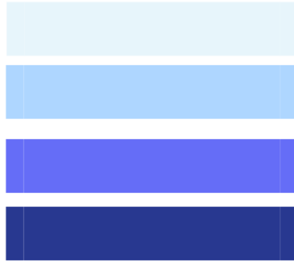
IADI Policy Briefs provide high-level overviews and key takeaways on policy and research topics of relevance to deposit insurers.



POLICY BRIEF

FIVE EMERGING ISSUES IN DEPOSIT INSURANCE

NO. 4

BERT VAN ROOSEBEKE and RYAN DEFINA

September 2021

IADI Policy Briefs are written by staff members of IADI's Secretariat Research Unit, and from time to time by other authors, and are published by IADI. The papers are on subjects of topical interest and are technical in character. The views expressed in them are those of the author(s) and not necessarily the views of IADI. The authors are grateful to Eugenia Alamillo, Daniel Dominioni, Danilo Palermo and David Walker as well as to staff from AMF Québec (Canada), CDIC (Canada), CDIC (Chinese Taipei), IPAB (Mexico), DIA (Russia) and FDIC (USA) for helpful comments.

The editor of the IADI Policy Brief series is Bert Van Roosebeke.

This publication is available on the IADI website (www.iadi.org).

© International Association of Deposit Insurers (2021).
All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.

International Association of Deposit Insurers (IADI), C/O Bank for International Settlements,
Centralbahnplatz 2, CH-4002 Basel, Switzerland. Tel: +41 61 280 9933 Fax: + 41 61 280 9554

Bert Van Roosebeke
IADI Research Unit
bert.vanroosebeke@iadi.org

Ryan Defina
IADI Research Unit
ryan.defina@iadi.org

FIVE EMERGING ISSUES IN DEPOSIT INSURANCE

Executive Summary

Deposit insurers operate within an ever-evolving global financial system. This Policy Brief offers an overview of five emerging issues that are expected to significantly affect the activities of deposit insurers in the near future – climate change, utilisation of financial technology ('fintech'), Covid-19 policy implications, deposit insurers' role in resolution, and cross-border considerations. These issues were selected for inclusion based on their relevance to the operations of deposit insurers, connection to the IADI Core Principles for Effective Deposit Insurance Systems, and relative weight assigned in recent dialogue within the international community.

Following a description of each of the issues, this Policy Brief explains why these issues are important to deposit insurers and identifies relevant global and regional policy initiatives. Deposit insurers may wish to consider these five emerging issues within the context of their own domestic policy settings, and to calibrate their response accordingly.

- **Climate change** is increasingly seen as a risk for financial stability as a whole. Climate-related risks may materialise as physical and/or transition risks and impact on the value of assets or on financial stability. Deposit insurers may be affected directly (e.g. operations and business continuity) and/or indirectly (e.g. member bank risk) by climate change risks. Momentum amongst international financial standard-setters to respond to climate-related risks is now well established.
- **Fintech** developments have fast-tracked the digitisation of financial services, helped enhance competition, efficiency and financial inclusion. However, concerns have risen regarding financial stability and competitive distortions. At times, these policy goals may be in conflict with other ones such as financial inclusion and consumer protection. Fintech affects deposit insurers through numerous direct and indirect channels, which may touch upon the very fundamentals of the banking sector such as payment systems and the role of traditional deposits. There is an apparent sense of urgency in terms of progressing policy and standard-setting debates which may also affect deposit insurers.
- **Covid-19** policy responses of significant scale have contributed to limiting adverse economic and financial stability consequences of the COVID pandemic. At the same time, some deposit insurers have witnessed high increases in covered deposits. The debate on how to unwind accommodating policy responses without causing turmoil is picking up. Given high levels of indebtedness, a tightening of financial conditions and an end to temporary regulatory forbearance may cause significant hikes in corporate bankruptcies, which in turn may translate into higher bank default risks. To deposit insurers, this risk stresses the importance of contingency plan testing and the need to further investigate the reasons behind the volatility of deposit flows.
- **Deposit insurers' role in resolution** varies significantly across jurisdictions, depending on deposit insurers' mandate and on legislative and resolution frameworks in place. However, IADI survey data points at a trend of higher involvement by deposit insurers in resolution. This involvement may be subject to safeguards in the form of financial caps for non-payout use of funds in some jurisdictions. Domestic or regional policy decisions on deposit insurers' mandate should consider the IADI Core Principles and, in particular, ensure that whatever mandate is chosen it be clearly defined, supported by sufficient powers and resources, as well as adequacy of design features, and be well coordinated with the other safety-net participants.
- **Cross-border considerations** are increasingly affecting deposit insurers' operations as these pose challenges regarding depositor reimbursement and resolution activities. This is driven by the growing inter-connectedness of global financial flows and the increasingly borderless and digital nature of financial services. Currently, the rate of prevalence of cross-border arrangements between deposit insurers is relatively low, but this is expected to continue to rise and with it the need to focus more attention in this area.

1 Climate Change

1.1 What is the issue?

The United Nations (UN) Paris Climate Agreement of 2015 provides that the increase in the global average temperatures should be limited to well below 2°C – if possible to 1.5°C – as compared with pre-industrial levels. As a follow-up to the Paris Agreement, in November 2021, the 26th UN Climate Change Conference (COP26) will take place.

Climate change is increasingly seen as a risk for financial stability as a whole.[1] Climate-related risks may materialise and impact on the value of assets or on financial stability as

- physical risk – i.e. through gradual changes in climate or adverse weather events such as storms or flooding, and/or as
- transition risk – i.e. through adjustments to climate change such as carbon pricing or product regulations.

However, quantifying or modelling climate-related financial stability risks is extremely challenging, given the complex and mutually influencing nature of climate change and uncertainties surrounding the policies adapted to mitigate this change and the economic impact these may have. Non-linear effects, tipping-points and the limitations in using backward-looking models all add up to an extreme degree of uncertainty. This may culminate in a "green swan" event, a rare climate-related event with a highly negative impact on financial stability.[2]

Uncertain as the size of system climate-related risks may be, these risks may also materialise on the level of individual financial institutions. Banks[3] are exposed to climate risk through a variety of channels, including the lower efficacy of mitigation strategies such as diversification or derivatives, climate-related changes in asset prices and in the creditworthiness of lenders, but also feedback-loops with the real economy through a general drop in lending and insurability of certain economic activities.

For this reason, efforts are ongoing to incorporate climate-risk into bank risk-management[4] and into micro-prudential bank supervision.[5] The latter often amounts to the supervisor communicating expectations as to climate change scenario analysis by banks.

Responding to both climate change itself and to its potential impact on financial stability, policy plays an increasingly important role. Climate-motivated policy and regulation in the non-financial sphere may negatively influence producers' creditworthiness and hence increase default probabilities. Financial regulation as well is expected to increasingly incorporate climate risks. This can be the case through prudential regulation, affecting the level of own funds banks must hold. However, mandatory disclosure as to banks' exposure to climate risks may also have an impact on bank funding.

1.2 Why is it relevant to deposit insurers?

Deposit insurers may be affected by climate change in both a direct and indirect way. The direct effects of climate change may affect deposit insurers' business continuity through operational risks, e.g. through severe weather conditions affecting the very operability of the deposit insurer through lack of availability of staff or technical infrastructure due to power outages. Obviously, this is not a risk specific to deposit insurers, and the relevance of this risk may vary significantly geographically. As Figure 1 illustrates, deposit insurers of all mandate types may be affected by this risk and deposit insurers may accommodate for it (by requiring remote work, installing power backups, etc.) and taking steps to incorporate climate risk into their contingency plans and crisis management frameworks.

---

[1] BCBS (2020), BIS (2021), Bolton et al (2020), FSB (2020), NGFS (2020).
[2] Bolton et al (2020).
[3] The term "bank" is defined as any entity which accepts deposits or repayable funds from the public and is classified under the jurisdiction's legal framework as a deposit-taking institution. (source: IADI Glossary)
[4] NGFS (2020a).
[5] NGFS (2020b) and FSB (2020a).

The indirect effects of climate change on deposit insurers pass through four other channels (also in Figure 1) that are in their turn directly affected by climate change. The ongoing inclusion of climate aspects into micro-prudential financial supervision (top right) will likely require consideration only by those deposit insurers with a risk-minimiser mandate. As described above, climate change may influence financial stability, which will affect all deposit insurers through the rise of systemic risks that they are subject to.

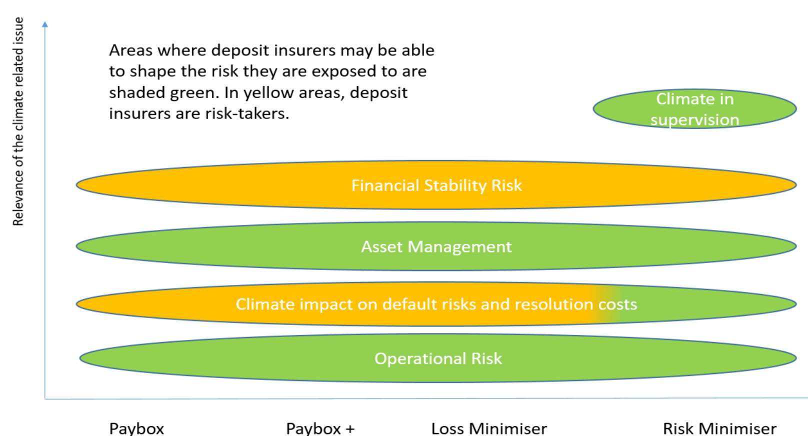


***Figure 1**: Climate Risks for Deposit Insurers*

Deposit insurers are also affected through the economic effects of climate change in multiple ways. This may translate to changes in banks' default risks given their exposure to climate risks. This may also be influenced directly by climate change and/or by climate-driven policy-measures affecting the creditworthiness of borrowers or the value of assets. Such changes may cause deposit insurers to reconsider the appropriateness of premiums and fund sizes. Moreover, climate-induced changes in asset prices may influence recovery rates upon resolution as the risk of stranded assets may rise. Deposit insurers with a risk-minimising mandate may choose to pro-actively manage these two risks. Finally, deposit insurers that function as asset managers may see a need – or may be expected – to incorporate sustainability into managing assets.[6]

1.3 Policy initiatives and implications

Several international and regional standard setters have put climate change high on the agenda.

- The **Basel Committee on Banking Supervision'**s (BCBS) work programme and strategic priorities for 2021 include the assessment, measurement and mitigation of climate-related financial risks, including regulatory, supervisory and disclosure-related elements.
- The **Financial Stability Board** (FSB) has put climate change and sustainable finance on its Work Programme for 2021.[7] It will review and develop principles or recommendations on regulatory and supervisory approaches related to climate risks at financial institutions. In July 2021, as input to the G20 Economy and Finance Minister Meeting, the FSB published a roadmap[8] to address climate-related financial risks as well as reports on the availability of data needed for the monitoring of climate-related financial stability risks and on ways to promote globally comparable standards of disclosure, based on the recommendations by the Task Force on Climate-Related Financial Disclosures (TCFD).[9]
- In April 2021, the **G20** established the Sustainable Finance Working Group which is to take stock of international work on sustainable finance and create a future roadmap.
- The **Bank for International Settlements** (BIS) has recently organised the Green Swan conference where Central Banks discussed their role in tackling climate change.[10] Here as well, data gaps on the actual exposure to climate risks were identified as a major problem.
- Just days following the conference, the **G7** supported mandatory and TCFD-based disclosure by banks and corporates of climate exposure and called for a coordinated approach in measuring climate impact and risk-exposure.[11] This may be picked up by the G20 and reinforced at the **UN Climate Change Conference (COP 26)** in November 2021.
- **IADI** and its members have also begun to address this topic through conferences and workshops. A recent conference held by the Perbadanan Insurans Deposit Malaysia and Korea Deposit Insurance Corporation (both IADI Members) titled *A Race Against Time – Climate-Related Risks and Financial Stability Implications* offered a forum to the

[6] A similar discussion for Central Banks is gaining ground, see NGFS (2020c).
[7] FSB (2021).
[8] FSB (2021b).
[9] FSB (2021c) and FSB (2021d)
[10] See BIS (2021).
[11] See US Treasury (2021). The G7 represents approximately 32% of global GDP and 23% of global greenhouse gas emissions.

deposit insurance community to engage in a productive dialogue on the topic. The conference concluded that discussions could include strategically aligned practical actions that can be taken by DIs to address concerns on financial stability. Also, an organisational roadmap could be adopted, beginning from the base of self-assessments, to articulating green outcomes, to building intellectual capabilities, and establishing collaborative networks.[12]

2 Fintech

2.1 What is the issue?

Recent developments in technology have fast-tracked the digitisation of financial services. Many of these new services have improved efficiency, ease of use and competition in the financial sector. However, at the same time, concerns have risen regarding financial stability and competitive distortions as a result of regulatory arbitrage and platform economies.[13] This has exposed supervisors and deposit insurers to new challenges and presented a sense of urgency in terms of progressing relevant policy debates. The global standard setting community is continuing to keep abreast of key issues and work on improving best practices in addressing financial stability considerations, all while seeking to retain accommodating conditions for innovation and profitability in the private sector. Issues such as improving levels of financial inclusion and consumer protection have added additional layers of nuance to discussions and have made clear the at times conflicting policy goals.

2.2 Why is it relevant to deposit insurers?

E-money products have become increasingly popular in recent years. They have improved access to digital financial services for people previously unserved or underserved by the traditional banking sector.[14] Policy discussions concerning the extent to which deposit insurers (DI) cover these products yield considerations regarding several models, including the direct, pass-through and exclusion approaches.[15] DI coverage leads to challenges regarding the identification and pricing of risks as well as safeguards for timely reimbursement. E-money service providers operate fundamentally different from traditional banks. As such, they are exposed to unique risks via (at times) difficult-to-characterise transmission channels. These, as well as potential gaps in the domestic legislative framework, can reveal additional uncertainty for the deposit insurer.

Depositor reimbursement is likely to be affected over the coming years by a number of fintech developments, e.g. the blockchain technology[16]. In combination with near-live refreshes of the single customer view, leveraging by deposit insurers on fintech technologies may contribute to shorter payout time periods and may improve overall depositor experience in the reimbursement process. The single customer view is fundamental to safeguard the monitoring and preparatory role of the deposit insurer. Associated datasets are typically updated at regular intervals with a time-lag. Emerging technologies increase the probability that more direct data lakes can be constructed with member institutions, leading to near-real-time updating of core monitoring metrics. This will lead to swifter and more efficient reimbursement outcomes provided the deposit insurer has invested sufficiently in IT infrastructure, the development of reporting standards, and the staff's technical capability. Also, near-real time information on the risk profile of member institutions

---

[12] For more information please consult PIDM - Webinar discusses climate-related risks and implications on financial stability

[13] Platforms mostly act as intermediaries to connect users. If users are homogenous, platforms are considered to be one-sided. Most platforms connect users of different groups, e.g. consumers, retailers and advertisers and are thus two-sided or multi-sided platform. Platforms are characterised by network effects as indirect externalities. This means that the benefit of a user at one side of the platform increases with the number of users on the other side and vice versa. The latter effect, in combination with economies of scale tends to lead to a high degree of concentration. Different price sensitivities across user groups (e.g. between consumers and sellers) may allow for differential pricing by the platform across these groups. This may lead to zero-pricing at the consumer side of the platform market, a fast-increasing user base and hence a further strengthening of market power. [see Van Roosebeke et al. (2016) with further references]

[14] This is particularly the case in Africa. As of July 2019, 90 per cent of Kenyans over the age of fourteen were conducting transactions through M-Pesa (a prominent e-money service provider Safaricom, a subsidiary of Vodafone).

[15] Izaguirre and Dias (2019) specify two main deposit insurance approaches to offer coverage for e-money accounts. The *direct approach* aims to address residual risks from the failure of an e-money issuer by making each e-money account eligible for deposit insurance coverage. The *pass-through approach* aims to address residual risks from the failure of a deposit-taking institution holding a float account. It does so by allowing the coverage to pass through the float account (held at an institutional member of the deposit insurance system) and reach each e-money account.

[16] The uptake of blockchain technologies could potentially benefit deposit insurers via numerous means. The decentralised system of recording, storing (securely via encryption or digital signature) and interaction with customer data may foster increased trust among stakeholders. There are potential efficiencies through streamlining of the "know-your-customer" (KYC) process. These, along with potential cost savings, may see depositor reimbursement activities reshaped fundamentally in the medium term. See Menon (2017) for further details on blockchain applications.

and covered deposits may improve DIs' ability to identify and manage their risks.

Central Bank Digital Currencies (CBDC) are currently being implemented in some jurisdictions and explored by over 85% of central banks[17], with some 60% engaged in testing proof of concepts. In 2020, the Bahamas released the sand dollar, the world's first CBDC and in April 2021 the People's Bank of China introduced public testing of a digital renminbi. In a joint report, a group of leading central banks[18] determined three foundational principles for the future development of CBDC: "do no harm" to monetary and financial stability; coexist with cash and other types of money in a flexible and innovative payment ecosystem; and promote broader innovation and efficiency.[19] Depending on their design, CBDCs may have more or less impact on DIs' operations and expose DIs to new sources of risks. Amongst others, CBDCs may offer a (limited) default-free alternative to bank deposits. This may both reduce DI risks (given reduced exposure) and increase DI risk (if depositors can flee into safe CBDCs upon uncertainty).

Cryptocurrencies such as Bitcoin offer a fluid, cost-efficient and anonymous means to conduct transactions. At the cost of excessive price volatility, they offer speculative investment possibilities and, given increasing inflation expectations, may provide a digital store of value. Stablecoins, i.e. private cryptocurrencies that are backed by (ideally safe) assets may be used by some as an alternative to deposits, given their focus on use in transactions and lower volatility. Also, stablecoins may be redeemable (although likely to a limited degree only) since unlike unbacked cryptocurrencies, they present a claim against the issuer. The relevance of cryptocurrencies and stablecoins for DIs is likely to depend upon their future regulatory treatment and on whether they are integrated within and emitted by the regulated banking sector. Given their hybrid form between securities and deposits, it remains to be seen whether coverage by deposit insurers or other participants of the safety net of risks related to cryptocurrencies and stablecoins will become a policy debate.

Supervisory Technology (SupTech) offers enormous potential to DIs, especially to those whose mandate extends to risk-minimising. Real-time risk alerts may allow for early intervention and preventive measures and thus lower the probability of resolution and/or depositor reimbursement. Resolution Technology (ResTech) applies modern technologies to resolution activities, including the set-up of resolution plans. This may impact on all DIs irrespective of their mandates.

Cyber Security is increasingly becoming a factor of risk to the provision and availability of digital financial products and thus to financial stability as a whole. Monitoring, pricing and potentially managing operational resilience risks at member institutions may be a challenge to deposit insurers because of potential information asymmetries and technical knowledge gaps. Moreover, deposit insurers themselves may be exposed to cyber security risks in their operations.

Financial stability as a whole may be affected through a range of channels resulting from the innovations mentioned above. Amongst others, there is a risk that the focus of Fintech on payments may lead to a deduction of funds from deposit accounts to non-bank payment service providers. It remains to be seen whether this may significantly impact on banks' funding. Also, open banking policies intended to spur competition may lead to greater volatility in deposits and the possibility of banks losing market shares in the payment services market to Fintech newcomers. The actual impact of this disintermediation, be it on banks' profitability or on central banks' ability to transmit monetary policy to the real economy, remains to be seen.

2.3 Policy implications and initiatives

- The **G7** will publish its conclusions on common principles for CBDCs later in 2021. In April 2021, the **G20** decided to conduct a broad discussion on the cross-border use of central bank digital currencies.
- In June 2021, the **BCBS** launched a public consultation on the prudential treatment of banks' exposures to cryptoassets.[20] The consultation closed on 10 September 2021.
- The **Financial Stability Board** (FSB) will provide, in October 2021, a progress report to the G20 on the regulatory, supervisory and oversight frameworks of global stablecoins. The G20 has repeatedly stated that no "global

[17] See Barontini & Holden (2019).
[18] The Bank of Canada, European Central Bank, Bank of Japan, Sweden's Riksbank, Swiss National Bank, Bank of England, Board of Governors of the Federal Reserve and Bank for International Settlements.
[19] See BIS (2020).
[20] Available at https://www.bis.org/bcbs/publ/d519.htm.

stablecoin" should commence operation until all relevant legal, regulatory and oversight requirements are in place.[21]

- Also in October 2021, and as an input to the G20, the **FSB** will provide a report on the harmonisation of cyber incident reporting in the financial sector and on quantitative targets for cross-border payments.[22]
- The **Bank for International Settlements'** (BIS) recently established Innovation Hub identifies critical trends in technology affecting central banking and develops in-depth insights into these technologies that can be shared with the central banking community. The implications for deposit insurers could well be substantial as the Innovation Hub equips central banks, supervisors and other safety net participants with contemporary tools and methodologies to modernise their activities.
- **IADI** has set up a Fintech Technical Committee that is exploring how deposit insurance is likely to be affected by fintech developments. The Committee is working on a number of Fintech Briefs on topics such as challenges to deposit insurers, data standardisation, machine learning and e-money coverage by deposit insurers.[23]

3 Covid-19 and Deposit Insurers

3.1 What is the issue?

Massive policy response has helped limit the economic and financial stability consequences of the COVID-19 pandemic. Although most of these policy measures remain in place for the time being, the debate is picking up as to how, when and at which pace to unwind accommodative policies without major economic and financial turmoil. At the same time, the real costs of the pandemic to the financial sector are not yet clear, given the persistence of measures such as insolvency moratoria and forbearance on non-performing loans.

Although consensus seems to be building that warns for a rapid withdrawal of these measures, considerable risks remain. Excessive risk-taking in markets, combined with expectations of rapid economic recovery, has led to very optimistic valuations and some wide swings in deposit growth have occurred in many IADI Members. For example, Figure 2 shows significant increases in deposit growth in certain economies. On a yearly basis, deposits by households grew in aggregate by 16%. Of 33 countries that offer data on household deposits, 25 recorded annual growth rates in Q4 2020 above 10%. Some countries, including Australia, France and Switzerland, reported increases of around 20%.

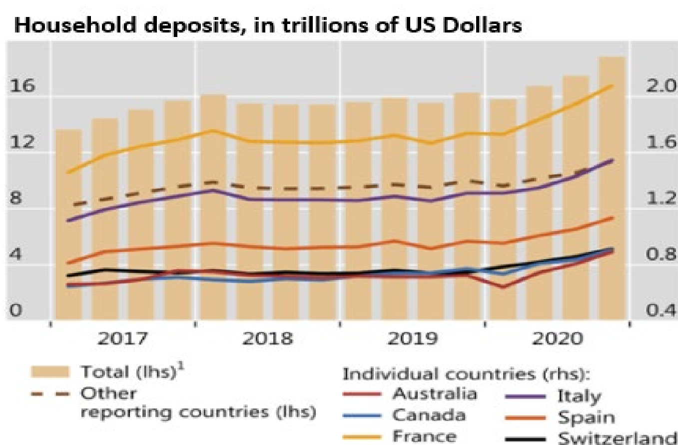


***Figure 2**: Household Deposits, BIS (2021)*

Nevertheless, in some jurisdictions (e.g. Nigeria), the pandemic has recently led to reductions in deposit growth[24], likely reflecting less public financial resources available to support consumer and business spending.

Mounting inflation expectations and/or changes in historically low interest rates may tighten financial conditions, which, given high levels of corporate and sovereign indebtedness, may cause financing difficulties, especially in emerging economies.

3.2 Why is it relevant to deposit insurers?

Tightened financial conditions may be problematic for sovereigns, corporates and banks alike. This is even more the case as the sovereign-bank nexus in part has worsened during the pandemic (see figure below) and some banks may be especially exposed to sectors hit the hardest by the pandemic (e.g. travel and tourism).

---

[21] The European Union legislators are currently discussing a comprehensive proposal aiming at regulating stablecoin issuers ("Market in Crypto-Assets, "MiCA").

[22] In this context, on 31 May 2021, the FSB launched a public consultation on its proposed quantitative targets for enhancing cross-border payments.

[23] All IADI Fintech Briefs are available at: https://www.iadi.org/en/research/fintech-briefs/

[24] Central Bank of Nigeria (2021).

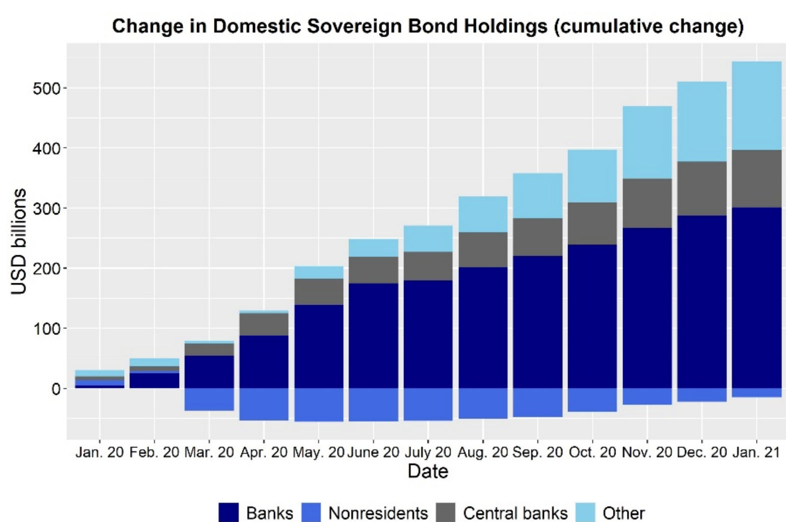


Figure 3: *Sovereign-bank nexus, IMF (2021)*

The IMF expects banks to be rather reluctant in loosening lending standards, meaning credit-driven support to the recovery may be limited. In addition, and given the limited financial resources in highly-indebted countries, deposit insurers may anticipate a significant degree of corporate bankruptcies and should prepare for this to translate into higher bank default risks and potential payouts and/or bank resolution initiatives.

Analysis conducted via a 2021 IADI survey[25] concluded that 40% of respondents expected many COVID-related measures to remain in place post pandemic. Half of the respondents identified technical assistance and/or research questions related to the COVID-pandemic, including enhanced early risk detection and stress-testing, preventive capital assistance and risk related to the surge of deposits observed in some jurisdictions. In addition, a majority of respondents noted that they planned to conduct contingency planning and/or crisis management activities.[26]

3.3 Policy implications and initiatives

- The **Financial Stability Board** (FSB) provided, in July 2021, an Interim Report to the G20 on lessons learnt from the COVID 19-pandemic.[27] On 9-10 July 2021, G20 Finance Ministers met to discuss. A final report will follow in October 2021.
- On October 30-31 2021, the **G20 Summit** takes place. Expectations point at a coordinated, yet differentiated trade-off between the risks of early and late withdrawal of support measures. It remains to be seen whether and how this translates into a coordination approach to prudential financial regulation.
- To ease the external financing need of some of the poorest countries, the **G7** has recently supported an additional allocation by August 2021 of IMF Special Drawing Rights (SDRs) worth USD 650 million. In addition, G7 countries committed to making some of their SDRs available to these countries.
- With respect to **IADI**, the COVID-19 pandemic has emphasised the critical importance of guidance on contingency planning and crisis management contained in IADI Core Principle 6 and effective information sharing and coordination arrangements.[28] The volatility in deposit flows in a crisis is another area where deposit insurers and IADI may wish to explore in terms of research and future guidance.

4 Deposit Insurers' Role in Resolution

4.1 What is the issue?

Deposit insurers' role in resolution varies significantly across jurisdictions, depending on deposit insurers' mandate and on legislative and resolution frameworks in place. Deposit insurers may be actively involved in the decision to put failing/likely to fail banks into resolution, in designing or reviewing the resolution strategy for all or some banks in their jurisdictions and/or in the financing of that resolution. Also, in some jurisdictions, deposit insurers' funds may be used by other entities as a tool to avoid closing the bank through sale, mergers or other forms of resolution in order to minimise resolution costs or for public interest reasons.[29]

---

[25] The Follow-up Survey on COVID-19 Implications for Deposit Insurers was conducted in Q1 2021 and consists of responses from 32 IADI Members.
[26] See Defina (2021a).
[27] FSB (2021d).
[28] See IADI Guidance on Contingency Planning and Crisis Preparedness, IADI (2019)
[29] In the remainder, "resolution" is used such as to encompass these scenarios.

Even though it does not take into account all regional specificities, the well-known categorisation of deposit insurers' mandates may serve as a good proxy for the involvement of deposit insurers in resolution (see figures below). The decline over time of the share of pure pay-boxes points at a trend of higher involvement by deposit insurers in resolution.

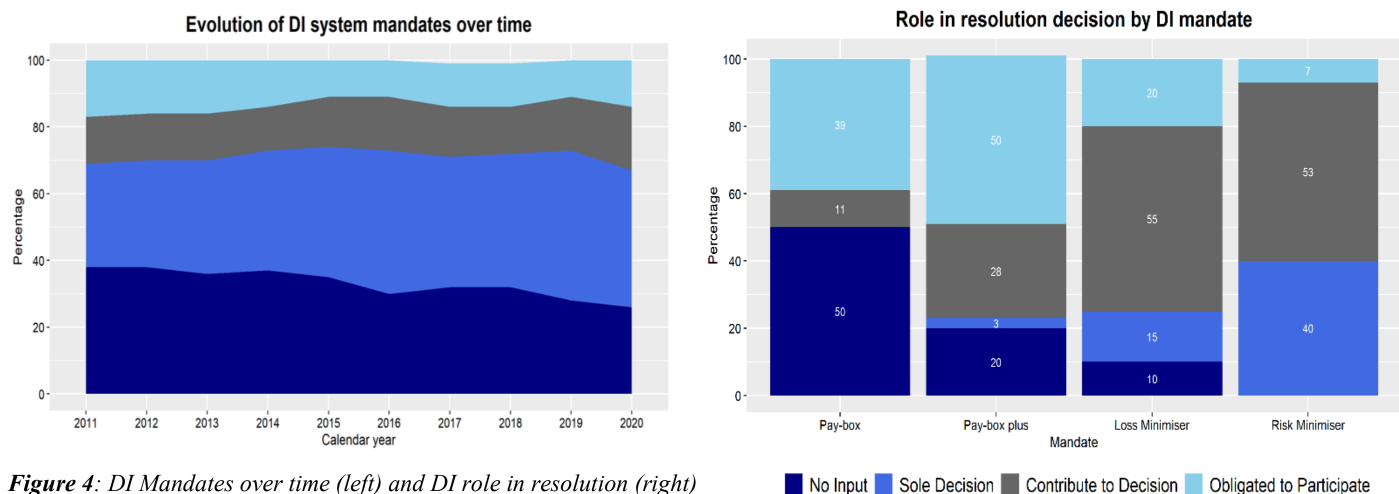


***Figure 4**: DI Mandates over time (left) and DI role in resolution (right)*
Source: IADI Annual Survey

Non-payout tools are relevant to a significant share of the deposit insurance community. Indeed, in 2019, 60% of respondents to an IADI survey indicated that deposit insurance funds were available for financing alternative measures, such as purchase and assumption transactions, the transfer of deposits to a bridge bank, and provision of capital and liquidity support.[30] The relevance of these non-payout tools for deposit insurers has been rising over time in recent years.[31]

At the same time, non-payout use of funds is often constrained by safeguards in the form of financial caps. These caps may include a "least cost" principle for the deposit insurer/resolution authority, often comparing the costs of different resolution options. Systemic failure criteria may allow for exceptions to the application of the least cost principle.

Prevalence of the least cost principle in surveyed jurisdictions

***Figure 5:** Least Cost Prevalence*
Source: IADI Annual Survey

The application of the least cost principle has risen as a growing number of deposit insurers have indicated this to be relevant in their jurisdiction (see Figure 5). Other caps relate to the net-costs deposit insurers would have faced in case of deposit reimbursement under liquidation or to the deposit insurers' financial target level.[32]

An alternative way to shield deposit insurers' funds (that are not resolution authorities) from excessive resolution costs has been the establishment of distinct resolution funds, which are held separately from deposit insurers' funds. Such resolution funds are available in approximately 40% of surveyed jurisdictions, approximately half of which are EU member states.[33]

4.2 Why is it relevant to deposit insurers?

The design and scope of a deposit insurers' framework (including mandate and role in resolution) is the result of policy decisions taken at the national/regional level. In coming to these decisions and putting them into practice, it is important

---

[30] See Baudino et al (2019).
[31] See Defina (2021b) (forthcoming).
[32] Such in the EU under Article 109 BRRD.
[33] See Baudino et al (2019). Note that EU legislation requires EU Member States to establish national bank resolution funds in addition to existing deposit guarantee funds. (Article 100 BRRD).

to consider the IADI Core Principles for Effective Deposit Insurance Systems and ensure that whatever mandate is chosen that it be clearly defined, supported by sufficient powers and resources as well as adequacy of design features, and be well-coordinated with the other safety-net participants. Proportionate application of these standards should seek to incorporate specific domestic considerations.

For those jurisdictions where deposit insurers already have a broader mandate or are considering expanding the deposit insurer's role in resolution activities, an emerging challenge is to ensure that relevant best practices are adhered to and up-to-date. This includes consideration of all available resolution tools and their appropriate use within a given set of circumstances.

Increased availability of resolution tools can also impact on a multitude of deposit insurance issues including ensuring effective safety-net coordination and decision-making, resolution funding (e.g. adequacy and use of deposit insurance funds, risk assessment and pricing, and more nuanced public awareness communications given the wider range of resolutions that may be implemented). Cross border issues may also emerge in situations where neighbouring jurisdictions, or jurisdictions with highly interconnected banking and deposit insurance systems, are exposed to multiple resolution regimes applied in a manner that is not consistent or complementary (see section 5).

"Where the deposit insurer is not the resolution authority, it has the option, within its legal framework, to authorise the use of its funds for resolution of member institutions other than liquidation. In such situations the following conditions are met:

(a) the deposit insurer is informed and involved in the resolution decision-making process;
(b) the use of the deposit insurer's funds is transparent and documented and is clearly and formally specified;
(c) where a bank is resolved through a resolution process other than liquidation, the resolution results in a viable, solvent and restructured bank, which limits the exposure of the deposit insurer to contribute additional funding in respect of the same obligation;
(d) contributions are restricted to the costs the deposit insurer would otherwise have incurred in a payout of insured depositors in a liquidation net of expected recoveries;
(e) contributions are not used for the recapitalisation of resolved institutions unless shareholder's interests are reduced to zero and uninsured, unsecured creditors are subject to parri passu losses in accordance with the legal claim priority;
(f) the use of the deposit insurer's funds is subject to an independent audit and the results reported back to the deposit insurer; and
(g) all resolution actions and decisions using the deposit insurer's funds are subject to ex post review.

Source: IADI Core Principles for Effective Deposit Insurance Systems (2014), Core Principle 9, Essential Criterion 8 Sources and Uses of Funds

"Where there are multiple safety-net participants responsible for resolution, the legal framework provides for a clear allocation of objectives, mandates, and powers of those participants, with no material gaps, overlaps or inconsistencies. Clear arrangements for coordination are in place."

Source: IADI Core Principles for Effective Deposit Insurance Systems (2014), Core Principle 14, Essential Criterion 3 Failure Resolution

4.3 Policy implications and initiatives

- The **FSB** will, in the remainder of 2021, focus on full implementation of the Key Attributes of Effective Resolution Regimes for Financial Institutions. This also includes efforts regarding the resolution of non-G-SIB banks, including financial cooperatives and state-owned banks.[34] In a number of jurisdictions, deposit insurers are responsible for the resolution of banks that are systemically important (be they D-SIBs or not). In November 2021, the FSB will be publishing its yearly Resolution Report.
- By the end of 2021, the **European Commission** is set to propose changes to review the bank crisis management and deposit insurance framework. The Commission is expected to lower the barriers to resolution, which currently are

[34] Motivated by findings from the 2019 Thematic Peer Review on Bank Resolution Planning – see FSB (2019) and its evaluation of too-big-to-fail reforms – see FSB (2021a).

subject to a somewhat vague "public interest" test.[35] Also, better alignment of state aid rules and the Bank Recovery and Resolution Directive (BRRD) may increase the likelihood of putting banks into resolution. Extending the toolbox of deposit insurers and changes as to the super-preference of deposit insurers' claims in resolution may affect the role of deposit insurers in resolution, but it remains to be seen whether proposals entail any elements in this regards.[36]

- With its planned Technical Assistance Framework, **IADI** will provide a structured setting for building a collaborative relationship between members looking to expand their mandates and enhance their compliance with the IADI Core Principles, and those that have evolved over time to include additional powers and responsibilities. In addition, IADI is collaborating with the IMF and the FSI to offer an online training course on bank resolution (Bank Resolution Online Course or BROC) to help strengthen the expertise and skills of financial regulators, supervisors, resolution authorities and deposit insurers.

5 Cross-Border Issues

5.1 What is the issue?

Given the growing inter-connectedness of global financial flows and the increasingly borderless and digital nature of financial services, cross-border issues have become increasingly relevant for deposit insurers' activities.

5.2 Why is it relevant to deposit insurance?

Many deposit insurers are directly affected by cross-border financial activities as these pose challenges regarding depositor reimbursement and resolution activities. As set out in IADI Core Principle 5 – Cross-Border Issues, deposit insurers should have regular contact with foreign deposit insurers where there is a material presence of foreign banks within a jurisdiction. This holds true for both branches and subsidiaries of foreign institutions and particularly where the deposit insurer is also the resolution authority. For example, information on actions taken by the supervisor or resolution authority in the home/host country may have serious impacts on local institutions.

As the 2020 IADI Annual Survey illustrates, 30% of responding deposit insurers affirmed to have cross-border arrangements between home/host deposit insurers in place. Since 2013, this share has risen over time and effectively doubled since 2017.[37] It remains to be seen whether the upward trend in the establishment of cross-border arrangements will continue in the future.

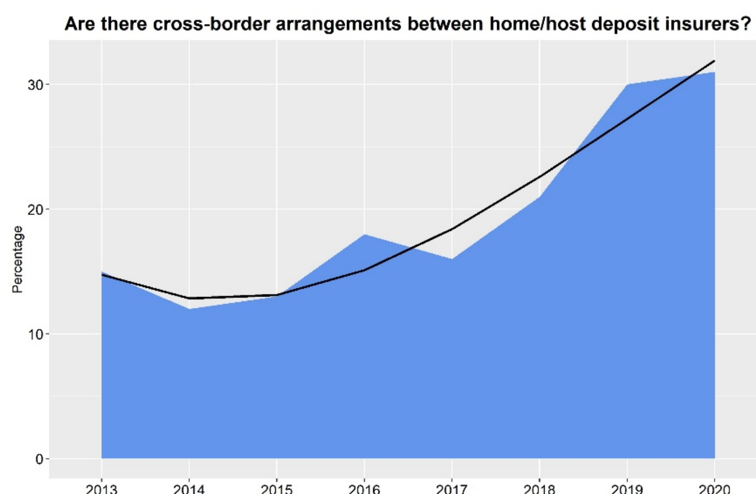


Figure 6: *Cross-Border arrangements amongst DIs.*
Source: IADI Annual Survey

Given intense cross-border financial activities, the rate of prevalence of cross-border arrangements between deposit insurers seems still relatively low. This may be caused by the fact that the majority of deposit insurance systems outside the EU do not insure depositors in foreign jurisdictions. In case of insurance of deposits held by foreign deposit-taking institutions, this is typically done so through the insurance of foreign bank branches where strict asset maintenance requirements and other safeguards apply. However, further research is necessary before conclusions can be drawn.

Potential implications of the aforementioned figures are substantial: constraints on the deposit insurer's ability to efficiently reimburse depositors in cases of cross-border dynamics; coordination gaps requiring comprehensive and pre-

---

[35] Note that the EU-concept of "resolution" is more narrowly defined than in many other jurisdictions. In the EU, resolution currently encompasses the application of a set of tools (including sale of business, bridge bank, asset separation and bail-in) to a bank that is failing or likely to fail in order to ensure the continuity of critical functions, protect depositors or safeguard financial stability. In addition, resolution must be necessary from a "public interest" perspective. If these conditions for resolution are not met, banks can be put in liquidation under national insolvency proceedings.

[36] See the EU Commission's conference on Crisis Management and Deposit Insurance Framework, 18 March 2020

[37] A question targeting cross-border issues has been posed in every IADI Annual Survey since 2013. The wording has changed slightly over the years, but this is mostly for clarification purposes. Hence the conceptual underpinning of the question remains broadly constant over time.

emptive strategies to mitigate associated risks; concerns over data availability (cross-border standards, legislative foundations to enable availability while ensuring privacy concerns and bank secrecy laws at met); impacts on IADI Core Principle 5 compliance.

5.3 Policy implications and initiatives

- In the resolution field, the FSB Key Attributes of Effective Resolution Regimes encourage resolution authorities to wherever possible achieve a cooperative solution with foreign resolution authorities. Mutual recognition of resolution actions is one avenue to give effect to foreign resolution measures. Such third country recognition adds to the effectiveness of cross-border resolutions as it allows for resolution actions taken in one jurisdiction to have effect in other jurisdictions. Just recently, in May 2021, the **Bank of England** has recognised the bail-in of securities under English law in the resolution of PrivatBank, an Ukraine-incorporated bank, as decided upon by the Ukrainian Resolution Authority.[38]
- The focus of the **FSB** on full implementation of the Key Attributes of Effective Resolution Regimes for Financial Institutions, including joint initiatives with IADI to develop supporting guidance on the resolution of non-G-SIB banks may cause efforts to make cross-border resolution works more effective to gain attention.

[38] Bank of England (2021). In 2016, PrivatBank was subject to bail-in by the National Bank of Ukraine (NBU). Following this, the NBU submitted a request for recognition to the Bank of England in relation to the bail-in of the four loans, totalling $595m, which were funded by notes issued by UK SPV and are governed by English law.

6 References

Bank of England. (2021). News Release, PrivatBank Bail-in: BoE recognises bail-in by National Bank of Ukraine.

Basel Committee on Banking Supervision (BCBS) (2020). Climate-related financial risks: A Survey on current initiatives, April 2020.

Barontini, C., Holden, H. (2019). Proceeding with caution – a survey on central bank digital currency. *Bank for International Settlements Papers, No. 101.*

Baudino, P., Defina, R., Fernandez Real, JM., Hajra, K., Walters, R. (2019). Bank failure management – the role of deposit insurance. *Financial Stability Institute Insights, No. 17.*

BIS. (2021). International banking statistics and global liquidity indicators at end-December 2020. *Statistical Release*.

Bolton, P, et al. Despres, M., Pereira de Silva, L.A., Samama, F., Svartzman, R. (2020). The green swan – central banking and financial stability in the age of climate change. *Bank for International Settlements publication.*

BIS. (2020). Central bank digital currencies: foundational principles and core features. *Bank for International Settlements publication.*

BIS. (2021). The Green Swan Conference - *Bank for International Settlements conference material.*

Central Bank of Nigeria. (2021). Money and Credit Statistics – Statistics on Demand Deposits

Defina, R. (2021a). Impact of the COVID-19 Pandemic on Deposit Insurance. *International Association of Deposit Insurers Survey Brief, No. 1.*

Defina, R. (2021b). Banking Resolution – Expansion of the Resolution Toolkit and the Changing Role of Deposit Insurers. *International Association of Deposit Insurers Policy Brief, No. 3*

FSB. (2019). Thematic Peer Review on Bank Resolution Planning. *Financial Stability Board publication.*

FSB. (2020). The Implications of Climate Change for Financial Stability. *Financial Stability Board publication.*

FSB. (2020a). Stocktake of Financial Authorities' Experience in Including Physical and Transition Climate Risks as Part of Their Financial Stability Monitoring. *Financial Stability Board publication.*

FSB. (2021). FSB Work Programme for 2021. *Financial Stability Board publication.*

FSB. (2021a). Evaluation of the Effects of Too-Big-To-Fail Reforms (Final Report). *Financial Stability Board Publication.*

FSB. (2021b). Report on Promoting Climate-Related Disclosures. *Financial Stability Board Publication.*

FSB. (2021c). The Availability of Data with Which to Monitor and Assess Climate-Related Risks to Financial Stability. *Financial Stability Board Publication.*

FSB. (2021d). FSB Chair's letter to G20 Financial Ministers and Central Bank Governors. *Financial Stability Board Publication.*

IADI. (2014). IADI Core Principles for Effective Deposit Insurance Systems. *International Association of Deposit Insurers publication.*

IADI. (2019). Deposit Insurers' Role in Contingency Planning and System-wide Crisis Preparedness and Management, Guidance Paper, *International Association of Deposit Insurers.*

IMF. (2021). Global Financial Stability Report, April 2021. *International Monetary Fund.*

Izaguirre, J.C., Dias, D. (2019). Deposit Insurance: The Last Line of Defense for E-Money? *CGAP Technical Note.*

Menon, R. (2017). Economic possibilities of blockchain technology. *Keynote address at the Global Blockchain Business Conference, Singapore.*

NGFS. (2020), The Macroeconomic and Financial Stability Impacts of Climate Change. *Network for Greening the Financial System publication.*

NGFS. (2020a), Overview of Environmental Risk Analysis by Financial Institutions. *Network for Greening the Financial System publication.*

NGFS. (2020b), Guide to climate scenario analysis for central banks and supervisors. *Network for Greening the Financial System publication.*

NGFS. (2020c), A Status Report on Financial Institutions' Experiences from working with green, non green and brown financial assets and a potential risk differential. *Network for Greening the Financial System publication.*

US Treasury. (2021). Press Release: G7 Finance Ministers and Central Bank Governors Communique. *United States Department of the Treasury.*

Van Roosebeke, B. et al. (2016). Competition Challenges in the Consumer Internet Industry. *Centre for European Policy publication.*

Previous issues in this series

No 1 October 2020	Depositor Preference and Implications for Deposit Insurance	Kumudini Hajra, IADI Ramadhian Moetomo, IADI
No 2 May 2021	The Geographic Dynamics of Deposit Insurance	Ryan Defina, IADI
No 3 August 2021	Banking Resolution: Expansion of the Resolution Toolkit and the Changing Role of Deposit Insurers	Ryan Defina, IADI