EUROPEAN CENTRAL BANK

EUROSYSTEM

Occasional Paper Series

IRC Task Force on IMF and
Global Financial Governance Issues

The IMF's financial surveillance in Europe – experiences with FSAPs and their links with Article IV consultations

No 246 / July 2020

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Introduction and executive summary

Cross-border financial integration has increased the need to make suitable multilateral arrangements for global financial cooperation and oversight – these include more intense and more effective financial sector surveillance by the International Monetary Fund (IMF). The financial sector has a crucial role to play in addressing today's global health emergency, and it is important that it remains sufficiently resilient to facilitate the prompt return to more orderly economic conditions worldwide.

Financial sector surveillance has become a central element of the IMF's work over the years, and is currently articulated across three main dimensions (bilateral, multilateral and regional, which include currency areas such as the euro area).[1] Article IV (AIV) consultations and Financial Sector Assessment Programs (FSAPs) are the main tools used in bilateral financial surveillance.

This report focuses on the Fund's FSAPs and their links with AIV consultations. It is based on the experiences and views of ESCB members involved in conducting FSAPs and AIV missions.[2] The main objective of the report is to help the authorities of the EU and its Member States formulate their own views and prepare common EU messages in two separate but interrelated reviews of the IMF's financial surveillance framework (the 2020 FSAP Review and the Comprehensive Surveillance Review or CSR).

FSAPs represent a key diagnostic tool in the Fund's toolkit. They are comprehensive stocktaking exercises conducted at a lower frequency than AIV consultations to detect possible fault lines in Fund members' financial systems in the light of granular supervisory data and following in-depth assessments of a country's financial sector. They comprise analyses of systemic risk (both within and across segments of the sector), financial policy frameworks and financial safety nets.

FSAPs have been favourably received by IMF member countries. This has reflected the authorities' desire either to obtain a seal of approval or to upgrade their own financial systems via a process of independent assessment that could help to build capacity or garner domestic support for medium-term reforms. Since their inception in 1999, the IMF has conducted several hundred FSAPs across most of its jurisdictions. All assessments were carried out on a

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1 In response to the East Asian financial crisis, the IMF developed the Financial Sector Assessment Program (FSAP) and the Global Financial Stability Report (GFSR); see Gola and Spadafora (2009) for a detailed discussion of these earlier developments. With the onset of the global financial crisis, the scope, coverage and intensity of financial surveillance expanded further and financial sector issues attracted growing attention, including in the context of AIV consultations. Moreover, the Fund developed the Early Warning Exercise (EWE) and strengthened its cooperation with other institutions, such as the Financial Stability Board (FSB) and standard setting bodies, with the objective of promoting reform, monitoring standards and improving the financial expertise of IMF staff involved in the assessments.

2 This report was prepared by a team comprising experts from ten national central banks (NCBs) and the ECB (the Task Force; see the List of Task Force members at the end of this document). The Bank of England also contributed by providing background information and comments in an earlier draft of the report.

voluntary basis until September 2010, after which they were formally declared mandatory for all members with a systemically important financial sector.

At the same time, FSAPs have become more burdensome and time-consuming for both the participating authorities and the IMF. This is due to the rising complexity of financial sector issues and the related need to deploy more sophisticated tools and analyses. While FSAP work represents a relatively small proportion of Fund-wide personnel expenditure relating to bilateral surveillance (Stedman, 2018), FSAP missions mostly fall to the Monetary and Capital Markets Department (MCM), which is primarily responsible for conducting the FSAPs and also contributes to financial stability assessments in a number of AIV consultations. This also means that any further enhancement of financial surveillance activities at the Fund is likely to raise significant trade-offs in the deployment of the IMF's budgetary resources.

This report discusses supply-side issues related to the FSAP. In particular, it focuses on two issues: (i) how to better integrate these exercises with AIV consultations, in order to improve the overall traction of Fund surveillance; and (ii) how to make FSAPs less burdensome and more cost-effective. Wherever relevant, these issues are addressed from a predominantly European Union (EU) and euro area perspective, reflecting the specific allocation of responsibilities across national and supranational authorities.

The report is organized as follows.

Chapter 1, "Financial sector surveillance at the IMF", contains a description of the legal basis and the analytical tools used for Fund surveillance over the financial sectors of its members. It includes an explanation of the key features and components of an FSAP.

Chapter 2, "IMF surveillance in the European Union", sets out why it has been necessary to devise parallel and self-reinforcing modalities of financial surveillance at both the national and the supranational level in Europe. It also contains a brief description of the size and the structure of national and area-wide financial systems, as well as the complex institutional arrangements for governing these systems, with responsibilities allocated at the national and the European level.

Chapter 3, "Discussion of experiences with FSAPs and Article IV consultations and possible reform options", presents a commentary on European experiences with FSAPs and their integration with AIV consultations. The chapter also contains a discussion of possible reform options and the related pros and cons.

Chapter 4 presents concluding comments and key policy messages.

The main recommendations of this report, as endorsed by the IRC, are outlined below.

Recommendation No 1: FSAP integration with Article IV consultations

Greater integration between FSAPs and AIV consultations is key to reinforcing the overall traction of IMF financial surveillance. The following steps are recommended:

- AIV consultations should devote further attention and resources to macro-financial stability risks. At the same time, FSAP analyses and recommendations should be structured in a way that allows them to be followed up more easily during subsequent AIV missions.
- AIV consultations and national FSAPs could be complemented, as needed, by ad hoc selective assessments focusing on national circumstances and carried out flexibly. Such assessments would not involve all three pillars of an FSAP and could instead be conducted as a part of an AIV consultation, at a variable frequency and depending on circumstances. At the same time, these ad hoc selective assessments should in no way be regarded as undermining comprehensive and regular national FSAPs.
- Greater integration between FSAPs and AIV consultations also requires the more systematic participation of FSAP team members in AIV missions and vice versa. To this end, the possibility was considered of the AIV mission chief co-leading the FSAP mission and vice versa.

Recommendation No 2: Analytical themes for future FSAPs

The IMF should continue to refine its analytical tools. This will enhance their transparency, improve the surveillance of macro-financial linkages, and provide a deeper analysis of financial sector vulnerabilities and the potential financial stability implications of new risks. Priority areas are listed below.

- The IMF should acknowledge the potentially systemic character of cyber risks in FSAP analyses and avoid viewing related operational risks as idiosyncratic. Emerging issues such as fintech and cyber risks should be routinely addressed in FSAP exercises and, where urgent and relevant, through ad hoc selective assessments, in jurisdictions in which financial technologies are changing rapidly.
- FSAP analyses of climate risks should be expanded. These should cover both macro-critical transition and physical risks to the financial sector, and should include direct and indirect transmission channels through which climate shocks may affect the real economy.
- Another important analytical area relates to the interlinkages between different subsectors of the economy, as well as risks from international spillovers.
- FSAPs should further deepen the analysis of risks related to the non-bank financial sector and the macroprudential policy measures implemented to address them.

Recommendation No 3: FSAP frequency and systemic importance

Countries with a systemically important financial sector (SIFS) should continue to undergo an FSAP more frequently than others. The current five-year frequency for mandatory FSAPs represents a reasonable compromise between the need to closely monitor these jurisdictions over time and the need to avoid overburdening the Fund and its membership. The following considerations are offered.

- *The systemic nature of a jurisdiction on the one hand, and the selection of non-systemic countries on the basis of vulnerability and risk on the other, should be the guiding principles used to determine the frequency of FSAP exercises.*
- *Any modification to the methodology used to determine systemic importance or the frequency of mandatory FSAPs should not lead to a reduction in the number of SIFS. It should also ensure that IMF surveillance retains its current coverage and quality.*
- *Contingency resources should be maintained by the IMF to allow an FSAP to be moved ahead of the cycle in potentially urgent cases. Alternatively, urgent issues could be addressed in the context of AIV consultations or through ad hoc missions.*
- *The pros and cons of a more nuanced differentiation of FSAP frequencies by systemic jurisdiction were also examined, although it was not possible to reach any firm conclusions.*

Recommendation No 4: FSAP questionnaires

A number of possible options have been assessed in order to mitigate the impact of FSAP exercises on national authorities. The relevant options include:

- a reduction in the scope of FSAP questionnaires, in particular questions pertaining to the institutional setting and the structure of the financial system;
- greater use of publicly available data/information and the development of a common template for presenting financial sector data for FSAP purposes;
- increased reliance on harmonised EU templates and statistics in order to help national authorities provide the FSAP preparatory material to IMF staff and to agree, on an ex ante basis and to the extent possible, on the entire data requirement for the FSAP exercise;
- the reorganisation of FSAP preparatory work to better reflect the allocation of tasks and responsibilities between national and supranational authorities.

Recommendation No 5: FSAP stress testing

In the field of FSAP stress testing, streamlining could potentially improve the use of resources, reduce the burden on authorities, and achieve more value added and traction from FSAPs. With regard to FSAP stress testing for the banking sector, the following suggestions were made.

- Re-orient the Fund's stress tests by enhancing the macroprudential and system-wide characteristics of their exercises, taking a cross-sectoral approach.
- Pay greater attention to more topical areas, including interconnectedness between financial institutions and sectors, and new emerging risks.
- Help country authorities to deepen their understanding of non-bank financial sector issues and improve the quality and accuracy of related data sources. Provide, as required, technical assistance on the development of stress tests for non-bank financial sectors in which techniques have not yet been established.
- Consider possible ways of reducing the burden of FSAP stress tests on national authorities and make appropriate use of stress tests produced outside the FSAP context. In this regard, a range of options could be considered, including greater reliance on stress test models already available for the country under scrutiny, while potentially adjusting parameters or scenarios or agreeing a bilateral understanding of data requests and their granularity.

Recommendation No 6: Articulation of FSAPs in the euro area

The FSAP exercises should be continued at both the national and the supranational level in the euro area.

- It is important to maintain a clear framework for the coverage of issues pertaining to significant and less significant institutions in both national FSAPs and FSAPs on euro area policies (EAP-FSAPs), as well as for the division of labour between the ECB and national competent authorities (NCAs). An informal agreement, reached at the level of the Economic and Financial Committee in 2018, remains adequate and necessary, as it provides such a framework.
- With regard to financial safety nets and crisis management, some clarifications might be helpful to better reflect the distinction between the responsibilities and tasks of the national resolution authorities (NRAs) and the Single Resolution Board (SRB) (for resolution planning and crisis preparedness and management) and those of the ECB and the NCAs (for recovery planning). This applies both in the scoping of the IMF's missions and in the delineation of the results.
- EAP-FSAPs should be carried out on a regular basis, preferably at the same frequency as those for other systemic financial systems. Under no circumstances, however, should a regular EAP-FSAP reduce the need for comprehensive national FSAPs.

Recommendation No 7: Costs of financial surveillance and Fund's resources

Adequate resources should always be available for carrying out FSAPs and other financial surveillance exercises.

- In order to take a considered decision regarding the impact on the Fund's overall budget and the extent to which that budget could be reallocated across functions and departments, cost implications are best addressed in a holistic manner, i.e.

by looking at the "big picture" and considering the entire range of the Fund's activities.

- The IMF should start, as soon as possible, a review of its budgetary and human resources policies, based on the priorities identified in its 2020 FSAP review and the CSR.

1 Financial sector surveillance at the IMF

This chapter contains a description of the legal basis and the analytical tools for Fund surveillance of the financial sector of its members, including a characterisation of the key features and components of an FSAP.

1.1 Legal basis

The Articles of Agreement (AOA), specifically Article IV, Sections 1 and 3, provide the broad legal basis for Fund surveillance – this also covers the financial sector. Member countries are obliged to cooperate with the Fund in the context of its surveillance duties (Article IV(1)) and the Fund is requested “to oversee the compliance of each member with its obligations under Section 1 of this Article” (Article IV(3)). Policies on how to discharge obligations or exercise membership rights deriving from the Articles are defined by Decisions adopted by the IMF’s Executive Board. These include Decisions regarding the specific principles and procedures followed by the Fund to fulfil its surveillance duties. The Fund’s Surveillance Decisions, adopted by a majority of the votes cast, are subject to periodic review and modification over time.

The current framework for IMF surveillance is set out in the 2012 Integrated Surveillance Decision (ISD; see IMF, 2012). The ISD specifically recognises the Fund’s responsibilities in respect of financial sector surveillance, noting that the international monetary system can only operate effectively in an environment of global economic and financial stability. To that effect, the Fund’s responsibilities have been expanded, with staff being mandated to explore financial sector issues relevant to domestic stability. Moreover, potential policy spillovers received greater attention, as the Decision stipulated that AIV consultations should also “include a discussion of the spillover effects of a member’s exchange rate and domestic economic and financial policies that may significantly influence the effective operation of the international monetary system, for example, by undermining global economic and financial stability” (IMF, 2012).[3]

The Financial Sector Assessment Program (FSAP) represents, together with AIV consultations, an important tool for the Fund’s bilateral surveillance of its members’ financial sector. The FSAP began in 1999 as a pilot project, and was initially conducted on a voluntary basis. FSAPs are carried out jointly by the IMF (with its focus on financial stability) and the World Bank (with its focus on developmental

[3] The ISD further emphasises the importance of sound domestic policies as a precondition for external stability, noting that “systemic stability is most effectively achieved by each member adopting policies that promote its own balance of payments’ stability and domestic stability”. The ISD did not create any new obligations for members, whose “legitimate policy objectives, including domestic social and political policy objectives that are beyond the scope of Article IV” are fully recognised by the Fund. Furthermore, the ISD acknowledged that “the Fund will not require a member that is complying with Article IV, Sections 1(i) and (ii) to change its domestic policies in the interests of external stability” (IMF, 2012).

issues).[4] For advanced economies, the FSAP is conducted by the IMF alone. At the multilateral level, financial sector surveillance also includes the GFSR[5] and the EWE.[6]

Since its inception, the FSAP has been subject to periodic review and the FSAP's legal context has evolved in accordance with the decisions taken by the IMF's Executive Board.[7] In 2010, the Board decided to make FSAPs a mandatory part of AIV surveillance for jurisdictions with a SIFS.[8] 25 jurisdictions were identified as having a SIFS, and it was decided that these jurisdictions should undergo an FSAP assessment every five years (see **Section 1.2.3** and **Box 2** for an in-depth discussion). The list of jurisdictions with a SIFS was last reviewed in 2013, when the legal basis for mandatory financial stability assessments was aligned with the 2012 ISD, and the methodology used to determine whether a jurisdiction has a SIFS was further refined.[9] As a result, the list of jurisdictions with a SIFS was expanded from 25 to its current number of 29.[10] The legal basis for mandatory FSAPs is provided by Article IV of the AOA. Voluntary FSAPs, conducted when requested by authorities, are similar in most ways to mandatory FSAPs (with regard to documentation, board engagement, processes, etc.) although from a legal point of view they are assimilated with technical assistance and find their legal basis in Article V Section 2(b).

1.2 FSAP features

1.2.1 Overview of a typical FSAP

An FSAP entails a comprehensive and in-depth financial sector examination and assessment, often based on confidential data pertaining to individual institutions. It recommends reforms and helps to build capacity (see **Box 1** for details of how a FSAP treats confidential data).

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4 These modules were introduced in 2009.

5 In 2002 the Capital Markets Report was replaced by the GFSR, in order to focus more on assessing global financial markets and identifying vulnerabilities that could pose a risk to financial stability and sustained market access for emerging market borrowers.

6 The EWE was set up in 2009 at the request of the G20 to identify tail risks, mainly in respect of macro-financial and financial stability issues, and to "join the dots" between different markets, sectors and countries that could play a role in amplifying and propagating these risks.

7 FSAP reviews were conducted in 2003, 2005, 2009, 2010, 2013 and 2014.

8 IMF Decision No 14736-(10/92), "Integrating Stability Assessments under the Financial Sector Assessment Program into Article IV Surveillance", adopted on 21 September 2010.

9 IMF Decision No 15495-(13/111), "Mandatory Financial Stability Assessments under the Financial Sector Assessment Program—Update", adopted on 6 December 2013.

10 The current list of jurisdictions with a SIFS consists of (with the year of their last FSAP shown in brackets): Australia (2019), Austria (2019/2020), Belgium (2018), Brazil (2018), Canada (2014), China (2017), Denmark (2014), Finland (2016), France (2019), Germany (2016), Hong Kong SAR (2014), India (2017), Ireland (2016), Italy (2019/2020), Japan (2017), Korea (2013), Luxembourg (2017), Mexico (2016), the Netherlands (2017), Norway (2015), Poland (2019), Russia (2016), Singapore (2013), Spain (2017) Sweden (2016), Switzerland (2014), Turkey (2016), the United Kingdom (2016), and the United States (2015).

Figure 1
Sequence of steps in an FSAP mission

FSAP missions follow a precise sequence of steps. The mission begins with informal contact between the IMF and national authorities, followed by a scoping mission during which the IMF team and national authorities agree on the perimeter of the assessment and other details such as the dates of IMF country missions and expected IMF deliverables. Informal contact normally takes place four to five months before the scoping mission – in some cases even earlier. Following the scoping mission, the IMF carries out two country missions. The period between the start of a scoping mission and the end of the second country mission (around seven to nine months) is the most work-intensive for the IMF teams as well as the national authorities. FSAPs officially conclude with an IMF board discussion, which usually takes place three to five months after the end of the second country mission and more than a year after the scoping mission. To sum up, the time required to complete an FSAP – including the preparatory phases – may be as long as 18 months, depending on the size and complexity of the system under scrutiny.

The FSAP team is headed by a mission chief and consists of between ten and twenty IMF staff and between five and ten external experts, depending on the size and complexity of the financial system under review. IMF team members are largely represented by the staff of the MCM, although experts from area departments and from functional departments such as Legal, Statistics, Research and Strategy may also form part of the team and/or provide input to the written reports.

The costs borne by the Fund vary widely across individual FSAPs, mostly reflecting the size and complexity of the financial systems under scrutiny and their policy frameworks. Other factors include whether FSAPs are simple follow-ups or first-round exercises, language barriers, travel distances and the type of access to confidential data granted by the relevant authorities (Stedman, 2018).

The main findings of an FSAP are presented in a Financial System Stability Assessment (FSSA), a document which is, eventually, published and is accompanied by additional technical notes (e.g. notes on stress testing). The assessment also includes a Report on the Observance of Standards and Codes (ROSC), which serves as a detailed quality check of a jurisdiction's financial regulations and supervision against international standards (e.g. the Basel Core Principles for effective banking supervision). These quality checks are especially useful from a cross-border perspective, since they help the competent authorities of third countries to gauge the adequacy of the home supervisory regimes of foreign banks operating in their jurisdiction.

The FSAP documentation is generally quite voluminous compared with that attached to AIV consultations: while the size of an FSSA varies from a minimum of around 40 to

a maximum of over 110 pages, the related technical notes could easily run to over 400 pages.

1.2.2 The core elements of a stability assessment

The FSAP's stability assessment is currently organised around three pillars, reflecting the need to approach increasingly sophisticated and integrated financial systems by taking a holistic view of risks, vulnerabilities, crisis management tools, and prudential and other frameworks (IMF, 2009). The pillars are as follows.

- *An evaluation of the main macro-financial stability risks and their potential impact.* This involves analysing the structure and soundness of the financial system, trends in financial sectors, macro-financial links, risk transmission channels, and the features of the policy framework that may attenuate or amplify financial stability risks.
- *An assessment of the country's financial stability policy framework*. This evaluates the effectiveness of financial sector supervision, the quality of financial stability analyses and reports, and the role of and coordination between the various institutions involved in financial stability policy.
- *An assessment of the authorities' capacity to manage and resolve financial crises.* This involves an evaluation of financial safety nets, crisis preparedness and resolution frameworks, and possible spillovers from the financial sector to the sovereign.

1.2.3 Voluntary versus mandatory FSAPs

Since 2010, FSAPs have been made mandatory for countries deemed to have a SIFS. The method adopted in 2013 for determining systemic importance uses a network-based approach, based on the structural features of a financial sector, i.e. size and interconnectedness (IMF, 2013; see also **Box 2**).[11]

The remaining countries may request an FSAP on a voluntary basis. Such requests are prioritised based on (i) the systemic importance of the country, (ii) macroeconomic and financial vulnerabilities, (iii) major reform programmes that might benefit from a comprehensive financial sector assessment, and (iv) the features of the exchange rate and monetary policy regime that make the financial sector more vulnerable. Initial FSAPs have a broad coverage, whereas FSAP updates (typically around six to seven years after the initial assessment) are more focused. FSAP updates may be either "full" or modular, where the latter is a more targeted and focused stability assessment, together with a risk-based assessment of international standards (IMF, 2018b).

[11] The euro area itself is not on the list of jurisdictions with a SIFS, so euro area authorities are not legally compelled to undergo a mandatory FSAP, although they can always volunteer to undergo one. The last FSSA for Euro Area Policies (IMF 2018a) was discussed by the Executive Board as part of its discussion of the Euro Area Policies report in July 2018.

1.2.4 Analytical tools used to assess financial sector resilience

The most important analytical tools used in stability assessments are: (i) stress testing, (ii) systemic risk analyses, (iii) reviews of standards and codes and (iv) Risk Assessment Matrices (RAMs).

Stress testing – Stress tests are conducted to assess financial sector resilience, in particular that of the banking sector. These exercises typically involve both (i) a scenario analysis, which seeks to assess the resilience of the financial system to scenarios that entail simultaneous changes in a number of macroeconomic variables, which are mapped to implications for financial risks, and (ii) a sensitivity analysis, which aims to identify the vulnerabilities of the financial system with regard to changes in individual financial variables such as interest rates, exchange rates and equity prices (IMF, 2003).

The IMF's approach to stress testing broadly consists of the following steps: (a) an initial assessment of vulnerabilities, (b) scenario design, (c) stress tests of solvency, liquidity and contagion, and (d) the identification of risk amplification mechanisms. The IMF's stress tests are macroprudential in nature, meaning that they assess systemic risk rather than risk for individual institutions. Stress testing exercises usually consist of top-down tests (conducted by IMF staff, sometimes in collaboration with national supervisors but based on their own data, scenarios, assumptions and models), although they may sometimes include bottom-up stress tests (produced by financial institutions) based on a methodology and scenarios agreed with IMF staff (Adrian et al., 2020).

Systemic risk analysis – A range of other analytical tools can be used to identify and assess the (systemic) risks and vulnerabilities faced by the financial sector. Important tools include: (i) an interconnectedness and spillover analysis, which seeks to assess the impact of shocks transmitting from an individual financial institution to the rest of the financial system, domestically and cross-border, (ii) a bank profitability analysis, which aims to uncover the key cyclical and structural determinants of bank profitability, (iii) a contingent claims analysis for the sovereign, financial and non-financial sectors, and (iv) a resilience analysis of the non-financial private sector (IMF, 2003; IMF, 2009; and IMF, 2018a).

Assessment of standards and codes – A key objective of the ROSC is to examine whether the regulatory and supervisory frameworks in place adequately address the vulnerabilities and risks identified by the IMF, thereby contributing to the overall assessment of financial system stability. These assessments typically concern compliance with international standards in three areas: (i) financial sector regulation and supervision; (ii) institutional and market infrastructure; and (iii) policy transparency

(IMF, 2003).[12] Assessments of standards and codes may be especially useful in gauging the adequacy of the home supervisory regimes of foreign banks operating in a specific host jurisdiction.

Risk Assessment Matrix – This was introduced in 2010 to help organise the analysis and presentation of stability assessments and facilitate their integration into bilateral and multilateral surveillance. RAMs combine the identified major sources of risks, possible triggers and transmission mechanisms with an assessment of regulatory, supervisory and crisis management frameworks and the results of stress tests. The aim of this is to produce qualitative assessments of (i) the probability of risk triggers being activated (low, medium or high), and (ii) the potential impact those events would have on financial stability and the broader economy if they were to materialise (IMF 2009).[13]

Box 1

The FSAP Confidentiality Protocol – protection of sensitive information

Adopted in March 2000 by the IMF's Executive Board, the FSAP Confidentiality Protocol is a key component of the legal framework which applies the classification and handling of sensitive information and documents relating to the FSAP. It was devised in acknowledgement of the fact that particular issues of confidentiality and publication arise in connection with the FSAP – both regarding the handling of the information that FSAP teams need to carry out their work, which includes confidential data on individual institutions and can be market sensitive*, and the documents produced by FSAP mission teams for country authorities and the Executive Board.

Accordingly, the Protocol sets out security procedures and applicable rules for IMF staff members and consultants, with the aim of preventing unauthorised access to and disclosure of sensitive information obtained through the FSAP exercise, including its classification and transmission. Assurances to that end are provided in the form of a letter sent by the IMF's Financial Counsellor to the member country authorities taking part in the FSAP. The Protocol constitutes an application of the existing policies and guidelines concerning the safeguarding of sensitive information and documents, and does not represent the adoption of new policies or guidelines (IMF, 2000). The Protocol was developed as a means of encouraging information-sharing by national authorities (especially those not normally involved in the traditional AIV consultations), and to allay possible concerns related to the presence of external experts in FSAP teams.

(*) The Fund can only obtain information on individual entities resident in the territory of its member countries with the consent of the authorities, because Article VIII, Section 5(b) provides that "Members shall be under no obligation to furnish information in such detail that the affairs of individuals or corporations are disclosed." In addition, domestic laws typically limit the disclosure of information on individual entities obtained by supervisory or other regulatory agencies.

[12] The standards routinely assessed are: (i) the IMF Code of Good Practices on Transparency in Monetary and Financial Policies, (ii) the Basel Core Principles of Effective Banking Supervision, (iii) Core Principles for Systemically Important Payment Systems, (iv) the International Organization of Securities Commissions Objectives and Principles of Securities Regulation, (v) the International Association of Insurance Supervisors' Insurance Core Principles, and (vi) the Financial Action Task Force Recommendations for Anti-Money Laundering and Combating Financing of Terrorism (IMF, 2010). Since 2009 there has also been an option for a targeted, risk-based update on compliance with the Core Principles for banking, securities and insurance regulation. This option applies in those cases in which an initial full assessment has been carried out in a previous FSAP (IMF, 2018b).

[13] RAMs are also used in AIV consultations, but from a different perspective. In this case, they cover major global, regional, or country-specific macroeconomic, financial sector and geopolitical risks that could materially alter the (forecast) baseline path, with an assessment of their likelihood and potential economic impact.

Box 2

Identifying jurisdictions with a systemically important financial sector

There are several methods used to measure the degree of interconnectedness in financial networks (see, for example, Newman, 2010). The IMF has employed the Clique Percolation Method (CPM) as a practical approach for identifying the core of systemic jurisdictions.* The CPM has been applied to four specific networks that could cause contagion between financial sectors: (i) bank claims, (ii) debt claims, (iii) equity claims and (iv) stock market return correlations. The first three networks correspond to direct connections (since they use cross-border exposures between financial systems), whereas the fourth network captures indirect connections through common movements in asset prices.

Bilateral exposures are weighted to reflect the role of size. The nominal exposures between any two jurisdictions are weighted by two sets of weights: jurisdictions' GDP (at purchasing power parity) and derivatives exposures which aim, respectively, to capture jurisdictions' size and complexity.

The CPM takes a holistic view of the connections in a network, so the importance of a jurisdiction in a network depends not only on the number of direct linkages it has with its neighbours, but also on the linkages those neighbours have with others. For this purpose, the CPM defines the core of a network as a union of "cliques", which are subgroups of jurisdictions that are fully interconnected to each other. For a given network, the CPM algorithm searches through the linkages to identify cliques, the union of which is the core of that network. The union of the cores of the four financial networks constitutes the SIFS-list (for more details, see IMF, 2013, Appendix I).

(*) The CPM identifies all k-cliques, i.e. sets of at least k jurisdictions that are all fully connected to each other. The k-clique is intuitively the basic building block of the systemic core, since a systemic jurisdiction must be connected to several neighbours.

2 Financial surveillance in the European Union

This chapter illustrates the main features of the European financial system(s) and the challenges these features can pose to effectively conducting IMF surveillance. The intention is to highlight why it has been necessary to devise parallel and self-reinforcing modalities of financial surveillance over the policies pursued by national and supranational authorities in the EU and the euro area. It contains a description of the size and structure of national and area-wide systems, as well as the complex institutional arrangements for governing these systems and the allocation of responsibilities between the national and the supranational levels. These arrangements are taken as a given and will not be called into question in this report.

2.1 The size and structure of national and EU-wide financial systems

EU countries have, on aggregate, one of the biggest financial systems in the advanced world. As of end-2018 and excluding the United Kingdom, financial assets on the balance sheets of all financial institutions resident in the EU amounted to €86 trillion, almost eight times the area's GDP (whereas the figure was €79 trillion and 681% of GDP for the euro area; see Table 1). Relative to GDP, the EU's financial system is bigger than that of the United States (479%), but smaller than that of Japan (734%), and much smaller than those of countries with large financial centres such as Switzerland (1047%) and the United Kingdom (1107%).

Table 1

The size and structure of European financial systems, by country aggregates and category of financial institution

	EU27[1]		Euro area	
	2015	2018	2015	2018
Total financial assets (EUR trillions)	81.1	86.6	72.3	78.7
Monetary financial institutions[2]	38.3	41.3	32.7	36.4
Monetary financial institutions (excluding central banks)	*34.1*	*34.6*	*27.8*	*28.6*
Insurance corporations and pension funds	10.3	11.3	9.3	10.0
of which: Insurance corporations	7.5	8.0	7.1	7.5
of which: Pension funds	2.9	3.3	2.1	2.5
Investment funds	10.8	12.5	9.4	11.2
Other financial institutions	21.7	21.5	21.0	21.0
Total financial assets (as a percentage of GDP)	665.1	643.9	687.8	681.4
Monetary financial institutions[2]	314.3	307.2	310.7	315.3
Monetary financial institutions (excluding central banks)	*279.5*	*257.4*	*264.7*	*248.0*
Insurance corporations and pension funds	84.8	83.8	88.0	86.8
of which: Insurance corporations	61.4	59.2	67.8	65.4
of which: Pension funds	23.5	24.6	20.2	21.4
Investment funds	88.2	93.2	89.8	97.1
Other financial institutions	177.7	159.7	199.4	182.2
Total financial assets (percentages)	100.0	100.0	100.0	100.0
Monetary financial institutions (excluding central banks)	44.3	43.3	41.2	40.4
Insurance corporations and pension funds	13.5	14.1	13.7	14.1
of which: Insurance corporations	9.7	10.0	10.6	10.6
of which: Pension funds	3.7	4.1	3.1	3.5
Investment funds	14.0	15.7	14.0	15.8
Other financial institutions	28.2	26.9	31.1	29.7

(1) Excluding the United Kingdom.
(2) Including central banks.
Sources: European Central Bank and Eurostat.
Note: For a detailed description of the institutional sectors represented in this table, see Annex A.1.

Banks represent the most important component of the EU27 financial system. The share of monetary financial institutions (MFIs) excluding the ESCB (a financial accounts aggregate consisting mostly of banks; see Annex A.1 for details), was equal to 43.3% of total financial assets (40.3% for the euro area). These values were well above the corresponding share for US banks (25.5%). As a ratio to the area's GDP, banking assets were equal to 257% (248% for the euro area).

Overall, in the period 2012-18 the relative weight of European banks decreased in all areas under consideration, while the non-banking financial sectors grew in size and importance, in particular the residual category "other financial institutions" (OFIs), but also insurance corporations and pension funds (ICPFs) as well as non-money market investment funds (non-MMIFs).

Non-MMIFs and OFIs represent the bulk of non-bank financial intermediation (NBFI, as defined in FSB, 2019) – a set of entities and activities which is regularly monitored

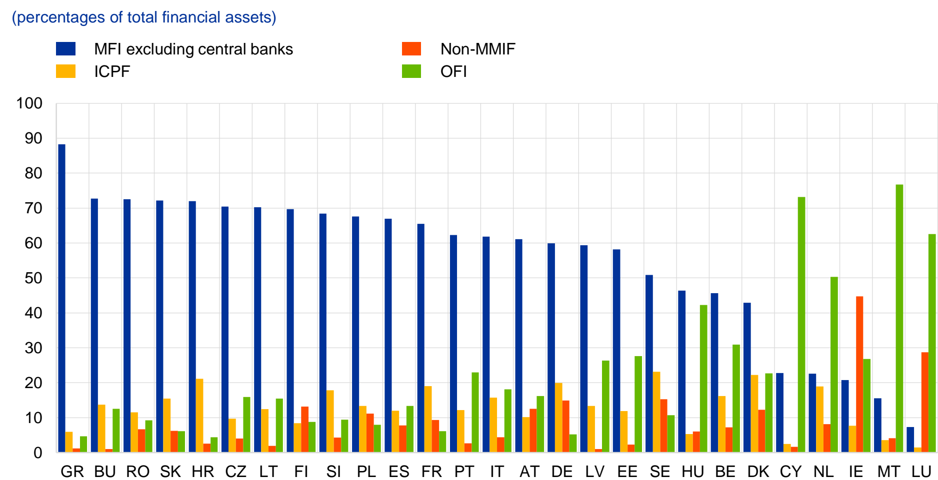
by the European Systemic Risk Board (ESRB, 2019).[14] NBFI-related vulnerabilities are examined briefly in Box 3. The risks and vulnerabilities thereby identified highlight the need for deeper scrutiny of non-bank financial intermediation issues in Fund surveillance, which includes the use of more focused FSAPs, as has also been recognised by the Fund in its recent FSSA on euro area policies (IMF, 2018a). These issues are discussed in Chapter 3.

Aggregate figures mask significant differences in the financial structures of individual EU countries. First, as highlighted by Chart 1, banking assets represent the greatest share in many, although not all, financial jurisdictions; in a few cases the main players are either OFIs or non-MMIFs. Second, the sectoral composition of national financial systems in the EU has changed relatively little since the global financial crisis (see Chart 2, showing the variation in countries' sectoral specialisation indexes between 2012 (on the horizontal axis) and 2018 (on the vertical axis).[15] This is evidenced by the clustering of data points around the 45-degree diagonal in the four panels of that chart.

Chart 1

Sectoral composition of EU27 financial systems

(percentages of total financial assets)



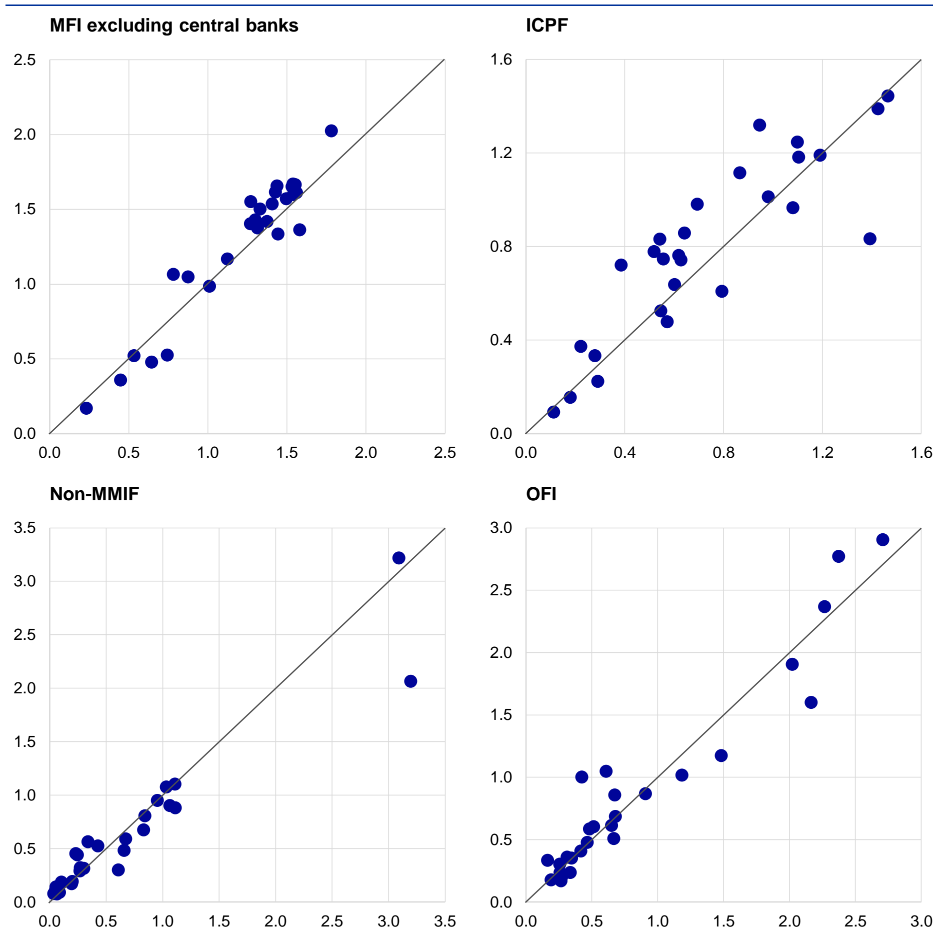
Sources: European Central Bank and Eurostat.
Note: For a detailed description of the institutional sectors represented in this chart see Annex A.1.

[14]. The aggregate "NBFI" does not fully correspond to the categories shown in Table 1. In particular, it consists of all types of investment funds (including money-market funds which are classified as part of MFIs in the table) and the residual category "Other financial institutions" (OFIs). Insurance companies and pension funds are not included in NBFI. More specifically, NBFI includes the Financial Accounts subsectors S.123, S.124, S.125, S.126 and S.127 (see Annex A.1). Money-market funds represent a very minor component of both MFIs and NBFI.

[15] These specialisation indexes are equal to unity when the share of a certain sector of the country total is equal to the corresponding share related to a wider area (EU28 in this case). Values above unity indicate that the country in question is specialised in that particular sector. All points in the scatter lying above the 45-degree diagonal indicate that the country in question has increased its specialisation in a particular sector, while all points below the diagonal indicate a decrease in sectoral specialisation.

Chart 2

Sectoral specialisation indexes of EU27 financial systems as of end-2012 (horizontal axis) and end-2018 (vertical axis)



Sources: European Central Bank and Eurostat
Note: For a detailed description of the institutional sectors represented in these charts see Annex A.1.

The case for taking a dual-track approach to Fund surveillance in Europe (combining country-specific assessments with area-wide analyses) is supported not only by the persisting coexistence of different national financial structures, but also by the multi-layered arrangements for the governance of European financial systems. These are covered in the remaining parts of this chapter.

2.2 The financial architecture of the European Union

The financial architecture of the EU consists of a multi-layered system composed of supranational and national authorities, which share a number of responsibilities in the fields of regulation, supervision and resolution. As a whole, different arrangements are in place in the fields of micro and macroprudential supervision and resolution tailored to banking, insurance, other intermediaries and securities markets. In the case of banking union, which currently comprises euro area countries, these arrangements involve a further strengthening of the institutional governance in banking supervision and resolution.

Bank supervision and regulation

The European System of Financial Supervision, established in 2011, includes the three European Supervisory Authorities (ESAs)[16] and the European Systemic Risk Board (ESRB).[17] The main roles of the ESAs are to facilitate a sound, effective and consistent level of national regulation and supervision, create a regulatory and supervisory level-playing field, strengthen supervisory coordination, prevent regulatory arbitrage and ensure that any relevant risk is appropriately monitored. These tasks include issuing guidelines and recommendations, and contributing to the EU single rulebook by drafting regulatory standards and other norms for their technical implementation, as called for by European level 1 legislation. While the ESAs focus on microprudential supervision, the ESRB aims to identify systemic risks (macroprudential supervision) and can issue warnings or recommendations in response to identified risks.

In the banking union, the Single Supervisory Mechanism (SSM), operating since 2014, is responsible for banking supervision in participating countries. To ensure efficient supervision, the respective supervisory roles and responsibilities of the ECB and the NCAs are assigned on the basis of the significance of the supervised entities. All entities under the SSM's supervision are subject to a common supervisory approach. Within the SSM, the ECB, assisted by the NCAs, directly supervises all institutions classified as "significant" (significant institutions or SIs). NCAs conduct the supervision of less significant institutions (LSIs)[18], subject to the oversight of the ECB, although under certain conditions the ECB can also take over the direct supervision of LSIs. The relative weight of SIs' assets in total banking assets differs from one country to another, ranging from 60% to over 95%.

Bank resolution and financial safety nets

The EU has established – through the Banking Recovery and Resolution Directive (BRRD) and the Deposit Guarantee Scheme Directive (DGSD), and with the associated acts delegated by the European Commission – a new legislative framework to manage possible failures of banks, investment firms and other financial entities.[19]

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[16] The three ESAs are: the European Banking Authority (EBA); the European Insurance and Occupational Pensions Authority (EIOPA) and the European Securities and Markets Authority (ESMA). These authorities were established, respectively, by Regulation (EU) No 1093/2010, Regulation (EU) No 1094/2010, and Regulation (EU) No 1095/2010.

[17] Regulation (EU) No 1092/2010 deals with the EU's macroprudential oversight of the financial system. It also established the ESRB.

[18]. An SI is an institution with total assets above €30 billion or which complies with one of the criteria set out in Council Regulation (EU) No 1024/2013 (SSM Regulation), i.e. it is one of the three largest institutions in a Member State; with regard to cross-border activities, the total value of its assets exceeds €5 billion and the ratio of its cross-border assets/liabilities in more than one other participating Member State to its total assets/liabilities is above 20%; it has requested or received funding from the European Stability Mechanism or the European Financial Stability Facility or for which the ECB has decided to directly exercise supervision. Entities which do not meet these criteria are considered to be LSIs.

[19] The reference is the following EU legislation: Directive 2014/59/EU (BRRD); Directive 2014/49/EU (DGSD).

In the banking union the newly established resolution powers (resolution planning and execution) for SIs and cross-border less significant groups have been assigned to the SRB.[20] The latter exercises these powers in cooperation with the national resolution authorities (NRAs) within the Single Resolution Mechanism (SRM). Resolution powers for the other LSIs form part of NRAs' responsibilities, albeit subject to SRB oversight.

In addition to the pooling of resolution powers, resolution financing arrangements have been mutualised in the banking union. In 2015 the Single Resolution Fund – which is managed by the SRB – was established and is gradually receiving banks' ex ante contributions, with the target of reaching 1% of covered deposits by 2024. These fully pooled resources can be used, among other things, to finance entities arising from the resolution or provide them with guarantees and liquidity. When resolution is not applied, national ordinary insolvency proceedings (not subject, so far, to any European harmonisation process) are implemented.

Another fundamental component of the crisis management safety net is the national Deposit Guarantee Scheme, the task of which is to reimburse covered deposits in liquidation. It also, subject to certain conditions, uses the financial resources raised from banks to allow: (i) the implementation of alternative measures aimed at preventing the failure of banks; and (ii) the transfer of assets, liabilities and deposit books to third parties in the context of insolvency proceedings, thereby preserving depositors' access to covered deposits. A project to create the European Deposit Insurance Scheme, representing the necessary third pillar of banking union, together with the SSM and the SRM, is still under discussion at the EU level.

Macro-financial stability

EU Member States have powers in the field of financial stability. The ESRB Recommendation covering the macroprudential mandate of national authorities (ESRB/2011/3) recommends that a national macroprudential authority be established in each Member State.

Moreover, in accordance with the Capital Requirements Directive (CRD IV),[21] Member States are also required to place an authority in charge of activating the series of macroprudential instruments for the banking sector indicated in the Directive. Finally, the entry into force of the SSM Regulation in 2014 also changed the institutional framework for macroprudential policy for euro area countries. Responsibility for these countries is now shared between the ECB and national authorities. In pursuit of financial stability, alongside the powers of national authorities to use macroprudential measures, the EU legislation instituting the SSM has made the

[20] The definition of SIs used for SRM purposes is borrowed from the SSM definition (see Article 6(4) of Regulation (EU) No 1024/2013, i.e. banks and banking groups with assets over €30 billion, as well as other criteria stipulated in the article). Besides SIs, cross-border less significant banking groups also fall under the remit of the SRB.

[21] Directive 2013/36/EU.

ECB responsible for assessing macroprudential policy in SSM Member States, which includes the power to tighten measures taken at the national level.[22]

In the light of the EU-wide financial architecture illustrated so far, it has become necessary for the IMF to devise parallel and self-reinforcing ways to carry out financial surveillance of the policies pursued by national and supranational authorities in the EU. One important aspect to consider is that European institutions cannot be members of the Fund which, therefore, has no legal power to scrutinise them (see Box 4 for a brief discussion of the legal status of euro area authorities at the IMF and the related arrangements for the surveillance of euro area policies). Another relevant aspect was the challenge of finding appropriate ways to guarantee the smooth and efficient conduct of FSAP exercises for euro area policies and euro area Member States alike.

The latter issue was addressed in 2018, when the Economic and Financial Committee (EFC) of the EU reached an informal agreement to facilitate the joint articulation of future FSAPs at the national and the supranational levels (for more details see Section 3.4).

2.3 The national arrangements for bank supervision, resolution and macro-financial stability

Micro-prudential supervision

In most countries considered in this section[23] central banks play a prominent role in the microprudential supervision of banks. In nine cases out of 11, central banks are responsible either for prudential supervision or for both prudential supervision and business conduct supervision. Additionally, in more than half of participating countries central banks also have some responsibility for the supervision of investment firms, financial markets and financial market infrastructures (e.g. CCPs and CSDs), payment and electronic money institutions, and non-bank financial institutions such as leasing, factoring, personal lending, etc.

For the remaining countries, the securities market supervisor is in charge of monitoring investment funds, asset management companies, financial markets and financial market infrastructures, while the pension or insurance authority is responsible for the surveillance of insurance companies and pension funds. Only in four cases is there an integrated financial supervisor responsible for the supervision of the whole financial system (either prudential supervision or both prudential supervision and business conduct supervision).

[22] The ECB has the power to apply higher requirements for capital buffers set at the national level (topping-up power).

[23] The material presented here is based on the responses to an ad hoc questionnaire submitted to the authorities participating in the IRC Task Force. Responses to that questionnaire were also provided by the Bank of England. Overall, and excluding the UK, our sample of 11 countries represents almost 90% of the aggregated financial assets of the EU27 countries, as illustrated in Table 1.

In most cases, the banking supervisory authority is accountable to its respective parliament or finance minister, and in more than half of countries the appointment of the head of this authority represents a political decision. In a majority of cases authorities enjoy full independence, on an approval or non-objection basis, with regard to issuing secondary regulation – only in one case is permission required. The tasks that require government approval typically relate to setting the budget or obtaining funding. However, salary structures and hiring policies are, in principle, solely determined and implemented by the supervisory authorities.

Bank resolution

In the field of resolution, each EU Member State has a dedicated independent resolution authority with statutory powers based on a set of rules and powers derived from the BRRD, and with access to national financing arrangements. Banking union jurisdictions are an exception, in that their institutions pay contributions to the Single Resolution Fund, which is under SRB management.

There are two basic models of institutional setup: (i) resolution authorities that are separate from the central bank and (ii) resolution authorities represented by an independent directorate within the central bank. Resolution powers over European cross-border banking groups are exercised by resolution colleges, which are collegial bodies based on the principle of open cooperation and home-host balance between resolution authorities. Resolution colleges perform an annual resolution planning cycle involving the cross-border banking groups under their remit, which is finalised through a joint decision. In the event of a crisis, they also take resolution decisions and coordinate financial arrangements – escalation/mediation mechanisms are in place if no decision is reached.

Resolution authorities are independent, regardless of governance model. The SRB is an independent EU agency appointed by and accountable to the European Parliament. Resolution authorities vary across EU countries, with appointment by and accountability to different legislative or executive bodies. The exercise of resolution powers by resolution authorities is, in the majority of jurisdictions, not subject to receiving authorisation or endorsement from other authorities, with the exception of situations in which public funds are used.

Macro-financial stability

According to Recommendation ESRB/2011/3, each EU country should establish a macroprudential authority, either in the form of a single institution, or a board or committee, while acknowledging the leading role of the central banks, given their institutional and functional strengths. Therefore, this macroprudential authority and the designated authority in charge of using macroprudential instruments have emerged either as a single entity or as separate entities: the central bank (or, in some cases, the financial supervisory authority) or a board/committee including several institutions (the

central bank, the financial supervisory authority and/or ministries). The number of countries falling under each arrangement is broadly balanced.

The accountability, powers and independence of NCAs legally mandated to oversee financial stability are specific to national arrangements. Macroprudential instruments include the harmonised toolkit stipulated in the CRD IV, which is applicable in all Member States, and any other non-harmonised macroprudential tools for which there is a legal basis at the national level.

Decision-making competence is either assigned to the governor or a board mandated to oversee financial stability in the case of a single entity, or to the chair of the macroprudential committee, which could be the governor of the central bank, the minister of finance, or an assembly. In some countries, the ministry of finance participates as a non-voting member, while in other countries the ministry has a voting member in the macroprudential authority or may even be the chair of the authority. In such cases the leading role of the central bank can be ensured by granting the power to propose financial stability measures only to the central bank.

National laws provide soft powers (issuing opinions, recommendations or warnings) and powers to collect information as part of a mandate, sometimes even from outside the financial sector. Some authorities have extended powers, under the form of hard powers through issuing legally binding decisions, or even regulatory and investigatory powers. However, there are cases of the mandate being limited to soft powers. The non-harmonised macroprudential instruments at the national level are a mix of borrower-oriented measures and lender-oriented measures, although in a number of countries some or all of these tools have not yet been used. The NCAs analyse and assess the adequacy of measures. The ESRB periodically publishes two overviews of the macroprudential measures in place at the national level.

Box 3
Non-bank financial intermediation in Europe – risks, vulnerabilities and analytical issues for Fund surveillance

As noted in the main text, EU economies are still very reliant on the banking sector for funding. However, financial institutions other than traditional banks have experienced rapid growth in recent years and are now an important part of the EU-wide financial system. In addition, the activities of these institutions have become more complex and broad-based since the last global financial crisis (Adrian, 2017). This box refers to non-bank financial intermediation (NBFI) as defined by the Financial Stability Board (FSB) for the purpose of its annual monitoring exercise – an aggregate previously referred to as “shadow banking” by the FSB.

The development of market-based finance may allow, at least in principle, the mitigation of financial stability risks by reducing reliance on the banking sector, thus creating a more diversified financial system. Market-based finance, generally speaking, is also more able to spread financial stability risks by passing losses back to investors, rather than leaving them concentrated in the banking system (Cunliffe, 2017). In this respect, initiatives within the framework of capital markets union (CMU) aim to create an environment which enables bank financing to be complemented by capital market financing and should facilitate the further development of NBFI (European Commission, 2018).

Risks and vulnerabilities

NBFI, especially that performed by investment funds, could become a source of systemic risk through different channels. While this box focuses on the investment fund sector, potential risks and vulnerabilities may also derive from insurance companies and pension funds (which are not classified as NBFI). A first set of vulnerabilities stems from the fact that the growth in the non-bank financial sector has prompted risk-taking behaviour as well as liquidity mismatches and high leverage among some investment fund types (ESRB, 2019; ECB, 2019a; and ECB, 2019). The bulk of flows since the crisis has been invested in less liquid debt instruments and in riskier parts of the market, in a search for yield. Market liquidity has tightened over the same period. Driven by this search for yield, there are signs that some investment fund types are increasingly exposed to less liquid assets, while offering their investors the opportunity to redeem at a higher frequency.

If there were a redemption shock, investment funds could be prone to synchronised behaviour, possibly selling their assets simultaneously. Funds with high liquidity mismatches or high leverage could be forced to sell illiquid assets, leading to a deposit drawdown from systemic sectors (e.g. banks acting as a custodian for the funds) and fire sales, ultimately impairing the functioning of key markets. Non-bank financial entities do not have explicit or formal access to official sector backstops to help cushion the impact of a crisis and there is no framework in place to avoid a run on such entities as there is for banks, which can usually rely on deposit insurance schemes (Bhatia et al., 2019). Fire sales could spill over from primary investments, leading to second-round effects (Bouveret, 2017).

A second set of vulnerabilities derive from the sector's complexity and interconnectedness,[24] which could give rise to contagion within the NBFI sector and across sectors, including through domestic and cross-border linkages (ESRB, 2019). Unlike bank-based financial intermediation, NBFI typically involves several entities, including specialised and interconnected intermediaries and banks, and numerous financial instruments (Comité du Risque Systémique, 2017). In particular, due to their complexity, (off-balance-sheet) derivatives and securitisation vehicles have the potential to add significant systemic risk arising from a mispricing of risk and step-in risk (ESRB, 2019).

Redemption shocks in one collective investment vehicle could propagate to others through cross-shareholdings. While not a source of additional risk per se, EU funds can be significantly exposed to non-EU-domiciled vehicles and global financial institutions. International exposure could constitute a challenge in terms of potentially divergent legislation and limited data availability.

Risk may have shifted towards the corners of the financial system in which there is less visibility and regulation. Besides, gaps in the data available and risk metrics constitute a challenge to the assessment of risks related to liquidity transformation and mismatches, leverage, interconnectedness (ESRB 2019) and exposures to non-bank lenders and their sources of funding.[25]

The relevance of the NBFI sector for FSAPs and issues for further reflection

The key risks and vulnerabilities identified above point to the importance of analysing NBFI and its implications for financial stability in an FSAP context. This was also recognised by the Fund in the

[24] In the run up to the crisis, credit enhancement associated with the pooling and tranching of risk and/or implicit guarantees operated with considerable complexity and opaqueness. A portfolio of illiquid, subprime loans could be transformed with the help of a sophisticated pricing model into an off-balance-sheet security that was regarded as a liquid and highly-rated asset enjoying credit support features not present in the underlying loans (Adrian, 2015).

[25] The Basel III reforms ensure better recognition and capitalization of banks' explicit and contingent exposures to entities in this sector.

EAP-FSAP (IMF, 2018a). Against this background, a number of issues are relevant for future FSAPs and could be taken into consideration by Fund staff to better identify, analyse and help Fund members tackle systemic risks related to NBFI.

Interlinkages between the banking and the non-bank financial sector should be taken into account in assessing the stability of the financial system (Abad, 2017). In particular, the role of money market funds in the provision of financing, including financing provided to banks and governments, makes them relevant from a macro/systemic perspective: any market turmoil in the money market fund subsector could exert liquidity pressure on banks, possibly generating financial instability (Bengtsson, 2013). Stress can spill over from the investment fund industry to banks through a number of direct and indirect channels. The former include the following: banks acting as counterparties in securities financing or derivative transactions; fund deposits into banks; banks granting loans to funds; bank holdings of investment funds' shares and banks sponsoring financing vehicles; and fund holdings of bank-issued debt. The latter comprise fund holdings of banks' shares and common exposures held by funds and banks. For instance, in the euro area, 14% of banks' equities are held by investment funds, which could make banks vulnerable to tensions in the non-bank financial sector (Bouveret, 2017).

Despite such interlinkages, limited knowledge of fund data remains a fundamental challenge. In particular, there are still data gaps for the individual exposures of funds to banks[26] and for exposures with non-bank lenders and their sources of funding.[27] Further work is warranted to fill in such gaps and improve the measurement and monitoring of developments in liquidity mismatches, particularly at the macro level.[28]

A second avenue for reflection could be the scope for Fund staff to develop and recommend macroprudential tools that could be used to address leverage, maturity and liquidity mismatches, as well as other financial stability concerns in the NBFI sector. While the countercyclical capital and systemic risk buffers largely take banking vulnerabilities into consideration, the build-up of vulnerabilities in market-based financial institutions and products should also feature within the macroprudential perimeter. More specifically, in FSAP stress testing exercises, it might be helpful if the IMF introduced a cross-sectoral approach. This would allow the Fund to focus on, in particular, the links between banks and non-bank financial institutions and would facilitate an evaluation of the extent to which vulnerabilities in various sectors could interact in a downturn and generate negative feedback loops.

Finally, no single organisation currently has a view of the "big picture", can collate all relevant information or can stress test major financial institutions at the global level. For this reason, international surveillance exercises such as FSAPs are essential to identify potential risks and vulnerabilities more effectively. Taking this broader perspective, the IMF's work could also advance knowledge of emerging issues such as the implications of climate change and digitalisation for the financial system, including the NBFI sector.

[26] Though aggregated data for funds' deposits into banks in the euro area are available (Bouveret, 2017).

[27] In the case of the European fund industry, it is difficult for supervisors to know the composition of fund unit liabilities once they have been distributed by intermediaries, and thus whether some funds are more vulnerable than others to synchronised runs. The manner in which leverage data are collected in the fund management industry also makes it difficult to distinguish gross from net exposure, and whether derivatives are being used for hedging or for speculative purposes. And, more broadly, for special purpose vehicles established for activities other than securitisation, information available to European supervisors has also been limited as these vehicles have, typically, resided outside the regulatory perimeter (Barrett, Godfrey and Golden, 2016).

[28] As also underlined by recent work by the Financial Stability Board (2017).

Box 4
The legal status of euro area authorities at the IMF and the related surveillance arrangements for euro area policies

In recognition of the replacement of euro area countries' national exchange rates and monetary policies with common policies, in 1998 the IMF's Board agreed that the conduct of firm surveillance of the external and exchange rate policies of its members meant that discussions would need to be intensified with EU and euro area institutions, especially the ECB. This resulted in the 1998 Decision on Surveillance over Monetary and Exchange Rate Policies: Members of the Euro Area (IMF, 1998). This Decision, later reviewed in 2002 and 2008,* sets out the modalities for the surveillance of euro area policies in the context of the AIV consultation with euro area countries. In the light of the transfer of competencies to common institutions, the Decision stipulates, among other things, twice-yearly staff discussions with the EU institutions responsible for common policies in the euro area (including the ECB and the European Commission), an annual staff report and a Board discussion.

Importantly, although these discussions with EU institutions take place separately from the discussions with individual euro area countries, they do not constitute an AIV consultation (this is also indicated by the title of the report "Euro Area Policies"), which are foreseen only for IMF member countries. Instead, they are considered to be an integral part of the AIV process for each euro area member country. This distinction recognises the fact that the legal basis for IMF surveillance relates only to country-based membership of the IMF. As European institutions cannot be members of the IMF, they have no legal obligations under the Fund's AOA to discuss their policies with the IMF. However, as noted in the ISD, all member countries of a monetary union are (individually) accountable for those policies conducted at the union level on their behalf. It has therefore been recognised that to conclude an AIV consultation, the IMF must be given the opportunity to assess core policies and, therefore, to hold discussions with representatives of the relevant EU institutions.

This corresponds to the fact that the countries themselves retain all the rights and obligations flowing from IMF membership, even though the institutional and governance set-up is different in the area of common policies for euro area countries in that they have an independent central bank and joint decision-making in some policy areas, as specified in EU Treaties (ECB, 2015).

(*) IMF Decision No 12899-(02/119), 4 December 2002 and IMF Decision No 14062-(08/15), 12 February 2008.

3 European experiences with FSAPs and Article IV consultations and possible reform options

This chapter provides an assessment of the experiences of the authorities of EU Member States and the ECB with national FSAPs and EAP-FSAPs. A number of possible proposals for improvement and reform are also discussed, with a brief examination of the related pros and cons. These assessments and proposals are based on the Task Force members' responses to an ad hoc internal questionnaire, as well as on additional discussions held during a meeting in Rome (on 30 October 2019) and subsequent exchanges of views, also involving IRC members.

Overall, these reflections are built on the following main interrelated issues:

- how to better integrate these exercises with AIV consultations so as to strengthen the overall traction of Fund surveillance (Section 3.1);
- how to focus FSAP analyses on relevant emerging risks and new areas of investigation (Section 3.2);
- how to make FSAPs less burdensome, more cost-effective and better tailored to specific country circumstances (Section 3.3).

Matters pertaining to the articulation of FSAPs for common euro area policies and for individual euro area jurisdictions are discussed in Section 3.4.

3.1 Integrating FSAP exercises into Article IV consultations

FSAPs evolved from being typical technical assistance exercises into a sophisticated tool for financial sector surveillance. However, they remain hybrid in nature, and IMF surveillance continues to hinge on AIV consultations. The continuing lack of integration between these exercises restricts the overall traction of IMF financial surveillance and represents a key urgent problem that needs to be addressed in both the 2020 FSAP Review and the CSR.

In recent years IMF staff have made several attempts to better integrate macro-financial surveillance into AIV reports (first through pilot reports, then by mainstreaming this approach). As a result, the degree of integration between FSAPs and AIV consultations has increased to some extent, although there is further room for improvement (IEO, 2019 and Annex A.2).

The main areas of tension (arising from a lack of interaction between the two exercises), as identified by the Task Force, were the following.

- While AIV reports have improved in terms of macro-financial assessments, integration with sector-specific FSAP recommendations has remained limited. This may be partly because typical FSAP recommendations, which are often of an institutional nature, are more complex to implement than the policy parameters discussed in AIV missions.
- FSAPs tend not to consider the macroeconomic policy trade-offs that might need to be addressed in implementing FSAP recommendations, which are often directed specifically at certain financial subsectors.

These tensions partly originate from the very different nature of FSAPs and AIV consultations. FSAPs provide valuable information of a structural nature, but there are limits to the extent to which this information can be fully factored in when preparing AIV missions. The latter are carried out at a higher frequency and are mostly focused on short to medium-term risks of a predominantly macroeconomic nature: the number of AIV-related Selected Issues Papers on financial sector matters is still fairly limited. For these reasons, FSAPs could, at best, only complement AIV consultations, not replace them (and vice versa).

The Task Force believes that there is room for further enhancement in country reports, and that greater integration between FSAPs and AIV consultations would help to further strengthen the traction of IMF surveillance. A number of options to improve such integration were considered, revolving around three "T"s (Topics, Tools and Teams).

- *Topics.* With regard to the substance of AIV reports, AIV consultations should devote more attention and resources to financial stability risks. This would make it possible to create a bridge to the main findings and recommendations of past FSAPs and identify possible emerging risks that should be addressed in future FSAPs. On the other hand, topics for FSAP analysis could be prioritised according to their systemic importance at the domestic level, as well as in the light of cross-country exposures, potential spillovers from/to third countries, feedback effects between banks, sovereign, and the real economy, and financial sector interconnectedness.
- *Tools.* Interactions between AIV consultations and FSAPs would be encouraged if FSAP tools focused on financial stability issues of macro-critical importance to the country's economy. In addition, focusing the FSAP analysis on common indicators and datasets would make it easier for AIV teams to perform a follow-up analysis based on previous FSAP data and findings. An evaluation of FSAP indicators and analytical tools could be conducted in that spirit.
- *Teams.* The key to better AIV-FSAP integration resides in the composition of (and cooperation between) IMF teams. The financial expertise and involvement of country desk economists should be strengthened within AIV teams. Country desks know a country's circumstances, governance and macroeconomic risks better than FSAP team members, making interactions with country authorities easier. At the same time, more intense involvement of MCM staff members in AIV consultations seems necessary to better identify rapidly emerging risks in the

financial sector in good time. This could also help to enhance the traction of the FSAP results and recommendations. Another possibility would be for the AIV mission chiefs to co-lead the FSAP mission and vice versa.

The frequency mismatch between AIV consultations and FSAPs is a key barrier to better integration. To overcome this discrepancy, a recent IEO recommendation (IEO, 2019) could be taken into consideration, whereby AIV consultations could provide annual check-ups to track FSAP-identified concerns. Another option worth considering for those years in which FSAP and AIV missions take place would be to intensify the focus of AIV consultations on the main FSAP themes and findings.

A further option for bridging the gap between these exercises could be to complement FSAPs with ad hoc selective assessments, focused on national circumstances and carried out flexibly, depending on countries' needs. These assessments would not be equivalent to existing FSAPs (whether comprehensive or just focusing on specific areas of the financial system), because they would not involve all three pillars of an FSAP (risk assessment, policy framework and safety nets). Ad hoc assessments would, in all likelihood, consist of financial stability analyses and stress tests, and would be performed only when needed and just for selected countries. They could be conducted either separately from AIV consultations or as an integral part of them but at variable frequency – either way, the required human resources would ultimately be provided by the MCM. If conducted separately from AIV missions – something the Task Force would not recommend – it would be crucial to define ex ante calendars for the entire membership. This would help avoid unintended consequences in respect of expectations and the materialisation of risks.

The aim of this proposal would be to increase the number of financial stability inputs informing (either directly or indirectly) AIV consultations, without necessarily including assessments of systemic financial risks in all AIV reports. This would provide a "parsimonious" strategy of moving towards closer FSAP-AIV integration. As one example of this strategy, AIV consultations could consider following up on a few earlier FSAP recommendations, which could provide topics for a Selected Issues Paper. The same could be done with newly emerging issues that had not been flagged in previous FSAPs.

At the same time, ad hoc selective assessments should in no way be regarded as undermining the need to conduct regular national FSAPs. Only the latter are able to provide a comprehensive assessment of specific financial systems and reflect the specificities of each jurisdiction. The need for national FSAPs is even greater in the EU context, given the existing differences and lack of full risk-sharing procedures across Member Countries.

3.2 Analytical areas for future FSAPs

The Task Force agreed on the need to develop FSAP analyses in the following areas:

1. new risks (in particular cyber risks), the impact of the rise of fintech firms, and the impact of climate change on the financial sector;

2. interconnectedness and spillovers between the financial and the real sectors;

3. analyses of risks stemming from the non-bank financial sector.

Extending the analysis to these new fields would offer many advantages:

1. it would help close gaps in its current risk assessment framework by building on the IMF's mandate in terms of macro-financial analysis and from a cross-country perspective;

2. it would increase the value added of the FSAP work and the benefits for national authorities compared with their own analyses;

3. it might enable the IMF to develop more sophisticated and less "one-size-fits-all" assumptions, particularly in the field of stress tests;

4. it could promote greater collaboration between IMF teams and national authorities (including with experts seconded from the ESCB and other central banks) on new working projects.

On the other hand, such an extension would probably require more granular data and additional relevant expertise, which would have significant budget implications for the IMF. In more detail, the plan for deepening FSAP risk analysis could proceed along the lines set out below.

Cyber risks

The IMF should start to acknowledge the potentially systemic character of these risks in their FSAP analyses and should avoid considering operational risks as idiosyncratic. More specifically, it may be interesting to focus on identifying cyber-risk vulnerabilities in the financial sector, including third-party service providers and potential risk reduction strategies.

This could be achieved by including in stress test scenarios an event such as disruption to the functioning of central counterparty clearing houses. Moreover, quantifying the consequences of cyber attacks would also help both insurance companies, which could offer cyber risk insurance products, and insurance takers, who would be able to form an opinion on how the order of magnitude of cyber events might impact their insurance coverage.

Climate change

FSAP analyses should cover both transition and physical risks to the financial sector, and should include both the direct and the indirect transmission channels through which climate shocks could affect the real economy. This could be achieved by including extreme events linked to climate change in every stress test scenario which

would then be applied within an integrated/common framework to each segment of the financial sector (banks/insurance companies/investment funds).[29]

In addition, the analysis should include an account of how second-round effects from well-identified sources of transition and physical climate-related risks translate into vulnerabilities in the banking and non-banking financial sectors, as well as in the real economy. Key financial indicators for monitoring climate-related risks, metrics or guideline principles could be identified (possibly in a "pecking order").

It would be both relevant and advisable to conduct an analysis of the policies currently in place to respond to these risks at the national and the EU level (including the euro area). These issues should therefore be addressed in the questionnaires/analyses prepared for both EAP-FSAPs and national FSAPs. Any specific recommendations in this field would be welcome.

Interconnectedness and non-bank financial sector analysis

FSAPs should pay greater attention to issues such as: (i) the interlinkages between the different subsectors of the financial system; and (ii) the risks from international spillovers. In addition, efforts should be made to carry out more frequent deep dives in the corporate and household sectors, particularly through appropriately designed stress tests, as has been the case in some recent FSAPs. The most urgent analytical priorities in these latter fields include:

1. better modelling of second-round effects when carrying out analyses, as well as indirect interconnectedness between banks, insurance companies, pension funds and investment funds, through common asset holdings and fire sales;

2. sharing analytical tools with competent authorities, clarifying the use of market data-based methodologies and relying on state-of-the-art techniques, instead of over-simplifying assumptions.

Finally, a deeper analysis of the risks related to the non-bank financial sector (including market infrastructures) could help to enrich the actual design of macroprudential policies, which are still characterised by tools developed mainly for the banking sector. Further analysis is required of the calibration and effectiveness of instruments which apply to the non-bank financial sector, in particular with regard to the measures aimed at limiting vulnerabilities in that sector.

3.3 FSAP tailoring and cost-effectiveness considerations

The considerations and proposals outlined in Sections 3.1 and 3.2 have cost/budget implications that are best gauged in the context of the entire range of Fund activities.

[29] These analyses could leverage, inter alia, the work of the Network for Greening the Financial System (NFGS) and on the energy transition risk stress test framework developed by Vermeulen et al. (2018).

This section discusses possible ways of making FSAPs more cost-effective and better tailored, with the intention of preparing the ground for addressing the important issue of whether the overall budget of the Fund should be increased or simply reallocated across its functions and departments.

3.3.1 FSAP frequency and systemic importance

The systemic nature of a jurisdiction on the one hand, and the selection of non-systemic countries on the basis of vulnerability and risk on the other, should be the relevant guiding principles used to determine the frequency of FSAP exercises. As described in Chapter 1, FSAPs are a mandatory part of surveillance under AIV for jurisdictions with SIFSs. The list of SIFSs is clearly important, as it leads to strong presumptions with regard to countries or jurisdictions expected to undergo an FSAP more frequently than others.

The current five-year frequency for systemic jurisdictions represents a convenient compromise which squares the need to monitor these financial systems at reasonably acceptable intervals with the need to avoid creating an excessive burden on the resources of the membership and the Fund alike. However, while a five-year frequency provides adequate time to implement the related recommendations (which have a time horizon spanning three to five years), experience shows that mandatory FSAPs for sophisticated/complex jurisdictions typically have a longer completion period than the others (see Section 1.2.1). For those jurisdictions, a five-year FSAP frequency inevitably entails significant pressure on available resources, reflecting the fact that the lag between the end of an FSAP (as sanctioned by the formal Board discussion of the related FSSA) and the beginning of preparations for the next FSAP is typically only between three and a half and four years.

To alleviate the burden on the relevant national authorities and create additional room for voluntary FSAPs for the remaining countries, there are two possible options (to be enacted separately or in combination):

1. lowering the frequency of FSAPs for some or all systemic jurisdictions to, for example, between six and ten years;

2. reducing the number of countries deemed to be relevant from a systemic point of view.

Either option would have budgetary implications for the Fund. Most FSAP work at the IMF is carried out by the staff of the MCM, which also contributes to financial stability assessments in a number of AIV consultations. This currently represents a relatively small proportion of Fund-wide personnel spending on bilateral surveillance (Stedman, 2018). As is evident, any changes to the list of systemically important countries, or in

the frequency of their FSAPs, would have an impact on the allocation of FSAP resources across the membership.[30]

With regard to the possibility of lowering the frequency of FSAPs, this could be decided on a case-by case basis, e.g. when the previous assessment has revealed that (i) most Basel Core Principles have been implemented, (ii) an effective risk approach is already in place, and (iii) the country has enjoyed conditions of persisting financial stability in the intervening period.

In respect of the identification of a SIFS (and hence the number of systemic jurisdictions), it should be noted that the underlying methodology offers some room for discretion, since the final list depends on the choice of thresholds to be applied to certain parameters. However, any modifications to the methodology used to determine systemic importance or the frequency of mandatory FSAPs, including by contemplating differentiated frequencies for systemically relevant jurisdictions, must be approached with caution, because countries with a SIFS clearly play an important role in (and may pose especially significant risks to) the global financial system. These changes should be carefully calibrated, with a view to ensuring that the new approach does not fall behind the current quality and coverage of Fund surveillance. As is evident, striking a balance between these considerations is far from easy.

On the other hand, it is also clear that the IMF should maintain contingency resources so that FSAPs can be moved ahead of the cycle in potentially very urgent cases. FSAPs that take place more frequently than every five years may be appropriate in very specific cases and within a flexible framework. This would allow financial sectors displaying greater vulnerabilities to be assessed earlier, particularly when:

- there are serious systemic risks that could potentially involve significant spillovers for financial markets (as possibly signalled by early warning models for distress of individual financial institutions);
- specific financial sector vulnerabilities could propagate throughout the financial system faster than anticipated.

Alternatively, urgent issues could be addressed in the context of AIV consultations or through ad hoc missions.

3.3.2 Adapting FSAP analysis to country circumstances

As a rule, all FSAPs should be adapted to country circumstances, and should try to capture country-specific financial sector risks accurately. In fact, the current degree of FSAP adaptation to national circumstances already appears to be broadly satisfactory, reflecting a number of circumstances comprising:

[30] Other elements to be taken into consideration in order to properly address the issue of the cost of FSAPs relate to (a) the allocation of the IMF's overall budget across FSAPs and other surveillance products, and (b) the possibility of streamlining FSAPs, avoiding duplications, differentiating in terms of scope, selecting standard to assess by, etc.

- the important role played by the Fund's scoping mission, which could be used to better tailor the entire exercise ex ante;
- the high level of engagement and the intense cooperation between IMF staff and the competent authorities throughout all the phases of the FSAP production cycle (onsite visits, preparation of the aide-memoire, the drafting of technical notes and the finalisation of the assessment);
- the willingness of all parties involved to learn from each other in terms of analysis, methodologies and data;
- the possibility of making cross-country comparisons based on a general framework which is applicable to all.

Nonetheless, there is still room for enhancing FSAP flexibility, for taking domestic conditions into greater account and for adapting "off-the-shelf" tools and analyses. In this regard, it is important to pay closer attention to the specificities of the EU legal framework and the features of the EU's financial architecture, in which responsibilities and tasks are shared between national and supranational authorities in a number of relevant fields.

More generally, it is crucial to ensure that a high degree of cooperation between national authorities and IMF staff is maintained during all phases of an FSAP mission, as this could bring several benefits. These could include, in particular: (i) an increase in the overall quality of the exercise; (ii) FSAP staff becoming very well-informed with regard to the national specificities of the countries under scrutiny, including idiosyncratic risks and the challenges ahead; and (iii) containing the number of interactions in the final stage of the FSAP when there is little time for refinements and adaptations.

3.3.3 FSAP questionnaires

From the experience of several countries represented in the Task Force, the workload associated with FSAP questionnaires and other background material (e.g. the data requested) was believed to be excessive, for reasons varying from the inherent rigidity of the FSAP structure to insufficient cooperation with IMF staff. In particular, it was felt that more focused information requests should be received from IMF staff, well ahead of the FSAP mission.

To mitigate the burden on national authorities the following options could be considered:

- reducing the number of questions, above all those related to descriptive sections pertaining to the institutional setting and the structure of the financial system;
- reducing overlaps between self-assessment and questions;

- making greater use of publicly available data/information (including existing EU templates and statistics) and, possibly, developing a common template for presenting financial sector data for FSAP purposes.

More generally, the organisation of preparatory work and the interaction with the IMF should better reflect the allocation of tasks/responsibilities between national and supranational authorities.[31]

3.3.4 Issues with FSAP stress tests

The Task Force recognised the potential for streamlining FSAP stress tests to make better use of available resources, reduce the burden on national authorities, and gain more value added and traction from FSAPs. While there may be a case for simplifying stress testing exercises, which, owing to extensive data requirements, are perceived as inefficient and burdensome, there is a major problem regarding the overlapping of stress testing processes in the EU. Indeed, the EU makes extensive use of stress tests as a supervisory tool, as is the case in other advanced economies. In particular, periodic stress tests are run by (i) the EBA on a bi-annual basis, (ii) the Single Supervisory Mechanism (SSM) on a regular basis as a part of its supervisory tasks, and (iii) NCAs within their own jurisdictions.

NCAs, as surveyed by the Task Force, concurred that FSAP-related stress tests add limited value compared with similar exercises conducted at the national and the EU levels. On the one hand, EBA-supported stress tests are officially conducted bi-annually on a sample consisting of the main EU banks (the majority of which are SIs), and their results are made available to the general public. These same stress tests are also run jointly by the ECB and NCAs for the remaining SIs that are not in the EBA stress test sample. Moreover, most NCAs customarily extend the exercise to all remaining banks, many of which are LSIs, which fall under their own direct competence – a practice that will be made mandatory in the EU in accordance with the Capital Requirements Directive (CRD V).[32]

It is also important to note that the availability of stress testing information in the euro area has increased recently, thanks to the SSM's launch of two new stress test exercises in years when EU-wide EBA-supported stress tests had not been envisaged (in particular, an interest rate stress test in 2017 and a liquidity stress test in 2019), focusing on risks that had not been specifically considered in the previous year's official stress test.

The possibility that two parallel stress tests using different methodologies could produce different results raises external communication issues with regard to the situation of particular banks or financial systems. The discrepancies between the results of EBA stress tests and those of FSAP stress tests

[31] For instance, in the case of euro area countries some questions in the questionnaire on the financial safety net and crisis management at the national level focused on SIs falling under the remit of the SRB. To prevent duplication, national responses on banking resolution and crisis management matters could be drawn directly from the questionnaire for the EAP-FSAP.

[32] Directive (EU) 2019/878 ("CRD V")

stem from the differing coverage of financial institutions and the differing scenarios, methodologies and assumptions, and therefore cannot be completely eliminated. In addition, while EBA stress tests are based on a bottom-up procedure requiring the direct participation of banks, the stress tests carried out in the context of an FSAP are typically conducted top down (i.e. using the individual data provided by NCAs).

It is important for the macroprudential and system-wide characteristics of IMF stress testing exercises to be enhanced by taking a cross-sectoral perspective. IMF stress tests for LSIs are usually replaced by much simpler sensitivity analyses. This makes them quite simple static separate tests of selected risks (all other variables being equal), while an overall assessment of financial stability should at least integrate a number of adverse scenarios, as is the case for the stress tests conducted by the EBA and NCAs in the EU context. As is evident, interrelated financial stability risks cannot be adequately assessed in this context.

In this last respect, FSAP stress tests would need to be refocused to facilitate a discussion of risks stemming from:

- interconnectedness between banks and with the non-banking financial sector;
- the interactions between the banking sector and the real economy;
- new emerging circumstances, such as cyber security and climate change (see Section 3.3).

Based on these considerations, several proposals for FSAP stress testing were discussed. To begin with, the Task Force considered the option of using existing public data instead of data expressly provided to the IMF by the NCAs. However, given the limited granularity of these data, this option appeared to provide very limited added value and was therefore discarded. With regard to more viable options, the Task Force considered that, at least in the case of highly sophisticated financial systems already conducting regular high-quality stress tests, FSAPs could concentrate on reviewing the authorities' models, designing risk scenarios and discussing the results of the tests and critical stability risks.

Another option considered in order to alleviate the burden of FSAP stress tests on authorities would be for the IMF and the authorities involved to agree on a common understanding of data requests and their granularity, formalised in a detailed Terms of Reference.

More generally the IMF should:

- pay greater attention in its stress tests to more topical areas, including interconnectedness between financial institutions and sectors as well as new emerging risks (see infra Section 3.C);
- endeavour to assist country authorities to develop, in the light of the macro-financial risks identified, stress tests for non-bank financial sectors in which techniques have not yet been established.

3.4 Articulation of national and supranational FSAPs in the euro area

As noted earlier, in 2018 the EFC reached an informal agreement to facilitate the joint articulation of future FSAPs at the national and the supranational levels. The agreement was aimed at: (i) avoiding duplication between national FSAPs and FSAPs on euro area policies (EAP-FSAPs); (ii) involving NCAs, as appropriate, in EAP-FSAPs; and (iii) relying, as appropriate, on the results of euro area-wide stress tests for the financial sector resilience module and focusing on idiosyncratic risks and macroprudential policy considerations.

The objectives of the 2018 agreement have proven useful in recent national FSAPs and should continue to serve as the basis for the scope of future FSAP exercises for individual jurisdictions and euro area policies alike. The EFC agreement has been applied in all five national FSAPs that have been carried out or initiated since its adoption (i.e. France, Italy, Latvia, Malta and Austria). Although some uncertainties have arisen with regard to its implementation, the agreement has, on the whole, facilitated discussion with FSAP mission teams in respect of the scoping of the exercises and has contributed to streamlining national FSAPs. Positive side effects have included limiting workload and maintaining an appropriate focus.

More generally, it is important to ensure that a clear framework is in place for the coverage of issues pertaining to SIs and LSIs in both national FSAPs and EAP-FSAPs, as well as for the division of labour between the ECB and NCAs. The EFC agreement of July 2018 remains adequate and necessary, as it provides such a framework. This enables IMF staff to align the scope of both national and euro area FSAPs with the EU's banking supervision and resolution architecture. It also ensures that IMF financial surveillance and advice continues to be effective and relevant for all authorities involved.

With regard to financial safety nets and crisis management, some specific clarifications may be useful going forward. In particular, a distinction between the responsibilities and tasks of the SRB and the NRAs (for resolution planning and crisis preparedness and management) and those of the SSM and the NCAs (for recovery planning) could be made in both the IMF's scoping missions and the delineation of their results. Specifically, it could be useful to seek to try to avoid overlaps between the national FSAP module for financial safety nets and crisis management and the EAP-FSAP, by limiting the scope of the former to LSIs to the extent possible. In the same vein, the topic of resolution planning for the SIs of banking union jurisdictions should be covered mainly by the EAP-FSAP, focusing specifically on those SIs whose public interest assessment performed in resolution planning envisages a crisis management strategy based on resolution. This analysis could be performed by collecting information from the SRB, also, as appropriate, involving NRAs.

Moreover, in recent years some IMF recommendations in the national FSAPs of euro area Member States have been aimed at European authorities. For the sake of consistency, the respective messages should be primarily raised in the euro area FSAP to the extent that they refer to supranational policies, including policies applied

by European institutions such as the European Commission, the ECB or the SRB. The relevant national authorities should be involved in EAP-FSAPs on an ongoing basis, as appropriate.

The Task Force agrees it is important to conduct regular EAP-FSAPs at the same frequency as FSAPs for other systemic financial systems. In this respect, it was explained that this arrangement would improve the predictability of the exercise timetable and enhance understanding of the new banking supervision and resolution architecture in the banking union. In addition, to fully capture the benefit of regular assessments for euro area policies, some members argued in favour of clustering as many national FSAPs as possible around an EAP-FSAP.

In no case, however, should regular EAP-FSAPs reduce the need for comprehensive national FSAPs, given the broad scope of the exercise and the many national specificities that could never be covered or replaced by FSAPs undertaken for the euro area as a whole.

3.5 Costs of financial surveillance and Fund resources

Despite the overriding importance of financial sector surveillance in the specific conduct of the IMF's mandate, overall IMF spending on such surveillance has not increased in real terms since the mid-2000s, even though global gross external liabilities as a share of GDP have risen by one-third since then (IEO, 2019).

The Task Force agrees on the need to ensure that adequate resources are always available for the conduct of FSAPs and other financial surveillance exercises. In order to take a thoughtful decision regarding the impact on the Fund's overall budget and the extent to which the latter could be reallocated across functions and departments, the implications are best addressed in a holistic manner, i.e. by looking at the "big picture" and considering the entire range of Fund activities.

The Task Force expects the IMF to launch, as soon as possible, a review of its budgetary and human resources policies, based on the priorities identified through its 2020 FSAP review and the CSR.

4 Concluding comments and key policy messages

This report has focused on the supply-side issues related to the FSAP, paying special attention to two interrelated questions: (1) how to better integrate these exercises with AIV consultations so as to strengthen the overall traction of Fund surveillance; (2) how to make FSAPs less burdensome, more cost-effective, and focused on newly emerging risks and country-specific circumstances and needs. Whenever relevant, these questions have been addressed from a European perspective, reflecting the specific allocation of responsibilities across national and supranational authorities.

The main policy messages and ideas agreed by the Task Force are the following.

4.1 FSAP integration with Article IV consultations

The persisting lack of integration of FSAP findings into AIV consultations represents one of the most urgent problems that all types of IMF surveillance reviews need to address. Greater integration of FSAPs and AIV consultations is key to reinforcing the overall traction of IMF financial surveillance, although it is unlikely this can be achieved by simply revisiting the tools and modalities of FSAPs. Further efforts are required to deploy best practices across the full spectrum of surveillance work, both bilaterally and multilaterally. The concurrent CSR will be at least as important for this purpose as the 2020 FSAP Review. On the other hand, it is also clear that any further integration of the two exercises will need to take into consideration the related budgetary implications for the IMF. Parsimony can be sought through various reform options regarding both the frequency and scope of FSAPs (see Section 4.3 below). In this respect, the Task Force broadly concurs with the recommendations presented in the latest IEO report, which were also endorsed by the IMF's Executive Board.

Indeed, **there are limits to what extent the structural information currently gathered through low-frequency FSAPs can be fully factored into the preparation of AIV missions**. The latter are carried out at a higher frequency and focus mostly on short to medium-term risks of a predominantly macroeconomic nature. Building on recent efforts to mainstream macro-financial surveillance, AIV consultations should devote further attention and resources to macro-financial stability risks in order to: (a) create the necessary bridge to the main findings and recommendations of past FSAPs, and (b) identify possible emerging risks that should be addressed in future FSAPs. At the same time, FSAP analyses and recommendations should be structured in such a way that they can be followed up more easily during subsequent AIV missions.

One possible option for bridging the gap between these exercises could be to complement FSAPs with ad hoc selective assessments focused on national

circumstances and carried out flexibly on the basis of countries' needs. Importantly, these assessments should not replace national FSAPs, which remain the principal vehicle for the thorough and comprehensive scrutiny of national financial systems. On the contrary, they would aim to enhance "dialogue" between ordinary FSAPs and AIV consultations. Ad hoc selective assessments would not involve all three pillars of an FSAP (risk assessment, policy framework and safety nets) and could be conducted either as separate exercises or as a part of AIV consultations, at a variable frequency and depending on the circumstances. Defining ex ante calendars for the entire membership would help to avoid unintended consequences in terms of expectations and the materialisation of risks.

All in all, this integration process is likely to require more systematic participation of FSAP teams in AIV missions and vice versa, with an obvious impact on Fund resources, especially those of the MCM, which is primarily responsible for conducting FSAP missions and contributing financial sector analyses to AIV consultations. The composition of the relevant IMF teams, as well as the degree of cooperation between these teams, is very relevant to successful integration. To this end, the possibility was considered of the AIV mission chief co-leading the FSAP mission and vice versa.

4.2 Analytical themes for future FSAPs

The IMF should continue to refine its analytical tools, enhancing their transparency, improve its surveillance of macro-financial linkages, and provide a deeper analysis of financial sector vulnerabilities. This includes placing more emphasis on non-bank financial risks and the potential financial stability implications of new risks (such as technological innovation and climate change). This should be done while paying due regard to the scope and limitations set by the Fund's mandate. Based on these considerations, priority areas that merit deeper FSAP risk analysis include the following.

Cyber risks

The IMF should start acknowledging the potentially systemic character of cyber risks in FSAP analyses and should avoid viewing operational risks as idiosyncratic. More specifically, it may be worth focusing on identifying vulnerabilities in the financial sector in respect of cyber risk. Third-party service providers and potential risk reduction strategies should be included in this.

Climate change

FSAP analyses should cover both macro-critical transition and physical risks to the financial sector, and should include both the direct and indirect transmission channels through which climate shocks may affect the real economy. This could be achieved by including an extreme event linked to climate change in stress test

scenarios, which would then be applied within an integrated/common framework to each segment of the financial sector (banks/insurance companies/investment funds).

Interconnectedness and non-bank sector analysis

It would also be worth exploring interlinkages between the different subsectors of the economy and the risk of international spillovers. These issues should be addressed in greater detail in future FSAPs. More frequent deep dives in the non-financial corporate and household sectors through well-designed stress tests, such as those that were carried out in some recent FSAPs, have been deemed to be useful.

Non-bank financial risks

A deeper analysis of the risks related to the non-bank financial sector could help to enrich macroprudential policy design. So far, the latter has been characterised by tools which apply only to the banking sector. Further analysis is required of the calibration and effectiveness of instruments which apply to the non-bank financial sector, in particular those measures aimed at limiting vulnerabilities in that sector.

4.3 FSAP tailoring and cost-effectiveness considerations

Frequency and systemic importance

- The systemic nature of a jurisdiction, on the one hand, and the selection of non-systemic countries on the basis of vulnerability and risk, on the other hand, should be the relevant and guiding principles used to determine the frequency of FSAP exercises.
- The current five-year frequency for mandatory FSAPs represents a reasonable compromise between the need to closely monitor these jurisdictions over time and the need to avoid overburdening the Fund and its membership.
- Possible modifications to the methodology used to determine the systemic importance or the frequency of mandatory FSAPs, including by contemplating differentiated frequencies for systemically relevant jurisdictions, should be approached with caution. This is because countries with a SIFS clearly play an important role in (and may pose especially significant risks to) the global financial system. These changes should be carefully calibrated, with a view to ensuring that any new approach does not fall short of the current quality and coverage of Fund surveillance. As is evident, striking a balance between these considerations is far from easy.

In any event, contingency resources should be maintained by the IMF to allow an FSAP to be moved ahead of the cycle in potentially very urgent cases. Carrying out FSAPs more frequently than every five years could be appropriate in very specific cases and within a flexible framework, as this would allow financial sectors displaying greater vulnerabilities to be assessed earlier. Alternatively, urgent issues could be addressed in the context of AIV consultations or through ad hoc missions.

FSAP questionnaires

A number of suggestions have been made for mitigating the FSAP burden on national authorities. These include reducing the number of questions, above all those related to descriptive sections pertaining to the institutional setting and the structure of the financial system; reducing overlaps between self-assessment and questions; and making greater use of publicly available data/information. With regard to the last suggestion, one idea was to develop a common template that could be used to present financial sector data for FSAP purposes.

Another suggestion was to use existing EU templates and statistics to help national authorities provide the FSAP preparatory material to IMF staff. To this end, information requests should be agreed beforehand, as well as the need for FSAP teams to formulate “reasonable” requests.

The organisation of preparatory work (and more generally the interaction with the IMF) should better reflect the allocation of tasks/responsibilities between national and supranational authorities.

FSAP stress testing

In the field of FSAP stress testing streamlining has the potential to make better use of resources, reduce the burden on national authorities and achieve more value added and traction from FSAPs. The following suggestions were made with regard to FSAP stress tests for the banking sector: (a) to reorient the Fund’s stress tests by taking a cross-sectoral approach which would enhance the macroprudential and system-wide characteristics of their exercises; (b) to pay greater attention to more topical areas, including interconnectedness between financial institutions and sectors and new emerging risks; (c) to endeavour to assist country authorities to develop, on the basis of the macro-financial risks identified, stress tests for non-bank financial sectors for which techniques have not yet been established; and (d) to consider possible ways of reducing the burden of FSAP stress tests on national authorities and making appropriate use of stress tests produced outside the FSAP context.

Articulation of FSAPs in the euro area

This report supports the continuation of FSAP exercises at both the national and the supranational levels in the euro area. This would allow the Fund to comply

with its obligations vis-à-vis its members, particularly through an improved understanding and better monitoring of risks transmitted cross-border through policy spillovers and interactions.

The informal EFC agreement of 2018 remains adequate and necessary. It provides a framework for the coverage of issues pertaining to SIs and LSIs in both national FSAPs and EAP-FSAPs, as well as for the division of labour between the ECB/SSM and NCAs.

With regard to financial safety nets and crisis management, some clarifications might be helpful to better reflect the distinction between the responsibilities and tasks of, on the one hand, the SRB and the NRAs (for resolution planning and crisis preparedness and management) and, on the other hand, those of the ECB/SSM and the NCAs (for recovery planning), both in terms of the scoping of the IMF's missions and the delineation of their results.

EAP-FSAPs should take place on a regular basis, and preferably at the same frequency as FSAPs for other systemic financial systems. Under no circumstances, however, should a regular EAP-FSAP reduce the need for comprehensive national FSAPs, given the broad scope of the exercise and the many national specificities that could never be covered or replaced by FSAPs undertaken for the euro area as a whole.

4.4 Costs of financial surveillance and Fund resources

Adequate resources should always be available for the conduct of FSAPs and other financial surveillance exercises. In order to take a considered decision regarding the impact on the Fund's overall budget and the extent to which the latter could be reallocated across functions and departments, cost implications are best addressed in a holistic manner, i.e. by looking at the "big picture" and considering the entire range of Fund activities.

The Task Force expects the IMF to start a review of its budgetary and human resources policies as soon as possible, based on the priorities identified in its 2020 FSAP review and the CSR.

Annexes

Annex A.1

The institutional sectors of the financial system

The financial sectors represented in Table 1 and Charts 1 and 2 are defined by the ESA 2010 European system of accounts (Eurostat, 2013) as follows.

Monetary financial institutions (MFIs) comprise central banks (ESA code S.121), other deposit-taking corporations (S.122) principally engaged in financial intermediation and whose business is to receive deposits and/or close substitutes for deposits from other institutional units and, on their own account, to grant loans and/or make investments in securities, and money market funds (S.123) whose business is to issue investment fund shares or units as close substitutes for deposits from other institutional units and, on their own account, to make investments primarily in money market fund shares/units, short-term debt securities and/or deposits. The subsector S.122 includes, in particular: (i) commercial banks, "universal" banks, "all-purpose" banks, (ii) saving banks including trustee savings banks and saving banks and loan associations, (iii) post office giro institutions, post banks, giro banks, (iv) rural credit banks, agricultural credit banks, (v) cooperative credit banks, credit unions, (vi) specialised banks such as merchant bank issuing houses and private banks, and (vii) electronic money institutions principally engaged in financial intermediation. The subsector S.123 includes investment funds, investment trusts, unit trusts and other collective investment schemes whose shares or units are close substitutes for deposits.

Non-money market investment funds (Non-MMIF; ESA code S.124) comprise all collective investment schemes other than those classified in subsector S.123, which issue investment fund shares or units that are not close substitutes for deposits and, on their own account, to make investments primarily in financial assets other than short-term financial assets and in non-financial assets, usually real estate. This subsector includes; (i) open-ended investment funds whose investment fund shares or units are, at the request of the holder, repurchased or redeemed directly or indirectly out of the undertaking's assets; (ii) closed-ended investment funds with fixed share capital, where investors entering or leaving the fund must buy or sell existing shares; (iii) real estate investment funds; (iv) investment funds investing in other funds – "funds of funds"; and (v) hedge funds covering a range of collective investment schemes, involving high minimum investments, light regulation and a range of investment strategies.

Insurance corporations and pension funds (ICPF) comprise financial corporations and quasi-corporations which are principally engaged in financial intermediation as a consequence of: (i) the pooling of risks mainly in the form of direct insurance or

reinsurance (subsector S.128); and (ii) the pooling of social risks and the needs of insured persons (social insurance; subsector S.129).

Other financial institutions (OFI) is a residual category comprising: (i) financial corporations and quasi-corporations engaged mainly in financial intermediation through incurring liabilities in forms other than currency, deposits and/or close substitutes for deposits from institutional entities other than MFIs, in particular those engaged primarily in long-term financing, such as corporations engaged in financial leasing, financial vehicle corporations created to be holders of securitised assets, financial holding corporations, dealers in securities and derivatives (when dealing on their own account), venture capital corporations and development capital companies (subsector S.125); (ii) financial auxiliaries engaged in activities closely related to financial intermediation without themselves being financial intermediaries – e.g. insurance brokers, insurance and pension consultants, loan brokers, etc. (subsector S.126); and (iii) captive financial institutions and money lenders, which neither engage in financial intermediation nor provide financial auxiliary services, and where most of their assets or their liabilities are not transacted on open markets – e.g. trusts, estates, agency accounts or "brass plate" companies etc. (subsector S.127).

Annex A.2

The 2019 IEO Report on IMF financial surveillance

The IEO report was based on information relating to the period 2013-17 and contained the following recommendations.

- **Financial and macro-financial analysis in AIV consultations should be strengthened, including through closer integration with the FSAP.** Concretely, FSAPs could provide a periodic "deep dive" to identify key risks and vulnerabilities in the form of a new financial vulnerability matrix, while AIV consultations could provide annual check-ups to track FSAP-identified concerns.
- **The allocation of FSAP resources should be more flexible and dynamic, and more clearly risk-based.** The IEO believes that the current approach risks paying too little attention to countries that fall just outside the boundary yet may face serious financial vulnerabilities, while paying too much attention to financial sectors which are relatively low risk yet more sizeable and connected. Under an alternative approach, the IEO therefore proposes that only the five most systematically important financial sectors (S5) should continue to be covered every five years on a mandatory basis. For the remaining membership, each year, as a part of work programme discussions with the Executive Board, management would propose a rolling list of countries that would be covered by FSAPs over the following two or three years.
- **The scope and focus of FSAPs should be more differentiated across countries and more closely tailored to country circumstances**, thereby

raising value added and providing more traction. In those countries already conducting regular high-quality stress tests, the IEO recommends that FSAPs should focus on reviewing the authorities' models, designing risk scenarios and discussing the results of the tests and critical stability risks.

- The IMF should intensify its efforts to be a **global centre of excellence for financial and macro-financial research** in order to enhance its value added on financial stability issues. The Fund should also continue and extend its efforts to **develop financial expertise among its staff**. It should consider increasing its resource envelope for financial surveillance if it is to meet its goals and act within its mandate.
- **The highest priority for additional resources should be to strengthen financial and macro-financial surveillance in AIV consultations**, which would require a larger pool of financial and macro-financial talent.

Furthermore, the IEO appreciated the greater candour provided by the **GFSR** than bilateral surveillance products, as well as its focus on not raising market-sensitive issues. Nevertheless, the IEO has assessed that the impact of the GFSR could be enhanced by offering more convincing main messages to country authorities. To this end, it would be helpful to conduct more thorough checking with in-house country experts and to make the analytical and empirical background work more easily accessible.

With regard to the **EWE**, the IEO concluded that the key challenge is to optimise coordination between the IMF and the FSB as the two organisations work in parallel, albeit following differing processes and governance, which makes it difficult to produce an integrated product. Another challenge is that EWEs are circulated to a limited audience in order cover sensitive issues and allow for an active exchange, while it would be useful to disseminate them more widely, without compromising confidentiality.

No decisions were taken by the IMF's Executive Board on these proposals (IEO, 2019). Management provided nuanced support for the IEO recommendations but did not concur with the recommendation to cut back on Fund stress testing in jurisdictions and areas in which the authorities already conduct detailed stress tests. As for the recommendation to increase resources for financial surveillance, management underscored that the decision should reflect a comprehensive range of factors, such as the areas of the Fund's comparative advantages, the medium-term trade-offs and the strategic objectives defined by the Executive Board and should, along with that, acknowledge the importance of making sure that the Fund assists members in the most cost-effective way possible.

Directors welcomed the wide range of constructive IEO recommendations, some of which were considered to be mutually reinforcing, and provided strong support to the risk-based approach to financial surveillance. Most directors remained open to relocating more resources to financial surveillance while retaining the flat overall budget rule in the medium-term. Many directors were broadly in favour of stress test coverage being tailored to country circumstances, as recommended in the report.

They agreed to maintain the flexibility of IMF stress tests to adapt to country-specific circumstances and mission chiefs to decide the way forward. Directors supported further integration of the FSAP analysis into AIV surveillance, although many directors observed that progress has been uneven so far. Some cautioned against increasing the level of macro-financial analysis in the AIV to the extent that it might become a heavily financial-oriented product, i.e. "mini-FSAP".

Views were more diverse with regard to the proposal to limit mandatory FSAPs to only S5 jurisdictions, and to maintain the five-year frequency. A number of directors supported this recommendation, while others defended the status quo of keeping mandatory FSAPs on a five-year cycle for all systemic jurisdictions. However, within this latter group a number of directors were open to discussing the length of the list. This group also suggested optimising resource reallocation through improved links between risk analysis and FSAP scoping, which would allow more countries to conduct FSAPs in a reasonable period of time. Another heavily debated issue was striking a better balance in IMF financial surveillance between the comprehensiveness of FSAPs and the inclusion of emerging issues.

Bibliography

Abad, J., D'Errico, M., Killeen, N., Luz, V., Peltonen, T., Portes, R. and Urbano, T. (2017), "Mapping the interconnectedness between EU banks and shadow banking entities", *Working Paper Series*, No 40, ESRB, March.

Adrian, T. (2015), "Financial Stability Policies for Shadow Banking", in Claessens, S., Evanoff, D., Kaufman, G. and Laeven, L. (eds.), "Shadow Banking Within and Across National Borders", *World Scientific Studies in International Economics*, Vol. 40.

Adrian, T. (2017), "Shadow Banking and Market Based Finance", speech in Helsinki, 14 September.

Adrian, T., Morsink, J. and Schumacher, L. (2020), "Stress Testing at the IMF", *Departmental Papers*, No 20/04, IMF.

Barrett, D., Godfrey, B. and Golden, B. (2016), "New data collection on Special Purpose Vehicles: Initial findings and measuring shadow banking", *Quarterly Bulletin Q4*, Central Bank of Ireland, 2016, pp.71-84.

Bengtsson, E. (2013), "Shadow banking and financial stability: European money market funds in the global financial crisis", *Journal of International Money and Finance*, Vol. 32, February, pp. 579-594.

Bhatia, A.V., Mitra, S., Weber, A., Aiyar, S., Almeida, L.A., Cuervo, C., Santos, A.O. and Gudmundsson, T. (2019), "A Capital Market Union for Europe", *IMF Staff Discussion Notes*, 10 September.

Bouveret, A. (2017), "Liquidity Stress Tests for Investment Funds", *IMF Working Papers*, 31 October.

Caprio, G. Jr (2018), "Assessing the FSAP: Quality, Relevance and Value Added", *IEO Background papers*, No BP/18-02/02.

Comité du Risque Systémique (2017), "Analysis on the Shadow Banking Content of Captive Financial Companies in Luxembourg", April.

Cunliffe, J. (2015) "Market Liquidity and market-based financing", speech at the British Bankers Association International Banking Conference, London, 22 October.

De Nederlandsche Bank (2017), "Bank-Based versus Market-Based Financing: Implications for Systemic Risk", *DNB Working Papers*, December.

European Central Bank (2015), "IMF Surveillance of the Euro Area and its Member Countries", *Economic Bulletin*, Issue 4.

European Central Bank (2018), Financial Stability Review, November.

European Central Bank (2019a), Financial Stability Review, May.

European Central Bank (2019b), Financial Stability Review, November.

European Commission (2018), Capital Markets Union: Time for Renewed Efforts to Deliver for Investment, Growth and a Stronger Role of the Euro, November.

European Systemic Risk Board (2019), EU Non-Bank Financial Intermediation Risk Monitor 2019, July.

European Systemic Risk Board (2018), EU Shadow Banking Monitor 2018, September.

European Systemic Risk Board (2017), Mapping the interconnectedness between EU banks and shadow banking entities, March.

Eurostat (2013), *European system of accounts 2010*, Luxembourg.

Financial Stability Board (2019), Global Monitoring Report on Non-Bank Financial Intermediation 2018, February.

Financial Stability Board (2017), Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, January.

Gola, C. and Spadafora, F. (2009), "Financial Sector Surveillance and the IMF", *IMF Working Papers*, WP/09/247.

Independent Evaluation Office (2019), *IMF Financial Surveillance Evaluation Report*.

Independent Evaluation Office (2006), *Report on the Evaluation of the Financial Sector Assessment Program*.

International Monetary Fund (1998), *Surveillance Over the Monetary and Exchange Rate Policies of the Members of the Euro Area*.

International Monetary Fund (2000), *Financial Sector Assessment. Program—Progress Report—Lessons from the Pilot Exercise and Next Steps*.

International Monetary Fund (2003*), Analytical Tools of the FSAP.*

International Monetary Fund (2009), *Financial Sector Assessment Program after Ten Years-Experience and Reforms for the Next Decade*.

International Monetary Fund (2010), *Guidance Note for Staff on Undertaking Targeted (Risk-Based) Reports on the Observance of Standards and Codes in Financial Regulation and Supervision*.

International Monetary Fund (2012), *Decision on Bilateral and Multilateral Surveillance – 2012 Integrated Surveillance Decision* (Decision No 15203-(12/72)).

International Monetary Fund (2013), "Mandatory Financial Sector Assessments under the Financial Sector Assessment Program: Update", *Policy Papers*, 15 November.

International Monetary Fund (2018a), "Euro Area Policies - Financial System Stability Assessment", *IMF Staff Country Reports*, 19 July.

International Monetary Fund (2018b), *Financial Sector Assessment Program: FAQs*.

Newman, M.E.J. (2010), *Networks. An Introduction*, *Oxford University Press*, Oxford and New York.

Stedman, L. (2018), “Strengthening IMF Financial Surveillance: Organizational and Human Resource Issues”, *IEO Background Papers*, No BP/18-02/05.

Takagi, S. (2018), “IMF Bilateral Financial Surveillance”, *IEO Background Papers*, No BP/18-02/01.

Vermeulen et al., (2018), *An energy transition risk stress test for the financial system of the Netherlands*, Nederlandsche Bank.

Zettelmeyer, J. (2018), “IMF Multilateral Financial Surveillance”, *IEO Background Papers*, No BP/18-02/03.

Abbreviations

AIV	Article IV
AOA	Articles of Agreement of the IMF
BRRD	Banking Recovery and Resolution Directive
CCP	Central counterparty
CPM	Clique percolation method
CRD	Capital Requirements Directive
CSD	Central securities depositary
CSR	Comprehensive Surveillance Review
DGSD	Deposit Guarantee Scheme Directive
EAP-FSAP	FSAP for euro area policies
EBA	European Banking Authority
EFC	Economic and Financial Committee
EIOPA	European Insurance and Occupational Pensions Authority
ESA	European system of accounts
ESAs	European supervisory authorities
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EWE	Early Warning Exercise
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSSA	Financial System Stability Assessment
GFSR	Global Financial Stability Report (of the IMF)
ICPFs	Insurance corporations and pension funds
IEO	Independent Evaluation Office (of the IMF)
IMF	International Monetary Fund
ISD	Integrated Surveillance Decision
LSIs	Less significant institutions
MCM	Monetary and Capital Markets Department (of the IMF)
MFIs	Monetary financial institutions
NBFI	Non-bank financial intermediation
NCA	National competent authority
Non-MMIFs	Non-money market investment funds
NRAs	National resolution authorities
OFIs	Other financial institutions
ROSC	Report on Observance of Standards and Codes
SIs	Significant institutions
SIFS	Systemically important financial sector
SRB	Single Resolution Board
SRM	Single Resolution Mechanism
SSM	Single Supervisory Mechanism

Acknowledgements

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PDF ISBN 978-92-899-4252-2, ISSN 1725-6534, doi:10.2866/654824, QB-AQ-20-009-EN-N