Preventing a New Global Financial Crisis amidst the Current "Inflation Crisis" and the Spring 2023 Bank Failure Episodes

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Abstract

The (2007-2009) global financial crisis (GFC), which was caused by a mix of business, regulatory, supervisory, and macroeconomic (in terms of sub-optimal fiscal and/or monetary policies) failures, had a negative impact both on the financial system – with the failure, through the activation of contagious effects, of several commercial and (in the US) investment banks and their subsequent, in most cases, bail-out by public funds – and on the real sector of the economy (recession, closure of non-financial businesses, and unemployment) in several countries all over the globe. As the footprint of that crisis in the collective memory is still bold, it is inevitable that any subsequent significant banking failure episodes, such as those in the US and Switzerland as recently as during spring 2023, raise concerns of eventual conditions for a "repeat" of the GFC and its grave multidimensional (and not only economic/financial) negative consequences. This article:

- briefly develops on the significant differences between now and then as to the macroeconomic environment, the monetary policy strategies and instruments, and the adequacy of the financial regulatory framework to prevent and manage financial (and in particular banking) crises (under Section 1);
- discusses the structural vulnerability of banks to some financial risks (and in particular liquidity risk), which is intertemporal (Section 2);
- presents the causes of the recent banking failures and the measures (successfully) taken to deal with them to avoid contagious spill-over effects (Section 3 on the US and Section 4 on Switzerland);
- identifies the existing threats to financial stability amidst the current phase of the inflation crisis (Section 5); and
- identifies the areas where the financial regulatory framework could potentially be further enhanced (Section 6.1 and 6.2) – with specific emphasis on current policy-related developments in Switzerland (Section 6.3).

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1. Differences in comparison to the environment at the outbreak of and amidst the (2007-2009) global financial crisis (GFC) – *"this time is (again) different"*[3]

1.1 The impact of higher official interest rates on financial stability: introductory remarks

(1) The recent bank failure episodes in the United States ('**US**') and subsequently in Switzerland[4] are part of a "financial turmoil",[5] which (fortunately) has not *per se* developed into a financial crisis. It broke out amidst the most recent phase of the pandemic crisis (which erupted in late 2019), the subsequent, since early 2022, severe geopolitical tensions caused by the Russian Federation's invasion of Ukraine, and then, as of mid-2022, the sharp and within a short period of time raising of official interest rates by major central banks, in quite a synchronised way, as a result of the current "inflation crisis".[6] The combined effect of the pandemic and geopolitical tensions significantly disrupted the global supply chain led to a gradual move towards partial "deglobalisation" through fragmentation of international trade, and induced a historically very high inflation (e.g., energy price and food price inflation, which led to a global "inflation crisis", even though inflation differentials exist), urging thus central banks to resort, according to their statutory mandates, to monetary tightening.[7] This was not the case at the outbreak of and amidst the (2007-2009) global financial crisis ('**GFC**').

(2) The raising of official interest rates had *on the one hand*, a positive impact: return to normality in terms of banking intermediation, which prompted a significant increase in banks' profitability.[8] *On the other hand*, it induced an, across the board, decrease in the market value of outstanding bonds,[9] and caused a correction of prices in stocks (at variable rates) and other asset categories. The cost of funding for governments, non-financial corporates, households, and bank themselves also increased. Hence: *first*, non-financial corporates may be unable to refinance their own bank debt, face an increased debt-servicing burden (especially if debt is based on floating interesting rates – the amounts significantly varying across jurisdictions), and see the value of collateral provided being negatively

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[3] The sub-title is taken over from the seminal work of **Reinhart and Rogoff (2008)**.

[4] These episodes are discussed in detail **under 3 and 4 below**.

[5] This is how, *inter alia*, the Financial Stability Board ('**FSB**') also classifies it in its' Chair's letter of 12 April to the G20 Finance Ministers and Central Bank Governors entitled "FSB to consider lessons learned from recent *banking-sector turmoil*" (emphasis added; available at: https://www.fsb.org/2023/04/fsb-to-consider-lessons-learned-from-recent-banking-sector-turmoil).

[6] The term "inflation crisis" is, *inter alia*, used by **Rogoff (2022)** who analyses the causes of that development and **Zettelmeyer *et al.* (2023**, editors**)**.

[7] Inflation has been mainly triggered by the disruptions in supply and not by an extraordinary increase in demand for goods and services (noteworthy also, that central banks can only directly influence the second leg and not the first). Furthermore, the mechanism for the transmission of monetary policy effects has performed efficiently (unlike in the preceding period of very low – and in the case of the deposit facility negative – interest rates), since banks have also increased their lending rates; however, the full impact of monetary policy measures always has a time lag. In addition, the amount of debt issued by governments, (financial and non-financial) corporates, and households has exponentially increased over the last decade – hence, higher sensitivity to official interest rate increases is warranted.

[8] This impact is positive for all banks but it particular for those the quality of the regulatory capital quality of which is not optimal.

[9] This also had a negative impact on central banks' portfolios (especially when marking-to market of positions is required and there is an exposure to foreign exchange risk as well) – see **Swiss National Bank (2023a)**, pp. 93 and 102.

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affected; *second*, consumers' debt may also be exposed to the above-mentioned problems; and *third*, banks may be prevented from issuing new bonds in the market at reasonable interest rates.[10]

(3) In this context, it is also noted that monetary policy objectives, strategies, and instruments have been adapted during the last few years. Major central banks still have different statutory objectives, sometimes (as in the case of the European Central Bank ('**ECB**') within the Eurosystem) on a hierarchical basis (price stability as primary objective, and contribution to growth, employment, and other (mainly) economic objectives as a subordinated, secondary one), but in all cases, environmental considerations have been included therein. Several major central banks have also gradually shifted the focus of their monetary policy strategies' to "medium-term" inflation targeting, while resort to "unconventional" monetary policy instruments during the period from the outbreak of the GFC up to the pandemic crisis has been applied across the board[11] (currently implementing gradual exit strategies). International cooperation among major central banks is also further enhanced. However, even though the preservation of financial stability is (in almost globally) one of the key tasks of central banks and the spillover links between monetary policy and financial stability are well established, monetary policy was and is not considered as the appropriate means to safeguard financial stability.[12]

1.2 The new financial regulatory framework

(1) Considering that financial stability in internationally highly interconnected systems is a "global public good"[13] and based on the G20 2009 "Global Financial Reform Agenda"[14] that was implemented in the wake of the GFC, enhanced and, in some areas, new international financial standards were adopted by international financial fora.[15] In this respect, the following is briefly noted:[16]

First, the "Basel III regulatory framework" of the Basel Committee on Banking Supervision ('**BCBS**') enhanced the existing prudential bank capital adequacy rules; established a new leverage ratio, micro- and macroprudential buffers and two liquidity ratios for banks.[17] Enhanced rules on the corporate governance of banks targeted at financial stability were also implemented.[18]

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[10] This may become a significant problem for banks which must meet regulatory capital requirements or resolution authorities' requirements ('**MREL**') with subordinated debt which is acceptable for these purposes.

[11] On these monetary policy instruments, see by means of mere indication **Bernanke (2019)**.

[12] See **Bank for International Settlements (2003)**, **Viñals *et al.* (2015)**, **Kohn (2016)** and **Martin *et al.* (2021)**.

[13] On this term, see **Kaul *et al.* (1999)**, pp. 4-6.

[14] This was laid down in the Statement of 2 April 2009 by the G20 Leaders in London "Global Plan for Recovery and Reform" (available at: https://www.g20.utoronto.ca/2009/ 2009communique0402.pdf).

[15] The importance of these soft law standards is significant to the extent they are properly transposed by the countries participating in these fora in their national laws (and in the European Union (EU) by its institutions *via* legislative acts), which avoids regulatory arbitrage and increases financial fragmentation.

[16] For a detailed presentation of these international fora, the financial standards they have adopted, and the new international financial architecture (before and after the 2009 financial reform agenda), see **Gortsos (2023a)**, Chapters 2-3, pp. 85-198 (with extensive further references).

[17] On this framework, which consists of three documents which were adopted in 2010 and are in force as further consequently amended, see details in **Gortsos (2022)**.

[18] Corporate governance rules for listed companies are primarily aimed at protecting investors/shareholders, hence they form part of capital markets regulation/law. The stricter rules applied to banks in terms of financial stability (part of banking regulation/law) constitute an additional layer.

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Second, financial supervisory authorities were endowed with enhanced powers, including in relation to the supervisory review and evaluation process ('**SREP**')[19] and early intervention for ailing banks,[20] while the arrangements for international cooperation among supervisory authorities in relation to cross-border banking (and in general financial) groups were made more robust. Furthermore, under the Basel III regulatory framework, the disclosure requirements (in terms of market discipline) on bans were further enhanced, and the macroprudential oversight of the financial system has become a key pillar of the prudential framework.[21]

Third, enhanced and new international standards were set out for prudential regulation and supervision in capital markets and the insurance sector by the International Organisation of Securities Commission ('**IOSCO**')[22] and the International Association of Insurance Supervisors ('**IAIS**');[23] measures to regulate and supervise "shadow banking" entities were also (albeit partially) proposed and adopted.[24]

Finally, in relation to crisis prevention and management, new financial standards were introduced for setting up bank resolution regimes and frameworks pursuant (*inter alia*) to the FSB "Key Attributes of Effective Resolution Regimes for Financial Institutions" of October 2011 (and in force as amended on **15 October 2014**[25]).[26] The rules governing the operation of deposit guarantee schemes ('**DGSs**')

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[19] This was embedded in the Basel III framework.

[20] On this, see **Basel Committee on Banking Supervision (2018)**.

[21] For an evaluation of the reforms, see **Financial Stability Board (2021)**. In the EU, in particular, macroprudential oversight and banking supervision (for the euro area in principle) were Europeanised by the creation, in 2010, of the European Systemic Risk Board ('**ESRB**', established by Regulation (EU) No 1092/2010 of the European Parliament and of the Council (hereinafter "the co-legislators") of 24 November 2010, OJ L 331, 15.12.2010, pp. 1-11) and then, in 2013, the Single Supervisory Mechanism ('**SSM**', established by Council Regulation (EU) No 1024/2013 of 15 October 2013 "conferring specific tasks on the [ECB] concerning policies relating to the prudential supervision of credit institutions", OJ L 287, 29.10.2013, pp. 63-89, '**SSMR**'), which is the first pillar of the Banking Union ('**BU**'). On these two elements, see **Gortsos (2023a)**, pp. 230-233 and 437-498, respectively (with extensive further references).

[22] See at: https://www.iosco.org/publications/?subsection=public_reports.

[23] See at: https://www.iaisweb.org/publications.

[24] See **Financial Stability Board (2011)**. Shadow banking is defined as credit intermediation involving entities and activities outside the regular banking system.

[25] See at: https://www.Financialstabilityboard.org/2014/10/r_141015. For a brief overview, see **Grünewald (2014)**, pp. 79-80 and **Kleftouri (2015)**, pp. 160-165.

[26] In the euro area, banking resolution was also Europeanised by the creation of the Single Resolution Mechanism ('**SRM**', established by Regulation (EU) No 806/2014 of the co-legislators of 15 July, OJ L 225, 30.7.2014, pp. 1-90, '**SRMR**'), which is the second pillar of the BU; see **Gortsos (2023a)**, pp. 499-543 (with extensive further references). Stricter rules are also in place in the EU at large for the provision, exceptionally, of State aid to credit institutions (bail-out) under the conditions set out in Article 107(3) of Treaty on the Functioning of the European Union (Consolidated version, OJ C 202, 7.6.2016, pp. 47-200, '**TFEU**')) and the provisions of the 2013 (European) Commission's "Banking Communication" (OJ C 216, 30.7.2013, pp. 1-15, as in force), which was adopted on the basis of Article 107(3), point (b) **TFEU** ("*aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a Member State*").

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(based on the financial standards set out by the International Association of Deposit Insurers ('**IADI**')[27]) were also enhanced.

(2) It is noted, however, that in the meantime new risks have emerged as well (and, thus, the need for new rules to mitigate them) due to the digitalisation of financial services (e.g., "digital" bank runs[28]). In addition, the mitigation of climate change and environmental risks, as well as of operational risks ("cyber risk" in particular) and the proper regulation and supervision of financial firms exposed to them has also become a high priority.[29]

2. What is not different, even this time, as concerns the banking sector

Even though it is well established that the macroeconomic and banking regulatory conditions are different during our days if compared to those before and amidst the GFC, some elements pertaining to the banking sector remain the same. In particular:

First, banks are inherently fragile and structurally exposed not only to credit risk but also to liquidity risk, bank liquidity being equally essential as bank capital adequacy.[30] Bank runs and panics of (typically uninsured) depositors can manifest themselves in periods of lack of confidence to a single bank (in the first case) or the entire banking system (in the second case).[31]

Second, effective risk management was and remains an essential tool for avoiding exposure to illiquidity or insolvency – a responsibility of bank managers and banks' Board of Directors which oversee them. Appropriate corporate governance arrangements are also of primary importance, while the generic issue relating to the adequacy of bank business models and the capacity of the banking sector was and remains points of concern.

Third, the failure of individual banks (large, medium and/or small-sized) cannot be ruled out (and even so more under the post-GFC regulatory framework) as long as the stability of the banking sector and financial system as a whole is not under threat. The new resolution frameworks and the existence of explicit DGSs provide sufficient safeguards towards orderly bank crisis management solutions and the protection of depositors of failed banks which are covered by DGSs. It is noted, however, that

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[27] "Core Principles for Effective Deposit Insurance Systems", in force as last revised in November 2014 in the aftermath of the GFC (available at: https://www.iadi.org/en/core-principles-and-guidance/core-principles). On these standards, see **Gortsos (2020)**.

Inter alia, the above-mentioned FSB "Key Attributes" and IADI "Core Principles" are included in the **"Key Standards for Sound Financial Systems"**, which are the main component of the FSB's "Compendium of Standards and Codes – International Standards and Codes to Strengthen Financial Systems" (available at: https://www.fsb.org/work-of-the-fsb/about-the-compendium-of-standards). On this Compendium and these Standards, see details in **Gortsos (2023a)**, pp. Chapter 2 (at various sections).

[28] In this respect, see indicatively at: https://www.srb.europa.eu/en/content/eu-resolution-authority-look-how-handle-digital-bank-runs-after-us-crisis.

[29] See at: https://www.iadi.org/en/core-principles-and-guidance/core-principles.

[30] This is also reflected in the Basel III regulatory framework, as noted **above, under 1.2**.

[31] On bank runs under the "non-fundamental theory", see the seminal work of **Diamond and Dybvig (1983)**; on the "fundamental theory" relating to banking panics, see **Gorton (1988)**. For a brief overall assessment, amidst the current financial turmoil, see **de Cos (2023)**.

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under this “paybox/payout function”,[32] DGSs – which in most countries (including in the US, the EU and Switzerland) are exclusively funded by contributions of participating banks – continue to provide sufficient but still limited coverage in terms of counterparties covered and amount of compensation.[33]

Finally, banking failures (as those of any category of businesses) have always and in all jurisdictions occurred and the probability of this not happening is low.[34] However, financial history dictates that such failures – including corporate governance failures – may also be due to regulatory and/or supervisory failures,[35] as well as to macroeconomic failures.

3. The US bank failure episodes during spring 2023

3.1 Silicon Valley Bank (SVB) – and related cases in March 2023

3.1.1 The failure and resolution of Silicon Valley Bank (SVB)

(1) The *Silicon Valley Bank of Santa Clara, California* (‘**SVB**’), a regional US depository institution, had the highest-risk deposit base among US depository institutions (most depositors not covered by the DGS of the Federal Deposit Insurance Corporation (‘**FDIC**’)), nearly half of all US venture capital-backed tech and healthcare startups holding banking relationships with it. A mix of failures was involved in this episode. In particular:

First, as regards business failures, and apart from its (above-mentioned) business model, its interest rate risk management was poor (asset-liability mismatch): purchase of long-duration fixed-income securities (80 billion US$ in bonds with an average yield of 1.5%) without and hedge and instead of resort to safer alternatives (e.g., short-term Treasury-bills or deposit with the Federal Reserve).

Second, regulatory failures were also involved, including the lack of *effective* interest rate risk regulation for all depository institutions,[36] and the exemption since 2019 of medium-sized ones from some prudential rules by virtue of the 2018 Economic Growth, Regulatory Relief, and Consumer

[32] Apart from this primary function, in some jurisdictions DGSs may also be required (by law) to contribute to the financing of resolution actions, take preventive measures, and/or take alternative measures during a bank’s insolvency/liquidation.

[33] E.g., in Switzerland, the coverage level is 100,000 Swiss francs per depositor per bank, in the EU 100,000 euro per depositor per credit institution, and in the 250,000 US dollar (US$) per depositor per depository institution. On this aspect, see also **below, under 6.2.2 (5)** (when discussing the FDIC Report of 1 May 2023 on “Options for Deposit Insurance Reform”).

[34] See in that respect the intertemporal overview of financial crises by **Reinhart and Rogoff (2008)**.

[35] In relation to the three levels of lags (recognition, reaction, and implementation) relating to supervisory failures, see **Guttentag and Herring (1987)**, pp. 48-50.

[36] See **Feldberg (2023a)**.

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Protection Act ('**EGRRCPA**'),[37] including the requirements for meeting prudential liquidity requirements;[38] and those for annual stress-testing.[39]

Third, the supervisory failures involved (recognition and reaction lags, but no implementation lag) are identified in the Federal Reserve's self-assessing review of the supervision and regulation of SVB.[40] Noteworthy in that respect is that SVB was operating for months without a Chief Risk Officer ('**CRO**'), and supervisory authorities did not manage to ensure that it was verifying appropriate risk management in light of the raising of the central bank's official interest rates amidst the recent (and current) inflation crisis.

(2) The SVB's failure was ultimately induced by a bank run due to liquidity issues. As a result, on **12 March 2023**, the Department of the Treasury, the Federal Reserve, and the FDIC released a Joint Statement[41] announcing the taking of "decisive actions" to protect the US economy by strengthening public confidence in the banking system; these included the activation by the FDIC of the statutory **"systemic risk exception"** to "least-cost resolution" ('**L-CR**')[42] in order to guarantee uninsured deposits at this depository institution and avoid a banking panic. Immediately afterwards, the FDIC took SVB into receivership and, in its capacity as (*inter alia*) banking resolution authority, resolved it (through an administrative process) by application of the bridge bank tool. Accordingly, all SVB deposits – insured and uninsured, substantially all its assets, and all its qualified financial contracts were transferred to *Silicon Valley Bridge Bank, N.A.*[43]

(3) Accordingly, the FDIC managed to prevent generalised spillover effects to the banking system (runs to individual banks developing into a widespread banking panic which would have been detrimental to the economy), especially among large depository institutions.[44] This is a demonstration

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[37] This is commonly referred to as "the 2019 Tailoring of the **"Dodd-Frank Act"** of 2010", which had established firm asset thresholds to designate financial institutions as "systemically important" and subject them to enhanced supervision.

[38] According to **Feldberg (2023b)**, if the SVB had been subject to the liquidity coverage ratio rules (part of the Basel III regulatory framework), it would have required to publish more data about its liquidity risks. On the other hand, **Tuckman (2023)** claims that the SBV failure was due more due to failures in "detective" and "punitive" supervision rather than the relaxation of the prudential rules.

[39] In the author's view, a chronic regulatory failure is complex banking supervisory structure, consisting of multiple bank supervisory authorities, at federal and state-levels. See on this also **Klein (2023b)**.

[40] See at: https://www.federalreserve.gov/publications/files/svb-review-20230428.pdf. This 100-pages long review also discusses at length the business failures in the SVB case. On the mix of regulatory and supervisory failures in the SVB case, see, by means of indication, also **Klein (2023a)**.

[41] See at: https://www.fdic.gov/news/press-releases/2023/pr23017.html.

[42] On this aspect, see further **Box 1 just below**.

[43] See at: https://www.fdic.gov/news/press-releases/2023/pr23019.html. The bridge bank's deposits and loans were then sold (under a purchase and assumption agreement) within two weeks (on 26 March) to *First-Citizens Bank & Trust Company, Raleigh, North Carolina* (at: https://www.fdic.gov/news/press-releases/2023/pr23023.html).

[44] On the contagion effects associated with the SVB failure and the bank-specific vulnerabilities that contributed to the subsequent declines in certain banks' stock returns, see **Choi *et al.* (2023)**.

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of the fact that the appropriate and timely application of resolution tools can prove beneficial in terms of preserving financial stability.[45]

BOX 1: On the "systemic risk exception" to L-CR under US banking law and proposals for its introduction into EU law

(1) As already noted,[46] under US banking law, the coverage level provided by the Deposit Insurance Fund of the FDIC is 250,000 US$ per depositor per depository institution. In accordance with the "least-cost resolution" ('**L-CR**') requirements, which have been introduced in 1991 to ensure that banks are resolved at a minimum cost, uninsured depositors and other creditors can be protected in resolution only if this is consistent with the stringent L-CR requirements.

However, upon fulfilment of five statutory requirements,[47] the L-CR can be waived under the **"systemic risk exception"** to L-CR[48] to the effect that uninsured depositors are more widely protected in resolution. The first of these conditions is the determination that L-CR "*would have serious adverse effects on economic conditions or financial stability*" and the FDIC's actions would avoid or mitigate them.[49]

(2) EU banking law provides for a (harmonised) least-cost test ('**LCT**') governing the use of funds of the (industry-funded) national DGSs outside payout to covered depositors;[50] in a resolution case in particular, the DGS's liability may not be greater than the amount equal to 50% of its target level (**'50% cap'**) and, in any case, its participation may not exceed the losses it would have incurred in a winding-up under normal insolvency proceedings (LCT safeguard).[51] In addition, the (also industry-funded) Single Resolution Fund ('**SRF**') can be accessed (in the BU) when the bail-in tool is applied in a resolution case if, *inter alia*, shareholders and the holders of specific categories of eligible liabilities have been bailed-in for at least 8% of total liabilities including own funds (the so-called "**8% TLOF bail-in threshold**") as a contribution to loss absorption and recapitalisation.[52]

[45] On April 28, 2023, the Board of Directors of the Federal Reserve System released a Report entitled "Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank", which details its supervision history and analysis of the underlying causes of this high-profile bank failure (available at: https://www.federalreserve.gov/publications/files/svb-review-20230428.pdf). On a continuous update in relation to systemic risk issues in the US, see the "Daily Systemic Risk Blog" of the Yale Program on Financial Stability (available at: https://som.yale.edu/centers/program-on-financial-stability/systemic-risk-blog).

[46] See **above, under 2**.

[47] 12 U.S.C. §1823, paragraph (c)(4), point (G).

[48] On this exception, as in force, see **Cho and Litan (2023)**.

[49] This exception is a recognition that financial stability considerations may prevail over the objective of minimising potential costs to taxpayers. On the evolution of this framework, see by means of mere indication Congressional Research Service (CRS): "Bank Failures: The FDIC's Systemic Risk Exception", In Focus IF12378, 11 April 2023, available at: https://crsreports.congress.gov.

[50] In relation to the adoption of "alternative, preventive measures" to financially support a credit institution and hence prevent its financial failure (under strict conditions) or finance other "alternative measures in the context of national insolvency proceedings", this is set out in Article 11(3)-(4) and (6) of **Directive 2014/49/EU** of the co-legislators of 16 April 2014 "on deposit guarantee schemes" (OJ L 173, 12.6.2014, pp. 149-178, '**DGSD**').

[51] *Ibid.*, Article 11(2), with reference to Article 109(5) of **Directive 2014/59/EU** of 15 May 2014 "establishing a framework for the recovery and resolution of credit institutions and investment firms (…)" (OJ L 173, 12.6.2014, pp. 190-348, as in force, '**BRRD**'); in the BU, applicable is Article 79(5) **SRMR**.

[52] **SRMR**, Article 27(6) and (7), point (a). It is recalled that the 'loss absorption amount' and the 'recapitalisation amount' are the two components of the MREL requirement.

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On the other hand, a systemic risk exception is not provided for. In this respect it is noted that in its Opinion on the (European) Commission's legislative package, of 18 April 2023, on a wide-scale amendment of the legislative acts which constitute the existing EU crisis management and deposit insurance ('**CMDI**') framework,[53] the ECB proposed the introduction of such an exception into the new CMDI framework, which should be applied under strict conditions (as in US law).[54]

3.1.2 The failure and resolution of Signature Bank and of the UK subsidiary of SVB

On **12 March** as well, the *Signature Bank, New York, NY* was also taken into receivership by the FDIC, which (as well) activated the systemic risk exception to LCR and applied to the bridge bank resolution tool.[55] Furthermore:

First, by application of its resolution powers (in this case as well), and in consultation with the Prudential Regulation Authority ('**PRA**'), the HM Treasury and the Financial Conduct Authority (FCA), the Bank of England ('**BoE**') sold, on 13 March, the subsidiary of SVB in the United Kingdom ('**UK**'), namely *Silicon Valley Bank UK Limited*, to *HSBC UK Bank Plc*.[56]

Second, on 19 March, the Federal Reserve, the Bank of Canada, the BoE, the Swiss National Bank ('**SNB**'), the ECB and the Bank of Japan announced a coordinated action to enhance the provision of liquidity through the standing US dollar liquidity swap line arrangements.[57]

3.2 The subsequent *First Republic Bank* (FRB) case

The financial turmoil in the US continued, albeit confined to mainly one depository institution. In particular, on **1 May 2023**, the FDIC has also taken into receivership the *First Republic Bank, San Francisco, California* ('**FRB**'). This failure was fully anticipated since the FRB was also exposed, for a longer time, to heavy liquidity outflows and its market capitalisation dramatically declined in the course of 2023. In this case, the FDIC entered into a purchase and assumption agreement with *JPMorgan Chase Bank, National Association*, *Columbus, Ohio*, to assume all deposits and substantially all assets of the FRB.[58]

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[53] The key elements are reflected in its related Communication of that same date (COM/2023/225 final). See on this by means of mere indication **Ramos-Muñoz *et al.* (2023)** and **Gortsos (2023c)**.

[54] ECB Opinion of 5 July 2023 "on amendments to the Union crisis management and deposit insurance framework (CON/2023/19)", p. 11, para. 8.5.

[55] See at: https://www.fdic.gov/news/press-releases/2023/pr23018.html. The deposits and certain loan portfolios of the bridge bank (*Signature Bridge Bank, N.A.*) were then sold (under a purchase and assumption agreement as well) even earlier (on 19 March) to *Flagstar Bank, National Association, Hicksville, New York*, a wholly owned subsidiary of *New York Community Bancorp, Inc., Westbury, New York* (see at: https://www.fdic.gov/news/press-releases/2023/pr23021.html). It is also noted that, on 28 April (as well), the FDIC released its internal review Report evaluating its supervision of Signature Bank ("*FDIC's Supervision of Signature Bank*"), which identified the causes of its failure, assessed the FDIC's supervision of the bank and recommends a number of matters for consideration or further study related to examination guidance, processes, and resources (available at: https://www.fdic.gov/news/press-releases/2023/pr23033a.pdf).

[56] See at: https://www.bankofengland.co.uk/news/2023/march/statement-on-silicon-valley-bank.

[57] See at: https://www.ecb.europa.eu/press/pr/date/2023/html/ecb.pr230319_1~8d62af24ac.en.html. For a brief analysis of the European perspective on these bank failures, as of 16 March, see **Spitzer, Magnus and Grigaitė (2023)**.

[58] See at: https://www.fdic.gov/news/press-releases/2023/pr23034.html. On 8 September, the FDIC released yet another internal review Report (conducted at the request of its Chairman) entitled: "FDIC's Supervision of First

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4. The failure of *Credit Suisse* (Switzerland)

4.1 The general context

4.1.1 Introductory remarks

At the time of its failure, *Credit Suisse* was Switzerland's second largest bank and, accordingly, one of those designated by the SNB, after having consulted the Swiss Financial Market Supervisory Authority ('**FINMA**'),[59] as "systemically" important.[60] Its failure, which was the most significant one, since the adoption of the FSB "Key Attributes",[61] involving a global systemically important bank ('**G-SIB**'),[62] occurred some days only after the above-mentioned US banking failure episodes. However, even though financial market confidence was traumatised across the board, it was not caused by a direct, interconnectedness-induced spillover from the failed US banks.

4.1.2 Business, regulatory, and supervisory failures

(1) The business failures in the case of *Credit Suisse*, were multiple (and over a rather prolonged period of time), such as belated implementation of a required restructuring plan; multiple involvement in investigations for severe violations of financial regulations; failed investment decisions; and governance problems, including wrong incentives deriving from a high variable renumeration. The triggers were (once again): the massive outflow of clients' funds (over 140 billion Swiss francs), as well as, ultimately, the withdrawal of a key shareholder (Harris Associates);[63] and the refusal of the Saudi National Bank to participate in an additional necessary capital injection in March 2023.[64]

Republic Bank". This Report evaluates the FDIC's supervision of *First Republic Bank* from 2018 until its failure and provides information on the causes of its failure (available at: https://www.fdic.gov/news/press-releases/2023/pr23073a.pdf). On all these US bank failure cases, see by means of indication the various other contributions in **Acharya *et al.* (2023)** – the one of Tuckman was already discussed above. See also **Basel Committee on Banking Supervision (2023)**, pp. 6-12 and 16-17 and **Financial Stability Board (2023)**, pp. 18-21.

[59] The FINMA was established by the Federal Act of 22 June 2007 "on the Swiss Financial Market Supervisory Authority [FINMA]" (SR 956.1); currently, this Federal Act is in force as amended and applicable since 1 January 2022 (but under further review). Its legal basis is Articles 95 and 98 of the Federal Constitution of the Swiss Confederation of 18 April 1999 (SR 101, currently in force as amended and applicable since 22 February 2022 – hereinafter the "Federal Constitution")). On the establishment of the FINMA, see **Weber *et al.* (2006)**; on its objectives, tasks, organisation, and powers (as of the time of their publication), see by means of mere indication **Abegg *et al.* (2021)**, pp. 110-129, and in more detail **Sester *et al.* (2018)**, pp. 381-687 and **Nobel (2019)**, pp. 501-607.

[60] Articles 7(2) and 8(3) of the Federal Act of 8 November 1934 "on Banks and Savings Banks" (SR 952.0, hereinafter the **"Banking Act"**). This Federal Act, whose legal basis is Articles 34ter, 64 and 64bis of the Federal Constitution, is currently in force as amended and applicable since 1 January 2023 (and will be further amended as of 1 January 2024).

[61] See **above, under 1.2 (1)**.

[62] A list of G-SIBs, based on an assessment methodology designed by the BCBS, is published by the FSB; the most recent list, of **21 November 2022**, in which the thirty banks remain the same as the 2021 list, is available at: https://www.fsb.org/2022/11/fsb-publishes-2022-g-sib-list.

[63] See Neue Zürcher Zeitung ('**NZZ**') of 7 March 2023, at p. 22 ("*Die Credit Suisse verliert ihren loyalsten Aktionär*").

[64] See NZZ of 16 March 2023, at p. 1 ("*Nationalbank wird CS im Notfall stützen*"). The refusal was based on the consideration that a further increase above 10% of the shares would require the FINMA's approval

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Hence, its failure occurred at a point of time where the market sentiment was negative towards the banking sector; but (after all) it was not a (totally) unexpected development.[65]

(2) In relation to regulatory failures, one can identify the non-full implementation into Swiss banking regulation/law of the post-GFC global reform agenda:[66] higher minimum capital requirements for systemically important banks (18% minimum capital requirement), but (until the end of 2022) no pre-funded deposit protection scheme and no resolution fund. In addition, in comparison to EU law, FINMA's supervisory and intervention powers are limited.[67]

(3) *Finally*, in relation to potential supervisory failures, an aspect that has been widely discussed was whether FINMA could have previously ordered "protective measures" in relation to *Credit Suisse*. In this respect the following is noted:

> *First*, these measures are listed in **Article 26(1) Banking Act** and include the appointment of an investigating officer, the restriction of the bank's business activities, the prohibition on the bank to make disbursements, accept payments or effect transactions, and/or its closing. They may be ordered independently or in conjunction with restructuring or bankruptcy liquidation but only upon the condition that there are reasonable grounds of concern that a bank is over-indebted or has serious liquidity problems, or if it fails to comply with the capital adequacy requirements.[68]
>
> *Second*, interestingly, in accordance with a joint Statement of the FINMA and the SNB of 15 March,[69] the bank was meeting the minimum capital and liquidity requirements for "systemically" important banks.

Thus, it can reasonably be argued that the conditions for the activation of protective measures were not met in this particular case.[70]

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according to Article 3(2), point (c^{bis}) **Banking Act**. However, the statement dramatically exacerbated the crisis through careless phrasing (see at: https://www.swissinfo.ch/eng/business/saudi-silence-after-the-credit-suisse-crash/48397618).

[65] On the causes of this failure, see by means of mere indication **Swiss National Bank (2023a)**, pp. 5-8, **Basel Committee on Banking Supervision (2023)**, pp. 13-16 and **Financial Stability Board (2023)**, pp. 5-10. See also **Schiltknecht (2023)** (a powerpoint presentation, discussing, *inter alia*, the adequacy of the international financial standards on the resolution framework as to its applicability to large banks), and **Sethe (2023)**.

[66] See **above, under 1.2 (1)**.

[67] This is, indeed, a regulatory failure (see also **under 6.3.2 below**) and is notwithstanding any potential supervisory failures by FINMA (see also just **below, under (3)**), for which (to the best of the author's knowledge) the agency has not (yet at least) released a review Report comparable to those of the Federal Reserve and the FDIC pursuant to the just above-mentioned.

[68] **Banking Act**, Article 25(2). In that respect, it is noted that the FINMA is a resolution authority for banks by virtue of Articles 25-32.

[69] Available at: https://www.finma.ch/en/news/2023/03/20230315-mm-statement. See also **Swiss National Bank (2023b)**, at p. 28, according to which the *Credit Suissse's* (and *UBS's*) Basel III risk-weighted capital and leverage ratios were above that for G-SIBs. However, on p. 30 of this Financial Stability Report it is (correctly) remarked that "*meeting capital requirements is necessary but not sufficient to ensure market confidence*."

[70] On this aspect, see further under **6.3 below**.

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4.2 The “forced” merger with the UBS

4.2.1 The procedure

(1) Under these circumstances, action became imperative to secure financial stability (both in Switzerland and internationally due to its global presence), and to protect the Swiss economy under the stressed situation. Accordingly, the decision was taken for a state-backed, emergency merger of *Credit Suisse* with the largest bank in the country (*UBS*).[71] Towards that end, the Swiss Federal Council enacted, on 16 March and with immediate effect, emergency legislation (under an Emergency Ordinance, in force as amended on 19 March[72]).

(2) This Emergency Ordinance was based on **Articles 184(3)** (on foreign relations) and **185(3)** (on external and internal security) of the **Federal Constitution**[73] and related to the following aspects:

First, liquidity assistance loans could be provided by the SNB to systemically important banks or to a part of a systemically important financial group, consisting, in addition to the (already pre-existing) “emergency” liquidity assistance (‘**ELA**’) loans, of: **(a)** “additional” (secured) liquidity assistance loans (capped); and **(b)** under conditions, liquidity assistance loans “with a federal default guarantee” to the SNB.

Second, in relation to the provision of liquidity assistance loans with a default guarantee:

> **(a)** at the time of the credit approval, the FINMA has the power to order (and in this case did so) the borrower and the financial group to completely write down Additional Tier 1 (‘**AT1**’) capital instruments;[74] and
>
> **(b)** by derogation from the Federal Act of 3 October 2003 “on Merger, Demerger, Conversion and Transfer of Assets and Liabilities”[75] (the **“Merger Act”**) and *inter alia*, the performance of transactions in accordance with that Act – and in agreement with the FINMA – does not require decisions by the General Meetings of the merged banks.

Third, in case of a transaction under the Merger Act between banks which are systemically important *and internationally active*, the Confederation can provide, under conditions, guarantees to the acquiring bank to protect against losses on the assts of the acquired bank which are to be wound up (“loss protection guarantee”).

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[71] An important aspect of this outcome in terms of competition law is the eventually resulting dominant position of the new bank in the Swiss banking sector; however, this is too early to assess.

[72] Ordinance of the Swiss Federal Council “on Additional Liquidity Assistance Loans and the Granting of Federal Default Guarantees for Liquidity Assistance Loans from the [SNB] to Systemically Important Banks”, available at: https://www.newsd.admin.ch/newsd/message/attachments/76289.pdf and https://www.newsd.admin.ch/newsd/message/attachments/76290.pdf, respectively. Of relevance is also an accompanying explanatory document (erläuternder Bericht) of 16 March (available at: https://www.newsd.admin.ch/newsd/message/attachments/76270.pdf).

[73] Resort to these Articles was apparently dictated by the fact that Switzerland is an international financial centre and, in case the measures provided in the Ordinance would not have been taken, there was a threat for negative spillover effects internationally.

[74] On this aspect, see further **Box 2 just below**.

[75] SR 221.301; currently, it is in force as amended and applicable since 1 January 2023.

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Fourth, the preferential rights in bankruptcy proceedings relating to liquidity assistance loans, and information exchange between the Federal Department of Finance ('**FDF**'), the SNB and FINMA.[76]

BOX 2: On the write down of AT1 capital instruments

AT1 capital instruments are, in accordance with the international financial standards in force, part of banks' regulatory capital. In this respect, two points deserve attention:

(1) The documentation governing the relevant capital instruments issued by *Credit Suisse* set out that these could be written down in a **"viability event"**, including if extraordinary government support were to be granted. As a matter of fact, as just noted, *Credit Suisse* was granted extraordinary liquidity assistance loans secured by a federal default guarantee; thus, these contractual conditions were met for the AT1 capital instruments issued by it. On 23 March, the FINMA made public further information about both this contractual clause and the provisions of the Emergency Ordinance as the bases for writing down these instruments.[77] It is reported that, in mid-April, *Credit Suisse's* investors in such instruments filed a lawsuit against the FINMA.

(2) On 20 March EU supervisory/resolution authorities boldly announced that the latter could not happen under EU law.[78] In this respect it is noted that the EU rules on the hierarchy of bank creditors (including depositors) and shareholders apply in resolution cases only, in accordance with the relevant EU framework (see, e.g., the *Banco Popular Español* case[79]). *On the other hand*, if no resolution is involved (as in the *Credit Suisse* case) but – e.g., during precautionary recapitalisation[80] – State aid is granted to a credit institution, applicable are the *quasi*-equivalent provisions of the 2013 (above-mentioned[81]) Commission's "Banking Communication". However, according to the judgement of the Court of Justice of the EU (CJEU) of 19 July 2016 in Case C-526/14 (*Kotnik case*),[82] the Communication, as a soft law instrument, is not binding upon the Member States.[83]

4.2.2 The outcome

On the basis of the above-mentioned, on 19 March, the FINMA approved the takeover of *Credit Suisse* by *UBS*.[84] As a result (as in the case of the above-mentioned US bank failures), a widespread

[76] **Emergency Ordinance**, Articles 2-14, 5a and 10a, and 15a, respectively.

[77] See at: https://www.finma.ch/en/news/2023/03/20230323-mm-at1-kapitalinstrumente.

[78] See at: https://www.eba.europa.eu/srb-eba-and-ecb-banking-supervision-statement-announcement-19-march-2023-swiss-authorities.

[79] On this case, see by means of mere indication **Binder (2017)**.

[80] **SRMR**, Article 18(4), first sub-paragraph, point (d)(iii).

[81] See **above, under 1.2 (1)**.

[82] ECLI:EU:C:2016:570.

[83] On this aspect, from corporate finance, legal, and financial stability perspectives, see the diverging views in **Paz Valbuena and Eidenmüller (2023)** (claiming that the write-down breached the principle of *pari passu*), and **Martino and Vos (2023)**; the author's view is closer to that of the latter article. See also **Coelho *et al.* (2023)** and **Swiss National Bank (2023b)**, pp. 30-31.

[84] See at: https://www.finma.ch/en/news/2023/03/20230319-mm-cs-ubs. For a brief cost-analysis of this decision as compared to the resolution of *Credit Suisse*, see **Swiss National Bank (2023b)**, p. 8 and **Group of Experts on Banking Stability (2023)**, pp. 10-12. This group of experts was set up by the FDF and submitted its Report on 1 September 2023 (further discussed **below, under 6.3.2**).

It is further noted that, on 2 April, the Swiss Office of the Attorney General ('**OAG**') opened an investigation into the takeover of *Credit Suisse*, which will investigate potential breaches of national criminal law by

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banking panic was prevented and threats to global financial stability were fully mitigated. However, it is remarkable that the authorities did not opt to activate the resolution framework by application of resolution tools,[85] which would have been a solution consistent with the post-GFC international financial reform agenda for G-SIBs.[86] The acquisition of *Credit Suisse* by the *UBS* was completed on 12 June. *Credit Suisse Group AG* has been merged into *UBS Group AG* and the combined entity started operating as a consolidated banking group.[87]

4.3 Specific further considerations

In this context, it is interesting to also note the following:

First, unlike at the time of the GFC, as all these bank failure episodes were ongoing, central banks in most developed economies (including those in the EU, US and Switzerland) decided to continue raising their official interest rates despite the existing potential threats to financial stability.[88] In the author's view, amidst a highly and multidimensionally uncertain international environment, there is a reinforced argument that monetary policy is, in principle, not the most appropriate instrument to safeguard financial stability, while price stability is crucial for durable financial stability.

However, the trade-off between high inflation and financial (in)stability remains evident since the tightening of monetary policy to reduce high inflation can reveal vulnerabilities in the financial system. Accordingly, when setting their interest rates, central banks use to incorporate in the definition and implementation of their monetary policy an economic analysis of the impact that (further) increases (and/or, where appropriate, decreases) in interest rates may have on banks' credit policy, as well as on capital markets.

Second, taking into account these bank failure episodes, the International Monetary Fund ('**IMF**') is planning to introduce three new pillars in relation to risk assessments under its Financial Sector Assessment Program ('**FSAP**') (jointly conducted with the World Bank):[89] **(a)** pay more attention to risk analyses relating to potentially vulnerable smaller financial companies; **(b)** closely investigate the interlinkages of asset market stress, financial firms' earnings, and their run risk, especially for banks; and **(c)** strive towards better understanding of the funding risk spillovers across financial firms ("systemwide liquidity risks").[90]

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government officials, regulators and bank executives (see at: https://www.swissinfo.ch/eng/business/swiss-prosecutor-investigates-credit-suisse-takeover/48412234).

[85] The "sale of business resolution tool" and the "bridge bank resolution tool" are governed by Article 30(1)-(2) **Banking Act**, and the "bail-in resolution tool" by Article 30b.

[86] Another potential alternative course of action was the bank's bail-out, as in the case with *UBS* amidst the GFC; see on this by way of mere indication **Thévenoz (2010)** and **Nobel (2019)**, pp. 451-465.

[87] See the relevant UBS press release at: https://www.ubs.com/global/en/media/display-page-ndp/en-20230612-ubs-credit-suisse-acquisition.html.

[88] See on this **Whelan (2023)**.

[89] On the FSAP, see **Gortsos (2023a)**, pp. 124-131, with extensive further references.

[90] See **Adrian and Oura (2023)**; on the "systemwide liquidity stress testing tool", see **Oura (2022)**.

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5. Threats to financial stability amidst the current phase of the inflation crisis

(1) Interestingly and unlike amidst and in the wake of the GFC, in the wake of the above-mentioned episodes and despite the eminent threats to financial stability, all major central banks have decided to further increase their official interest rates in their effort to control the higher than expected and persistently intensive inflation pressures. In that respect and amidst a highly uncertain global environment, this reinforces the (above-mentioned[91]) argument that monetary policy is – typically – not considered as the appropriate means to safeguard financial stability; but the trade-off between high inflation and financial (in)stability is evident ("balancing act"). Hence, when setting interest rates, central banks need to integrate into their monetary policy economic analysis, *inter alia*, the impact of (further) increased interest rates on the lending activity of banks and on capital markets (without prejudice to any potential conflicts of interest). It has, however, been warned that the efficiency of monetary policy can be negatively affected by prolonged and non-targeted fiscal expansion (meaning that, while higher official interest rates are aimed at dampening demand, fiscal expansion may lead to the opposite direction).[92] An appropriate monetary policy – fiscal policy mix is thus of predominant importance.

(2) In autumn 2022, the IMF's "Global Financial Stability Report",[93] the ESRB's Warning "on vulnerabilities in the Union financial system"[94] and the ECB's "Financial Stability Review"[95] identified several sources of threat to financial stability amidst the inflation crisis:

first, financial vulnerabilities are elevated for both governments with mounting debt (including some within the euro area) and for non-bank financial institutions (such as insurance companies, as well as pension, hedge, and mutual funds);

second, rising interest rates – in combination with risk-aversion on behalf of investors – have a negative impact on several classes of assets held, *inter alia*, by banks (such as stocks and bonds, bond yields rising broadly across credit ratings), leading to notable declines in financial asset prices (across regions and asset classes); and

third, an increase in market volatility, and (to a certain extent) strained market liquidity, in conjunction with pre-existing vulnerabilities, could amplify any potential rapid, disorderly repricing of risk and the borrowing cost for many companies are already rising to the highest levels in decades.[96]

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[91] See **above, under 1.1 (3)**.

[92] See on this by means of mere indication **Georgieva (2022)**; for an overview of similar concerns at EU level, see **Gortsos (2023b)**, pp. 106-107.

[93] See **International Monetary Fund (2022)**.

[94] **ESRB/2022/7**, OJ C 423, 7.11.2022, pp. 1-6.

[95] At: https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202211~6383d08c21.en.html#toc2.

[96] See also two related reports: the FSB Annual Report "Promoting Global Financial Stability" (at: https://www.fsb.org/wp-content/uploads/P161122.pdf) of 16 November 2022; and the Federal Reserve Board's "Financial Stability Report" of May 2023 on its assessment of the US financial system's resilience. The latter focuses on assessing four broad categories of vulnerabilities (valuation pressures, excessive borrowing by businesses and households, excessive financial sector leverage, and funding risks) and how their interaction may amplify financial system stress (available at: https://www.federalreserve.gov/publications/2023-may-financial-stability-report-purpose-and-framework.htm).

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In the same vein, in its April 2023 "Global Financial Stability Report"[97] the IMF noted the following:

> "*Financial stability risks have increased rapidly as the resilience of the global financial system has been tested by higher inflation and fragmentation risks*".

Similarly, the IMF's October 2023 "Global Financial Stability Report"[98] remarks:

> "*While acute stress in the global banking system has subsided, a weak tail of banks remains in some countries. In addition, cracks in other sectors may also become apparent and could turn into worrisome fault lines. In the event of an abrupt tightening of financial conditions, adverse feedback loops could be triggered and again test the resilience of the global financial system*."

(3) The (further) raising of official interest rates and the tightening of financial conditions may – albeit in a differentiated way across jurisdictions (considering the vulnerabilities of more-indebted sovereigns, households and corporates), especially if also combined with a deterioration of the macroeconomic outlook leading to conditions of anaemic growth (an economic environment of "stagflation") or (in some countries) even recession:[99]

first, lead to further (and eventually sharp) correction in asset prices with a (potentially further) negative impact on banks' portfolios (exposure to market risks);

second, negatively affect the asset quality and profitability outlook of banks, whose resilience is also affected by structural factors, competition from new (and, in several cases, still non-regulated) providers of financial services, and exposure to climate change-related risks; activate vulnerabilities in the residential and the commercial real estate sectors;

third, affect medium-term sovereign debt dynamics; potentially lead to a (new round of) increases of non-performing loans ('**NPLs**') and non-performing exposures ('**NPEs**'); and

overall, expose banks to rising medium-term risks due to deteriorating growth prospects, despite the benefits from short-term gains derived from higher interest rates and margins.

(4) It is finally noted that geopolitical tensions are transmitted to banks through the *real economy*. The effect of disruptions to supply chains and commodity markets on domestic growth and inflation could exacerbate banks' market and credit losses, hence further reducing their profitability and capitalisation, diminishing their risk-taking capacity, and prompting them to cut lending, further weighing on economic growth. The financial and real-economy channels are likely to feed off one

[97] See **International Monetary Fund (2023a)**.

[98] See **International Monetary Fund (2023d)**. Interestingly, this Report also remarks that the widening divergence of inflation and economic outlook across the globe could mark the beginning of the desynchronization of global monetary policy.

[99] According, however, to the IMF's world economic outlook of April 2023, pursuant to its "baseline forecast", growth in advanced economies is expected to fall from 2.7% in 2022 to 1.3% in 2023, while under a "plausible alternative scenario", which embeds further financial sector stress, it is projected falling below 1%. On the other hand, the return of global inflation to its overall 2% target is not foreseen, in most cases, before 2025, while indebtedness is also expected staying high (see **International Monetary Fund (2023b)**, pp. 1-14). The baseline forecast on growth was slightly revised upwards to 1.5% in 2023 (and to 1.4% in 2024) in its world economic outlook of October 2023 (see **International Monetary Fund (2023e)**). Furthermore, the forecast for global inflation remains stable, even though a steady decline from the peak in 2022 (8.7%) is evident due to tighter monetary policy in conjunction with lower international commodity prices.

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another, with the overall effect being disproportionately larger for, *inter alia*, banks with lower capitalisation ratios.[100]

6. The way forward

6.1 Introductory remarks

(1) The recent banking failures in the US and Switzerland were rather due to idiosyncratic problems (business failures) and to specific regulatory and supervisory failures and signalled a bold reminder that banks can be exposed to bank runs (especially, but not solely by uninsured depositors).[101] Despite that, it is reasonably considered that the banking system remains overall resilient and this mainly attributed to the implementation of (parts at least of) the post-GFC global reform agenda[102] and (on average) stricter and more efficient banking supervision.

(2) It is furthermore noted that the FSB Chair's letter to the G20 Finance Ministers and Central Bank Governors of 11 July 2023,[103] taking into account the recent banking failure episodes during the spring financial turmoil, remarked that the FSB work programme has been reprioritised, including with an additional focus on, *inter alia*, the interactions between interest rate and liquidity risk across the financial system, the role of technology and social media in deposit runs ("digital" bank runs[104]).

6.2 General policy considerations

6.2.1 Introductory remarks – the first reaction of international financial fora

(1) By duly analysing the causes of the above failures, national parliaments and administrative authorities responsible for the preservation of financial stability (including central banks) are expected to take appropriate measures to early detect any further idiosyncratic problems in order retain and (where applicable) restore depositors' confidence in the banking system.[105] In that respect, the mitigation of regulatory and/or supervisory failures at national level is also of importance.

(2) Furthermore, it is up to the international financial regulatory community (international financial institutions and fora) to identify the case for potential fixings in the global financial regulatory framework and propose related policy measures. In that respect, in October 2023, the BCBS and (immediately thereafter) the FSB published two Reports.[106] Both these Reports relate to an overall assessment of the causes of the spring 2023 financial turmoil and the initial lessons learnt. Their different focus reflects the diverging objectives of these two international financial fora:

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[100] See on this **Catalán *et al.* (2023)**.

[101] See **Sections 2-4 above**.

[102] See **above, under 1.2 (1)**.

[103] Available at: https://www.fsb.org/wp-content/uploads/P120723.pdf.

[104] In this respect, see also at: https://www.srb.europa.eu/en/content/eu-resolution-authority-look-how-handle-digital-bank-runs-after-us-crisis. On the role of social media as a bank run catalyst, see also **Cookson *et al.* (2023)**.

[105] See **Catalán *et al.* (2023)**.

[106] See **Basel Committee on Banking Supervision (2023)** and **Financial Stability Board (2023)**, respectively; both were referred to in footnotes above when discussing the failure episodes

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on the one hand, the focus of the BCBS Report is on the assessment of the regulatory and supervisory responses to the failure episodes; it clearly states that the discussion therein is not an indication of planned revisions to the Basel Framework;[107] while

on the other hand, upon (correctly) pointing out that the failures of the US banks showed that even non-G-SIBs can still be systemically significant or critical in failure, the FSB Report assesses the implications for its "Key Attributes" framework in resolving G-SIBs and other systemically important banks and sets out considerations on the effective implementation (and in some jurisdictions operationalization) of the international resolution framework that merit further attention as part of the future FSB work.

6.2.2 Further policy considerations

(1) Since the probability of **"tail-risk scenarios"** materialising has increased, relevant authorities and market participants have already been called upon to continue preparing for scenarios in which such risks would materialise. There is a case for close coordination between relevant authorities and financial firms across all financial sectors with regard to risk management practices to effectively address vulnerabilities and avoid market fragmentation and negative externalities. *Furthermore*, the case can also be made that banks' prudential risk management practices should be complemented by micro- and macroprudential capital buffers consistent with the prevailing level of risk.

(2) The rules on corporate governance could be further enhanced at least in relation to remuneration and risk management (in which case, the cost of an even higher regulatory burden is confined). The recent (September 2023) review by the OECD of its related principles is a significant step forward.[108]

(3) The quality of own funds (in terms of loss absorbency) could also be further improved, despite an existing "vicious circle": higher capital requirements for listed banks negatively affect their return on equity, at the same time when seeking for additional own funds (regulatory capital).[109] Additional prudential concerns relate to the extent and the direction for further broadening the powers of supervisory authorities, how to mitigate supervisory failures, and how to better address the problem of overcapacity in the banking sector (in some jurisdictions at least).

(4) In view of the manifest supervisory failures revealed during the 2023 bank failure episodes, there is a need to further enhance the effectiveness of prudential banking supervision and measures should be taken by supervisory authorities to improve their own performance and by other policy makers to contribute to ensuring vigilant, independent, and accountable supervision.[110]

(5) As regards bank crisis management frameworks, major issues arising are the appropriateness of using the bail-in resolution tool in times of economic slowdown; the ability of banks to meet the MREL in periods of high interest rates without severely undermining their profitability (a requirement

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[107] It is noted, however, that the Basel Committee's **"Core Principles for Effective Banking Supervision"** (as in force after their amendment for the last time in September 2012 (available at: https://www.financialstabilityboard.org/2012/09/cos_061030a), which are also included in the above-mentioned (see under **under 1.2 (1) above**) FSB's Compendium, are currently under review with a view to their further amendment. The relevant Consultative Document of July 2023 (the public consultation was closed on 6 October) is available at: https://www.bis.org/bcbs/publ/d551.pdf.

[108] See at: https://www.oecd.org/corporate/revised-g20-oecd-principles-corporate-governance.htm.

[109] This is a clear disadvantage to their shareholders in comparison to those in other categories of listed companies and may even lead to "adverse selection" as regards the pool of potential key shareholders.

[110] On this aspect, see **Adrian *et al.* (2023)**.

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for stability); and whether resolution frameworks are tailor-made for **"systemic crises"**.[111] *Furthermore*, in relation to DGSs, questions arise whether there is need to increase the level of coverage and how these could be better used to also serve crisis prevention functions.[112]

(6) Financial stability risks beyond the banking sector need also be adequately addressed. The priority is to continue focusing on developments in the non-bank financial intermediation ('**NBFI**') system (as currently the "shadow banking system" is referred to). The objective is to increase its resilience, by monitoring, in particular, those of its parts that may pose bank-like financial stability risks and/or regulatory arbitrage to identify their build-up and initiate the appropriate policy interventions.[113]

(7) Selected issues relating to the capital markets and the insurance sectors include the following: *first*, (re-)assessing the adequacy of the prudential regulatory framework applied to insurance and re-insurance companies; *second*, considering the case for prohibiting the distribution of complex financial instruments (e.g., AT1 and Tier 2 instruments) to retail investors; *third*, assessing the adequacy of the framework governing the regulatory treatment of such instruments in the portfolios of insurance companies and pension funds (to protect unsophisticated insured persons from bearing losses); and *fourth*, (re-)assessing the application of the rules on short selling in times of a financial turmoil.

(8) Finally, the case for a more radical "structural reform" by fully or *quasi* separating commercial and investment banking has re-emerged.[114] It is noted, however, in this context that a US **"Glass-Steagall Act"**-type legislation on the total separation[115] has never been enacted in Europe (EU Member States, UK, and Switzerland), where the "universal banking" model (albeit, in some cases, under limitations) prevails.[116]

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[111] At EU level, relevant in this respect is the above-mentioned (see **Box 1**) Commission's package of legislative proposals on the amendment of the CMDI framework.

[112] See on this **Hüpkes (2023)**. It is also worth noting that in the US, in the wake of the March 2023 turmoil, the FDIC published, on 1 May, a Report entitled "Options for Deposit Insurance Reform" (available at: https://www.fdic.gov/analysis/options-deposit-insurance-reforms/index.html). *Inter alia*, this Report: *first*, discusses the March failures; *second*, undertakes a historical review of deposit insurance in the US; and *third*, examines three options for reform that range in their departure from the *status quo* (i.e., maintenance of "Limited Coverage"; extension of "Unlimited Coverage" to all depositors; and offer of different deposit insurance limits across account types, with business payment accounts receiving significantly higher coverage than other accounts ("Targeted Coverage")), with preference to the third option on the basis of a cost-benefit analysis.

On a more radical reform, see also **King (2023)**.

[113] On the related system-wide monitoring framework of the FSB and its work on contributing to the development of such policies, see at: https://www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/non-bank-financial-intermediation.

[114] In this respect, **Westman (2022)** interestingly remarks that "separability" in resolution planning under the existing EU resolution framework is close to the structural reform proposals included in the Liikanen Report of 29 January 2014 (at: https://ec.europa.eu/internal_market/bank/docs/high-level_expert_group/report_en.pdf), the recommendations of which, as such, have not been implemented at EU level.

[115] On the 1933 **"Glass-Steagall Act"**, which was partly repealed in 1999 with the "Financial Services Modernisation Act" (also known as the **"Gramm-Leach-Bliley Act"**), see by means of mere indication **Lichtenstein (2010)**, pp. 219-224.

[116] On structural regulation (including on the universal banking model), see by means of mere indication **Armour *et al.* (2016)**, pp. 505-529, with extensive further references.

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6.3 Specific policy considerations relating to Swiss banking regulation after the failure of *Credit Suisse*

6.3.1 The IMF's positions

(1) Switzerland belongs to the jurisdictions with financial systems/sectors that have the greatest impact on global financial stability ("systemically important financial sectors", '**SIFS**'); since 2010 (i.e., in the aftermath of the GFC) these jurisdictions must undergo financial stability assessments under the FSAP[117] every five years. The most recent (mandatory) FSAP for Switzerland was published on 26 June 2019.[118] *Inter alia*, it was accompanied by the following three Technical Notes which are, directly or indirectly, linked to various aspects of Swiss banking regulation:[119] the *first* is entitled "Selected Issues on Banking Supervision";[120] the *second* governs "Macrofinancial Analysis and Macroprudential Policy";[121] and the *third* refers to "Financial Safety Net and Crisis Management Arrangements".[122]

(2) In its recent (10 May 2023) Staff Report for the 2023 Article IV Consultation on Switzerland, the IMF remarked[123] that, even though the authorities are continuing to implement the advice contained in the 2019 FSAP, progress has been slow and – due to elevated financial sector risks – there is a need for further and expedited progress. In particular (and *inter alia*):

First, the FINMA should make further progress in ensuring risk-focused, in-depth, forward-looking supervision, filling resource gaps, and enhancing its enforcement powers.

Second, the authorities should: **(a)** strengthen the macroprudential framework by broadening the toolkit to address rising vulnerabilities in the real estate and mortgage markets; **(b)** further reform the provider of the domestic DGS (esisuisse),[124] develop effective resolution funding arrangements, and fill gaps in recovery and resolution planning of systemically important institutions (and financial

[117] See also **above, under 4.3**.

[118] **IMF Country Report No. 19/183**, available at: https://www.imf.org/en/Publications/CR/Issues/2019/06/26/Switzerland-Financial-Sector-Assessment-Program-47045.

[119] The other Technical Notes published were on "Insurance Regulation and Supervision" (No. 19/185), "Insurance Stress Testing" (No. 19/186), "Regulation and Supervision of Asset Management Activities" (No. 19/188), "Stress Testing the Banking Sector" (No. 19/189) and "Supervision and Oversight of Financial Market Infrastructures" (No. 19/190).

[120] **IMF Country Report No. 19/184**, available at: https://www.imf.org/en/Publications/CR/Issues/2019/06/26/Switzerland-Financial-Sector-Assessment-Program-Technical-Note-Selected-Issues-on-Banking-47046.

[121] **IMF Country Report No. 19/187**, available at: https://www.imf.org/en/Publications/CR/Issues/2019/06/26/Switzerland-Financial-Sector-Assessment-Program-Technical-Note-Macrofinancial-Analysis-and-47051.

[122] **IMF Country Report No. 19/191**, available at: https://www.imf.org/en/Publications/CR/Issues/2019/06/26/Switzerland-Financial-Sector-Assessment-Program-Technical-Note-Financial-Safety-Net-and-47055.

[123] **International Monetary Fund (2023c)**, Annex IV, pp. 42-44.

[124] The esisuisse is (mainly) governed by Articles 37h-37k **Banking Act** and its Articles of Association (see at: https://www.esisuisse.ch/en/banks/self-regulation - Statutes). On this DGS (before the amendments introduced in 2022), see **Nobel (2019)**, pp. 1034-1036 and **Ainouz (2022)**, on a comparative analysis with the FDIC.

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market infrastructures (‘**FMIs**’)[125]); and **(c)** better monitor and manage asset management concentration risk and pension fund systemic risks. As explicitly stated therein:[126]

> “*A careful analysis of the case and its implications on the Swiss and international supervisory and regulatory frameworks should include the prolonged and ultimately unsuccessful efforts of [Credit Suisse] management to address long-standing risk-management failings and the Swiss supervisor's actions (or inaction) based on existing enforcement provisions and resources. The reviews should also analyze the implications of the merger for the Swiss and global TBTF regime, including on supervisory intrusiveness, recovery planning and activation, contingency arrangements and coordination, resolution preparedness and tools, liquidity in resolution, shareholder rights and predictability of creditor treatment and hierarchy, predictability of resolution actions, and communication strategies. For accountability to taxpayers, the cost of the merger and the extent of recoveries, if any, should be disclosed to the public on an ongoing basis*.”

6.3.2 The 2023 Swiss Report

(1) In accordance with the (above-mentioned[127]) Report of the group of experts on banking stability entitled “The need for reform after the demise of Credit Suisse”,[128] Switzerland should review the current regime governing too-big-to-fail (‘**TBTF**’) banks[129] and close the identified gaps in the resolution framework, since, in the event of a *UBS* crisis, the option of a Swiss takeover would no longer be available. In that respect, there are proposals to improve this regime in four areas:

- enhancement in crisis management preparedness;
- addressing gaps in access to liquidity;
- provision to FINMA of additional and more effective powers and tools for banking supervision; and
- enhancement of transparency in the quality of capital.

The key considerations are summarised in **Box 3** just below.

BOX 3: Key findings of the expert group in its Report on “The need for reform after the demise of *Credit Suisse*”	
Enhancement in crisis management preparedness	The FINMA, the SNB and the FDF must share responsibility for successful crisis management by jointly monitoring, evaluating, and communicating the viability of the resolution of (global and domestic) systemically significant banks on a continuous basis.[130]

[125] FMIs are multilateral systems among participating financial firms, including their operator, used for the purposes of, clearing, settling or recording payments, securities, derivatives or other financial transactions. They include payment systems, central securities depositories, securities settlement systems, central counterparties, and trade repositories.

[126] **International Monetary Fund (2023c)**, p. 15.

[127] See **above, under 4.2.1 (2)**.

[128] The findings will be incorporated into the FDF's ongoing work for the attention of the Federal Council.

[129] The more precise term is “too-big-to-be-left-to-fail”.

[130] **Expert Group Report**, pp. 20-39.

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Addressing gaps in access to liquidity	Since ensuring access to liquidity even under difficult conditions is indispensable for banks and digitalisation has further increased the likelihood and speed of bank runs,[131] there is a need to take measures to address gaps in the liquidity mechanisms with regard to both: ➢ the provision of emergency liquidity assistance by the SNB (ELA); and ➢ the subsidiary provision of state-guaranteed liquidity to a bank in the event of resolution (public liquidity backstop, '**PLB**').[132]
Additional and more effective powers and tools for banking supervision	Additional instruments should be provided to the FINMA, which would enable it to supervise more effectively and intervene at an early stage.[133] Furthermore, the FINMA should have the means to use market information more effectively in its supervision.[134]
Enhanced transparency in the quality of capital	The FINMA should improve transparency on capital quality. Since the market for AT1 bonds issued by Swiss banks has suffered damage, measures are needed to revive that market.[135]

[131] See **above, under 6.1 (2)**.

[132] **Expert Group Report**, pp. 40-53. In this respect it is noted that in 2016, the FSB adopted **Guiding Principles** "on the temporary funding needed to support the orderly resolution of a global systemically important bank" (i.e., on the provisions of liquidity in (or after) resolution, available at; https://www.fsb.org/2016/08/guiding-principles-on-the-temporary-funding-needed-to-support-the-orderly-resolution-of-a-global-systemically-important-bank-g-sib). This is also an open issue at EU level; see on this by means of mere indication **Demertzis *et al.* (2018)**, **Moullin *et al.* (2018)** and **Grund *et al.* (2020)**.

[133] On this aspect, see also **above, under 4.1.2 (3)**.

[134] **Expert Group Report**, pp. 54-61.

[135] *Ibid.*, pp. 62-71.

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