FSB FINANCIAL STABILITY BOARD

Funding Strategy Elements of an Implementable Resolution Plan

21 June 2018

The Financial Stability Board (FSB) is established to coordinate at the international level the work of national financial authorities and international standard-setting bodies in order to develop and promote the implementation of effective regulatory, supervisory and other financial sector policies. Its mandate is set out in the FSB Charter, which governs the policymaking and related activities of the FSB. These activities, including any decisions reached in their context, shall not be binding or give rise to any legal rights or obligations under the FSB's Articles of Association.

Contacting the Financial Stability Board
Sign up for e-mail alerts: www.fsb.org/emailalert
Follow the FSB on Twitter: @FinStbBoard
E-mail the FSB at: fsb@fsb.org

Copyright © 2018 Financial Stability Board. Please refer to: http://www.fsb.org/terms_conditions/

Table of Contents

Page

Resolution Funding Plan: Summary of key funding strategy elements 1

Background 3

1. Firm capabilities to support monitoring, reporting and estimating funding needs in resolution and to facilitate execution of the funding strategy 5

1.1 Methodology for estimating liquidity needs for resolution 5

1.2 Monitoring and reporting sources, uses and positioning of liquidity 7

1.3 Identification of collateral and monitoring of asset encumbrance for resolution purposes 8

2. Development of the resolution funding plan by the authorities 8

2.1 Interaction with the contingency funding plan and recovery plan 9

2.2 Assessing liquidity stress in the run-up to resolution 9

2.3 Enhancing firm capabilities to support planning and execution during resolution 10

2.4 Maintaining adequate liquidity in different currencies 11

3. Firm assets and private sources of resolution funding 12

3.1 Firm assets and private sources of funding 12

3.3 Mobilisation of unencumbered assets as collateral and of other sources of funding 14

4. Temporary public sector backstop funding mechanisms and ordinary central bank facilities 15

4.1 Identification of temporary public sector backstop mechanisms 15

4.2 Operationalising access to temporary public sector backstop funding 16

4.3 Exit strategies from temporary public sector backstop funding 17

4.4 Access to ordinary central bank facilities and payment and settlement systems by material operating entities of a firm in resolution 17

5. Information sharing and coordination between authorities 18

5.1 Allocation of responsibilities among home and host authorities 18

5.2 Cooperation among the relevant authorities and market communication 19

Resolution Funding Plan: Summary of key funding strategy elements

As part of its development of a resolution plan[1] for a G-SIB, the home resolution authority[2] is responsible for the development of a plan that sets out the strategy, key actions and measures that would be employed to address liquidity stress in resolution (hereafter referred to as a "resolution funding plan").

The resolution funding plan should be reviewed at least annually and discussed by the Crisis Management Group (CMG). In developing the resolution funding plan, the home resolution authority should consider the following key elements.

Strategy for maintaining liquidity in resolution

(i) Whether the overall strategy for ensuring adequate liquidity in resolution and the methodology to estimate funding needs in resolution are feasible and consistent with the overall resolution strategy for the G-SIB.

Firm capabilities to support monitoring, reporting and estimating funding needs in resolution

(ii) The firm's capabilities to measure sources and positioning of liquidity and estimate funding needs in resolution and any impediments or actions taken to improve the firm's capabilities.

(iii) The firm's capabilities to report liquidity information at a material operating entity[3] level on a timely basis, in particular with respect to the availability and location of unencumbered assets, and other resolution specific information that may be required.

(iv) The firm's capabilities to identify and rapidly mobilise assets that could be used as collateral, and the operational, legal and regulatory feasibility of mobilising such assets, including on a cross-border intra-group basis.

Development of the resolution funding plan by the authorities

(v) The interaction of measures in the resolution funding plan with measures in the firm's contingency funding plan and recovery plan.

(vi) The relevant authorities' approach to assessing liquidity stress in the run-up to resolution, including the role of liquidity in the relevant authority's assessment of whether the firm has met the conditions for entry into resolution.

(vii) The home authority's framework for estimating funding needs in resolution, in particular with respect to liquidity resources and funding needs at a material operating

---

[1] References to the resolution plan in this guidance should be understood to refer to the plan that the relevant resolution authority develops and maintains for each G-SIB. The resolution plan is intended to facilitate the effective use of resolution powers to protect systemically important functions, with the aim of making the resolution of any firm feasible without severe disruption and without exposing taxpayers to loss (Key Attribute 11). For purposes of this guidance, the term resolution plan does not refer to the plans that G-SIBs themselves are required to prepare in some jurisdictions.

[2] References to the home resolution authority in this guidance should be understood to refer to the official sector administrative authority responsible for applying resolution tools and exercising resolution powers, and in particular to either a single resolution authority applying resolution powers to the top of a G-SIB group under a single point of entry resolution strategy or to two or more resolution authorities applying resolution powers to different parts of the group under a multiple point of entry resolution strategy.

[3] A material operating entity is a group entity necessary for the continuity of critical functions during resolution.

entity level and aspects relating to the transferability of liquidity resources between material operating entities.

(viii) Whether the assumptions and liquidity stress scenarios for the purposes of estimating liquidity resources and funding needs in resolution are appropriate.

(ix) The strategy and the implementing steps to acquire funding or to provide temporary backstop funding in the needed foreign currency for the G-SIB in resolution.

Firm assets and private sources of resolution funding

(x) Whether and to which extent firm assets will remain available in the context of different failure scenarios.

(xi) The likely availability and size of private sources of funding, and the key steps to mobilise such sources of funding.

(xii) Actions that could be taken by the authorities to increase the willingness of private counterparties to provide funding to a G-SIB in resolution.

Temporary public sector backstop funding mechanisms and ordinary central bank facilities

(xiii) The pre-conditions and operational procedures necessary to access any identified temporary public sector backstop mechanism funds, supported by the use of testing exercises and the development of protocols as appropriate, with the goal of ensuring same day access to public sector backstop funds.

(xiv) The alignment of the possible use of any temporary public sector backstop funding mechanism with the objectives of the preferred resolution strategy.

(xv) The preferred sequencing, and expected contribution, of temporary public sector backstop sources of funding, or criteria to guide preferred sequencing in resolution, and exit strategies for any temporary public sector backstop funding.

(xvi) Whether and subject to what conditions material operating entities of a firm in resolution (especially where these entities are not themselves in resolution) have access to ordinary central bank facilities, as well as payment and settlement systems.

Information sharing and coordination between authorities

(xvii) Whether the resolution funding plan establishes a clear allocation of responsibilities and a communication plan among the relevant home and host authorities in relation to the provision of resolution funding (in particular where access to public sector backstop mechanisms in host jurisdictions is envisaged).

(xviii) Whether the resolution funding plan captures the implications of local regulatory requirements or other aspects specific to material operating entities in host jurisdictions and how funding will be distributed to the firm's material operating entities consistent with the resolution strategy.

(xix) How to address any impediments to coordination and information sharing among the relevant resolution authorities, home and host supervisory authorities, market oversight authorities, central banks and finance ministries or any other authorities that administer resolution or deposit insurance funds that might affect the timely provision of resolution funding.

Background

On 18 August 2016, the FSB published the *Guiding Principles on the temporary funding needed to support the orderly resolution of a global systemically important bank (G-SIB)*, hereafter referred to as the 'Guiding Principles'.[4] The Guiding Principles complement the *FSB's Key Attributes of Effective Resolution Regimes for Financial Institutions*[5] (hereafter referred to as the '*Key Attributes*') and are intended to assist authorities in their resolution planning work.

Consistent with the *Key Attributes'* goals of conducting an orderly resolution that minimises any adverse effect on financial stability, ensures the continuity of critical functions, and avoids exposing taxpayers to loss, the Guiding Principles provide that:

(i) in resolution, a recapitalised firm's internal liquidity sources (e.g., cash and other liquid assets available for sale or use as collateral that are held by the firm) should be used to meet funding needs to the extent possible;

(ii) private markets should be the preferred source of funding in resolution; and

(iii) to the extent market access to funding is not available or sufficient, credible public sector backstop mechanisms should be in place to enable the temporary funding needs of the firm to be met to the extent necessary to maintain the continuity of critical functions in resolution, subject to strict conditions that minimise the risk of moral hazard. Consistent with the Guiding Principles, the term 'public sector backstop funding mechanism' refers to only the applicable authority and/or mechanism in each jurisdiction.[6]

Guiding Principle 5 establishes the need for a well-developed and implementable resolution plan which should include a resolution funding plan section that describes the home resolution authority's approach to ensuring that adequate temporary funding would be available, addressing in particular:

(i) the G-SIB's capabilities for contingency planning and proposed contingency measures to deal with severe liquidity stress at the point of resolution;

(ii) the G-SIB's capabilities to estimate the nature and extent of the resolution funding need;

(iii) the G-SIB's capabilities to identify assets that could be rapidly mobilised as collateral or sold where appropriate;

---

[4] See *Guiding principles on the temporary funding needed to support the orderly resolution of a global systemically important bank ("G-SIB")* (http://www.fsb.org/wp-content/uploads/Guiding-principles-on-the-temporary-funding-needed-to-support-the-orderly-resolution-of-a-global-systemically-important-bank-"G-SIB".pdf), 18 August 2016.

[5] See *Key Attributes of Effective Resolution Regimes for Financial Institutions* (http://www.fsb.org/wp-content/uploads/r_141015.pdf), 15 October 2014.

[6] In the U.S., for example, the Orderly Liquidation Fund (OLF) is the source of last resort for public sector backstop funding for a U.S. G-SIB being resolved under the Orderly Liquidation Authority of the Dodd-Frank Act. In the U.S. context, therefore, references in this document to the public sector backstop funding mechanism are references to the OLF rather than to the Deposit Insurance Fund or the Federal Reserve.

(iv) private and public sector backstop sources of resolution funding and the preferred funding sources given the preferred resolution strategy; and

(v) key operational elements to ensure adequate temporary funding is available to support the resolution strategy, including coordination and information sharing requirements between relevant home and host authorities.

The development of an implementable resolution funding plan as part of the overall resolution plan is a key component of the on-going work of CMG authorities to operationalise resolution strategies and plans.

This report provides additional guidance with respect to the elements identified in Guiding Principle 5 for the development of an implementable resolution funding plan for G-SIBs.[7] The guidance, which should be read in conjunction with the Guiding Principles, builds on the *Key Attributes* and other FSB guidance in relation to resolution planning,[8] as well as existing supervisory guidance on liquidity risk management and monitoring (for example, the Basel Committee on Banking Supervision's *Liquidity Coverage Ratio and liquidity risk monitoring tools*[9] and *Principles for Sound Liquidity Risk Management and Supervision*[10]). It identifies a set of key funding strategy elements which cover:

(i) **firm capabilities to support monitoring, reporting and estimating funding needs in resolution and to facilitate execution of the funding strategy**, including processes for monitoring sources and positioning of liquidity and assets that can be mobilised as collateral, and the establishment of a methodology for estimating liquidity needs for resolution (Section 1);

(ii) the **development of the resolution funding plan**[11] **by the home resolution authority**, including the interaction of the resolution funding plan with the firm's contingency funding and recovery plans, the assessment of liquidity stress in the run-up to resolution, and the use of the firm's capabilities to inform estimates of the range of funding needs and potential funding sources in resolution (Section 2);

(iii) the **mobilisation of firm assets and private sources of resolution funding**, including the mobilisation of unencumbered assets as collateral (Section 3);

---

7 The guidance, or parts thereof, may also be applicable for other firms subject to resolution planning requirements at a jurisdictional level.

8 See, for example, *Guidance on Developing Effective Resolution Strategies* (http://www.fsb.org/wp-content/uploads/r_130716b.pdf), 15 July 2013 and *Guidance on Continuity of Access to Financial Market Infrastructures ("FMIs") for a Firm in Resolution* (http://www.fsb.org/wp-content/uploads/P060717-2.pdf), 6 July 2017.

9 See Basel Committee on Banking Supervision, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools* (http://www.bis.org/publ/bcbs238.pdf), 7 January 2013.

10 See Basel Committee on Banking Supervision, *Principles for Sound Liquidity Risk Management and Supervision* (http://www.bis.org/publ/bcbs144.pdf), 25 September 2008.

11 Consistent with I-Annex 4 of the *Key Attributes* on Essential Elements of Recovery and Resolution Plans, the resolution funding plan should serve as guidance to the authorities in an actual resolution scenario. It does not in any way imply that the authorities would be obliged to implement it, or be prevented from implementing a different funding strategy in the event that circumstances warrant that changes be made.

(iv) **access to temporary public sector backstop funding mechanisms and ordinary central bank facilities,** including the identification and sequencing of temporary public sector backstop funding mechanisms and exit strategies (Section 4); and

(v) **information sharing and coordination between authorities**, including the allocation of responsibilities among home and host authorities (Section 5).

1. Firm capabilities to support monitoring, reporting and estimating funding needs in resolution and to facilitate execution of the funding strategy

Understanding a G-SIB's capabilities for calculating funding needs (the sources and uses of funding) as well as for providing funding to the appropriate material operating entities is an important component of resolution planning. Resolution authorities will have to rely on the firm's capabilities both in the planning phase as well as in executing the plan.

Requirements on tools and metrics to capture liquidity risk are established in the Basel Committee's liquidity framework, including the *Basel III Liquidity Coverage Ratio and liquidity risk monitoring tools* (Basel III LCR), the *Basel III Net stable funding ratio*[12], and the *Principles for Sound Liquidity Risk Management and Supervision* (Basel Principles), which provide guidance on, among other things, the identification and management of liquidity risks, the design and testing of severe stress scenarios and the development of strategies to address liquidity shortfalls.

In addition to managing liquidity risks on a going concern basis, G-SIBs must be able to support resolution funding planning in a variety of stressed situations and resolution scenarios.

To estimate and address potential funding needs in resolution, authorities should ensure that each G-SIB maintains:

(i) a **methodology for estimating the liquidity needs for successfully executing the resolution strategy** (hereafter referred to as "the methodology");

(ii) processes for **monitoring and reporting funding needs and sources and positioning of liquidity** within the firm that would be available in resolution within an adequate timeframe; and

(iii) processes for **monitoring asset encumbrance and for identifying assets that can be mobilised as collateral across the group**.

1.1 Methodology for estimating liquidity needs for resolution

The methodology should enable the G-SIB to estimate ex ante the liquidity needed after entering resolution to stabilise the surviving material operating entities and to allow those entities to either (i) continue performing their critical functions during resolution or (ii) be wound-down in an orderly manner.

[12] See Basel Committee on Banking Supervision, *Basel III: the net stable funding ratio* (http://www.bis.org/bcbs/publ/d295.pdf), 31 October 2014.

The methodology should to the extent possible:

(i) enable the G-SIB to estimate the aggregate amount of liquidity needed to ensure that the resolution plan can be implemented and that material operating entities can be stabilised and continue to operate without disruption in resolution or be wound-down in an orderly manner;

(ii) capture legal, regulatory or operational obstacles to transferring funds between entities;

(iii) incorporate all sources and uses of funding to generate detailed cash flow schedules by major currency and estimate the minimum operating need and peak liquidity needed to stabilise or wind-down the G-SIB's material operating entities after entry into resolution;

(iv) enable the G-SIB to estimate the liquidity required to meet all obligations related to their payment, clearing, and settlement activities, including any change in demand for and sources of liquidity needed to meet such obligations and potential liquidity effects of adverse actions by financial market infrastructures (FMIs) or FMI intermediaries, consistent with the FSB's *Guidance on Continuity of Access to FMIs for a Firm in Resolution*;[13]

(v) identify and measure for each material operating entity intraday liquidity needs, operating expenses and working capital needs;

(vi) model expected counterparty behaviour and include relevant counterparty requirements, such as increased initial or variation margin requirements, during resolution (or the resolution of a firm's parent or material operating entities) in order to enable the firm to forecast changes in collateral requirements and cash and non-cash collateral flows under a variety of stress scenarios;

(vii) consider the contractual termination and netting/set-off rights that non-defaulting counterparties may be entitled to exercise upon the firm's resolution taking into account the exercise by the home resolution authority of powers to stay early termination rights, if this is envisaged under the preferred resolution strategy;

(viii) enable a G-SIB to forecast the schedule of contractual liquidity inflows and outflows by major currency and develop sourcing strategies for each material operating entity/currency combination for which a shortfall could arise; and

(ix) allow for adjustments of scenarios for (i) any changes to the regulatory framework or financial market conditions that may impact funding requirements of a firm in resolution; and (ii) different restructuring options.

While it is difficult to accurately model and predict the exact economic and financial market conditions present at the time of resolution, and therefore to assess ex ante the liquidity needs in resolution, the G-SIB should expect that the environment that accompanies resolution is likely to be highly stressed and that the G-SIB itself, even once recapitalised, will likely remain under liquidity stress in resolution due to market volatility and an asymmetry of information regarding the firm's viability. Previous experience of market crises could be used as a benchmark in this regard.

[13] See Section 2.4 of FSB *Guidance on Continuity of Access to Financial Market Infrastructures (FMIs) for a Firm in Resolution*.

The G-SIB should routinely review, among other things, the range of funding need estimates generated by the methodology, including funding and liquidity inflows and outflows at the material operating entity level, under a range of stress scenarios across jurisdictions.

1.2 Monitoring and reporting sources, uses and positioning of liquidity

The firm should have the capability to monitor and report sources and positioning of liquidity at its material operating entities. Such capabilities should generally be developed in line with existing supervisory liquidity requirements and monitoring tools which have been established consistent with Basel standards. For example, Principle 6 of the Basel Principles establishes that banks should actively monitor and control liquidity risk exposures and funding needs within and across legal entities, business lines and currencies, taking into account legal, regulatory and operational limitations to the transferability of liquidity. In addition, the monitoring tools in the Basel III LCR are designed for the on-going monitoring of the liquidity risk exposures of banks, and the Basel Committee *Principles for effective risk data aggregation and risk reporting*[14] establish a set of principles to strengthen banks' risk data aggregation capabilities and internal risk reporting practices. Also, since the financial crisis, many supervisory authorities have required firms to develop the capability to report granular liquidity information, including on a daily basis in a stress situation.

For the purposes of resolution planning by authorities, firms should be able to apply these supervisory liquidity capabilities and monitoring tools to:

(i) measure the stand-alone liquidity position of each material operating entity and identify the liquidity resources that are available to cover the sum of all standalone material operating entity liquidity deficits;

(ii) measure a minimum period of time reflecting the stabilisation phase of resolution (which, as determined by the home resolution authority, may extend beyond the thirty-day window of the LCR stress scenario) and the idiosyncratic liquidity profile and risk of the G-SIB and, as necessary to support resolution planning, incorporate assumptions more conservative than those in the LCR stress scenario;

(iii) be sufficiently flexible to provide information suitable for decision-making under different resolution scenarios, such as "fast burn" and "slow burn" failures (see section 3.2) as well as multiple macroeconomic or market stressed conditions;

(iv) consider, among other things, daily and intra-day stressed flows and daily contractual mismatches between inflows and outflows, which may affect the resolution authority's decisions to continue or wind-down certain counterparty relationships or business lines.

(v) measure mismatches in contractual maturities between inflows and outflows at the currency, material operating entity, and line of business levels (as appropriate) to enable the authorities to identify any shortfalls and develop strategies for covering them in resolution; and

(vi) rapidly identify assets that may be eligible to support resolution funding, including less liquid assets where those could be used as collateral at the funding provider. The firm's identification should focus first on the unencumbered assets that may be eligible to

[14] See Basel Committee on Banking Supervision, *Principles for effective risk data aggregation and risk reporting* (http://www.bis.org/publ/bcbs239.pdf), 9 January 2013.

support private sector funding (as discussed in section 3 below). The monitoring of liquidity resources should also be able to provide information on the assets eligible to access ordinary central bank facilities, as well as on the assets that could facilitate access to temporary public sector backstop funding.

The transferability of liquidity resources between material operating entities represents an important consideration for the purposes of developing a resolution funding plan that meets liquidity needs at a material operating entity level. To support resolution funding planning by the resolution authorities, firms should give particular consideration to impediments to the movement of funds, such as trapped liquidity, and potential legal impediments in foreign jurisdictions. Firms should have the capability to calculate and report the amount of assets which are freely transferable across the group, taking into account the need to satisfy local regulatory requirements and meet operational liquidity needs.

1.3 Identification of collateral and monitoring of asset encumbrance for resolution purposes

The Basel Principles provide that banks should actively manage collateral positions, differentiating between encumbered and unencumbered assets, and that banks should monitor the legal entity and physical location where collateral is held and how it may be mobilised in a timely manner.

From a resolution perspective, the identification and monitoring of assets that can be mobilised as collateral to support resolution funding is key to ensuring that the firm will be able to source liquidity and meet its obligations in resolution. Moreover, a high level of asset encumbrance, taking into account the business and funding models of an institution, could become an impediment to resolvability. Firms should therefore have the capabilities to:

(i) quickly identify and determine legal rights to all collateral pledged to, pledged by, or held in custody by material operating entities within the group;

(ii) readily identify the amount, level, type and eligibility of collateral by jurisdiction and the effects of re-hypothecation (both collateral pledged by counterparties and collateral pledged to counterparties); and

(iii) measure the overall level of asset encumbrance, as this is a key indicator for authorities to understand how much of the firm's assets can be separated as part of the restructuring of a firm during the resolution process. For example, if the preferred resolution strategy envisages the use of the sale of business tool, bridge bank tool or asset separation tool, the extent to which assets can be transferred is an important consideration.

2. Development of the resolution funding plan by the authorities

In developing a viable and operational funding strategy consistent with the preferred resolution strategy, and a set of options to ensure that adequate funding is available to a G-SIB in resolution, the home resolution authority should:

(i) consider the interaction of the resolution funding plan with the firm's contingency funding plan and recovery plan;

(ii) identify indicators to assess liquidity stress in the run-up to resolution and, as applicable in the relevant legal framework, help inform a potential determination that a firm meets the conditions for entry into resolution due to insufficient liquidity resources;

(iii) identify approaches to address liquidity needs in foreign currency; and

(iv) leverage the firm's monitoring capabilities (considering, where appropriate, measures to enhance existing capabilities for purposes of resolution planning) to inform the development of the funding strategy and the estimate of the range of funding needs and potential funding sources in resolution.

2.1 Interaction with the contingency funding plan and recovery plan

In developing the resolution funding plan and the strategy to ensure that adequate temporary funding is available to a G-SIB in resolution, the relevant authorities should consider the interaction with the contingency funding plan and recovery plan developed by firms.

Principle 11 of the Basel Principles establishes that banks should have a formal contingency funding plan (CFP) that clearly sets out the strategies for addressing liquidity shortfalls in emergency situations. The *Key Attributes* require certain G-SIBs to maintain a recovery plan that identifies options – including with respect to liquidity – to restore financial strength and viability when the firm comes under severe stress (KA 11.5).

Recovery and resolution are part of a continuum, and there is likely to be overlap between actions that could be taken to restore liquidity in a stress scenario and actions that could be taken to maintain sufficient liquidity in resolution. Accordingly, a firm's contingency funding and recovery plans – in particular the recovery actions in those plans – should serve as an important source of information for the resolution authority in the development of the strategy to maintain liquidity in the resolution funding plan. Resolution authorities should consider how the resolution funding plan may be informed by recovery and contingency funding plans, recognising that resolution planning addresses a different scenario (i.e., the failure of a firm) that will need to incorporate resolution-specific information. This includes the possible need to use more conservative assumptions in relation to liquidity stress, to identify a wider range of assets to support funding, and to identify potential sources of temporary public sector backstop funding that may be available in resolution.

During the final lead-up planning in the period prior to a G-SIB's resolution, the resolution authority should review and update the resolution funding plan to ensure that the resolution funding strategy and funding options remain credible and feasible in light of any actions that the firm may have taken under its contingency funding and recovery plans. In some jurisdictions, the process for entering into resolution may require the relevant authorities to demonstrate that recovery plan options have been exhausted or are not likely to succeed in returning the firm to viability.

2.2 Assessing liquidity stress in the run-up to resolution

The *Key Attributes* (KA 3.1) require timely and early entry into resolution when a firm is no longer viable or likely to be no longer viable, but in any event before a firm is balance-sheet insolvent. In many jurisdictions, resolution may be triggered by either a capital-based insolvency (where liabilities exceed assets or where there is a breach of minimum capital requirements) or a liquidity-based insolvency (where the firm is unable to pay its liabilities as

they fall due). A firm may experience liquidity stress and fail for liquidity reasons before it is balance-sheet insolvent or has breached its minimum capital requirements. The relevant authorities may therefore determine that a firm has met the conditions for entry into resolution on the grounds that a firm is insolvent due to inadequate liquidity resources.[15]

The relevant authorities should consider the development of quantitative and/or qualitative indicators to inform a potential determination that a firm meets the conditions for entry into resolution due to insufficient liquidity resources, as applicable in the specific national legislation. The ability to monitor whether the firm has adequate liquidity resources can also assist during recovery and can help ensure timely and early entry into resolution. This could also help reduce risks to the public sector funding backstop by placing the firm in resolution in a timely manner. In any case, a firm experiencing liquidity stress should be subject to closer monitoring of its liquidity resources, and in particular, its unencumbered assets, by the relevant authorities.

The authorities' approach could be linked to the level of liquidity resources a firm needs to hold in order to meet its estimated liquidity needs in resolution, as determined on a case-by-case basis. This case-by-case approach should take into consideration that liquidity resources, including high quality liquid assets (HQLA), are intended to be available to be drawn down in times of stress, which may cause a firm to fall below minimum LCR requirements, including during recovery and resolution.[16] Furthermore, authorities should take into consideration that a firm experiencing liquidity stress may be able to draw on central bank liquidity facilities and borrow against eligible collateral, as applicable in each jurisdiction and subject to the central bank's own rules and procedures.

The home resolution authority should establish its own timeline for commencing the final, lead-up planning for a G-SIB's resolution and to update estimates of the range of resolution funding needs. As part of this the home resolution authority should consider both qualitative and quantitative factors consistent with the resolution regime in the home jurisdiction. These factors could include market and financial stability considerations as well as information provided by CMG authorities and other relevant supervisory or oversight authorities. The resolution authority may also consider firms' governance frameworks and triggers for escalation of information to management and authorities when assessing the severity of a G-SIB's distress.[17]

2.3 Enhancing firm capabilities to support planning and execution during resolution

In developing the resolution funding plan and the strategy to ensure that adequate temporary funding is available to a G-SIB in resolution, authorities should be able to rely on, and periodically ascertain as necessary, the G-SIB's governance and operational capabilities to monitor sources and positioning of liquidity and report liquidity information.

---

[15] See also EN 3 (a) and (c) of the *Key Attributes Assessment Methodology for the Banking Sector* (http://www.fsb.org/wp-content/uploads/Key-Attributes-Assessment-Methodology-for-the-Banking-Sector.pdf), 19 October 2016.

[16] See paragraph 11 of the Basel III LCR.

[17] See also *Guidance on Recovery Triggers and Stress Scenarios* (http://www.fsb.org/wp-content/uploads/r_130716c.pdf), 16 July 2013.

Authorities should also consider, as necessary and appropriate, measures to enhance existing liquidity capabilities and monitoring tools with specific capabilities for resolution. The relevant authorities should consider in particular:

(i) the adequacy of how liquidity resources are held within the group and allocated between the parent and its branches and subsidiaries, taking into account the resolution strategy, the interaction with supervisory requirements, the nature of the firm's business, the assumptions used in the firm's liquidity estimates and models, and any legal, regulatory or operational obstacles to transferring funds between entities; and

(ii) the adequacy of existing supervisory liquidity data to support resolution funding needs, and whether any incremental capabilities or reporting are required for the purposes of developing the resolution funding plan. In particular, additional capabilities may be necessary to provide reporting on a wider set of assets than HQLA or to forecast daily liquidity inflows and outflows per material operating entity over an extended period.

While the firm should have the capability to measure its liquidity resources and establish a methodology for estimating funding needs in resolution, it is the responsibility of the home resolution authority, as part of the resolution funding plan, to develop a viable and operational funding strategy, consistent with the preferred resolution strategy, that includes an estimate of the range of likely funding needs in resolution. The home authority should therefore use the firm's capabilities to inform the development of the funding strategy and the estimate of the range of funding needs and potential funding sources in resolution.

Home resolution authorities should use available financial data from the firm (including regulatory reports) as well as other available data from supervisory authorities and market sources to calculate and regularly update estimates of resolution funding needs. The assumptions made by home resolution authorities should reflect current market and firm stresses and may differ from those used by firms in their own forecasts and methodology. A comparison of estimated funding needs in resolution with the amount of liquidity remaining at each material operating entity, as reported by the firm, could provide an indication of any potential funding shortfall.

The home resolution authority's estimation of the range of resolution funding needs should be made during resolution planning and be updated in the final lead-up planning to a G-SIB's resolution. Estimates of uses and sources of funds should be updated throughout the period immediately following entry into resolution, using appropriate assumptions to reflect current firm and market conditions.

2.4 Maintaining adequate liquidity in different currencies

A firm in resolution is likely to have a need for funding in currencies other than its home currency. The resolution funding plan should consider potential options to meet liquidity needs and address potential shortfalls in foreign currencies. The resolution funding plan should set forth the necessary steps to address such shortfalls through the use of FX markets (e.g. swap transactions with private counterparties), ordinary central bank facilities in host jurisdictions or temporary public sector backstop funding mechanisms in home or host jurisdictions.

In many cases, it may be feasible for the G-SIB in resolution to receive temporary public sector backstop funding in its domestic currency, from the relevant home authority, and swap it in the

market for the needed foreign currency. However, there may be shortfalls in particular currencies during resolution due to, for example, operational or timing constraints, or counterparty reluctance, to swap significant amounts of currency in the period immediately following entry into resolution.

Home and host authorities should discuss ex ante the potential use of temporary public sector backstop funding mechanisms in home and host jurisdictions, in order to determine whether such funding mechanisms and arrangements can support the resolution funding plan and to understand the conditions under which the provision of foreign currency might be considered appropriate and consistent with the relevant legal framework.[18]

Consistent with the objective of providing temporary funding in resolution, the provision of foreign currency liquidity support by public sector backstop mechanisms should only be a temporary solution.

3. Firm assets and private sources of resolution funding

Consistent with the Guiding Principles, a recapitalised firm's internal liquidity sources should be used to meet funding needs to the extent possible and private markets should be the preferred source of funding in resolution. The resolution funding plan should therefore:

(i) identify firm assets and private sources of funding that may be available to the G-SIB in resolution;

(ii) determine the extent to which those sources of funding can meet the funding needs of the G-SIB in resolution in light of different stress scenarios; and

(iii) identify the process to use such sources of funding, including the mobilisation of unencumbered assets as collateral and the distribution of funding throughout the group.

3.1 Firm assets and private sources of funding

With respect to firm assets that could be used as a source of funding, the resolution funding plan should:

(i) identify available assets, considering first the remaining liquidity buffer of the G-SIB in resolution, including the remaining amounts of HQLA that could be used to meet funding needs in resolution (to the extent that HQLA remains available at the point of entry into resolution);

(ii) detail the assets that could be used for funding, including non-central bank eligible assets where relevant, and establish a priority ordering of collateral in order to optimise its use;

(iii) consider actions that could be taken, consistent with the resolution strategy, in order to generate liquidity, including an assessment of the timeframe for such actions and the possible impact on the firm's franchise. Depending on the resolution strategy, these

[18] In this respect, one important consideration is whether a material operating entity in a host jurisdiction would meet the conditions for access to a temporary public sector backstop funding mechanism in the host jurisdiction, particularly if the material operating entity has not itself entered into resolution.

actions could include the sale of other type of assets beyond HQLA, business run-offs and disposals of subsidiaries; and

(iv) take into account actions envisaged in the firm's recovery and contingency funding plan, as the availability of assets and actions to generate liquidity will depend on actions taken during the recovery phase.

The resolution funding plan should identify potential sources of private sector funding that could be available in resolution and generate liquidity in timeframes that are consistent with the resolution strategy.

Immediately after a G-SIB's entry into resolution, even after the G-SIB has been recapitalised, private market participants may stand back from providing liquidity, in particular on an unsecured basis, due to, for example, an asymmetry of information regarding the G-SIB's viability or general market conditions and uncertainty. It is therefore reasonable to anticipate that secured funding (e.g., short or long-term repurchase agreements, covered bonds, or securitisations) would be the most likely source of available funding during the period immediately following entry into resolution, but that even the availability of this source of funding may be significantly limited. The identification of private sources of funding should therefore incorporate conservative assumptions regarding market constraints, asset value haircuts, and timing considerations.

The provision of private sources of funding may be supported by actions that can be taken by the authorities. For example, where permitted under the relevant legal framework, public sector backstop guarantees could be deployed to encourage private sector sources to provide funding to a G-SIB in resolution, or "super priority" rights could be granted to the liquidity provider. The resolution funding plan should consider such actions to the extent they are available under the legal framework of the relevant jurisdictions.

3.2 Adequacy of resources to address resolution funding needs in light of different scenarios

As set out in Guiding Principle 5, the resolution funding plan should identify the extent to which private sources of funding can meet the funding needs of the G-SIB in resolution.

The extent to which remaining firm assets and private sources of liquidity can be used to meet the funding needs of the G-SIB in resolution is likely to depend in particular on the circumstances of the G-SIB's failure and on actions taken during the recovery period. When assessing the adequacy of private funding sources, the authorities should consider how the circumstances leading to the potential failure of a firm may affect resolution funding needs and liquidity constraints. For example, a slow-burn failure might imply a more severe liquidity situation as the G-SIB may have drawn heavily on its available liquid assets as part of recovery actions taken to restore its viability. On the other hand, a fast burn failure might imply a more moderate liquidity situation where the firm has not fully utilised all of its available assets.

The extent to which remaining internal firm assets and private sources of funding can be used to meet the funding needs of the G-SIB in resolution will also depend on the impact of recovery and resolution measures. In particular, recovery actions or resolution strategies that involve de-leveraging actions (sale of assets/business, run-off, etc.) could serve to materially reduce the size of the firm's balance sheet, implying lower potential funding needs in resolution. The extent to which remaining firm assets and private sources of funding can be used to meet the

funding needs of the G-SIB in resolution should therefore be assessed against actions envisaged under the recovery plan and the preferred resolution strategy.

With respect to private sources of funding, the amount and availability of private funding is likely to depend on a number of factors, including but not limited to the prevailing market and macroeconomic conditions (e.g., idiosyncratic versus market-wide stress) and the confidence of the market in the actions taken by the authorities to recapitalise the firm and restore its viability.

In this respect, the resolution funding plan should incorporate analysis of the extent to which remaining firm assets and private sources of funding could be used to meet the funding needs of the G-SIB in resolution, taking into account:

(i) the likelihood that certain sources of private funding (e.g. customer funding, unsecured funding, etc.) are less likely to be available in resolution, particularly during the immediate period following entry into resolution;

(ii) the timeliness, operational feasibility and likely realisable values of actions to generate liquidity such as securitisations and asset sales/disposals (considering, for example, the risk of a 'fire sale' of assets); and

(iii) that general risk aversion may generate a shortening of initial maturities and higher haircuts on available sources of secured private funding, particularly during the immediate period following entry into resolution.

3.3 Mobilisation of unencumbered assets as collateral and of other sources of funding

As set out in Guiding Principle 5, where the usage of collateralised facilities is envisaged, the resolution funding plan should identify the types of unencumbered assets that could be rapidly mobilised as collateral and describe operationally how to mobilise such assets and address any legal, regulatory or operational obstacles to mobilisation of collateral.

In this regard, due attention should be paid to the custody chain and financial market utilities, in particular where the relevant collateral has to be mobilised by several custodians and central securities depositories. Legal and regulatory obstacles, such as restrictions on the ability to transfer collateral between legal entities (either domestically or on a cross-border basis) and local requirements (e.g. liquidity requirements, large exposure limits) may also limit the G-SIB's ability to mobilise collateral. Any such obstacles should, to the extent possible, be addressed as part of resolution planning.

Certain sources of private funding are likely to require extensive preparatory work (e.g. securitisations or pooling of unencumbered assets). If the use of such sources of funding is envisaged, the G-SIB and the authorities should seek to perform preparatory work as part of business as usual resolution planning (for example, setting up a special purpose vehicle, analysing asset portfolios, creating asset pools, defining tranches, and establishing legal documentation).

4. Temporary public sector backstop funding mechanisms and ordinary central bank facilities

The Guiding Principles establish that an effective temporary public sector backstop funding mechanism[19] should be available for use when necessary and appropriate in order to provide temporary funding to promote market confidence and to encourage private sector counterparties to provide or to continue to provide funding to the material operating entities of a G-SIB in resolution. However, public sector backstop mechanisms should only provide temporary funding to the extent that (i) market access to funding is temporarily not available or not sufficient for effectuating an orderly G-SIB resolution; (ii) such funding is necessary to foster financial stability and enable successful implementation of the preferred resolution strategy; and (iii) the terms of the funding include conditions that minimise moral hazard risk.[20]

As part of the development of a resolution funding plan home authorities should:

(i) identify the temporary public sector backstop mechanisms that could be used by a firm in resolution where necessary and appropriate,[21] including the possibility to replace the temporary public sector backstop funding with other private funding sources as soon as they become available in home as well as host jurisdictions, and the sequencing of usage where multiple sources are available;

(ii) identify the operational requirements, eligibility criteria and actions required to access the relevant temporary public sector backstop funding mechanisms;

(iii) develop exit strategies from temporary public sector backstop funding;

(iv) identify measures to promote continuity of access by material operating entities of a firm in resolution (where these entities are not themselves in resolution) to ordinary central bank facilities and central bank and non-central bank operated payment and settlement systems; and

(v) publicly disclose information on the framework for temporary public sector backstop funding mechanisms, where available in the applicable legal framework, including how and under what conditions funding from such mechanisms could, at a general level, potentially be made available to a firm in resolution.

4.1 Identification of temporary public sector backstop mechanisms

The identification of potential temporary public sector backstop mechanisms should specify:

---

[19] As described in the Guiding Principles, public sector backstop liquidity may be provided by one or more of the following mechanisms and/or authorities: resolution funds, deposit insurance funds, resolution authorities, central banks and/or finance ministries. However, the actions of each authority and/or use of specific mechanisms will depend on the applicable legal framework (and, where applicable, operational independence) for such authority and/or mechanism. Thus, as used in this guidance, the term 'public sector backstop funding mechanism' refers to only the applicable authority and/or mechanism in each jurisdiction.

[20] Guiding Principle 3 sets out examples for terms and conditions that could be used to reduce the risk of moral hazard that may be associated with the provision of temporary public sector backstop funding.

[21] The identification of the mechanisms and related conditions should not imply reliance by the resolution funding plan on public sector backstop mechanisms beyond the relevant limitations applicable in each jurisdiction for the purposes of resolution planning.

(i) the pre-conditions for use;

(ii) maximum capacity, constraints on access, pricing, and currency of funds; and

(iii) where multiple temporary public sector backstop funding sources are potentially available, criteria for prioritising the sequence of funding drawdowns and subsequent repayments, recognising that the preferred sequence could vary depending on the resolution strategy, the actual funding plan developed in the lead up to resolution, and the circumstances in each jurisdiction in which a G-SIB operates.

The resolution authority's decision-making criteria regarding the potential use of public sector backstop funding mechanisms should reflect the following operational considerations:

(i) alignment of the temporary public sector backstop funding mechanism with the objectives of the preferred resolution strategy;

(ii) terms and conditions of temporary public sector backstop funding that minimise moral hazard risks, reinforce market discipline, and facilitate private sector funding;

(iii) sufficiency and speed of access to temporary public sector backstop funds taking into consideration – where applicable – the relevant authorities' ability to raise funds on an open market in both an idiosyncratic and systemic stress;

(iv) potential for negative stigma, loss of confidence, or negative market signalling associated with specific funding mechanisms; and

(v) availability of eligible collateral for pledging and associated haircuts, taking into account not only the availability of collateral upon entry into resolution but the operational, legal, regulatory and other impediments to lending against such collateral (e.g., transferring interest in collateral, consequences of ring-fencing, etc.) and the potential impediments that collateralised public sector lending could pose on exit strategies.

4.2 Operationalising access to temporary public sector backstop funding

The identification of the conditions for access to temporary public sector backstop funding mechanisms should be complemented by an assessment of the operational requirements and actions required to operationalise access to the relevant temporary public sector backstop funding mechanisms, where envisaged under the preferred resolution strategy, including by documenting the operational steps and requirements for accessing relevant funding mechanisms.

A firm in resolution may require temporary funding immediately following entry into resolution. Accordingly, the operational steps and requirements in the resolution funding plan should be subject to internal testing procedures to identify and address operational obstacles, with a goal of ensuring same day availability of backstop funds. Testing exercises should include identification of capabilities and obstacles to the mobilisation of collateral to secure repayment of the backstop funding, including less liquid collateral, necessary to access the temporary public sector backstop in question.

Where coordination is required between authorities in respect of temporary public sector backstop funding mechanisms, the home resolution authority should consider establishing protocols with the relevant authorities to coordinate the provision of temporary backstop

funding. Such protocols could set out the information sharing arrangements, notification requirements and key decision making considerations between the relevant authorities.

4.3 Exit strategies from temporary public sector backstop funding

An effective resolution funding plan should incorporate into its overall funding strategy the identification of options to facilitate an exit from the provision of temporary public sector backstop funding. As provided in the Guiding Principles, "any provision of temporary funding from the public sector backstop mechanism should be accompanied by conditions that create incentives for the G-SIB to exit such funding arrangements promptly". Authorities' implementation of the resolution strategy and of a restructuring of the firm during resolution should prioritise the prompt exit from any temporary public funding or related support.

An effective exit from temporary public sector backstop funding is directly related to the overall effectiveness of the authorities' implementation of the resolution strategy. A strongly recapitalised firm, with a clearly communicated funding strategy, backed by a complete and accurate understanding by the authorities of the firm's liquidity position, funding sources and needs, and collateral availability, will provide the necessary foundation to exit from the provision of temporary public sector backstop funding and ensure that the G-SIB's funding needs can be met through private sources of funding.

To support an effective exit, the strategy should identify actions to restore market confidence during the stabilisation period and options available to create incentives to minimise moral hazard and encourage a prompt return to private sector funding. The options identified may vary given the structure and operations of the firm and will need to be flexible to address circumstances at the point of intervention.

Exit strategies should be tailored to the specific material operating entity based on differences in regulatory frameworks, counterparties, or existing temporary public sector backstop funding mechanisms. Exit strategies could be developed with reference to certain milestones (for example, when the firm has restored its liquidity resources to a sufficient level or when it has regained a credit rating and is able to meet its funding needs through private sources).

4.4 Access to ordinary central bank facilities and payment and settlement systems by material operating entities of a firm in resolution

The resolution funding plan should contain measures to promote continuity of access by material operating entities of a firm in resolution to ordinary central bank facilities and central bank and non-central bank operated payment and settlement systems, in home and host jurisdictions as required to implement the resolution strategy and operationalise access to relevant private and public funding mechanisms, where local requirements and conditions for access are met (e.g., where those entities are not themselves in resolution).

In particular, the resolution funding plan should:

(i) identify the material operating entities that provide critical functions and which should maintain access to central bank facilities;

(ii) identify correspondent banks or nostro agents used by the firm to facilitate access to central bank and non-central bank operated payment and settlement systems;

(iii) identify the requirements to comply with local requirements and conditions for access; and

(iv) premised upon the adequate recapitalisation of the firm and its material operating entities, set out a strategy and the implementing steps necessary for such material operating entities to retain ongoing access during the resolution of the firm.

To support the development of the resolution funding plan and its implementation, home and host authorities should discuss and share information ex ante on the conditions for access to ordinary central bank facilities by material operating entities of a firm in resolution, such as minimum conditions to be satisfied, collateral requirements, duration, or other terms.

Authorities should discuss and share information regarding any constraints or technical impediments to access that could potentially arise during resolution. Home and host authorities should also discuss and share information on maintaining continued indirect access to ordinary central bank facilities by material operating entities (e.g., access to central bank and non-central bank operated payment or settlement systems through correspondent relationships with affiliated entities) and any possible constraints or technical impediments to indirect access (e.g., restrictions related to on-lending).

5. Information sharing and coordination between authorities

5.1 Allocation of responsibilities among home and host authorities

Guiding Principle 6 states that home and host authorities should cooperate to support the consistent and effective implementation of group-wide and local resolution funding plans, and establish a clear division of responsibilities, consistent with national law and policy, for providing temporary funding in a G-SIB resolution that is consistent with the resolution strategy.

The home resolution authority is responsible for the development of the resolution funding plan, including by defining the overall methodology for estimating funding needs in resolution and coordinating the provision of funding to the resolution group during resolution. The resolution funding plan and supporting analysis should be developed in cooperation with CMG authorities to help assess liquidity needs at both the group and material operating entity levels and capture the implications of local regulatory requirements or other aspects specific to material operating entities in host jurisdictions.

Host authorities should have the opportunity, through the CMG, to discuss the key elements of the resolution funding plan (e.g. the overall strategy to maintain liquidity and the methodology to estimate funding needs in resolution) developed by the home resolution authority, as this will inform their overall review of the feasibility of the operational plans for the implementation of the resolution strategy. Furthermore, home and host authorities should discuss in the CMG how funding will be distributed to the firm's material operating entities consistent with the resolution strategy. The resolution funding plan should be reviewed at least annually by home and host authorities in the CMG, consistent with the requirement for the review of the operational resolution plan as set out in the *Key Attributes*.

5.2 Cooperation among the relevant authorities and market communication

As set out in Guiding Principle 6, effective cooperation and information sharing between home and host authorities for cross-border G-SIBs is essential to assess risks at both the group and foreign subsidiary/branch levels correctly. The resolution funding plan should include a plan, developed by the home resolution authority in consultation with CMG authorities, for communication and coordination with the relevant authorities in home and host jurisdictions, as the provision of funding in resolution may involve multiple authorities. For example, and as noted in the Guiding Principles, temporary public sector backstop liquidity may be provided by resolution funds, deposit insurance funds, resolution authorities, central banks and/or finance ministries.

The plan for communication and coordination should cover the sequencing of resolution funding actions to be taken prior to resolution, upon entry into resolution and during resolution by the relevant home and host authorities. The plan should include key factors for consideration for different funding strategies. For example, if the resolution funding plan envisages the provision of liquidity solely by the home authority, the CMG authorities should consider how to address impediments to the mobilisation of the firm's assets in different jurisdictions to act as collateral for the home authority's temporary public sector backstop facility. Alternatively, where the use of a temporary public sector backstop funding mechanism in a host jurisdiction is envisaged in the resolution funding plan (e.g. to provide funding to a local entity), a clear process for coordination between home and host authorities should be established. If the provision of temporary public sector backstop funding by both home and host authorities is envisaged, the CMG authorities should consider how to address impediments to the mobilisation of collateral located in a host jurisdiction to access the home authority's temporary public sector backstop funding mechanism (and vice versa), and consider options to align the location of assets available to act as collateral for temporary backstop facilities with the location of material operating entities. If there are significant intra-group funding dependencies between home and host jurisdictions in the firm's funding model, the CMG authorities should take into account any constraints on the cross-border mobility of temporary public sector backstop funding provided by home or host authorities.

Guiding Principle 1 establishes that a communication strategy should be developed in coordination with the relevant home and host authorities that will inform market participants, in a clear and timely fashion in the event of resolution, of the resolution and restructuring strategy for the G-SIB. Accordingly, the resolution funding plan should include a market communications strategy for use by the relevant home and host authorities as the firm enters into resolution to provide information to the market on the steps being taken to ensure that the firm can meet its obligations as they fall due.[22]

Mechanisms for coordination and information sharing are also necessary between relevant domestic authorities (for example, between the resolution authority, supervisory authority and central bank). *Key Attribute* 12 requires jurisdictions to ensure that no legal, regulatory or policy impediments exist that hinder the appropriate exchange of information, including firm-

[22] The need for an an effective market communication strategy to promote confidence, inform creditors and the market of the implications of the resolution, limit contagion, and avoid uncertainty is also addressed in the FSB's *Principles on Bail-in Execution* (http://www.fsb.org/2018/06/principles-on-bail-in-execution-2), 21 June 2018.

specific information, between supervisory authorities, central banks, resolution authorities, finance ministries and the public authorities responsible for guarantee schemes.

In relation to the development and implementation of the resolution funding plan, resolution authorities should have access to supervisory data to monitor the liquidity profile of the firm, as the firm's liquidity position may be a factor in determining that the firm has met the conditions for entry into resolution. Coordination and information sharing with the central bank is also necessary, given the potential use of ordinary central bank facilities by material operating entities that are not themselves in resolution and that meet the conditions for access.