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Strategic optionality in resolution: combination of tools

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ABSTRACT

This paper[1] discusses the selection of resolution tools in the EU resolution planning framework, going beyond the one-size-fits-all approach generally based on the single bail-in tool. As it is impossible to account for all the peculiarities of bank failures, it argues that optimal resolution strategies should preserve flexibility and involve a combination of bail-in and transfer tools.

In the first part, we highlight the variety of resolution tools in the EU framework, with a typology of strategies relying on their combinations. Notwithstanding the many options offered by the EU resolution toolkit, resolution planning remains primarily focused on bail-in alone. At the same time, transfer transactions have a proven track record in ensuring orderly management of bank failures. Frequent departures of resolution execution from resolution planning in the EU show the need for greater flexibility and optionality. Drawing on 2023 bank failures, we argue that for large, multi-business line banks such as global systemically important banks, a combined approach where open-bank bail-in is complemented by partial transfer tools could be more appropriate and credible than whole-bank sales leading to market exit.

In the second part, we present the French national resolution authority's approach to alternative strategies and asset separation for large banks. This modular approach relies on a toolbox strategy, where the bail-in tool is complemented by both the sale of business tool and the asset separation tool. This toolbox allows resolution authorities to embed flexibility and options within a single strategy, rather than designing several strategies in parallel for the myriad of crisis situations that could be encountered in resolution. We assess the relevance of transfer transactions over the compressed timeline of the resolution weekend, compared to the longer time horizon of the restructuring phase. In a combined approach, resolution authorities can leverage on the funding source provided by bail-in to enact costly business exits and separate sources of high risks (e.g. impaired assets or assets generating reputation risks).

The third part focuses on operational considerations to ensure these combinations of tools are fully actionable. Greater flexibility should not come at the cost of the credibility of resolution strategies. Proper operationalisation of such strategies requires that both banks and resolution authorities reach and maintain an adequate level of preparedness for several tools at the same time. Finally,

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we consider valuation aspects to show that the combined approach may have the additional benefit of reducing resolution funding needs compared to the use of bail-in on a stand-alone basis.

Introduction

One of the overarching objectives of any banking resolution regime is to ensure the continuity of banks' critical functions, while protecting financial stability and public funds. In the European Union (EU) resolution framework, this objective has led to a focus on a failing bank's remaining open and on the need to provide it with financial resources for recapitalisation. Accordingly, bail-in is the cornerstone of resolution planning in the EU, especially for large banks. In the Banking Union, it is the preferred resolution strategy for 82% of banks earmarked for resolution (SRB, 2023).

However, in actual resolution cases under the Bank Recovery and Resolution Directive (BRRD, OJEU, 2014) framework, resolution authorities have opted for transfer tools and the orderly market exit of failing banks to achieve resolution objectives, even where they had only prepared for bail-in.

As it is impossible to account for all the peculiarities of bank failures, there may be an inevitable tension between resolution planning and execution. Nevertheless, when actual crisis management consistently departs from planned strategies or even reverts to solutions outside resolution as in the Credit Suisse case (FSB, 2023), the credibility of the resolution framework along with resolution authorities' ability to reduce moral hazard – especially in respect of large banks like Global Systemically Important Banks (G-SIBs) – may be undermined.

Strategies solely based on the bail-in tool are too rigid to address the uncertainty, the various sources (e.g. liquidity-driven or solvency-driven) and the dynamic nature of banking crises. At the same time, transfer transactions have proven a key tool of the management of bank failures across the EU and globally, including for large banks. This paper argues that resolution authorities can reconcile resolution planning and execution if they are prepared to employ a variety of resolution tools, thereby increasing flexibility and optionality in crisis management. In particular, preparing for a combination of tools – alternative resolution strategies relying on a combination of bail-in and transfer transactions – ensures that multiple viable options are available to them at the time of resolution. This toolbox approach to resolution planning aims to better equip resolution authorities to deal with a wide range of scenarios, including idiosyncratic shocks.

The first section of this paper draws lessons from recent and comparatively older crisis situations, highlighting the need for alternatives resolution strategies going beyond the single bail-in tool. Then, the second section presents the French "toolbox" approach to resolution planning for large banks and

assesses the relevance of using partial asset transfer tools in combination with bail-in. Finally, the third section focuses on operational considerations related to combinations of tools, underlining that greater flexibility should not come at the cost of resolution credibility.

1 Reconciling resolution planning and execution in the EU: the need for alternative strategies and optionality

Notwithstanding the many options available to resolution authorities, resolution planning in the EU framework has been built on strategies geared towards bail-in alone. We draw on past resolution cases to show that transfer tools have proven key tools in actual crisis situations, highlighting the risk of inconsistency between resolution planning and execution in the EU. Resolution authorities managed to get the resolution formula right for small and medium-sized banks, provided that whole-bank transfers are better supported by the availability of loss-absorbing resources. While this full transfer formula cannot be consistently applied for larger banks, the latter's resolution strategies may benefit from partial asset transfers. Accordingly, we argue that the optimal resolution option involves a combination of bail-in and transfer tools for all banks, regardless of their size.

1.1 The EU resolution toolkit: a typology of resolution strategies relying on a combination of tools

In the EU resolution framework, there are two different ways to achieve resolution objectives: (i) ensuring that a failing bank can remain open and operating through recapitalisation; (ii) managing the failing bank's orderly market exit through a transfer transaction to an acquirer. Accordingly, resolution tools can be divided into two categories: bail-in and transfer tools.

When used alone, the bail-in tool in EU law corresponds to an open-bank approach[2], as the resolved bank stays in the market after the resolution weekend. Another specificity of the EU bail-in design is the distinction between the write-down and/or conversion of capital instruments (WDCCI)[3] and the bail-in tool per se. Whereas WDCCI relates to the write-down or conversion of capital instruments, bail-in continues with subordinated debt followed by senior unsecured debt and other higher-ranking claims in the creditor hierarchy.

In the EU context, transfer tools provide resolution authorities with the powers to:

[2] Bail-in may provide resources to two types of entities and, accordingly, there are two distinct approaches to bail-in: (i) recapitalisation of the failing entity, which emerges from resolution with long-term viability being restored and its legal existence maintained ("open-bank bail-in"); (ii) capitalisation of a new legal entity or bridge institution ("closed-bank bail-in").

[3] Article 59 BRRD.

(i) transfer, under the sale of business tool, the failing bank's whole business (*share deal*) or some of its parts to a potential buyer (*asset deal*).[4] The distinction between share deal and asset deal for transfer tools does not coincide with the standard Mergers and Acquisitions (M&A) terminology. From a resolution perspective, transferring the resolved bank's shares in a subsidiary to an acquirer would be referred to as an asset deal – these shares are *assets of the resolution entity* –, even if this type of transfer does corresponds to a share deal from an M&A operational perspective;

(ii) transfer, under the asset separation tool[5], impaired assets such as non-performing loans (NPLs) to an asset management vehicle (AMV) – i.e. a bad bank –, with the aim to maximise their value for an eventual sale, or an orderly wind-down;

(iii) and transfer, under the bridge institution tool[6], relatively healthy parts to a temporary entity (known as "bridge bank" or "good bank"), in the absence of a suitable buyer at the time of resolution.

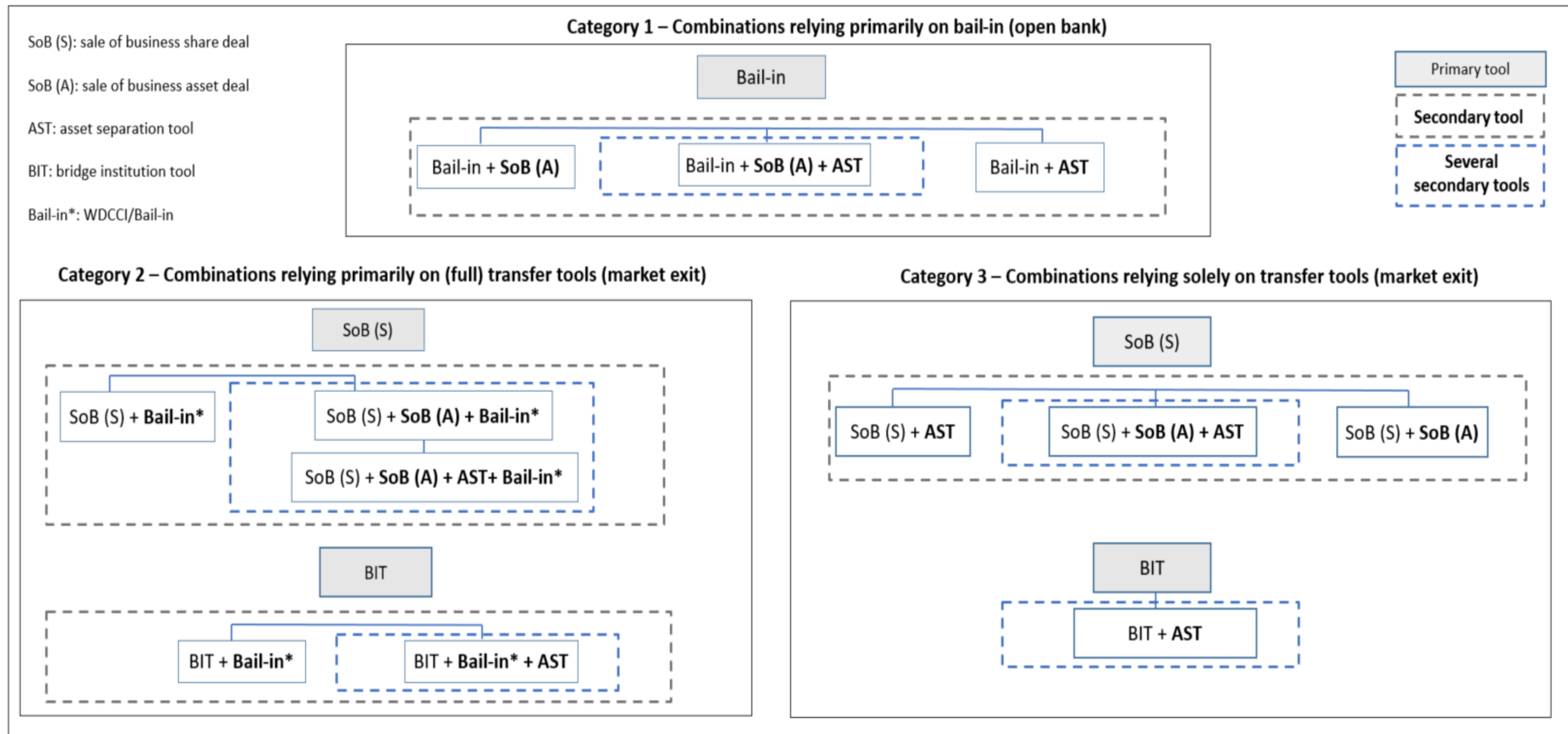
These transfers may be implemented without the consent of the failing bank's shareholders or any third party and without regard to compliance with any procedural requirements under company or securities law.[7]

In contrast to bail-in, resolution strategies relying primarily on transfer tools lead to the market exit of the resolution entity, either because it is fully absorbed by an acquirer or, in the event of a partial transfer, because the residual entity is to be wound up under normal insolvency proceedings within a reasonable timeframe.[8]

When the resolution entity is to stay in the market (open-bank strategy), bail-in is the primary tool, with partial transfer tools as complementary tools (see below category 1 in Figure 1). For instance, the resolution authority may transfer some subsidiaries of the failing bank and/or portfolios of assets to a third party through sale of business transactions (asset deals), before recapitalising the then smaller perimeter of the banking group.

[4] The sale of business tool thus comes in two forms depending on the type of instruments transferred to one or more purchasers that are not a bridge institution: (i) a full transfer or share deal when these instruments are shares or instruments of ownerships of the institution under resolution (Article 38(1)(a) BRRD); a partial transfer or asset deal when these instruments are made up of assets, rights or liabilities of the institution under resolution (Article 38(1)(b) BRRD).
[5] Article 42 BRRD.
[6] Articles 40 and 41 BRRD.
[7] The consent of the acquirer is required.
[8] Article 37(6) BRRD.

Figure 1 – Three categories of combination of tools: possible strategies



Note: for category 2 and category 3 strategies, there may also be a residual entity to be wound up under normal insolvency proceedings within a reasonable timeframe – in the event of a partial transfer of assets and liabilities to the bridge institution.

Source: ACPR

When the failing bank is to exit the market (closed-bank strategy), the primary tool is necessarily a transfer tool, with WDCCI/partial[9] bail-in acting as complementary power/tool (category 2 in Figure 1). For instance, a limited bail-in after WDCCI may be instrumental in marketing a share sale by right-sizing the balance sheet of the failing bank so that it can command a positive sale price. In this kind of combination, bail-in serves as a source of funding for the implementation of transfer tools.

Transfer tools can also be considered together, with partial transfer tools complementing the sale of business (share deal) or the bridge institution tool (category 3 in Figure 1). For instance, such a combination would be necessary in case the potential buyers of the failing bank make the exclusion of certain assets or portfolios (e.g. NPLs, assets with high litigation risk, non-core assets) a pre-condition for a share deal. Alongside with this deal, the resolution authority would then have to find alternative buyers for the excluded items in a separate sale of business (asset deal) transaction and/or set an AMV to which they can be transferred, under the asset separation tool.

1.2 Putting resolution strategies to the test of actual crisis situations: lessons for crisis management from bank failures

Transfers have consistently been the actual primary tools of crisis management in Europe and in the United States (US), although bail-in remains the cornerstone of resolution planning in the EU (especially in the Banking Union).

1.2.1 The rareness of bail-in cases in the EU: resolution planning vs. resolution execution

In the Banking Union, the bail-in tool remains untested. In the two Banking Union resolution cases of Banco Popular and Sberbank, the failure was a consequence of the deterioration of the liquidity situation of the institution and did not specifically require a recapitalisation. The Single Resolution Board (SRB) implemented transfers and deviated from the resolution plans of the two banks, which provided for the bail-in tool as the preferred resolution strategy. These deviations were justified on the grounds that the bail-in tool cannot address the liquidity situation of the institution – as opposed to the solvency situation – to restore it to financial soundness and long-term viability. For Banco Popular, the SRB decided to exercise the power of WDCCI prior to the transfer, to address the shortfall in the value of the institution: Common Equity Tier 1 and Additional Tier 1 instruments were written down, while Tier 2 instruments were converted into new shares transferred to Banco Santander for the price of €1. In the March 2022 case of Sberbank, the Russian-owned bank experienced sudden deposit outflows due to the geopolitical situation and the looming impact of sanctions. The SRB adopted resolution decisions for the Slovenian and Croatian subsidiaries of Sberbank Europe AG,

[9] Partial bail-in should be understood as the limited extent of bail-in of instruments other than capital instruments (e.g. debt instruments), that follows the use of the WDCCI power in line with the creditor hierarchy in resolution.

relying on the use of the sale of business tool. On top of showing that liquidity crises can escalate very quickly, the Sberbank case highlighted that the bail-in tool is not fit for dealing with reputation and liquidity risks.

In non-euro area countries, the bail-in tool was applied in a few resolution cases of small banks. It has never been used alone but always in combination with transfers (combinations of category 2 in Figure 1). For instance, in Poland, the Bank Guarantee Fund adopted a resolution scheme for the regional cooperative bank – Podkarpacki Bank Spółdzielczy in Sanok (PBS), relying on the use of a bridge bank combined with bail-in (Stopczyński, 2021). In Denmark, the Danish resolution authority resolved two cooperative banks – Københavns Andelskasse in September 2018 and Andelskassen J.A.K. Slagelsein October 2015 – by a combination of a bridge bank and bail-in (Andersen and Hovedskov, 2021). In Croatia, Jaadranska banka d.d. Sibenik was resolved in October 2015 under a resolution scheme relying on the combined use of the sale of business tool, the bail-in tool and the asset separation tool – a special purpose vehicle (SPV) was set up to manage the bank's non-performing assets.

In the EU, various resolution authorities have thus consistently reached the conclusion, under different contexts, that a sale of the business or a bridge bank would achieve the resolution objectives more effectively than open-bank bail-in. The latter may appear as an option for resolution planning, but not for resolution execution. Such a discrepancy between resolution planning and execution may undermine the credibility and reliability of those resolution plans relying solely on the bail-in tool.

1.2.2 Lessons to be learnt from the Credit Suisse case: how to resolve a crisis of confidence and mitigate reputation and business risks in resolution?

In March 2023, the Credit Suisse failure was a prime example of departure from resolution planning in an actual crisis situation. In the resolution plan, the Swiss resolution authority's (FINMA) primary resolution strategy was to restructure Credit Suisse according to a single point of entry (SPE) open-bank bail-in, while Swiss authorities finally opted for an alternative solution outside resolution – the state-facilitated acquisition of Credit Suisse by UBS. The main sources/features of the Credit Suisse crisis should be put in perspective with the reasons provided by Swiss authorities as to why the alternative solution was considered more appropriate.

As Credit Suisse was compliant with its regulatory capital ratios, the crisis of confidence was not due to solvency risks per se. Rather, two different types of risks acted as catalysts to the crisis: reputation

and business risks, which are strongly interrelated and self-reinforcing (SNB, 2023).[10] Business risk refers to the risk of reduced revenues and franchise value, in particular due to a drop in business volume or client activity. In a forward-looking perspective, those risks imply a poor profitability outlook and a significant loss potential in case of adverse scenarios. This may lead to rapid changes in the overall perception of a bank's resilience to the point of a crisis of confidence, however strong its capital position at a given point in time. When this crisis of confidence cannot be managed by the bank, the result is a fast-moving liquidity-driven failure similar to the Credit Suisse crisis.

One lesson of the Credit Suisse case is that resolution planning should be flexible enough to better tackle different crisis scenarios, including a crisis of confidence due to reputation and/or business risks. Due to the latter risks, clients, market participants, rating agencies and authorities may have greater trust in the ability of an acquirer to restructure the failing business than in the failing bank's own efforts. In such case, the sale of business, rather than the bail-in tool, is an appropriate measure to resolve the crisis of confidence. In particular, in October 2022, Credit Suisse unveiled a new strategy and transformation plan based on downsizing its investment banking activities – where business risk was concentrated – and a focus on wealth management, asset management and the Swiss business to restore its profitability and client trust. Given the high execution risk of the strategy and the volatile market environment, this restructuring plan did not restore confidence. Swiss authorities concluded that an acquisition by UBS was more appropriate than bail-in, with UBS being better placed to build confidence in the marketplace and continue the downsizing already initiated by Credit Suisse.

Second, the resolution planning work should better assess the execution risk of bail-in. According to FINMA (Angehrn, 2023), a Credit Suisse bail-in would have further damaged the bank's reputation. Swiss authorities also had concerns about its impact on financial markets, with potential contagion effects and risks to financial stability in Switzerland and globally (FSB, 2023). This shows that even in idiosyncratic crisis scenarios such as that of Credit Suisse, bail-in alone may be risky to implement.

1.2.3 The US framework for crisis management: consistency between resolution planning and execution

Since the creation of the Federal Deposit Insurance Corporation (FDIC), a key feature of the US resolution regime has been that all resolved institutions, regardless of their size, are earmarked for a market exit.[11] In contrast, most EU banks are planned to be restructured and stay in the market post resolution, as part of an open-bank bail-in strategy. Given the proven track record of transfer tools in

[10] When business risk starts materialising, a damaged reputation may increase the execution risk of any initiative on the bank's part to restructure and fuel speculation about the extent of potential losses, further increasing business risk. A structural business risk may be perceived as a problem related to the suitability and viability of the bank's business model.
[11] As assets and liabilities are either left behind in a receivership or transferred to an acquirer or a bridge institution.

the orderly management of bank failure, closed-bank strategies ensure consistency between resolution planning and execution.

The FDIC resolution toolkit in dealing with failing insured depository institutions (i.e. deposit-taking institutions) under the Federal Deposit Insurance (FDI) Act relies on two main tools[12]: purchase and assumption (P&A) transactions and, in the absence of a willing purchaser, a bridge bank buying time for due diligence, marketing and a deferred P&A. These two tools can be used alone or in combination. P&A can be considered the US equivalent of the European sale of business tool. This toolkit has been executed successfully for decades and more recently in 2023 during the regional banks crisis (i.e. Silicon Valley Bank, Signature Bank and First Republic Bank). One of the main lessons of the latter resolution cases is that the availability of loss-absorbing resources beyond own funds could help protect uninsured depositors and finance a transfer with internal rather than external (i.e. industry-funded) resources from resolution/deposit insurance funds. Were such loss-absorbing capacity framework implemented for non-GSIB banks[13], the FDIC resolution toolkit could be framed under the EU resolution framework as a combination of the sale of business tool or bridge institution tool[14] and partial bail-in[15] as complementary tool (category 2 strategies in Figure 1).

The Dodd-Frank Act (Title II) broadens the resolution powers of the FDIC beyond the insured depository institutions resolved under the FDI Act, equipping it with an Orderly Liquidation Authority (OLA) in respect of financial institutions that are considered systemically relevant. The FDIC framework for resolving a systemically important firm under OLA is based on an SPE resolution strategy. Under SPE, the FDIC would intervene at the level of the uppermost entity in the group, the group bank holding company, while the operating subsidiaries would continue their operations uninterrupted.

While OLA remains untested, the resolution strategy of G-SIBs is based on the same toolbox that has been tested for the orderly resolution of insured depository institutions. As receiver, the FDIC would transfer the operations of the failed US bank holding company to a bridge financial company, including its ownership of its operating subsidiaries. Bail-inable instruments that can be used to pass losses to investors (Total Loss Absorbing Capacity – TLAC – instruments) would be left behind in the receivership in a closed-bank bail-in. The use of a bridge financial company is based on the premise that G-SIBs are too large and complex for a quick P&A to be an option. This strategy can thus be construed under the

[12] On top of liquidation.
[13] In August 2023, the three federal banking agencies issued a proposed rule on long-term debt requirements for some non-GSIBs.
[14] The time horizon of the bridge bank's operations may differ in the US (a few days or weeks in practice) and the EU (up to two years).
[15] Unlike the EU, there is no statutory bail-in power in the US: bail-in is an economic process where some liabilities are left behind in the receivership to absorb losses.

EU resolution framework as a combination of the bridge institution tool[16] (primary tool) and bail-in (secondary tool) applied to TLAC (category 2 strategies in Figure 1).

1.3 Beyond the stand-alone bail-in approach: finding the right options

When it relies solely on bail-in, the resolution planning work does not reflect the way in which banking crises are resolved. At the same time, crisis management cases globally show that the takeover of a failing bank's operations by a more robust institution is a robust way to manage bank failures. The key question is whether this approach can be consistently applied for all banks, regardless of their size.

1.3.1 The right formula for small and medium-sized banks: combining a sale of business or a bridge bank with the bail-in tool

For small and medium-sized banks, both European and US experiences show that transfer and market exit strategies have a proven track record in supporting financial stability and providing a workable solution to liquidity-driven failures due to a damaged reputation, a materialisation of business risk or more generally a crisis of confidence in the failing bank.

At the same time, such transfers have often been backed by public guarantees or financed by industry-funded resolution funds. In order to reduce moral hazard and protect public funds, transfer transactions should be creditor-financed to the extent necessary. In this respect, the optimal option would be a combination of a sale of business share deal and a "partial bail-in". For that option to work, small and medium-sized banks would need to have strong loss-absorbing capacity buffers on their balance sheet. In such case, bail-in has a purely instrumental role, as a mere tool to finance and facilitate an orderly market exit through a direct or eventual sale to a private acquirer.

1.3.2 The right formula for large systemic banks: what is the appropriate mix between transfers and bail-in?

The solution of a full transfer may also seem attractive for large banks. Indeed, under a European resolution scheme, the economic outcome of the Credit Suisse case could be replicated for a small European G-SIB by a combination of the sale of business (share deal) tool and the WDCCI power/partial bail-in[17] power (category 2 strategies in Figure 1). However, share deals in resolution pose various issues for large systemic banks, due to the difficulty in finding acquirers for large businesses, the complexity of large banks' balance sheets and competition issues. This approach can only be considered for those smaller G-SIBs that have bigger national or foreign peers. However, it is not

[16] In the US, the bridge institution is a bridge holding company for G-SIBs.
[17] The replication of the guarantees offered to the acquirer by the resolution fund would have required a bail-in of 8% of total liabilities and own funds, on top of the WDCCI.

desirable in respect of the too-big-too-fail issue as it risks creating larger and more systematically important banks if consistently applied. It would also question the appropriateness and feasibility of open-bank strategies and equate resolution with consistent market exit.

This paper explores an alternative approach for large banks, based on a combination of open-bank bail-in as the primary tool and partial asset transfers as complementary tools. This approach is tantamount to breaking up a failing banking group, recapitalising some of its parts to preserve critical functions and selling off other parts that are detrimental or not core to its business model to one or multiple acquirers. It would have three main benefits.

First, the only circumstance under which a bank can credibly stay in the market post resolution is where the resolution process manages to restore public trust and confidence. When the causes of failure are structural (e.g. business model, poor profitability outlook, reputation etc.), this may require swift structural measures to reorganise the failed bank, going beyond a creditor-financed recapitalisation. The use of partial asset transfer tools during the resolution weekend can lay the groundwork for a restructuring plan over a longer time horizon and help restore public trust in the long-term viability of the resolved bank, especially in liquidity-driven failures.

Second, preparing for such combination of tools gives effect to the strategic optionality allowed in EU law. It provides resolution authorities with flexibility to adapt and find resolution solutions having the better prospects of stabilising a bank in a range of cases.

Third, this approach can be consistently applied to all banks while mitigating too-big-too-fail and competition issues.

2 Combination of tools: a modular and toolbox approach to resolution with embedded flexibility

In this section, we present a modular approach to alternative strategies and asset separation for large banks. This toolbox strategy is based on a combination of bail-in, the sale of business tool in asset deal form and the asset separation tool. It allows resolution authorities to embed flexibility and options within a single strategy. We assess the relevance of separability actions over the compressed timeline of the resolution weekend, compared to the longer time horizon of the restructuring phase. We argue that costly and capital-consuming asset disposals may not be readily implementable in the post-resolution phase, focusing on the accounting and prudential impacts of partial transfers. In a combined approach, resolution authorities can leverage on the funding source provided by bail-in to enact costly

business exits and separate sources of high risks (e.g. impaired assets or those generating reputation risks and impacting market confidence).

2.1 Scenarios of combination of tools: the suitability of a toolbox approach to resolution planning

2.1.1 Stabilising effects of resolution tools

Resolution tools can affect five dimensions of an institution's financial soundness and viability: its solvency, its liquidity, its asset quality, its overall risk profile and its business model.

Bail-in alone[18] can only improve to a significant extent the solvency of the failed bank, as it merely affects the liability side of the bank's balance sheet. Transfer tools can improve all other dimensions.

While resolution alone cannot fix broken business models, the sale of business tool in its asset deal form offers flexibility to resolution authorities to start refocusing a failing bank's business model in line with a credible restructuring plan (see section 2.2.1), including through transactions involving specific business lines, legal entities or portfolios.

The asset separation tool can enhance asset quality and the overall risk profile of a failing bank by removing permanently impaired assets from its balance sheet and enabling it to focus on managing its core assets (see Box 1 for selected European experiences with asset separation schemes). It may also provide some capital relief if transferred assets are valued in accordance with a real economic value above the prevailing market value.

At the same time, transfer tools can provide liquidity for the failing group through considerations paid in cash for transferred assets[19] and funding relief in case the transferred businesses were significantly funded by the failed banking group – either immediately if the purchaser takes over the existing funding or progressively with the amortisation of the group's funding.

Box 1. European experiences with impaired assets disposals in Greece, Italy, Spain and Ireland

In the aftermath of the Global Financial crisis of 2007-09 and the sovereign debt crisis of 2010-12, non-performing exposures (NPEs) weighed on the banking sector performances of several European countries, notably Greece, Italy, Spain and Ireland. The decentralised management of impaired assets poses several problems, as banks are likely to maintain NPEs on their balance sheets and postpone their separation, to avoid recognition of losses. This is especially the case in a crisis environment, where low liquidity and depressed

[18] Without considering the ensuing reorganisation that will have a significant impact on governance arrangements and the business model (see section 2.2.1).

[19] However, this can only play a limited role compared to adequate liquidity arrangements in resolution in the form of public liquidity backstop and/or central bank's liquidity provision.

markets imply that those assets may only be disposed at a high purchase price discount, resulting in accounting and capital losses (see section 2.2.2).

In the four countries mentioned above, the reduction of the NPLs stock has benefited from asset separation schemes undertaken by EU and national authorities. These schemes can be divided into two categories:

(i) creation of an Asset management company (AMC) to which impaired assets are transferred (including with State aids), with a view to avoiding unnecessary value destruction and selling them in the long term. For instance, the Irish National Asset Management Agency (NAMA) was set up in 2009 to acquire from the several Irish banks a portfolio consisting of almost exclusively commercial real estate. In Spain, the Management Company for Assets Arising from the Restructuring of the Banking Sector (SAREB) was created in 2012, taking over loans to developers and real estate assets from several Spanish banks.

(ii) securitisation techniques for NPLs used in conjunction with asset protection schemes from the government (on a market-consistent basis, i.e. without State aid): for example, Garanzia Cartolarizzazione Sofferenze (GACS) in Italy (2016), Hercules Asset Protection Scheme (HAPS) in Greece (2019).

These transfers were implemented at steep discounts on book value (see Table 1) but still above the prevailing market prices at the time. Although they provided some capital relief compared to a market valuation, they still resulted in significant losses. The impact of the losses on compliance with capital requirements was offset to some extent by the reduction in risk-weighted assets (RWAs):

(i) in the case of AMCs, the transferred assets were deconsolidated from the balance sheets of the transferring banks, which offset the impact of losses on disposal on compliance with capital requirements through lower RWAs.

(ii) the securitisation schemes included a credit default swap with the government, acting as a guarantee in the event of default on the senior tranche. As banks typically retained the senior tranches and sold junior tranches to investors, the government guarantees enabled them to replace high risk-weighted portfolios with significantly lower risk-weighted assets.

In respect of resolution, two main lessons can be drawn from these asset separation cases. They relate to the dynamics of loss absorption and the restoration of confidence. First, these asset separation schemes have effectively front-loaded and crystallised losses. For instance, NAMA acquired over 15,000 loans at a cost of €31.8 billion from five Irish banks, compared to a face value of €74.4 billion (Table 1). This crystallised losses in the banks of €42.6 billion (57%), which required financial support to the banking sector from the State. In resolution, bail-in used together with the asset separation tool provide the capital space to crystallise such losses during the resolution weekend without public funds.

Given the more conservative and stringent approach to accounting and prudential provisioning (e.g. European central bank guidance and related publications on NPLs) taken in recent years in Europe, the level of haircuts on book value recorded in these asset separation cases (Table 1) may not be indicative of that of future cases.

Second, in view of public trust, a more gradual reduction of on-balance-sheet impaired assets has the drawback of reducing annual profitability and maintaining uncertainty about asset quality over a longer time horizon. In this respect, one of the main advantages of asset separation schemes is the rapid restoration of confidence in the banking system that they can bring about. They may not only improve asset quality, risk profile and liquidity, but also send the positive signal to markets that some banks have turned the corner.

Table 1 – Haircuts on book value for impaired assets transfers of selected European asset separation schemes (in €billion)

Types of schemes		Book value[20]	Gross book value	Purchase price	Haircut on book value
AMC	NAMA Ireland)	74.4	-	31.7	57 %
	SAREB (Spain)	107.0	-	50.8	53 %
Securitisation schemes	GACS (Italy)	21.26	64.5	16.3	23 %
	HAPS (Greece)	17.7	32.3	11.3	36 %

Sources: NAMA and SAREB websites and annual reports, Boudiaf and Miranda (2022) for a sample of GACS and HAPS transactions between 2017 and mid-2021.

2.1.2 The toolbox approach: embedded options and flexibility within resolution strategies

With regard to flexibility and options, resolution authorities should always be able to leverage on all the stabilising effects of transfer tools when executing a resolution. At the same time, the purpose of transfer options can only be to support resolution objectives to a greater extent than bail-in on stand-alone basis. In that respect, their use could be justified:

(i) to deleverage, provide liquidity and risk relief to the group and optimise value preservation by avoiding recapitalising all entities (financial soundness purpose);

i) to separate sources of high risks (business risks, reputation risks etc.) with a view to restoring public trust;

iii) to refocus the activities of the group by divesting some entities, separating unhealthy and resource-consuming entities and strengthening the group's viability (business model perspective).

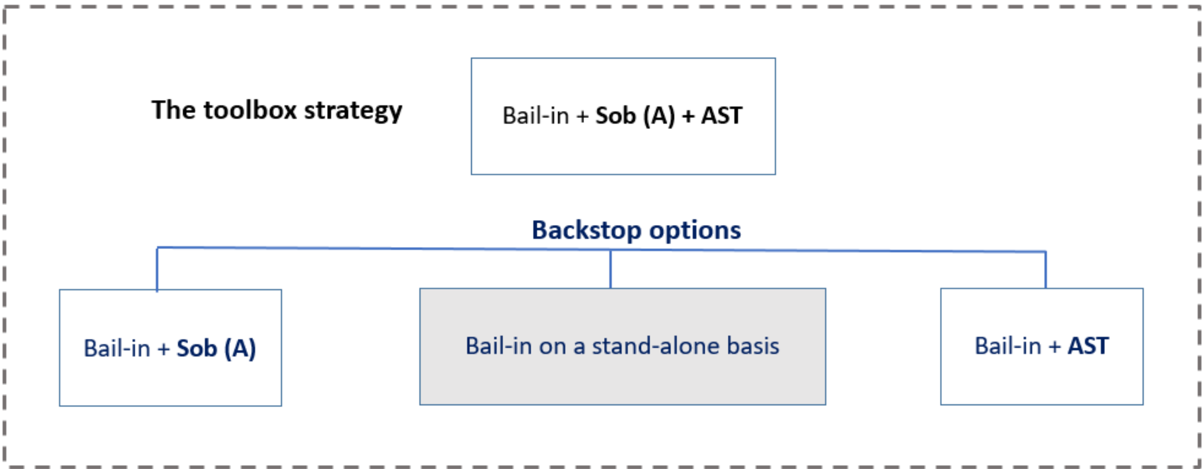
Considering the need to better support resolution objectives, there are three main scenarios of combination of tools, relying on bail-in as the primary tool (Figure 1): (i) bail-in used in combination with the sale of business (asset deal) tool; (ii) bail-in used in combination with the asset separation tool; (iii) bail-in used combination with both the sale of business (asset deal) tool and the asset

[20] Net book value when the gross book value is also available.

separation tool. The combination of open-bank bail-in and the bridge institution tool is not consistent, as it would lead to a scenario where two good banks emerge from the resolution weekend.[21]

For large banks, the scenario of combination of tools that best preserves optionality is the one combining not two, but three resolution tools: the bail-in tool, the sale of business tool in its asset deal form and the asset separation tool (Figure 2). Such combination can be construed as toolbox approach to resolution planning, based on the premise that it is impossible to account for all the peculiarities and idiosyncratic elements of bank failures. It gives resolution authorities the necessary flexibility to choose the most appropriate and proportionate approach for each case. For instance, if asset quality is not a source of the bank's failure, resolution authorities can select the two other tools of the toolbox. If there is no market appetite for asset deals, especially in a systemic crisis scenario, the resolution authority can combine bail-in with the asset separation tool.

Figure 2 – The toolbox strategy and its backstop options



Source: ACPR

Optionality and flexibility are thus embedded within a toolbox strategy, allowing resolution authorities to consider several options and potential outcomes at the same time over a compressed timeline. By preparing for a combination of three resolution tools, resolution authorities prepare for various backstop options in parallel and at minimal cost, killing two birds with one stone. This departs from the standard resolution planning practice, where authorities prepare for a preferred resolution strategy based on a single resolution tool and add variant strategies to the resolution plan in case the former is not feasible.

[21] The only consistent combination between bail-in and the bridge institution tool is the one where the bridge bank, as the primary tool, is capitalised by means of the bail-in tool (secondary tool).

2.2 Separability across different time horizons

2.2.1 Separability during or after the resolution weekend?

Separability is the bank's ability to implement a transfer of legal entities, business lines, or portfolios of assets and liabilities at short notice to a third party. Asset separation may intervene in recovery, resolution and in the restructuring phase post resolution.

Separability in going concern: contingency, recovery options and business reorganisation

Crisis management starts within the banking group operating on its own, in the form of contingency plans setting out mitigation actions (Figure 3). If contingency actions are not sufficient to resolve the crisis, the bank[22] may activate recovery options set out in its recovery plan to restore its financial position over an indicative timeline of 6-18 months.[23] These options may include partial transfers, in the form of the disposal of legal entities or business units and assets sales.

Further along the crisis management spectrum, open-bank bail-in allows to quickly recapitalise a bank declared Failing or Likely to Fail (FOLTF), replace its management and begin after the resolution weekend the process of restructuring its business over a longer time horizon. In the EU framework, resolved banks that stay in the market post resolution must submit to the resolution authority a Business Reorganisation Plan (BRP) within one month of bail-in execution.[24] The plan should target a so-called core banking group performing a minimum set of activities and business lines, consistent with a healthier, viable and sustainable business model. Reorganisation measures during the restructuring phase can take several forms: cost reduction measures, sale of assets or businesses, orderly wind-down of activities or immediate discontinuation of activities. The business reorganisation period should ideally be as short as possible, ranging under EU standards from one month to no more than five years after resolution.[25]

[22] Where the bank breaches or is likely to breach its prudential requirements, the supervisory authority may also require the implementation of some of the measures set out in the recovery plan, as part of early intervention measures (Article 27(1) BRRD).

[23] As per the overall recovery capacity (EBA, 2023), which is a quantitative indicator of the extent to which the implementation of credible and feasible recovery options allows the entity to restore its financial position in a range of scenarios of severe macroeconomic and financial stress. It is computed over a timeline of 18 months for the impact on the capital position (including leverage) and 6 months for the impact on the liquidity position.

[24] Article 52 BRRD.

[25] Pursuant to Article 52(1) BRRD, where the Union State aid framework applies, the business reorganisation plan must be compatible with the restructuring plan that the institution under resolution is required to submit to the European Commission. The latter has typically required a 5-year restructuring plan in recent years.

Figure 3 – The asset separation spectrum: from contingency to restructuring post resolution

	Contingency	Recovery	Resolution	Reorganisation
		FOLTF		
Time horizon	Over several months	6-18 months	Over several days	Over several months to several years
Actors initiating separability actions	Banks	Banks Supervisory authorities (EIM)	Resolution authorities	Banks
Features of separability actions	**Contingency plan**	**Recovery plan**	**Resolution plan**	**Business reorganisation plan**
	Low impact on the franchise (minor adjustments to the business mix)	Transfer options providing financial relief (significant capital and liquidity impacts) High potential impact on the franchise (disposal of whole businesses)	Costly business exits/impaired assets divestment Businesses that are sources of high risks Failed recovery options	*Refocus of the business model ("core bank")* Restructuring per se (e.g. cost reduction measures) Sale of non-core assets or businesses Orderly wind-down of activities (e.g. solvent wind-down of trading book) Immediate discontinuation of activities

Source: ACPR

In the standard open-bank bail-in scenario, separability is thus not a requirement for resolution per se, but for the phase following the resolution weekend: a phase called stabilisation, restructuring or business reorganisation phase in the various international and European fora. The key question is whether and under which circumstances some transfers should preferably be implemented during the resolution weekend[26], rather than in the subsequent phase. Answering this question requires assessing three elements.

First, the success of resolution requires market confidence. The underlying assumption of the standard open-bank bail-in scenario is that the bank can actually re-open on the Monday following the resolution weekend. Losses should be absorbed, the capital and liquidity situation should be restored and the governance should be revamped to address the sources of the failure. Then, the resolved could go through the post-resolution phase without major confidence concerns. However, in some scenarios, for instance when the main vulnerabilities leading to the resolution are reputational or linked to a weak business model as in the Credit Suisse case, the sole bail-in tool would likely prove insufficient to restore public trust in the institution. In such cases, partial asset transfers during the resolution weekend may help resolve the crisis of confidence and be a pre-condition for the restructuring process to start smoothly.

[26] Which means completing negotiations and signing a sale and purchase agreement (see section 3.1.1) during the resolution weekend. The actual transfer can be closed at a later stage.

Second, timing in crisis management matters. Asset transfers during the resolution weekend may deliver the key benefits mentioned above as soon as Monday morning, such as a clearer communication for the future of institution, preliminary adjustment towards a healthier business model, enhanced asset quality and renewed public confidence in the institution. Moreover, bail-in can provide the necessary capital space to enact costly and sudden business exits or asset separation over the resolution weekend. The latter may be too costly to be performed as business-as-usual commercial transactions in the post-bail-in restructuring phase, where the bank will typically target the maximisation of the sale price. Some asset separation decisions require extraordinary schemes and incentives beyond the business-as-usual toolkit, as evidenced by several European examples (Box 1).

Third, resolution authorities merely oversee business reorganisation measures, while they lead the implementation of partial transfer tools. The conduct of any business reorganisation comes with execution risks for the resolved bank, as the costs are often incurred at the beginning of the reorganisation period (section 2.2.2) and may only be offset by the benefits after a certain period of time. The Credit Suisse case shows that when market assessment gives significant weight to the execution risk of a restructuring plan as opposed to foreseen benefits, the bank's own efforts are unlikely to stabilise the situation. In such case, resolution authorities can step in during the resolution weekend to assume part of the execution risk and mitigate the reputational risk of any restructuring plan. This would send a positive signal and reduce the risk of adverse market reactions to business reorganisation in the stabilisation phase, especially if the resolved bank has previously failed to restore its financial position or resolve a crisis on its own account (e.g. after having triggered unsuccessfully recovery options).

For these reasons, reorganisation measures during the restructuring phase should be construed as complements, rather than substitutes, to asset transfers during the resolution weekend. And the latter should be understood as key tools for enhancing the credibility of the business reorganisation plan.

2.2.2 Crystallising losses: accounting, prudential and economic impacts of partial transfers

Partial transfers are one of the key features of any combination of tools relying primarily on bail-in. In going concern, transferred assets are deconsolidated from the transferring bank's books, with accounting and prudential impacts. These impacts are relevant for asset separation during recovery and the restructuring phase post resolution. For transfers during the resolution weekend, an economic perspective is more appropriate given the mandatory economic reevaluation of the bank's balance sheet in resolution. In any case, the sale price will have to be compared to a benchmark, either an accounting value or an economic value, to assess the impact of any transfer.

Accounting impacts of partial transfers

In going concern, the book value (or more specifically net book value), i.e. the value at which an asset is carried in the books of a bank, is the benchmark value to which the sale price must be compared to determine the profit and loss (P&L) impact of a transfer. Any difference between the sale price and the book value of assets generates a capital gain or loss upon the realisation of the sale transaction.

Disposing of impaired portfolios of assets generates a loss, as the transfer price will typically be below the net book value (see Box 1 for examples). For NPEs, the net book value will typically be equal to the difference between their gross book value (nominal value of the loan) minus the amount of their related provisions. For example, let us consider the portfolio of NPLs of the stylised example of banking group X (Box 2) with a gross book value of €50 billion and €15 billion of booked provisions. If the portfolio is transferred to an AMC for a transfer price of €25 billion (43% haircut on net book value), the transfer will generate a pre-tax accounting loss of €10 billion (=50-15-25).

When a legal entity within a resolution group is separated, the resolution entity loses control of this subsidiary. In respect of the group consolidated accounts, the latter recognises a loss or profit based on the difference between three adjustments (see Box 2): (i) it derecognises the assets (including goodwill), liabilities and non-controlling interests of the former subsidiary; (ii) it recognises the fair value consideration for which the subsidiary is disposed; (iii) it reclassifies to P&L any amounts previously recognised in other comprehensive income (OCI).

Box 2. Stylised example of the accounting impact of partial transfers on the consolidated books of the bank

For all stylised examples in this paper (figure 5, box 4), we consider the banking group X, with €1200 billion in total consolidated assets at the time of resolution and €400 billion in total RWAs. Banking group X envisages to sell a business line made up of three subsidiaries A, B and C:

Consolidated accounting balance sheet

Goodwill (subsidiaries A, B and C)	**2**	**Liabilities of subsidiaries A, B and C**	150
Assets of subsidiaries A, B and C	160	*Provisions for NPLs*	15
NPLs of the parent entity	50	*Other Group liabilities*	1005
Other Group assets	988	**Equity**	30
		Issued common stocks and capital reserves	20
		Retained earnings	5
		Net income	1
		Accumulated OCI	3
		of which due to assets and liabilites of A, B and C	0,5
		Minority interests	1
Total assets	1200	Total liabilities and equity	1200

The net carrying value (including goodwill) of the business line in the consolidated bank's books is equal to €12 billion (=160+2-150). The fair value of the consideration received needs to be compared to this net book value to assess the level of gain or loss on disposal.

Let us assume that, in the run-up to resolution, the resolution entity disposes of its entire interest in the three subsidiaries A, B and C for cash consideration of €7 billion (i.e. below book value). The bank will thus book a loss on disposal of €5 billion (=12-7). The total pre-tax impact on the consolidated net income (- €3.5 billion) will take into account the derecognition of minority interests related to A, B and C[27] (+ €1 billion) and the reclassification to P&L of any amounts (+ €0.5 billion) previously recognised in other comprehensive income (e.g. foreign currency translation reserve, fair value and hedging reserves):

Post-transfer accounting balance sheet

~~Goodwill (subsidiaries A, B and C)~~	**0**	~~Liabilities of subsidiaries A, B and C~~	0
~~Assets of subsidiaries A, B and C~~	0	*Provisions for NPLs*	15
Cash	7	*Other Group liabilities*	1005
NPLs of the parent entity	50	**Equity**	25
Other Group assets	988	*Issued common stocks and capital reserves*	20
		Retained earnings	5
		Net income	-2,5
		of which net income before disposal	1
		of which loss on disposal of A, B and C	-5
		of which recycling of OCI	0,5
		of which derecognition of minority interests	1
		Accumulated OCI	2,5
		~~*of which due to assets and liabilites of A, B and C*~~	0
		~~Minority interests~~	0
Total assets	1045	Total liabilities and equity	1045

Prudential impacts of partial transfers

The pre-tax impact on the CET1 level of a given transfer should be close to the loss on disposal, taking into account CET1 regulatory deductions (e.g. goodwill and other intangible assets) and eligibility of some minority interests.

A given transfer will also impact RWAs. For instance, for transfers of portfolio of assets such as loans, the exposure value is the accounting value remaining after specific credit risk adjustment. In the above example of the transfer of the €50 billion gross book value portfolio, assuming a 100% average risk-weighting, the removal of the portfolio from the balance will reduce RWAs by €35 billion (=(50-15)*100%). This decrease in RWAs will offset the impact of the losses on the bank's compliance with its capital requirements.

[27] Assuming that all minority interests are related to the three subsidiaries.

The overall effect of a given asset transfer on the CET1 ratio depends on a comparison of the relative change in CET1 and that in RWAs. Even if CET1 decreases due to a sale price lower than the book value of the transfer perimeter, the CET1 ratio may not decrease provided that the decrease in consolidated CET1 is offset by a decrease in consolidated RWA significant enough (see Box 3).

Box 3. Disposals of assets in recovery and the business reorganisation phase: break-even haircuts on book value to maintain a bank's capital position

Let us assume that the sale price of a subsidiary of a parent bank is below its net book value, leading to a capital loss and a decrease in CET1. It is possible to identify a maximum haircut on book value (BV) below which the CET1 ratio does not decrease ("break-even haircut"). The CET1 ratio stays constant despite the loss on disposal if the decrease in consolidated CET1 is matched by a similar decrease in consolidated RWA:

$$\frac{\Delta CET1}{CET1} = \frac{\Delta RWA}{RWA} \quad (1)$$

$$\frac{\Delta CET1}{\Delta RWA} = \frac{CET1}{RWA} \quad (2)$$

Let us assume that the CET1 ratio of the banking group before disposal is equal to 10%:

$$\frac{CET1}{RWA} = 10\% \quad (3)$$

Assuming no other regulatory adjustments other than goodwill, intangible assets and minority interests, the change in CET1 is given by the following formula:

$$\Delta CET1 = Sale\ price - BV + \Delta Goodwill\ and\ other\ IA - \Delta Minority\ interest$$
$$\Delta CET1 = (1 - Haircut) \times BV - BV + \Delta Goodwill\ and\ other\ IA - \Delta Minority\ interests$$
$$\Delta CET1 = -Haircut \times BV + \Delta Goodwill\ and\ other\ IA - \Delta Minority\ interests$$

By replacing (3) in (2), we have:

$$\frac{\Delta CET1}{\Delta RWA} = 10\%$$

$$\frac{-Haircut \times BV + \Delta Goodwill\ and\ other\ IA - \Delta Minority\ interests}{\Delta RWA} = 10\%$$

The break-even haircut on book value is thus given by :

$$Haircut = -\frac{10\% \times \Delta RWA - (\Delta Goodwill\ and\ other\ IA - \Delta Minority\ interests)}{BV}$$

For a given starting CET1 ratio, the higher the risk-weighted exposure of the transferred assets, the higher the break-even haircut.

Economic impact of transfers in resolution

The accounting and prudential impacts are relevant for recovery options and the business reorganisation measures in the post-resolution phase. They imply that costly business exits and asset disposals may weaken the capital position of the resolved bank in the post-resolution phase, at a time when confidence is still to be built and maintained. In this respect, as mentioned above, it may be preferable to crystallise such losses during the resolution weekend.

In resolution, the benchmark value is the economic value of assets and liabilities, although this economic value may be derived from accounting values, adjusted for instance through haircuts – the so-called adjusted book value methodology (EBA, 2019). From the resolution authorities' perspective, a partial transfer transaction may have a relative impact, but based on this economic value, not the accounting value. In any case, the economic reevaluation of the bank's balance sheet will crystallise losses, whether assets are retained or disposed. These valuation aspects are further developed in section 3.2.2.

3 Preparedness for combinations of tools: operational considerations

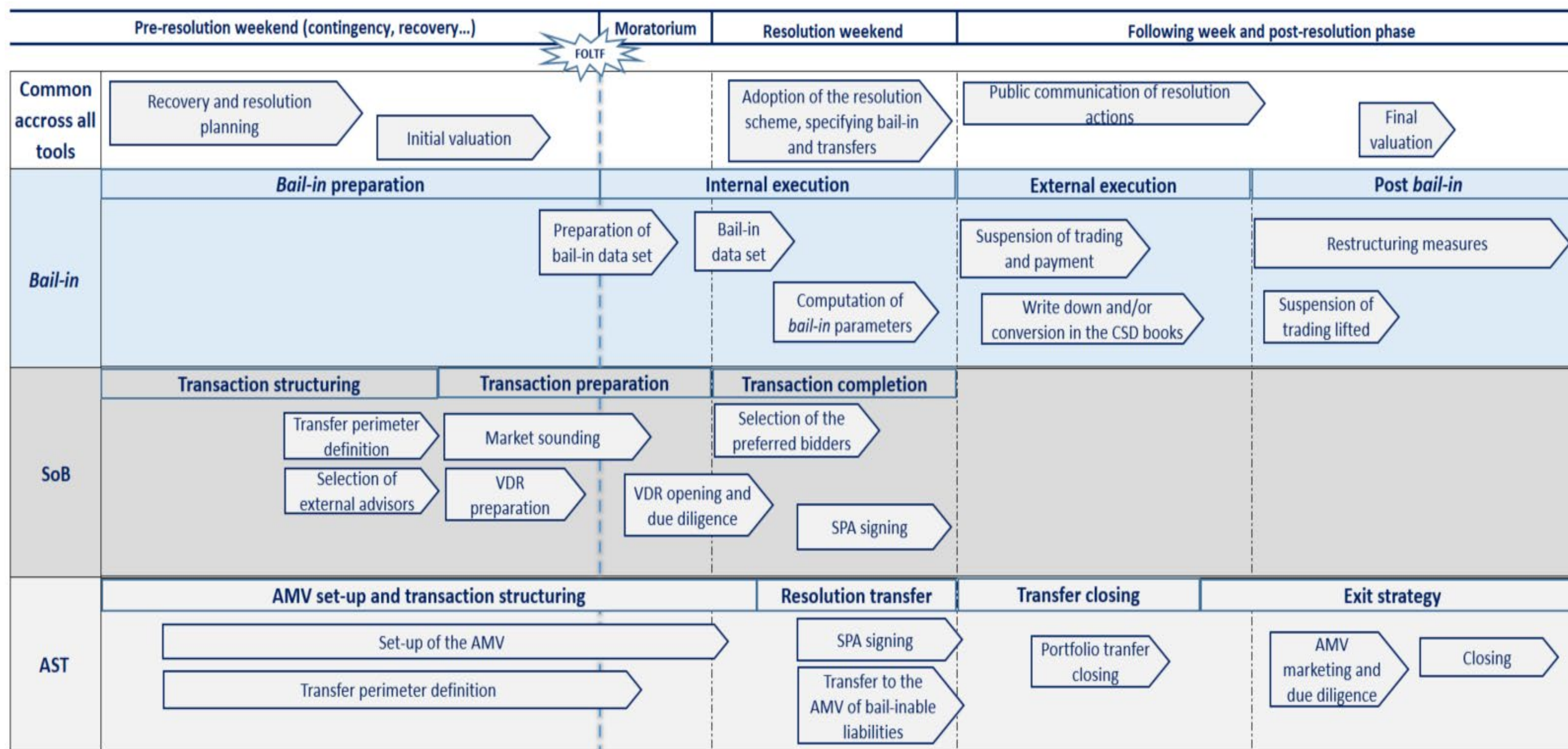
While combinations of tools offer flexibility and options, they need to be fully actionable to effectively respond to a wide range of scenarios. The aim of this section is to assess the resolution planning work required to be ready to use such strategies. The main challenge to the proper operationalisation relates to the capabilities of both banks and resolution authorities to reach and maintain an adequate level of preparedness for several tools at the same time. Focusing on valuation aspects, we assess the appropriate level of loss-absorbing resources to support the execution of a combination of tools, compared to bail-in on a stand-alone basis.

3.1 The mechanics for combining resolution tools: interaction between bail-in and transfers

3.1.1 Sequence of steps in the context of a combination of tools

The implementation of a single tool involves several procedural, legal and operational steps. Pursuing a combination of tools would mainly require executing various tool-specific steps, possibly under high time pressure. On top of these tool-specific steps, there may be some combination-specific steps, especially if the bail-in tool is to provide a source of financing for the transfer transactions. Figure 4 gives a stylised representation of the timeline and main steps such combination may follow.

Figure 4 – Stylised representation of the steps a combination of tools may follow



Source: ACPR

Note: Article 33a BRRD gives to resolution authorities the power to suspend for a limited period of time (two days) certain payments and contractual obligations of the resolved bank. This "moratorium" period upon FOLTF may help resolution authorities limit the run-off risks of bail-inable liabilities (ACPR, 2023) or buy them time for due diligence or marketing in respect of transfer transactions.

The execution of a combination of tools would rely on an adequate level of preparedness for each resolution tool to be employed. Bail-in execution can be divided into four phases:

(i) bail-in preparation, which mainly involves data provision by the failing bank and determination of bail-in scope (ACPR, 2023) and parameters by the resolution authority;
(ii) bail-in internal execution, which includes all processes within the bank related to the decision of the resolution authority to write down instruments and convert them to equity;
(iii) bail-in external execution, consisting of operational steps related to trading suspension, listing and to the failing bank's paying agent and CSD processes to reflect in their systems bail-in actions;
(iv) The post-bail-in period, with the lifting of trading suspension and business reorganisation.

The implementation of the sale of business tool may go through three main phases:

(i) transaction structuring: selection of external advisors, definition of the transfer perimeter, market assessment and marketing strategy;
(ii) transaction preparation, which is mainly about sounding out potential buyers to assess market appetite and preparing process materials and the Virtual Data Room (VDR) for the due diligence;
(iii) the transaction completion phase, during the resolution weekend: opening of the VDR, submissions of bids, selection of the preferred bidder, signing of the transaction.

The implementation of the asset separation tool may be divided into four phases:

(i) the AMV set-up by the resolution authority. The AMV is to be incorporated with a minimum share capital 100% held by the resolution authority. The portfolio to be carved-out from the resolved bank along with the funding arrangement[28] of the AMV would have to be identified on a high-level basis before the resolution weekend;
(ii) the resolution scheme should set out the transfer of the NPE and its main terms. It may be complemented by a sale and purchase agreement (SPA) entered into between the resolved bank and the AMV regarding the more detailed terms. As the bail-in tool may provide capital for the AMV, the resolution scheme may also set out the transfer of some bail-inable liabilities from resolved bank to the AMV, which would subsequently be written down and converted into AMV equity;

[28] Having a funding arrangement in place before the resolution weekend is key to ensuring that the AMV is able to pay the transfer price of the NPE portfolio to the resolved bank, especially if the AST has a liquidity relief purpose, and to meet the AMV working capital needs.

(iii) the third phase, soon after the resolution weekend, would be the settlement of the transfer of ownership of the NPEs sold under the SPA to the AMV through the payment of the NPE purchase price to the resolved bank (closing of the NPE portfolio transfer);

(iv) the fourth phase may start after the resolution weekend, with the marketing process for the disposal of shares in the AMV that the resolution authority holds to private investors. As a full sale may not be achievable in the short term, the resolution authority will have to define exit strategies (e.g. deferred sale of the AMV, wind-down or outright sale of the AMV's portfolio etc.).

While there is no significant overlap between transfer tools and bail-in preparation, their combinations would entail executing some tool-specific steps and taking several decisions in parallel during and after the resolution weekend. For the sole purpose of the sale of business tool, several transactions may have to be run in parallel if multiple acquirers are considered for the transfer perimeter.[29]

3.1.2 The time horizon of a combination of tools

In the context of the use of bail-in on a stand-alone basis, resolution implementation mainly[30] starts with the reception of a bail-in data set from the failing bank and the subsequent determinations of bail-in parameters.[31] In contrast, using transfer tools in the resolution weekend requires several significant steps to be performed beforehand. This includes the transaction structuring, market sounding and due diligence for the sale of business tool and the set-up of the AMV for the asset separation tool. In the context of the use of transfer tools on a stand-alone basis, as the resolution entity exits the market, there is no business reorganisation phase.

Accordingly, in a combined approach, resolution authorities will probably have to take actions from the contingency phase (e.g. sounding out prospective buyers for a sale of business or preparing the set-up of the AMV) up to the restructuring phase. A combination of tools takes place over a longer time period and with significant execution risks than the use of resolution tools on a stand-alone basis. It would require both an expansion of the time horizon of resolution plans and a careful assessment of these execution risks.

[29] There is of a course a limit to how many sale of business transactions resolution authorities can prepare in parallel.
[30] There may be some early engagements with bail-in stakeholders (e.g. CSDs).
[31] Banks should be able to produce the bail-in data points list within 24 hours to fully meet the SRB's expectation.

3.2 Operational readiness for transfer tools in resolution planning

A combination of tools embeds transfer options within an open-bank bail-in strategy. As such, its credibility depends both on maintaining an adequate level of preparedness for the primary tool (bail-in) and on reaching such level for complementary (transfer) tools.

3.2.1 Focus on the selection of the transfer perimeter and on its recipients

When it comes to the selection of the transfer perimeter, there are two key differences between asset transfers in closed-bank and open-bank strategies.

First, where the resolution entity exits the market, the continuity of critical functions can only be achieved through transfer to one or multiple buyers. Consequently, the transfer perimeter must encompass the failing bank's critical functions to achieve resolution objectives. In an open-bank scenario, they can still be retained and performed by the resolved bank. Accordingly, the transfer perimeter may or may not include some critical functions.

Second, partial asset transfers require a higher level of separability compared to the sale of the whole business in a share deal. More specifically, the identification of the transfer perimeter implies, as a prerequisite, the definition of what cannot be separated either in the course of resolution action, or in the post-resolution phase, i.e. the core bank. However, delineating the perimeter of the core bank cannot be done entirely ex ante, as its shape will depend on the prevailing circumstances and sources of the failure.

The role of resolution planning is merely to prepare authorities and banks to the swift identification and transfer of an optimal perimeter of assets in resolution execution, rather than defining *ex ante* and anticipating such perimeter. This can be achieved through the development of two types of capabilities in resolution planning: (i) capabilities to identify the optimal perimeter based on the circumstances of the case; (ii) capabilities to transfer swiftly some part of the bank and to operate independently of this part.

For the first type of capabilities, the resolution planning work should merely give authorities insight into the main interdependencies, degrees of separability and marketability of the various business lines and legal entities within a resolution group (SRB, 2021).

As regards the second type of capabilities, they can be built gradually, with a preliminary focus on a few legal entities and business lines. In a pilot mode, once it is demonstrated that some potential objects of sale can be readily disposed in the resolution weekend, new objects of sale could be added to the potential transfer perimeter over the resolution planning cycles. Most EU G-SIBs and Top Tier

banks typically pursue a large variety of activities, including retail and investment banking, custody, asset management, special lending businesses like leasing, factoring or consumer credit. Combined with a wide geographical presence, for those banks, the diversity of activities offers a wide range of disposal options in areas that are not core to their business models.

The purposes of transfer

The transfer perimeter in resolution planning should thus be, on the one hand, well-identified and fully-documented, and, on the other hand, a flexible and living perimeter, changing with the business model and sources of risks of the banking group over the years. In resolution execution, the shape of the transfer perimeter will ultimately depend on the goals of the transfer.

In order to enhance the financial profile of the institution, the perimeter could include non-core, profitable but liquidity- or capital-intensive businesses that are not key liquidity providers to the rest of the group.

In order to restore public trust and refocus the activities of the group, it may be necessary to perform costly business exits, with bail-in providing the required financial headroom. For instance, if a specific business line or some legal entities within the group build up business risks or weigh down on the group (e.g. due to a high cost base) in the run-up to resolution, resolution authorities may decide to include them in the transfer perimeter at one point. In that respect, weak franchises and stress in varied business lines and geographical locations contributing to the source of the failure would make them natural disposal candidates.

Given these objectives, size would be another criterion to identify the transfer perimeter. The latter should be large enough compared to the size of the whole group to deliver significant franchise, business model or financial impacts and justify the investment of both banks and resolution authorities in the operationalisation of partial transfer tools (see section 3.2.3).

Specifities of the asset separation tool

The transfer perimeter of the asset separation tool would concern assets that could cause adverse effects on financial markets if they were to be liquidated or that could threaten the proper functioning of the institution under resolution.[32] As it is the case for the sale of business, the identification of assets to be carved-out cannot be entirely performed ex ante. In particular, at a given stage of resolution planning, banks may have a strong asset quality and negligible ratios of NPLs/NPEs. This may change in the run up to resolution as compared with the resolution planning stage. Accordingly, stress tests,

[32] Article 42(5) BRRD.

scenario and sensitivity analysis by banks in resolution planning are therefore required for the operationalisation of perimeter identification.

The recipients of transfers

In order to operationalise partial transfer tools, the identification of the transfer perimeter should go hand in hand with a focus on the nature of recipients to which it is to be transferred.

For instance, under the sale of business tool, the need to temporarily continue providing some services after the transaction completion requires that the acquirer has a banking license and is financially and governance-wise able to carry on this activity. When it comes to large asset deals involving legal entities of significant size, the marketing process would target banking groups with appropriate levels of resources and no funding issues. Taking into account the acquirer's own capital position, a form of compensation for taking over the risk-weighted exposure of the transfer perimeter may also be necessary.[33] For a smaller perimeter, in the absence of bank purchasers, private equity or distressed debt funds could be potential purchasers.

Under the asset separation tool, the legal and operational set-up of the AMV is a key aspect of operationalisation, taking into account the EU State aid framework and national law specificities applicable to credit operations where relevant (e.g. the French banking monopoly[34]). This set-up will include funding arrangements and the prudent estimate of its capital needs. For instance, the resolution fund[35] may provide liquidity lines to the AMV for the payment of consideration to the resolved bank in respect of transferred assets and for its working capital needs.

3.2.2 Valuation of the transfer perimeter

One of the purposes of valuation in resolution is to inform the choice and design of resolution actions at the point of non-viability. The assets/liabilities of the failed bank are valued in accordance with economic value – not the accounting value – to ensure all losses are fully recognised. The objective of this economic valuation is to derive the net economic value of the failing bank.

There are two categories of appropriate measurement basis for this valuation purpose[36]: (i) the hold value which should be understood as the present value of cash flows that the entity can reasonably

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[33] This may take the form of an adjusted sale price below the fair value of assets and liabilities transferred, i.e. a negative goodwill from the perspective of the acquirer.

[34] For example, in French law, only banks and a limited list of specific financial entities can purchase unmatured loans and receivables (*créances non échues*).

[35] The key EU condition for the use of a resolution fund – a minimum bail-in equivalent to 8% of total liabilities including own funds – only applies "in the event that the use of the resolution financing arrangement results in part of the losses being passed on to the resolution financing arrangement" (Article 101(2) BRRD).

[36] As specified in the Commission Delegated Regulation (EU) 2018/345 (CDR 2018/345, OJEU, 2018).

expect from retaining particular assets and liabilities; (ii) the disposal value that can be reasonably expected in a sale under the prevailing market conditions (e.g. observable or estimated market prices), including discounts for an accelerated sale or illiquid assets.[37] Overall, the hold value is the most appropriate measurement basis for the application of the bail-in tool, while the valuation of assets transferred under both the asset separation tool – taking into account the EU State aid framework[38] – and the sale of business tool should be conducted in accordance with the disposal value.

Importantly, even in the context of an open-bank bail-in, assets that are being retained in order to be disposed after the resolution weekend – as foreseen for instance in a business reorganisation plan – should be assessed under the disposal value.

The implementation of bail-in requires the determination two amounts:

(i) the loss absorption amount: the aggregate amount of write-down required to absorb losses and restore the failing bank's net asset value to zero on the basis of the economic valuation.[39]

(ii) the recapitalisation amount: the amount by which eligible liabilities must be converted into shares or other types of capital instruments to reach the target CET1 capital ratio post resolution.

In a combination of tools, bail-in should be calibrated with respect to:

(i) the hold value of assets that are to be retained by the resolved bank;

(ii) the disposal value of assets that are going to be disposed (see Figure 5 for a stylised example) under transfer tools;

(iii) the disposal value of assets that are being retained in order to be disposed after the resolution weekend (e.g. business reorganisation forecasts).

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[37] Also considering the lack of a liquid market, difference in funding costs, potential market distress etc.

[38] In accordance with the EU State aid framework, the transfer in resolution at a disposal value above market value to a publicly-controlled AMV can only occur in accordance with the guidance laid down by the European Commission (e.g. impaired assets communications) and the relevant case-law of the European Court of Justice.

[39] Article 46(1)(a) BRRD.

Figure 5 – Stylised example of a resolution valuation based on both hold and disposal value

Consolidated accounting balance sheet

Assets		Liabilities	
Assets of subsidiaries A, B and C (including goodwill)	**160**	Liabilities of subsidiaries A, B and C	150
Other Group assets		*Other Group liabilities*	
Cash	100	Deposits	400
Non-performing loans	**50**	Financial liabilities at FV	250
Other loans/receivables	350	Long-term debt	100
Financial assets at FV	400	Other liabilities	270
		Of which provisions	15
Other assets	140	Equity	30
Total assets	1200	Total liabilities	1170

Resolution balance sheet under full hold value

Assets		Liabilities	
Assets of subsidiaries A, B and C (including goodwill)	**155**	Liabilities of subsidiaries A, B and C	150
Other Group assets		*Other Group liabilities*	
Cash	100	Deposits	400
Non-performing loans	**22**	Financial liabilities at FV	250
Other loans/receivables	340	Long-term debt	100
Financial assets at FV	380	Other liabilities	255
Other assets	140	Contingent liabilities, operational and resolution costs	50
Total assets	1137	Total liabilities	1205
		Negative economic value of the institution	**- 68**

Combination of tools: resolution balance sheet

Assets		Liabilities	
Assets of subsidiaries A, B and C (including goodwill)	**150**	Liabilities of subsidiaries A, B and C	150
Other Group assets		*Other Group liabilities*	
Cash	100	Deposits	400
Non-performing loans	**20**	Financial liabilities at FV	250
Other loans/receivables	340	Long-term debt	100
Financial assets at FV	380	Other liabilities	255
Other assets	140	Contingent liabilities, operational and resolution costs	50
Total assets	1130	Total liabilities	1205
		Negative economic value of the institution	**- 75**

Note: transfer perimeter in red. This figure is for illustrative purpose only. Under a bail-in alone scenario, the economic valuation of the transfer perimeter would most probably also be conducted in accordance with the disposal value, in the same way as all other assets that are being retained during the resolution weekend in order to be disposed at a later stage (post resolution weekend).

3.2.3 Funding needs of a combination of tools

The difference between the book value and economic value of the failing bank's assets determines the extent of loss absorption in a bail-in scenario. Compared to this bail-in scenario, the funding needs of

a combination of tools differ in two main respects. First, they may differ in the extent of write-down necessary for loss absorption. This may reflect:

(i) the difference between the hold value and the disposal value of the transfer perimeter, in the unlikely case that the transfer perimeter is to retained under an open-bank bail-in.[40] In this respect, the hold value of assets under the bail-in tool is already a prudent and fair economic value, departing from accounting valuation to the extent necessary to reflect their economic depreciation. As such, the valuation input for the bail-in calibration already assumes a significant part of potential divestment costs – the part which is linked to the fair economic revaluation of the transferred assets[41];

(ii) or the difference between the disposal values of the transfer perimeter under the combination of tools and bail-in scenarios.

This second type of difference is more likely because if some assets are transferred during the resolution week-end under a combination of tools, those same assets, in the context of an open-bank bail-in scenario, would have most probably been retained in order to be disposed in the ensuing reorganisation. As the same measurement basis is used, this difference should be low, mainly taking into account the different expected disposal horizons: the resolution weekend in the former scenario, the post-resolution phase in the latter scenario.

Second, the amount by which bail-inable liabilities should be converted into shares or other instruments of ownership should be lower in a combination of tools than in an open-bank bail-in scenario. This will reflect the smaller perimeter of the banking group resulting from asset divestments.

Accordingly, even while enacting costly business exits or impaired asset divestments, a combination of tools, with lower recapitalisation needs, may reduce the overall resolution funding needs compared to bail-in on stand-alone basis (see the stylised example in Box 4).

Box 4. Stylised example: comparison of financing needs of various combinations of tools

We consider again banking group X of box 2 and Figure 5. Suppose that:

(i) the contribution of the three subsidiaries of the business line to consolidated RWAs is equal to €70 billion;

[40] In the Banking Union, for the purpose of the Minimum Requirement for own funds and eligible liabilities, the loss absorption amount is equal to the sum of the minimum supervisory pillar 1 and pillar 2 requirements (SRB, 2023). As this calibration is set in the level 1 text (Article 12d(3)(a)(i) SRMR) for all strategies, including those relying on a combination of tools, it is already designed to absorb potential losses on disposal.

[41] This implies that any difference between the hold value and the disposal value should merely reflect a discount that is appropriate in view of the accelerated sale transaction, the amount of assets being transferred or the impact of the acquisition on the purchasers' group capital ratios.

(ii) the average risk-weighting of the NPLs stood at 100%, so that their divestment and deconsolidation reduce consolidated RWA by €35 billion, i.e. the gross book value minus the associated provisions (=50-15);

(iii) the recapitalisation target of the resolved bank is equal to 13%.

Case 1: Assets that are going to be disposed under a combination of tools would be retained under an open-bank bail-in scenario

In that case, based on the valuation in resolution of Figure 5, the overall funding needs of combining several tools are given by the table below (in € billion):

	RWA post resolution	Write-down level	Conversion level (13% CET1 target)	Total bail-in (funding needs)
Bail-in alone	400	68	52	120
Bail-in + SoB + AST	295	75	38	113
Bail-in + SoB	330	73	43	116
Bail-in + AST	365	70	47	117

The difference in the level of write-down required for the various combinations reflects the difference between the hold value and the disposal value, as per the table below (in €billion):

	Net book value	Hold value	Disposal value	Disposal Value-NBV	Hold Value – Net book value
Business line transfer	10	5	0	-10	-5
NPL transfer	35	22	20	-15	-13

Case 2 (most likely scenario): assets that are going to be disposed under a combination of tools would also be disposed under an open-bank bail-in scenario (e.g. in the business reorganisation phase)

In that case, assuming the disposal value is the same under both bail-in alone and a combination of tools, the extent of write-down is similar (in €billion):

	RWA post resolution	Write-down level	Conversion level (13% CET1 target)	Total bail-in (funding needs)
Bail-in alone	400	75	52	127
Bail-in + SoB + AST	295	75	38	113
Bail-in + SoB	330	75	43	118
Bail-in + AST	365	75	47	122

In practice, as mentioned above, the disposal value may differ between the two scenarios due to the different expected disposal horizons. This implies that, under bail-in alone, the actual write-down level will be in the range of that of case 1 to that of case 2.

Disposal value vs hold value: taking into account the compensation of the acquirer

The difference between the disposal value and the hold value of the transfer perimeter can also be construed as a form of compensation to the acquirer for assuming some of the resolved bank's assets and liabilities.

Assume, for instance, that the consideration paid for the transfer of the business line is €1 (in line with the disposal value of €0 in Figure 5), with an economic hold value estimated at €5 billion. The haircut on hold value can be thought as a compensation for the acquirer taking over the risk-weighted exposure of the businesses. When the acquirer will consolidate the transferred perimeter in a business combination, it will perform fair value adjustments to assets and liabilities.

Assume that the fair value adjustments is less conservative than the prudent valuation of the independent valuer, so that the net fair value of the acquired businesses recorded in the acquirer's balance sheet of the acquired businesses is €7 billion (the net economic value under hold value was estimated at €5 billion). The €7 billion amounts of the net assets acquired over the fair value of the consideration transferred (€1) results in a negative goodwill that will be recognised in the income statement of the acquirer. From a consolidation perspective, this negative goodwill enables the acquirer to capitalise the acquired businesses (roughly speaking, at a 10% level since the RWAs transferred stand at €70 billion).

Accordingly, even while enacting costly business exits or impaired asset divestments, a combination of tools, with lower recapitalisation needs, may reduce the overall resolution funding needs compared to bail-in on stand-alone basis (see the stylised example in Box 4).

Conclusion

Transfer tools can play a key role in the development of a flexible approach to resolution strategies. In the context of a combination of tools, they are applied in addition, not as alternative, to bail-in. The combined approach can also be construed as a toolbox, embedding flexibility and backstop options within a single strategy. It would allow resolution authorities to adapt their responses to the prevailing conditions within the resolution framework.

Significant work must be carried out to make the resolution of banks through a modular approach combining bail-in and transfer transactions operational. Nevertheless, this solution may be more workable than the design of several alternative strategies to deal with the variety of scenarios that could be encountered in resolution. It is also relevant for all banks, regardless of their size. Proportionate but sufficient loss-absorbing capacity on small and medium-sized banks' balance sheets may support the implementation of whole-bank transfer strategies. For larger banks, the use of partial

transfer tools may help restore public trust and enhance the credibility of the restructuring plan in the post-bail-in phase.

This implies stepping up preparedness for the use of all the tools of the EU resolution framework.

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