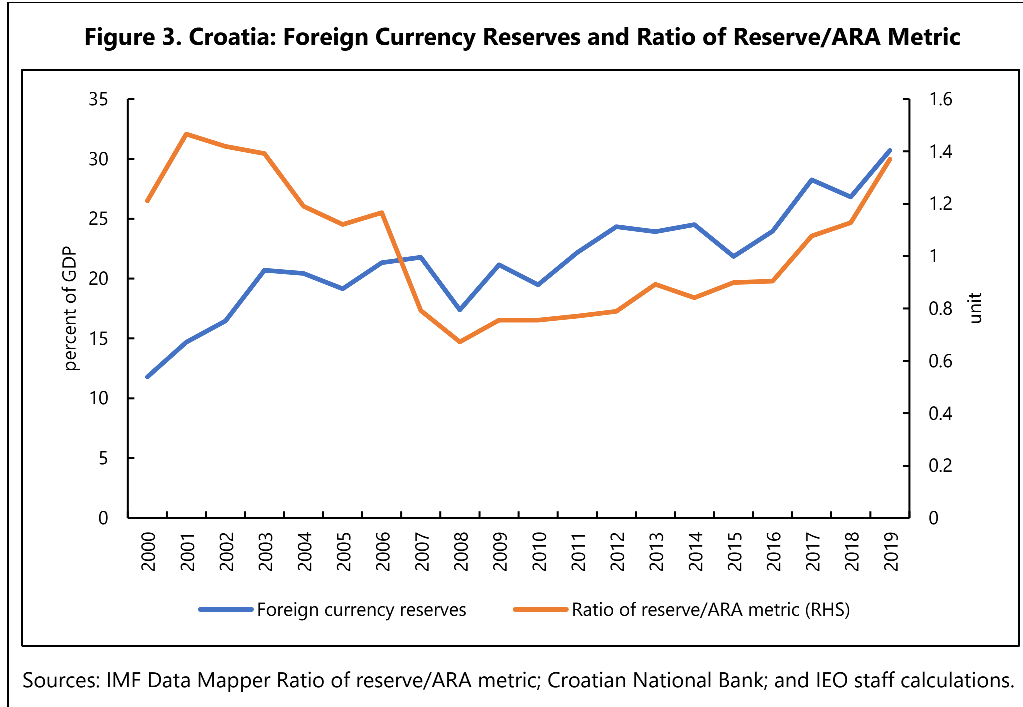
25. Perhaps the most obvious area of disagreement between staff and the authorities pertained to the appropriate level of foreign exchange reserves. By 2010, the initial wave of pressure on the kuna had subsided and Croatia had even been able to tap international sovereign bond markets. The Fund staff noted that year that reserves were low relative to short-term external debt and recommended that the authorities begin to boost reserves through regular, preannounced purchases. This suggestion—like the call for greater exchange rate flexibility—was not taken up by the authorities. And while the authorities seemed to be more open to boosting reserves by 2011, they suggested that the staff's reserve adequacy metric overestimated vulnerabilities to a capital flow reversal since it did not take account of intra-company debt (Figure 3). And in 2014, the authorities still disputed the call to boost reserves, arguing that risks were limited by the scope to short the kuna. This difference of view seemed to have been resolved by 2018, since reserves had by then risen to the staff's adequacy metric, owing to the authorities' purchases to stem appreciation pressures associated with the strengthening of the current account position.

[16] In face of the Swiss franc appreciation in early 2015, the government froze the applicable kuna/CHF exchange rate (on mostly pre-2009 household loans) for one year, during which creditors and debtors were supposed to seek a permanent solution. The IMF staff expressed concern about this approach and suggested that instead the focus should be on distressed borrowers.

[17] Croatia's use of MPMs in response to capital inflows is detailed in IMF (2017).

[18] The IV requires the staff to assess measures (including MPMs) as possible CFMs if they are "designed to limit capital inflows," but only requires the staff to assess measures taken subsequent to the IV's adoption (IMF, 2012b).

Figure 3. Croatia: Foreign Currency Reserves and Ratio of Reserve/ARA Metric



Sources: IMF Data Mapper Ratio of reserve/ARA metric; Croatian National Bank; and IEO staff calculations.

C. Assessment

26. A reading of the Article IV reports and conversations with Croatian officials shows that the Fund played a useful role in helping Croatia navigate the pre-GFC build-up of vulnerabilities, the onset of crisis, and the authorities' subsequent stabilization efforts. Officials who were interviewed for this review appreciated the depth of the staff's analysis and its coverage of the capital account and risks stemming from the boom in foreign currency credit growth. And the role of the Fund in the Vienna Initiative which helped to secure cross-border bank funding in Croatia and other neighboring countries was seen as helpful in reducing the risk of a more disruptive withdrawal of parent bank funding.

27. Although the staff reports did not include detailed analysis of the capital account, and it was not a major feature in the discussions, CNB officials suggested that this was because Croatia did not experience a prolonged loss of market access, and because the government was able to tap the euro bond market in 2009 and reschedule maturing obligations at favorable rates. These funds also helped to enable a build-up of foreign exchange reserves, and the authorities relaxed foreign currency liquidity requirements for banks to enable them to meet outflow pressures. Similarly, the role of the Vienna Initiative did not seem to have featured as part of the consultation discussions, but the staff's involvement (including through the Fund's regional office in Warsaw) was appreciated.

28. Moreover, Article IV staff reports consistently recognized the potential risks from capital flow volatility, and CNB officials were confident that staff teams were on top of the details of capital account developments. Moreover, especially with the advent of the ISD, the actual and

potential risks stemming from unconventional monetary policies (and their eventual unwinding) were part of the policy dialogue. Officials also welcomed the instances when draft Selected Issues papers were presented during missions, and they noted that the 2016 analyses of balance sheet vulnerabilities had been particularly useful.

29. This said, staff advice ahead of the GFC may have been overly "doctrinaire" in its preference for market-oriented policy approaches to the capital inflows and growing balance sheet vulnerabilities. CNB officials observed that the staff's calls for exchange rate flexibility, interest rate hikes, and the adoption of inflation targeting underestimated the risk that wider interest rate differentials would further spur disruptive capital inflows and the risks to balance sheets from significant exchange rate movements. And they felt that once the crisis broke, it had been difficult to persuade the staff that any boost to competitiveness from an exchange rate depreciation would be overwhelmed by the impact on financial stability—a concern that had led them to place greater weight on the use of macroprudential measures in their stabilization toolkit.

30. Similarly, the CNB officials were not convinced by the staff's external balance assessments of current account and exchange rate sustainability. They felt these assessments relied too heavily on cross-country regressions that did not account for country-specific factors. And when these methodologies began to confirm the authorities' views, the staff began to rely instead on alternative (unit labor cost based, cross-country) analyses, which the officials considered as too dependent on the cross-country sample used. And while the staff eventually seemed to accept the officials' view that depreciation would be too risky, the continued emphasis on building FX reserves was seen as pressing the same issue from another direction.

31. The fact that capital account policies did not feature more in the discussions is somewhat surprising. Croatia had already dismantled most of its capital account restrictions prior to the global financial crisis and was committed to removing the remaining measures ahead of EU accession. However, CNB officials noted that agreement was reached with the EU to delay this step by 12 months to 2010 owing to crisis-related capital inflow pressures, which does not seem to have been part of the policy dialogue with the Fund. Moreover, CNB officials acknowledged that they had developed a capital controls contingency plan in case outflow pressures intensified further, but this was never discussed in detail with the Fund.

32. The officials who were interviewed for this assessment suggested that the quality of the dialogue with the Fund on these issues may have been affected by the impact of the GFC (and earlier downsizing of the Fund staff) on turnover within the Fund team. During 2008–19, there were seven different IMF mission chiefs to Croatia; CNB officials suggested that this undermined the teams' familiarity with the country's specific challenges and may have limited their scope to apply judgment in the application of the Fund's analytical and policy metrics and/or limited their ability to resist pressures from HQ reviewers for a mechanistic application. By contrast, the more recent stability of the staff team had seemed to make it easier to persuade the staff of the merits of the quasi-peg and the authorities' reserves policies. And, the officials also observed that there

seemed to be greater institutional comfort and familiarity with the use of MPMs as part of the policy toolkit.

III. POLAND

A. Background

33. In the run-up to the global financial crisis, Poland's growth was strong, spurred in part by the boost to confidence from its accession to the EU in 2004. Robust growth allowed the authorities to bring down the structural fiscal deficit and stabilize public debt at nearly 50 percent of GDP. The current account deficit was moderate and fully financed by FDI (Figure 4). Poland adopted an inflation targeting regime in 1998 and let its currency, the zloty, float freely. However, during this period, Poland also experienced a credit boom, especially in Swiss franc denominated mortgages, although the exposures were less severe because the build-up began later than in other Central European countries.

34. Poland was relatively less impacted by the GFC than many of its regional peers. Although banks experienced temporary difficulties in hedging (through short-term currency swaps) of their domestically-raised funding for FX-denominated mortgages, these pressures were comparatively modest. And while stock prices fell sharply and the zloty also depreciated significantly, sovereign spreads remained relatively well contained. The current account deficit widened and FDI slowed sharply, but the real effective exchange rate was still judged to be only moderately undervalued in 2009. In the context of Poland's inflation targeting framework, monetary policy was eased and the exchange rate was allowed to depreciate. Coupled with a relaxation of fiscal policy these steps helped ensure that the growth slowdown was relatively moderate.

35. Poland recovered strongly from the crisis. GDP growth picked up in 2010–11 and accelerated strongly during 2014–18, supported by the confidence provided by the 2009 Flexible Credit Line arrangement with the Fund, strong domestic demand, favorable external conditions, and EU structural funds.[19] The external current account deficit narrowed, achieving a roughly balanced position over 2016–18, and the currency was supported by large portfolio inflows, reflecting the global search for yield (Figure 5). The structural fiscal balance also improved significantly after 2010. While the public debt/GDP ratio remained around 50 percent, the share of public debt held by non-residents was reduced as holdings by domestic banks rose. Credit growth also was robust, although bank exposures to foreign currency loans to households fell in proportion to total lending owing to the intensified use of macroprudential policies, and also as a result of other policies designed to discourage new FX lending and encourage voluntary restructuring and redenomination of existing FX loans.[20]

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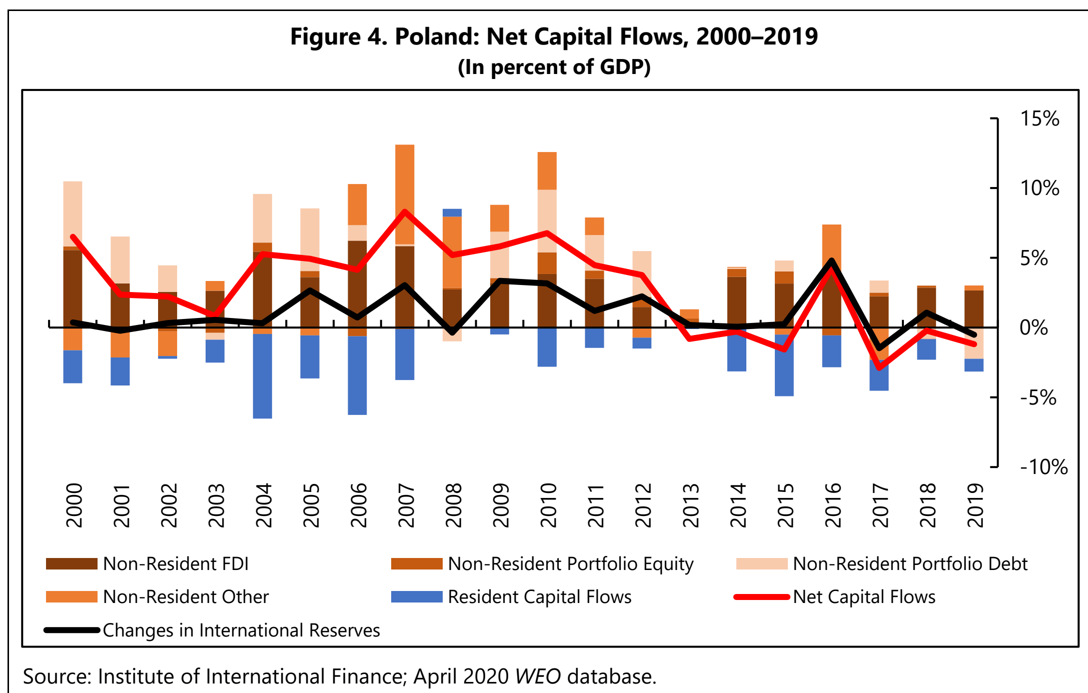
[19] The authorities terminated the FCL arrangement in 2017 without having drawn on the facility.

[20] FX mortgages to unhedged borrowers were effectively prohibited in 2013, loan to value ratios were steadily lowered during 2014–17, and risk weights on FX-denominated loans were hiked to 150 percent in 2017, compared with 35 percent for domestic currency loans. For a discussion see IMF (2019) and Mokrogulski (2019).

36. Poland benefited from large net capital inflows ahead of the GFC, averaging around 5 percent of GDP during 2004–06, largely owing to strong FDI inflows. Despite the crisis, inflows increased further in 2007–11, to average around 10 percent of GDP, mainly reflecting strong portfolio inflows (partly corresponding to the sale of government bonds to non-residents), which helped offset net outflows of "other investments." Net inflows steadily decreased thereafter, to remain at a roughly balanced position from 2013, as portfolio flows diminished along with the government's reliance on funding by non-residents and other investments turned negative. Moreover, since 2004 Poland has received significant inflows of EU funds (1.9 percent of GDP on average), which have helped to reduce the current account deficit and diminished the external financial needs of the Polish economy. However, Poland's capital inflows still exhibited periods of volatility, including as a result of the 2013 U.S. Fed-induced "taper tantrum," the reaction of investors to the Russia/Ukraine conflict, and the broader deterioration in investor sentiment toward emerging markets (EMs) in 2018.

Figure 4. Poland: Net Capital Flows, 2000–2019
(In percent of GDP)



Source: Institute of International Finance; April 2020 *WEO* database.

37. Poland did not participate in the Vienna Initiative 1.0, which was launched at the height of the GFC in January 2009 to contain the balance of payments crises of some EU countries accessing IMF programs. Poland, however, was an active participant only in the second phase of the Initiative, focused on ensuring proper cooperation between home and host country authorities responsible for financial stability. The Governor of the National Bank of Poland acted as its inaugural chairman from 2012 to 2016. Poland was involved in efforts made by the Initiative to ameliorate the effects of euro area reforms of bank regulation on cross-border lending to CESEE countries.

38. Poland almost fully liberalized its capital account during the 1990s, and the liberalization process was largely completed in 2002 with the adoption of a new foreign exchange law that

removed restrictions on the foreign currency operations of banks (Kabza and Kostrzewa, 2016). This move to capital account liberalization was at least partly spurred by Poland's accession to 1996 membership in the OECD—which involves a legal commitment to eventual capital account liberalization—and by its negotiations for EU accession, which began in 1998 and concluded with accession in 2004.

B. IMF Engagement

39. The Fund's engagement with Poland over the past ten years was principally in the context of its Article IV surveillance and an arrangement under the Flexible Credit Line facility over the 2009–17 period. The FCL arrangement provided a strong signal of the Fund's confidence in Poland's policy framework as well as access to SDR 13.7 billion in Fund financing if needed. It reflected a response to the volatility in international capital markets that began to affect Poland in 2008, and while Poland's market access had been maintained, banks experienced temporary difficulties in hedging (through short-term currency swaps) of their domestic funding after the exchange rate had depreciated sharply.

40. Indeed, Poland did experience portfolio capital flow volatility subsequently, including as a result of the spillovers from the extraordinary monetary stimulus that was implemented by the U.S. Federal Reserve and the European Central Bank, the "taper tantrum," the euro area sovereign crisis, and shocks to market confidence from the Russia/Ukraine conflict. In order to provide an essential buffer against a possible increase in risk aversion, access under the FCL arrangement was augmented to SDR 19.2 billion in answer to a request by the Polish authorities in January 2011.

41. However, the capital flow volatility that Poland experienced was more modest than in many other emerging market economies in the region, and Poland weathered these shocks relatively well. Indeed, Poland benefited from a substantial improvement in current account position and inflows related to EU transfers, and from 2008 was able to achieve a steady rise in FX reserves. Possibly as a consequence, although Fund surveillance regularly flagged the risk that capital flows could surge or reverse quickly, the emphasis of the Fund's policy advice over the period was mainly on domestic cyclical and structural issues.

42. The IMF staff's analysis and coverage of capital flows tended to focus on the risks posed by Polish banks' reliance on parent bank funding and hedging of FX exposures, but it broadened and become increasingly sophisticated during the period. In 2010, the Article IV Staff Report contained a fairly detailed description of capital account developments and the Selected Issues paper included a chapter on policy options for dealing with capital flow volatility. In 2011, as portfolio inflows rebounded, the Staff Report highlighted the possible policy responses that could be considered, and the 2012 Staff Report contained model simulations of financial spillovers from the EU. In the 2013 Staff Report, the coverage of spillovers deepened with the inclusion of network analysis showing the financial interconnectedness of Poland with the rest of the world. The 2014 Report acknowledged that Poland's investors are more diversified than in

most other emerging markets, reducing the vulnerability of domestic financial markets to external shocks. The 2015 Staff Report included analysis of the balance sheet effects of low inflation, and Annex IV of the 2018 Staff Report examined Poland's experience during the broad-based pressure on EMs' market access that year.[21]

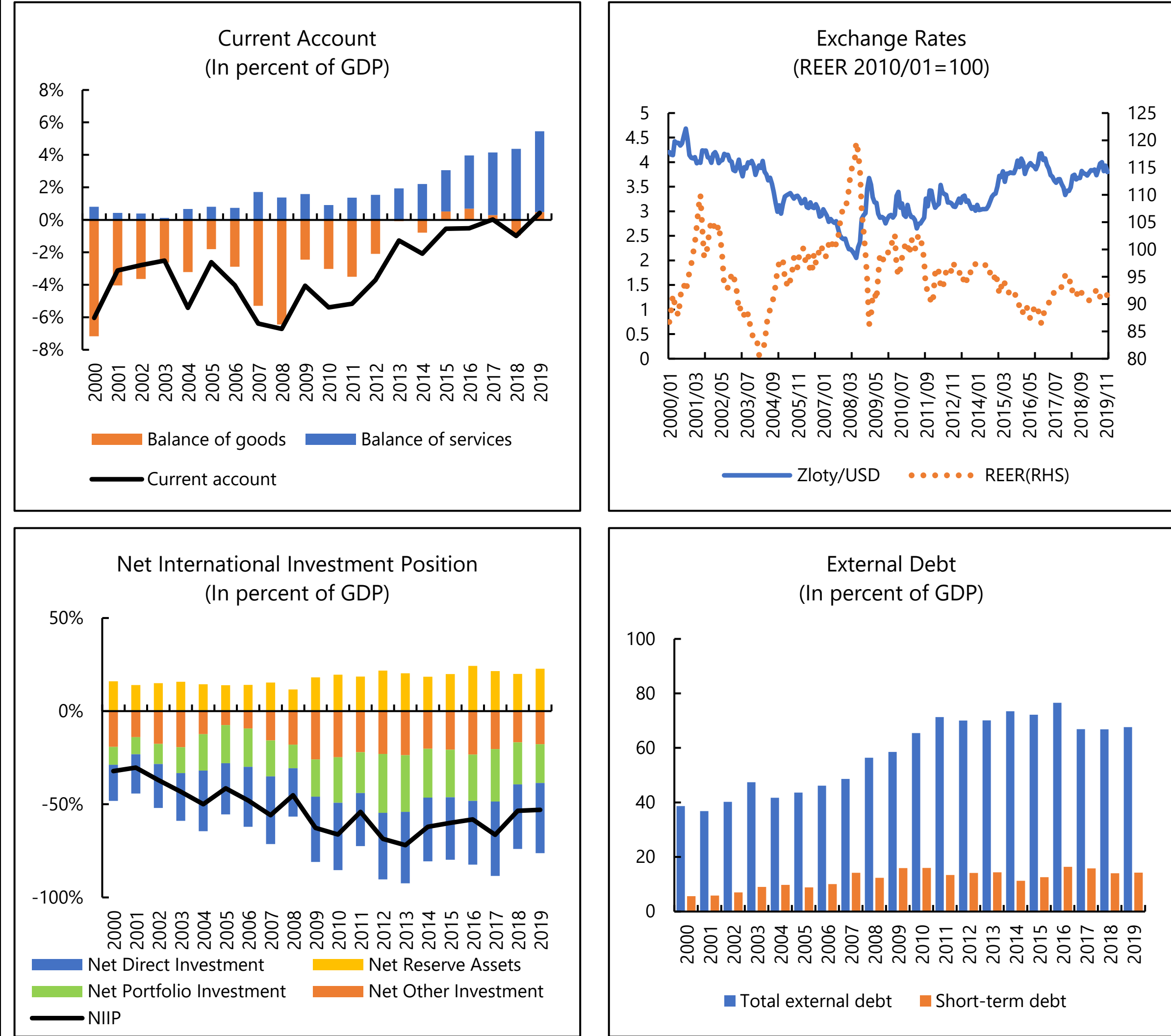
43. The staff was consistently supportive of the authorities' flexible exchange rate policy, viewing it as providing an appropriate cushion in the event of shocks and consistent with monetary authorities' commitment to inflation targeting. With the Fund's introduction of risk assessment matrices, the staff reports for Poland began to include contingent policy responses. The 2014 Staff Report suggested that "in the event of severe external pressures the exchange rate should be allowed to play its appropriate cushioning role… [but] …intervention, including verbal, could be used to curb excess volatility." In subsequent years, these types of contingent policy prescriptions were typically included in staff reports, including with reference to the need to buffer the possible effects of a zloty depreciation on balance sheets.

44. Notwithstanding this commitment to exchange rate flexibility, in 2008—just prior to the GFC—the authorities announced the intention to adopt euro by 2012. Once the crisis broke, adoption was postponed indefinitely. The 2009 Staff Report noted that while "the authorities are determined to adopt the euro as soon as possible," the staff agreed that "the increased uncertainty in global markets and the current cyclical conditions have tilted the short-term balance in favor [of] maintaining monetary policy independence and a flexible exchange rate for now." This view was repeated in the 2010–14 staff reports, but was not referenced thereafter, reflecting the lack of political interest in this step.

45. During the period in question, the staff also viewed the level of the exchange rate as broadly consistent with medium-term fundamentals. For example, the 2008 Staff Report stated that—even with a 40 percent appreciation in effective terms from 2004—"the zloty is within the estimated equilibrium range." However, after a subsequent 30 percent depreciation in effective terms, the 2010 Staff Report nevertheless stated that "staff assess the real exchange rate to be broadly in line with fundamentals." This latter view was justified by noting the wide confidence intervals around the estimates and the fact that the depreciation had returned the real effective exchange rate back to its recent average. However, staff reports, especially later in the period, acknowledged that revisions to the balance of payments data and the large residuals in their exchange rate models complicated their assessments.

[21] The latter study argued that the country's better fundamentals had helped it weather the volatility in international capital markets but warned about the vulnerabilities stemming from the funding of FDI in the form of intercompany loans.

Figure 5. Poland: External Balance Indicators—2000–2019

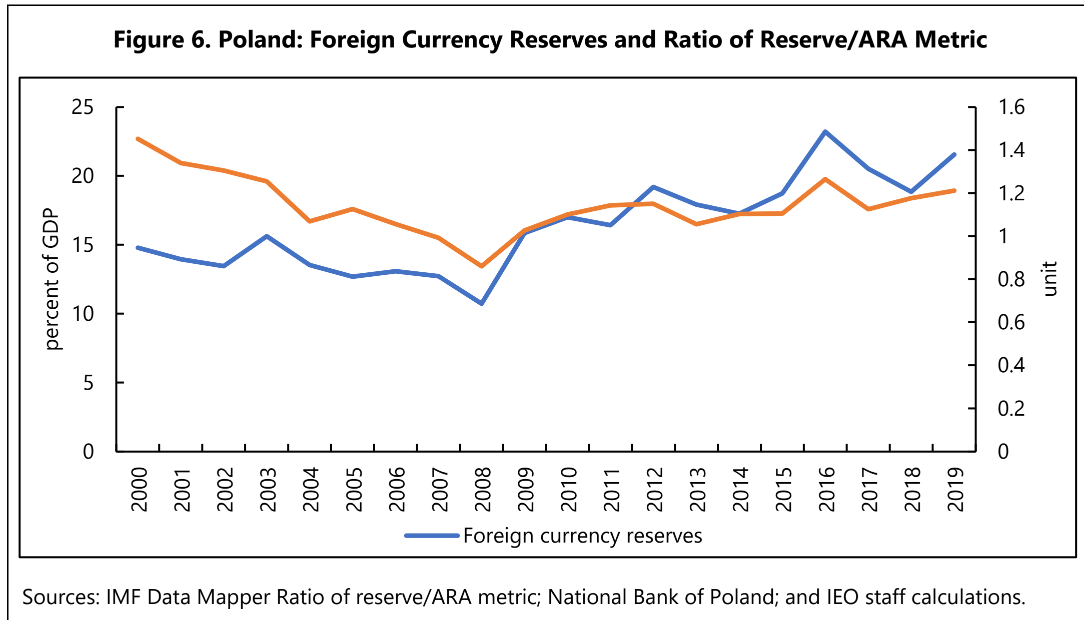


Sources: IMF, International Financial Statistics; April 2020 *WEO* database; and IEO staff calculations.

46. In the early part of the period, the staff consistently encouraged the National Bank of Poland to build up FX reserves. For example, the 2010 Staff Report stated that “intervention [in the event of upward pressure on the zloty] would boost international reserves, which are still low relative to standard metrics.” And the 2011 Staff Report noted that “reserves exceed several measures of reserve adequacy, but fall short of short-term debt at remaining maturity plus the current account deficit” and included an appendix with detailed analysis. The authorities seemed unconvinced, partly because they were mindful of the insurance provided by the FCL arrangement, but by 2015 reserves had risen—not owing to intervention, but largely because of

the off-market purchase of EU transfers from the government—to a point that reserve adequacy no longer seemed an issue.[22]

Figure 6. Poland: Foreign Currency Reserves and Ratio of Reserve/ARA Metric



Sources: IMF Data Mapper Ratio of reserve/ARA metric; National Bank of Poland; and IEO staff calculations.

47. Capital flow management policies were not explicitly advocated by the staff during this period, although the usual indicators of capital account openness suggest that Poland maintained at least some capital account restrictions.[23] The one possible exception was in 2010, when the Selected Issues paper contained a chapter discussing policy options for dealing with capital flow volatility and took the position that "monetary controls on capital inflows could also be considered in the case of rising pressures," citing in particular Croatia's use of unremunerated reserve requirements (URRs) on new foreign currency borrowing. However, the chapter noted that in Poland the design of URRs would need to be mindful of the constraints posed by Poland's EU and OECD membership.

48. Macroprudential policy measures received significant attention in staff reports for Poland, although principally with regard to the need to safeguard financial stability. While the staff typically viewed the banking system as relatively sound, concerns were consistently raised about the size of the banks' holdings of foreign currency loans, and once the recovery from the GFC was well established it encouraged measures (including stricter capital ratios and loan-to-value limits) to discourage any further build-up. And later in the period, the staff expressed concern that a bank tax would undermine bank profitability and soundness and for the same reasons it

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[22] Berłowska, Bezzubik, and Żaczek (2019) describe the factors that helped drive Poland's FX reserve accumulation and note that intervention was very infrequent.

[23] The Chinn-Ito and Quinn indices, which are used to judge capital account openness for the IMF's reserve adequacy thresholds, both show Poland with less than a fully open capital account.

cautioned against the introduction of a blanket conversion of foreign currency denominated mortgages.

C. Assessment

49. The staff's coverage of capital flows and related policies appears to have been particularly strong in the case of Poland. This was reflected in the detailed and comprehensive coverage of the capital account, the balance sheet risks associated with banks' holdings of foreign currency denominated mortgages, the drivers of shocks to sovereign spreads, and the potential effects of steps to liberalize the pension funds' investments abroad. The depth of the Fund's analysis is perhaps not surprising, in light of Poland's regional significance and the importance that was attached to ensuring the success of the FCL arrangement.

50. Conversations with current and past country officials suggest that they appreciated the high quality of the Fund staff and its work, and they gave credit to the Fund for the warnings given prior to the crisis about the risks that were building in the mortgage sector, especially with regard to the borrowing in Swiss francs. And they confirmed the impression given in the staff reports that there have been no significant differences of view between the authorities and the staff team on any major issues. Where differences occurred, these were relatively minor and seemed to be based on thoughtful analysis and different assumptions rather than on a more fundamental divergence of policy approach.

51. Commentators gave considerable credit to the series of FCL arrangements with the IMF in bolstering Poland's resilience. Although the cost of the commitment fees eventually helped persuade the authorities to allow the arrangement to expire, once external conditions had improved, it provided an important boost to confidence, and by helping Poland withstand the crisis more easily it may have also had favorable spillovers to the rest of the region.

52. Although inward spillovers did not seem to have featured significantly in Article IV consultation discussions, this was not wholly surprising. The lowering of interest rates by the Swiss National Bank was beneficial especially in light of the large stock of foreign currency mortgages. Lower interest rates meant that these loans were less prone to default than domestic currency loans, despite the zloty's depreciation. And staff reports were alert to the risk that these favorable spillovers could be temporary.

53. Some commentators wondered whether the Fund could have been less supportive of the authorities' decision to allow the zloty's sharp depreciation in 2008 and early 2009. In the event, the balance sheet effects proved to be manageable; the size and diversity of the economy meant that import substitution provided a helpful macroeconomic boost; and the FCL arrangement also provided a useful backstop. Some interviewees suggested that the possibility of utilizing FX

intervention to lean against the wind had been debated in official circles, but the Fund staff had not been part of this conversation.[24]

54. The lack of discussion of capital flow measures also does not seem surprising. The authorities were not interested in such approaches, given their strong commitment to liberalizing the capital account, including in the context of EU accession; their view that macroeconomic adjustments were a more appropriate response than CFMs to inflow/outflow surges; and their confidence that the capital flow volatility Poland experienced was not significant enough to warrant changing this approach. The Fund teams were actively and appropriately engaged on the use of macroprudential measures to contain systemic risks, including in the context of their call for stricter limits on FX lending in 2011.

55. The staff reports did not reference the Vienna Initiative since Poland did not participate in operations related to the management of capital flows during the crisis (although the Fund's liaison with the other partners in the Initiative was led by the Fund regional representative's office in Warsaw). Nonetheless, interviews with the authorities seem to suggest that some Polish officials felt that the Initiative helped avoid a more disruptive withdrawal of bank funding.

56. Staff reports did not suggest a difference of view on issues related to the sustainability of the real effective exchange rate and the current account balance. This seemed largely to reflect the fact that the staff never viewed either metric as being out of line with fundamentals. At least in hindsight this is difficult to understand, given the volatility of the exchange rate and the large movements in the current account balance.

IV. ISRAEL

A. Background

57. Following a recession in the early 2000s, Israel experienced five years of solid growth, low inflation, moderate current account surpluses, and a booming capital market ahead of the global financial crisis.[25] And at the same time, fiscal consolidation led to a steady decline in its public debt/GDP ratio. Large capital inflows (both FDI and portfolio investment) contributed to a steady appreciation of the new Israeli shekel (NIS), which became particularly sharp in early 2008. This led the Bank of Israel (BoI) to activate a plan to boost its foreign exchange reserves by intervening in the foreign exchange market, purchasing fixed daily amounts (Figure 7).

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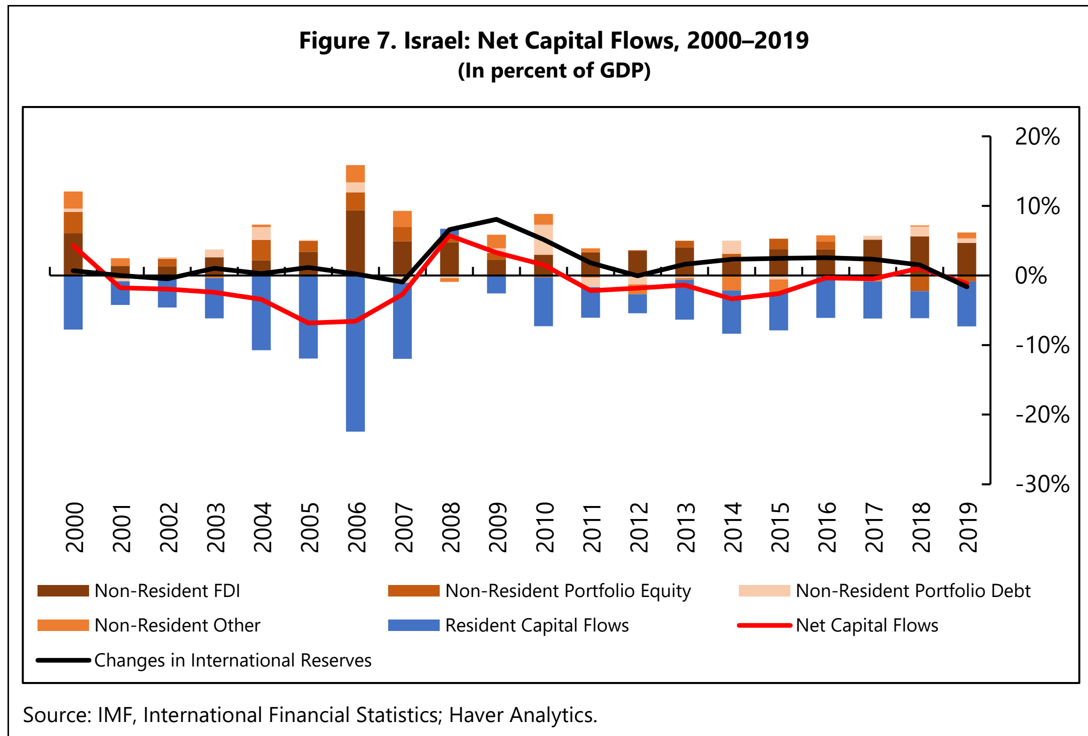
[24] Also not mentioned in staff reports—according to commentators—was the use of state enterprises to execute foreign exchange transactions at year-end to provide a temporary boost to the exchange rate and "window dress" the foreign currency debt/GDP ratio. This practice was abandoned when the official statistics adopted the EU convention of calculating these ratios using yearly averages for the exchange rate.

[25] It is also worth noting that over the past 20 years, Israel's net international investment moved to a large positive position (Figure 8), reflecting the effects of an increase in national saving (in part due to the introduction of a mandatory pension system as well as to large growth in output per capita) and a decline in the investment rate (including in the aftermath of the surge in construction after a large influx of Soviet immigrants).

58. The effects of the GFC on the Israeli economy were relatively modest and short lived. In late 2008 and early 2009, there was a decline in economic activity led by a fall in exports, with equity and corporate bond prices falling sharply, a widening of risk spreads in credit markets, and a fall in financial investments by non-residents. After appreciating until mid-2008, the NIS depreciated sharply in the second half of that year, in response to BoI intervention and the broader strengthening of the U.S. dollar.

Figure 7. Israel: Net Capital Flows, 2000–2019
(In percent of GDP)



Source: IMF, International Financial Statistics; Haver Analytics.

59. Israel's policy response during the GFC focused on maintaining stability and facilitating the continued smooth functioning of the financial system. Monetary policy in Israel had been conducted in the context of a flexible inflation targeting regime, with a target set at the 1–3 percent range, and in this context the BoI responded with a sharp cut in the policy rate, intervention in the FX market to increase reserves, a limited program of purchases for quantitative easing (QE), and monetary measures to improve liquidity. The fiscal policy response was modest, mostly relying on automatic stabilizers on the revenue side.[26]

60. The Israeli economy started to recover by mid-2009 and has exhibited solid macroeconomic performance since then. Growth was strong and the labor market tightened, with the unemployment rate falling to historically low levels and wages growing. Strong growth

[26] The GFC coincided with a political crisis in Israel that led to a delay in the approval of the 2009 budget until mid-2009. Thus the government was forced to operate on the basis of the previous year's budget and had limited ability to use fiscal stimulus measures on the expenditure side (for details, see Braude and others, 2013).

helped bring the public debt/GDP ratio down from 75 percent in 2009 to around 60 percent by end-2019, notwithstanding a recent loosening of fiscal policy.

61. The current account remained in surplus but fluctuated in response to cyclical conditions, the effects on oil imports of the discovery of offshore natural gas reserves near the Israeli coastline, a growing deficit in the goods account, and a surplus in the services account. The exchange rate also resumed an appreciating trend reflecting Israel's safe haven status.

62. The BoI's instruments during this period included interest rates and FX intervention. Initially it raised the policy interest rate in response to a surge in inflation (which turned out to be temporary), and then reduced it to the effective lower bound in response to a sharp decline in inflation that stabilized at a persistently low level. And it intervened occasionally in the FX market to lean against sharp appreciations that were judged to be inconsistent with fundamentals (the BoI viewed the shekel as overvalued, to various degrees, for most of the period under review). And during 2013–18 a program of preannounced FX purchases was in place that was aimed, ahead of the planned setup of a sovereign wealth fund, to preserve the benefits of natural gas production for future generations.

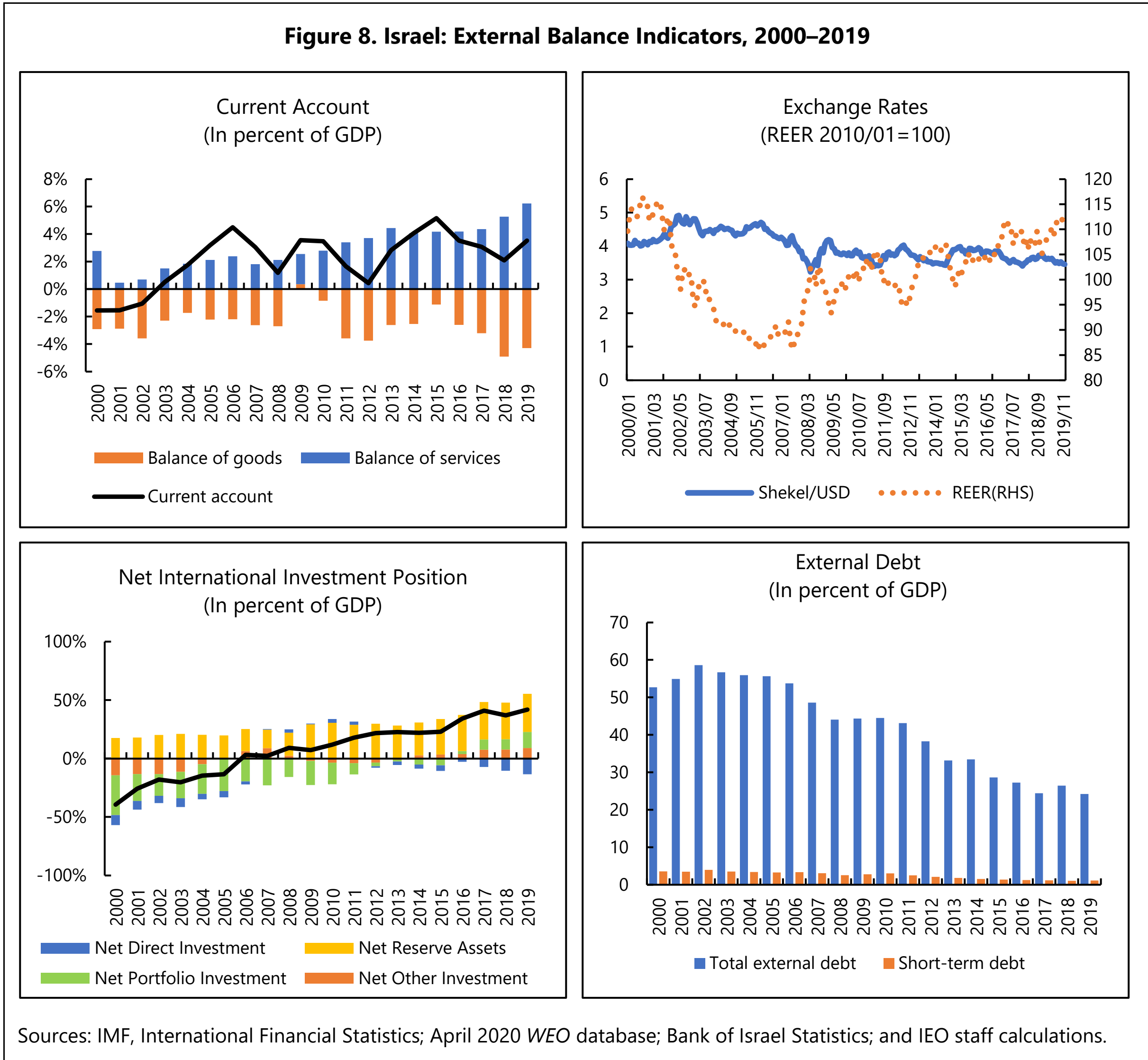
63. Israel has attracted strong capital inflows since the GFC. These inflows have reflected perceptions of its safe haven status, its relatively high interest rates compared to those in major advanced economies, and FDI flows into the high-tech sector. Financial flows have been volatile and have been vulnerable to shifts in global market sentiment and domestic institutional developments. Notably, in 2012 and 2013, portfolio flows turned negative, mainly because after the introduction of mandatory private pensions in 2008 domestic institutional investors made sizable portfolio investments abroad. However, the reversal in portfolio flows did not alleviate the appreciation pressures because institutional investors increased their hedging positions to protect the (domestic currency) value of their foreign investments in anticipation of further appreciation.

64. In 2007, the BoI announced that its FX reserves were only 72 percent of the desired level (calculated on the basis of estimated potential uses), and in March 2008 it announced a program to increase reserves significantly to a range of US$65–90 billion. In 2011 the BoI published its methodology for assessing reserve adequacy, which uses an eclectic approach based on the potential uses of the reserves in a period of emergency or financial stresses. And in 2014, the target range was raised further to US$70–110 billion.

65. The NIS exchange rate had been on an appreciating trend since 2005. Following sharp fluctuations around the global financial crisis, this appreciation trend resumed, albeit with large swings, and since Q2 2009 the shekel has appreciated by 30 percent in nominal effective terms and almost 20 percent in real effective terms (Figure 8). The continued appreciation, sharp at times, contributed to the undershooting of the inflation target and to the erosion of competitiveness of the goods exports sector, as reflected in a declining market share over the

years. However, while the trade balance returned to a deficit position after 2009, a current account surplus was sustained owing to an upward trend in net services income (see Figure 8).

Figure 8. Israel: External Balance Indicators, 2000–2019

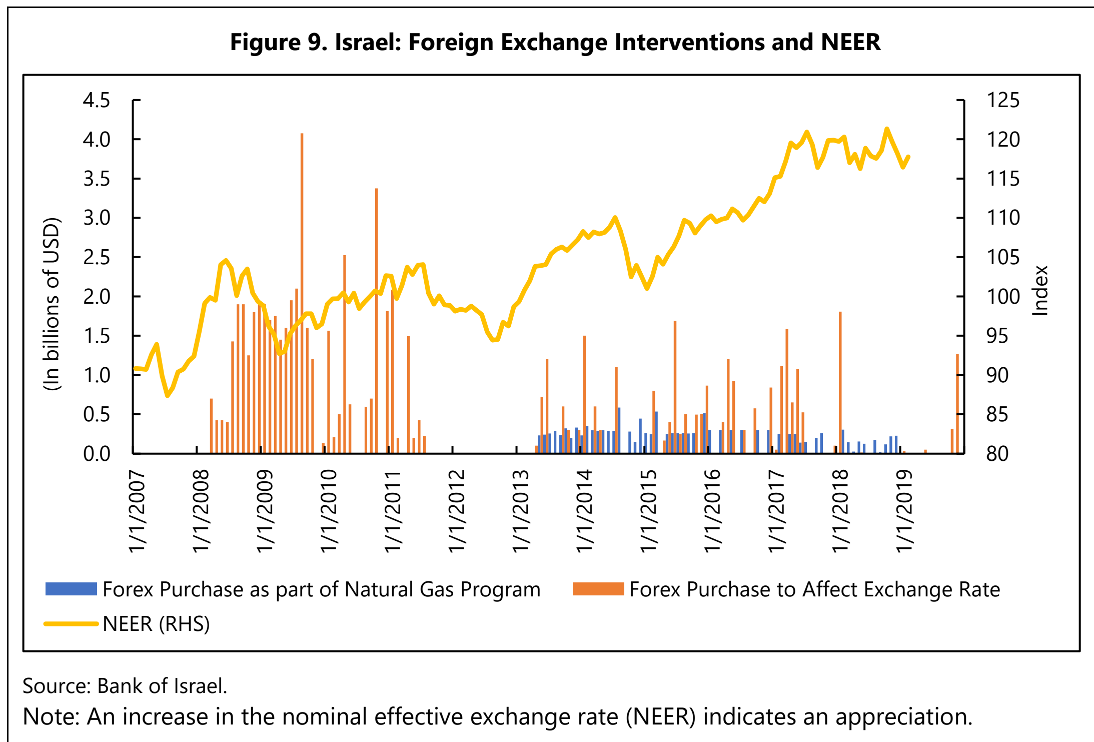


Sources: IMF, International Financial Statistics; April 2020 *WEO* database; Bank of Israel Statistics; and IEO staff calculations.

66. Following ten years without intervention in FX markets, the BoI intervened in March 2008, after sustained large capital inflows (both FDI and portfolio investment) produced a steady appreciation of the NIS which intensified in early 2008. The BoI subsequently decided to activate a plan to boost FX reserves, starting with fixed daily purchases of US$25 million, later increased to US$100 million daily. Besides supporting the goal of increasing reserves to an adequate level, the intervention aimed at countering appreciation pressures that were stemming from the spillovers from the exceptionally easy policies of major central banks. In August 2009, the BoI announced that it would cease its fixed daily purchases of FX, but that it would continue to intervene when fluctuations in the exchange rate were judged to be inconsistent with fundamental economic forces, or when the foreign exchange markets were not functioning

properly. In April 2013, the BoI introduced a program of preannounced intervention to offset the impact of natural gas discoveries on the external current account and to address concerns about potential Dutch disease effects, in advance of the planned establishment of the sovereign wealth fund (Figure 9).[27] FX reserves have trended upwards since then, including as a result of purchases by the BoI.

Figure 9. Israel: Foreign Exchange Interventions and NEER



Source: Bank of Israel.
Note: An increase in the nominal effective exchange rate (NEER) indicates an appreciation.

67. Israel has had a fully liberalized capital account since 2003. In January 2011, following a surge of inflows, some CFMs/MPMs were introduced in order to curb short-term capital flows: a reporting requirement was established on activities in FX derivatives, the market for central bank bills (Makam) and short-term government bond markets, and a 10 percent reserve requirement was placed on FX derivative transactions by non-residents. In November 2011, the Minister of Finance moved to eliminate the favorable tax treatment for foreign investors in the Makam market. These policy measures helped to lower the upward pressure on the shekel, which eased further as the BoI reduced its key rate. In October 2014 the reserve requirement was canceled.

B. IMF Engagement

68. The Fund's involvement with Israel was principally in the context of annual Article IV surveillance. Throughout most of the post-GFC period, the staff's advice to Israel was provided in an environment of relatively solid but moderate growth, a declining unemployment rate, low (and below target) inflation, rapidly rising housing prices, an appreciating currency, and stable

[27] For details see Flug and Shpitzer (2013). The wealth fund has not become operational because accumulated tax revenues have not met the minimum threshold specified in the law.

financial markets and institutions. During this period, the staff was supportive of the accommodative stance of Israeli monetary policy and urged the authorities to adopt a more ambitious fiscal consolidation plan. Regarding the housing market, the staff warned against the risk of a boom-bust cycle and supported the macroprudential measures taken to alleviate such risks.

69. Regarding the monitoring of capital flows, the IMF team tended to focus on these in times of higher than usual volatility or (according to BoI officials) when the team included an expert from MCM. For example, the 2013 Article IV Staff Report highlighted the volatility of portfolio flows and noted that "foreign investors brought large volumes of capital to take advantage of the interest rate differential between Israel and the major advanced economies." And the same report usefully explained that portfolio outflows that occurred in 2012 and 2013, following the introduction of mandatory private pensions in 2008, had not alleviated the appreciation pressures on the shekel because these flows were mostly hedged. The Fund staff was also effective in highlighting the implications of Israel's FDI inflows, recognizing in 2013 that "… FDI inflows were largely explained by reinvestments, owing to a considerable increase in retained profits of foreign companies operating in Israel…" but also that an inflow of investment in startups could give rise to "a Dutch-disease phenomenon."

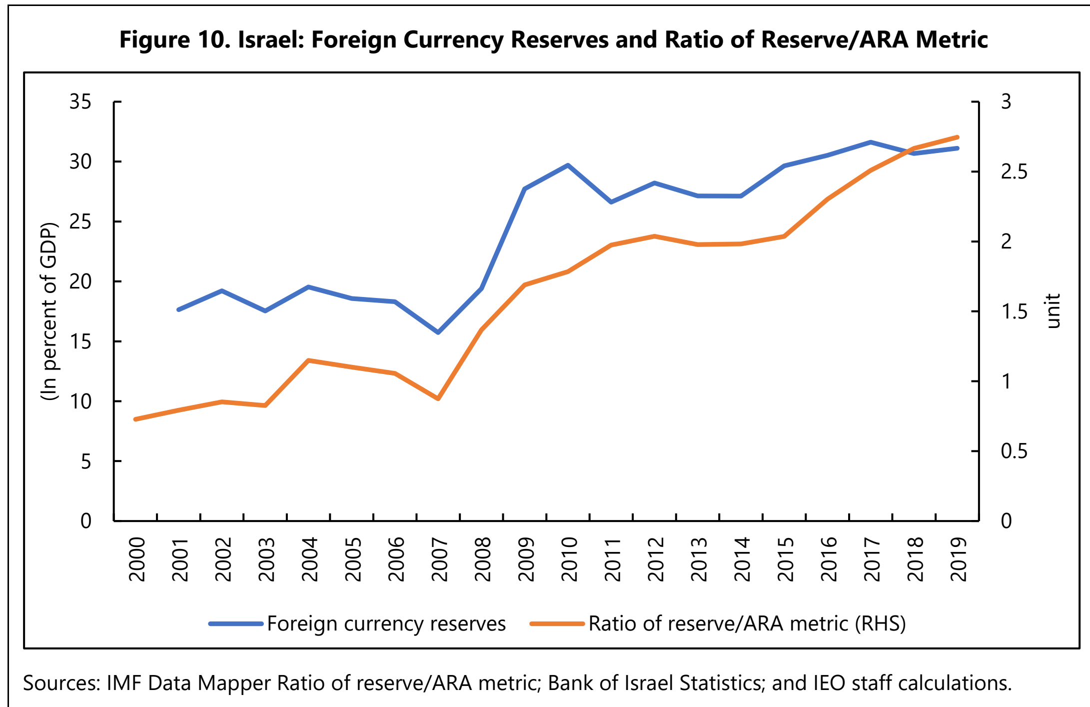
70. Staff reports did not highlight any major data gaps in the area of capital flows. However, the BoI had recognized that the Fund teams had been handicapped by shortcomings in their access to information on transactions in swap and other derivatives markets, and had beefed up their reporting requirements from market participants in 2016.

71. The Fund lent consistent support to the authorities' goal of increasing their FX reserves. For example, the 2008 Staff Report stated that "Further reserve accumulation seemed warranted by the continuing buoyant market conditions, reflected in the strength of the shekel, and by a desire to build up resilience to further shocks." And the 2017 Staff Report stated that "Although Israel's reserves exceed standard metrics relative to imports, short-term debt, and broad money, they do not appear excessive by international standards, especially considering Israel's geopolitical risk exposure and its limited export diversification," with a similar position expressed in the 2018 report (Figure 10).

72. The Fund staff and the authorities differed in their assessment of whether the exchange rate was misaligned with fundamentals. For most of the period under review, the BoI's view—based on a range of in-house and external analytical tools—was that the NIS was overvalued, at times significantly so, whereas the mission assessed that there was no clear misalignment. The staff maintained its position despite the fact that the nominal effective exchange rate was on an appreciating trend, and attributed the appreciation largely to fundamentals (including that Israel had weathered the global financial and euro area crises relatively well, had a strong current account surplus and robust FDI inflows, and was developing its natural gas reserves) while the BoI's view was that the ultra-expansionary monetary policies by major central banks played a

more significant role. Still, the 2013 Staff Report recognized that "occasionally, portfolio flows have influenced short-term fluctuations in the exchange rate."

Figure 10. Israel: Foreign Currency Reserves and Ratio of Reserve/ARA Metric



Sources: IMF Data Mapper Ratio of reserve/ARA metric; Bank of Israel Statistics; and IEO staff calculations.

73. EBA assessments since 2012 provided widely varying estimates of the "current account norm." This issue was especially stark in the 2017 Staff Report, which concluded that "a significant deviation of the shekel from fundamentals is not evident" despite a 26 percent appreciation of the unit-labor-cost-based real effective exchange rate for the shekel since 2009. However, by the time of the 2018 Staff Report, the staff seemed to be more cautious in its assessment, discounting the estimate of the current account norm and putting more weight on "real exchange rate analyses, which indicate that the shekel is either broadly in line with fundamentals or overvalued."

74. The Fund staff supported the BoI's decision to intervene in the FX market before and during the global financial crisis both for precautionary purposes and as a way to provide the needed monetary stimulus at the effective lower bound. By 2010, the staff's position appeared to caution against one-sided intervention—i.e., while acknowledging that capital flows could exhibit "irrational behavior even in 'normal' times … intervention should be symmetric but only over a fairly long time horizon."[28] However, by early 2013, the appreciation pressures resumed, and the staff supported the BoI's decision to introduce in April 2013 the program of preannounced

[28] This wording seems to indicate that although the Fund's headquarters-based reviewers felt that a free floating regime should be reflected in a two-sided intervention to the extent that intervention occurred, the staff team for Israel recognized that this would be unrealistic (at least in the short term) in the context of the ongoing one-sided upward pressure on the NIS.

intervention to offset the impact of natural gas development on the external accounts and to avoid potential Dutch disease. The staff remained supportive of the BoI's intervention policies during 2015–17.

75. But by 2018, the staff viewed the exchange rate as in equilibrium and stated that "FX intervention [should be] limited to addressing disorderly market conditions which may arise from significant exchange rate deviations from fundamentals." This contrasted with the BoI's view that the shekel was overvalued, and that intervention should not be limited to addressing disorderly market conditions but should be acknowledged as part of the set of monetary policy tools that Israel would prefer over using negative interest rates or QE. Foreign exchange intervention was also seen as a necessary instrument in the face of the spillovers from the unconventional monetary policies being employed by the major advanced economies.

76. Capital flow management policies were not a significant part of the conversation between the Fund staff and the Israeli authorities over the past ten years. The 2009 Staff Report acknowledged the potential disruption that would be caused by continued capital inflows, but it concluded that "capital controls and taxes on inflows would be inadvisable alternatives as their effectiveness is doubtful and both would compromise Israel's commitment to open markets." The following year, the 2010 Staff Report suggested that "controls on particular kinds of inflows could in principle play a role if the affected flows are large and have low substitutability with other kinds of flows. But efforts to satisfy this requirement internationally have typically run aground when the inflows were large and enduring, and Israel has little recent experience with controls, which on earlier occasions focused on curbing outflows rather than inflows. The signaling effects of such a step could also be problematic." The authorities' decision to use some CFMs/MPMs in 2011 was endorsed but not given much emphasis in the discussions or in that year's Staff Report, and the subsequent elimination of these measures in 2014 passed without note (the measures were not relevant for the OECD, which Israel joined only in 2014).

C. Assessment

77. The staff's coverage of capital flows in its discussions with the Israeli authorities appears to have been appropriate although not at the center of the policy discussions. Most staff reports analyzed the level and nature of the different types of capital flows and their potential effects on various macroeconomic variables; they referred to the risk of potential reversal of these flows and to the need to be prepared for such a reversal. They also referred to the spillover effects from unconventional monetary policies in driving some of the flows. However, staff teams could have been more proactive in identifying data gaps and could have pressed for official efforts to fill these gaps, including with more granular analysis of FDI, including inflows into tech sector startups.

78. The staff clearly recognized the policy dilemmas facing the Israeli authorities given the global and regional contexts, and appeared to fairly present the pros and cons of different policy options. For example, it raised concerns about the use of CFMs—both reputational and

regarding their effectiveness in an environment of a fully liberalized capital account. It did not, however, get into the specifics of possible such measures or the specific conditions under which they could be useful or, if introduced, when they should be phased out. The staff instead focused its policy advice on broader questions about the BoI's policies with regard to interest rates and FX intervention, and provided extensive analysis of fiscal and structural policies.

79. Assessments of exchange rate sustainability were often a point of contention with the authorities. In the authorities' view, the staff overrelied on a cross-country model of the equilibrium current account that did not consider sufficiently the role of capital flows, including the spillovers from advanced economies' monetary policies on the exchange rate.

80. Moreover, it was felt that the staff's current account/REER models—which were based on a cross-country panel regression—did not adequately consider country-specific factors. For example, in Israel the current account tends to be inflated by three factors: FDI to startups is recorded as exports of services; the introduction of a compulsory pension scheme was reflected in a surge in savings; and the finding of natural gas offshore has sharply reduced oil imports. Although these factors were acknowledged in the staff reports, they did not seem to have been consistently recognized in staff estimates of the equilibrium current account or the REER.[29] This suggests that the staff could have given more weight to such country-specific factors, or to the large margin of error around the model estimates.

81. Dealing with these uncertainties may have been complicated by turnover within the Fund staff team. A reading of the comments by headquarters-based reviewers of draft staff reports and briefs suggests that there was pushback when the team's judgment on the current account/REER deviated from the EBA model results, and the team's ability to make its case may have been handicapped by its relative unfamiliarity with the country specifics.[30]

82. Regarding FX intervention, the Fund was consistent in supporting intervention as a way to build up reserves when they were below the ARA, but its approach to FX intervention and reserve adequacy seemed to evolve over time and to be appropriately "situation specific." In periods when reserves were deemed adequate, intervention was supported just as a vehicle to deal with disorderly markets, and, at other times—especially when interest rates were at their effective lower bound or when spillovers from others' unconventional monetary policies were especially severe—intervention was considered as a legitimate part of the policy toolkit. Indeed, the BoI officials who were interviewed for this study appreciated that the Fund had become more open to recognizing FX intervention as a legitimate instrument of monetary policy.

[29] The effects of some of these factors were taken into account in the current account "norm" in the 2017 Staff Report, but not in subsequent years.

[30] For example, the Israel team was discouraged by reviewers in Washington from using its own model-based estimates and instead was asked to make only qualitative references to reasons why its exchange rate assessment might deviate from the standard approach.

83. The staff applied judgment when assessing the adequacy of Israel's FX reserves, taking into account country-specific circumstances that would suggest deviating from the results of the standard ARA methodology. The limited coverage of capital flow measures in the policy discussions also seems to have been appropriate given Israel's circumstances. The country did not face capital inflow or outflow pressures large enough to warrant this type of instrument, except the relatively minor CFM/MPM that was introduced in 2011. Moreover, the authorities' appetite for discussing the possible use of CFMs was likely to have been very limited in light of Israel's accession to OECD membership in 2014.

V. CONCLUSIONS

84. In each of the three countries surveyed, country officials generally appreciated the depth of the Fund team's monitoring and analysis of capital flows, and the manner in which this was applied in the context of Article IV surveillance and, in the case of Poland, the Flexible Credit Line arrangement. The quality of this work was confirmed by the rigor of the analysis that was contained in the teams' staff reports and Selected Issues papers.

85. CFMs were not a major point of discussion for the three case studies reviewed here, although these were assessed in the context of Israel and the possibility of using them as a contingency measure was considered by the staff in the case of Poland. The relatively light coverage is not surprising, however, since the capital flow pressures and the broader macroeconomic circumstances that the three countries faced did not appear to have warranted these types of measures for most of the period. Moreover, in all cases, the authorities' appetite for such measures (or for discussing them openly with Fund staff) seems to have been very limited, both because of their deep commitment to capital account liberalization and because such measures would have been inconsistent with their obligations to the EU and/or OECD.

86. This said, the three case studies above suggest a number of opportunities for strengthening the Fund's work on capital flow issues and related policies:

- Although the country officials interviewed generally appreciated the quality and thoughtfulness of the staff's advice, the impression left was that for the most part the dialogue focused on broader macroeconomic issues. The fact that the Fund staff was generally not seen as a source for more technical advice on implementation strategies (e.g., in the area of FX intervention) suggests a possible need to ensure that Fund teams have greater practical expertise, or to better leverage the use of IMF technical assistance.[31]

[31] In a similar vein, the IEO (2019a) report on IMF financial surveillance called for "the build-up of expertise needed for macrofinancial surveillance, including by recruiting and developing the needed in-depth experience and skills."

- For country authorities, the credibility of staff advice about current account and exchange rate sustainability appeared at times to have been undermined by its heavy dependence on cross-country models, including because the models did not sufficiently take into account country specifics.[32] The model results were sensitive to the variables included (which changed over time as the methodology changed); they did not appear to take full account of capital flows and their drivers; and they did not provide insights about why exchange rates might be deviating in the short run from longer-run fundamentals and how they might eventually return to equilibrium. Although standardized frameworks have advantages, these need to be further developed to give greater weight to the effects of capital flows, and greater license should be given to teams to avoiding using (and presenting) them as a "black box."[33]

- The staff's use of the ARA metric also appears to have been somewhat inconsistent in its consideration of country specifics. For example, while the staff appeared to accept Israel's exposure to geopolitical risks as a factor necessitating going beyond the ARA standard metric, in the case of Poland the staff did not seem willing to adjust its assessment to factor in Poland's potential access under its FCL arrangement or its sizable EU transfers.

- High turnover of country teams and mission chiefs can undermine their ability to effectively understand country contexts and can weaken the traction of their policy advice. It may also limit their scope to apply judgment in the application of the Fund's analytical tools and metrics and/or their ability to resist pressures from headquarters-based reviewers for a mechanistic application of these tools. Moreover, at least one country official suggested that coverage of capital flows and financial issues seemed to be somewhat dependent on the level of financial expertise of the IMF team. Ensuring consistency on both these fronts has been a concern of past IEO assessments and deserves continued effort (IEO, 2019b).

- Teams' reliance on the balance of payments for their analysis of capital flows may inadequately account for the impact of financial flows/off-balance sheet hedging transactions involving foreign exchange and foreign currency denominated asset transactions between residents, and similarly may also miss the effects of similar

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[32] Note that country-specific judgment appears to have been permitted for at least a subset of the countries covered by the External Sector Report. In the description of the EBA methodology, it is noted that "…external assessments naturally need to be complemented by country-specific knowledge and insights. To integrate country-specific judgment in an objective, rigorous and evenhanded manner, a process was created for arriving at multilaterally-consistency [sic] external assessments for a subset of the largest 30 economies" (Cubeddu and others, 2019).

[33] The importance of taking account of capital flows has also been emphasized by Hyun Song Shin, Economic Adviser and Head of Research of the Bank for International Settlements, in a speech given at the Joint G20/IMF seminar on global imbalances (April 2019): "Above all, the exchange rate loses traction in balancing current accounts when global firms are playing such an important role, and instead the financial channel acquired significance through the financing of working capital such as inventories and receivables" (see Shin, 2019).

offshore (non-resident-to-non-resident) transactions. To better understand the dynamics of the foreign currency market, there is a need to expand data coverage of transactions in derivatives, swaps, offshore transactions, etc. The Fund should urge the authorities to fill data gaps in this area.

- The presentation and discussion of Selected Issues papers during missions (e.g., for Croatia on balance sheet vulnerabilities and Israel on housing and mortgage market risks) was much appreciated by country officials. Although the Fund has long tried to make this practice common, it does not yet seem to be uniform. Continued efforts to ensure that country officials have the opportunity to discuss the results of the teams' analytical work before it is finalized could improve its quality, enhance the clarity about the reasoning behind the staff's policy advice, and contribute to the authorities' own analytical capacity.

- Similarly, the Fund's work on the Vienna Initiative was viewed as very helpful by multilateral partners involved, but it did not seem to have been a feature of the Article IV teams' discussions with country officials or to have been given any prominence in staff reports.

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