



Monetary Authority of Singapore

**GUIDELINES TO  
MAS NOTICE 654  
ON RECOVERY  
AND RESOLUTION  
PLANNING**

30 JANUARY 2019

# **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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## **TABLE OF CONTENTS**

Section I	Introduction .....	1
Section II	Definitions .....	2
Section III	Recovery Plan .....	3
	General .....	3
	Recovery Triggers .....	5
	Recovery Options .....	5
	Communications .....	6
Section IV	Resolution Plan.....	7
	General .....	7
	Information requirements.....	8
	Local Banks .....	8
	Foreign Banks.....	18
Section V	Management Information Systems .....	28
Section VI	Operational Continuity .....	29

# **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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## **I. INTRODUCTION**

Recovery and resolution planning is an important process to reduce risks posed by a bank to the stability of the financial system, ensure the continuity of critical functions to the economy, and allow a distressed bank to restore its financial strength, be restructured, or to exit the market in an orderly manner. The Monetary Authority of Singapore (“the Authority”) requires banks notified by the Authority to be subject to recovery and resolution planning requirements set out in Notice 654. These Guidelines provide further guidance and elaboration on these requirements, and should be read in conjunction with Notice 654.

The recovery and resolution planning process is an iterative one. The Authority will engage and collaborate closely with banks to clarify their obligations and the Authority’s expectations with regard to the recovery and resolution plan as part of our supervisory interaction with banks.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **II. DEFINITIONS**

1. In these Guidelines –

“core business lines” are business lines that are material to the bank’s franchise value or will cause serious impact to the group if there is discontinuation without contingency arrangements made;

“foreign bank” means any bank incorporated outside Singapore or foreign-owned bank incorporated in Singapore;

“local bank” means any bank incorporated in Singapore, whose banking group is headquartered in Singapore and which the Authority has consolidated supervisory authority over.

2. The expressions used in these Guidelines (except where defined or where the context otherwise requires) have the same meanings as in the MAS Act (Cap. 186) and Notice 654.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **III. RECOVERY PLAN**

#### **General**

3. A local bank should undertake recovery planning on a consolidated basis, taking into consideration the holding company, local and overseas subsidiaries and branches, as well as any material non-bank financial institutions.
4. A foreign bank should ensure that the recovery plan is prepared in consultation with its parent company or head office. In formulating its recovery plan, a foreign bank may also leverage, in whole or in part, on its head office's or group's recovery plan, provided that these plans adequately cover and address the Singapore operations. In determining whether the bank's recovery plan has adequately covered and addressed the Singapore operations, the Authority will consider if the recovery plan includes the following factors:
  - (a) details of the local governance and oversight;
  - (b) monitoring and escalation framework for the Singapore operations including quantitative and qualitative triggers;
  - (c) the recovery options available to the Singapore operations;
  - (d) a communication plan specific to the stakeholders in Singapore; and
  - (e) an analysis of the impact of the group-wide recovery plan on the Singapore operations.
5. The recovery plan should take into account any legal, reputational and operational impediments to recovery.
6. The bank should put in place a robust governance structure and sufficient resources to support its recovery planning process. The roles and responsibilities of each person involved in the recovery planning process should be clearly assigned within the bank and specified in the recovery plan. This should include the executive officers, committees and business

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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or functional units in Singapore, overseas subsidiaries/branches (for local banks) and the head office and other subsidiaries/branches (for foreign banks).

7. The recovery planning process should be integrated into a bank's overall governance processes and risk management framework. This includes the development, review, approval, monitoring, escalation, activation and implementation of the recovery plan.
8. The recovery plan should reflect the nature, size, complexity, interconnectedness, level of substitutability and scale of the cross-border operations of the bank.
9. The recovery plan should take into account specific circumstances of the bank, including its unique organisational and legal structure, business model, risk profile, characteristics of the markets the bank operates in, amongst others.
10. The bank should not assume extraordinary assistance from the Authority or from authorities of other jurisdictions. For the purpose of recovery planning, the bank may consider access to existing central bank facilities, which shall be subject to the prevailing terms and conditions applicable. In such instances, the recovery plan of the bank should:
  - (a) consider the circumstances in which the bank would need to access such facilities;
  - (b) outline the measures to be taken to meet and maintain the applicable conditions for access to such facilities;
  - (c) analyse eligible assets as collateral for the facilities and estimate such potential drawing capacity after applying the relevant haircuts; and
  - (d) outline the action plan the bank would take to repay such facilities.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **Recovery Triggers**

11. The bank should identify and develop criteria and procedures that are clearly defined and calibrated to trigger timely activation and implementation of recovery options within the recovery plan. The recovery plan should clearly indicate the actions to be taken upon the occurrence of a trigger event.
12. In formulating the recovery triggers, the bank should consider stress scenarios that are sufficiently severe to threaten the going concern and survivability of the bank and its group. The bank should consider both idiosyncratic and market-wide stress scenarios, including the potential impact of cross-border contagion, as well as simultaneous stress situations in markets that are significant to the bank.
13. The recovery triggers should be comprehensive and robust, and incorporate leading indicators where possible. The bank should consider a combination of quantitative and qualitative indicators.
14. The bank should implement processes and have sound management information systems to monitor these recovery triggers. The recovery triggers should be monitored on a regular basis to allow timely activation and implementation of recovery options where necessary.

### **Recovery Options**

15. The menu of recovery options should specify measures that are within the direct control of the bank. Where the execution of any recovery option is dependent on other entities or stakeholders, for example, the head office of a foreign bank, these dependencies and the processes to co-ordinate the execution of the recovery options, should be clearly set out in the recovery plan.
16. The bank should detail, in the recovery plan, the steps and estimated time needed to implement each recovery option, the underlying assumptions for each recovery option, as well as the circumstances which could render the option unavailable.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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17. The bank should assess the potential effectiveness and feasibility of each recovery option. This should take into account the impact, timeliness, ease of execution and any associated risks that may arise from implementing the recovery option.
18. The recovery plan should include measures to reduce the risk profile of the bank and conserve capital, as well as strategic options, such as the divestiture of business lines and restructuring of liabilities.
19. Where the bank's recovery plan includes disposal options of a part or the whole of the bank or its business or assets, the bank should also establish processes for determining the value and marketability of such operations, businesses and assets.
20. The bank should identify the potential hurdles, challenges and constraints that it may face for each recovery option. These should be documented in the recovery plan, along with the measures that the bank intends to take to address these impediments. Where the recovery option includes accessing existing central bank facilities, the bank should also carry out periodic test transactions to access the facilities, to ensure the effectiveness of the option.
21. A bank which is a settlement institution of a designated payment system under the Payment Systems (Oversight) Act (Cap. 222A) ("a settlement institution") should include specific recovery triggers, recovery options, and stress scenarios that may prevent the settlement institution from being able to perform its role as a going concern, as part of the bank's overall recovery plan.

### **Communication**

22. The communication plan should address communications with relevant stakeholders, including shareholders, employees, key group entities, customers, regulators and the media.
23. The communication plan should also specify the roles and responsibilities of persons involved in the communication to stakeholders, and include ready templates where applicable.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **IV. RESOLUTION PLAN**

#### **General**

24. Resolution plans developed by the Authority facilitate the effective use of resolution powers with the aim of making feasible the resolution of a bank without severe systemic disruption while protecting systemically important functions. Resolution planning involves developing a substantive resolution strategy for a bank and an operational plan for its implementation.
25. The bank should maintain the essential information to facilitate resolution planning.
26. Paragraphs 28 to 31 and 32 to 35 set out guidance on the information requirements for local banks and foreign banks, respectively.
27. The resolution plan is expected to include, amongst others, information on:
  - (a) functions for which continuity is critical;
  - (b) resolution options to preserve these critical functions or wind them down in an orderly manner;
  - (c) data requirements on the bank's business operations, structures, and critical functions;
  - (d) potential barriers to effective resolution and actions to mitigate those barriers;
  - (e) actions to protect insured depositors and ensure the rapid return of segregated clients assets; and
  - (f) options or principles for the bank's exit from the resolution process.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **Information Requirements**

#### ***Local Banks***

28. A local bank should maintain the required information for resolution planning on a consolidated basis, taking into consideration local and overseas subsidiaries and branches, as well as any material non-bank financial institutions (“consolidated group”).
29. A local bank should establish communication facilities and procedures for providing relevant stakeholders with access to information during resolution.
30. A local bank should maintain the following information for resolution planning:
  - (a) Organisational structure
    - (i) A complete organisational chart detailing the legal structure, relationships and shareholdings of all entities<sup>1</sup> within the consolidated group;
    - (ii) A list of entities within the consolidated group that are assessed by the bank to be material (“material entities”), and the factors or criteria used by the bank to assess their materiality; and
    - (iii) A list of entities that are systemically significant or critical to the financial stability of the jurisdictions they operate in.
  - (b) Material entities

In relation to each material entity -

    - (i) The name of the entity and place of incorporation or operation;

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<sup>1</sup> “Entities” include bank and non-bank subsidiaries, branches and affiliates.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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- (ii) The names of directors, executive officers and key crisis-management personnel and their contact information;
- (iii) The unconsolidated financial statements, including:
  - (A) an overview of assets that are encumbered and whether they are intra-group or external encumbrances; and
  - (B) an overview of assets under custody;
- (iv) A description of the business activities or functions within each material entity, including the products/services offered, its geographical reach, customer segments, and contribution to the consolidated group based on internal metrics such as revenue or assets; and
- (v) Information on material operational dependencies within the consolidated group or on third parties, including:
  - (A) the name, designation, contact information, and location of key staff;
  - (B) the location and name of the entity hosting the systems and data;
  - (C) the location and name of the entity hosting the backup systems and data; and
  - (D) the name, designation, contact information, and location of key support personnel; and
  - (E) the details of any processes to support retention of key staff and key support personnel.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (c) Deposit-taking
  - (i) A list of deposit-taking entities within the consolidated group, amount of deposits held, including amounts insured under the respective deposit insurance regimes and the uninsured sums.
  
- (d) Core business lines
  - (i) A list of the business lines that are assessed by the consolidated group to be material, and the factors or criteria used to assess their materiality.
  
  - (ii) In relation to each core business line –
    - (A) A list of the entities involved in operating the business line;
  
    - (B) The location of these entities;
  
    - (C) Whether the entities are regulated in their respective jurisdictions and the authorities in charge<sup>2</sup>;
  
    - (D) Information on the location and name of the entity (or a support unit within the entity) that processes transactions for the business line identified; and
  
    - (E) Information on material operational dependencies within the consolidated group or on third parties, including:
      - (I) the name, designation, contact information, and location of key staff;
  
      - (II) the location and name of the entity hosting the systems and data;

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<sup>2</sup> Both the names of the supervisory and the resolution authority should be provided if these roles are played by different agencies.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (III) the location and name of the entity hosting the backup systems and data; and
  - (IV) the name, designation, contact information, and location of key support personnel; and
  - (V) the details of any processes to support retention of key staff and key support personnel.
- (e) Critical functions
- (i) A list of functions performed by the consolidated group that are assessed to be critical functions in Singapore;
  - (ii) The relevant metrics used to assess criticality of functions;
  - (iii) A mapping of the critical functions to the material entities under which they are conducted; and
  - (iv) An assessment on impact of cessation of critical functions.
- (f) Dependencies
- (i) Capital allocation and mobility
- To provide for each material entity -
- (A) A breakdown of regulatory capital;
  - (B) A breakdown of capital currently allocated<sup>3</sup>; and
  - (C) The bank's analysis and planning assumption with regard to the mobility of capital amongst entities within the consolidated group.

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<sup>3</sup> This includes capital that does not qualify as regulatory capital.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### (ii) Critical shared services

- (A) A list of critical shared services;
- (B) A mapping of the critical shared services to the entities under which they are conducted, and a mapping of all service agreements which are material and all internal service-level agreements to the entities which have entered into the agreements;
- (C) The relevant criticality metrics used to assess critical shared services; and
- (D) Information on critical shared services, including:
  - (I) the name, designation, contact information, and location of key staff;
  - (II) the location and name of the entity hosting the systems and data;
  - (III) the location and name of the entity hosting the backup systems and data;
  - (IV) the name, designation, contact information and location of key support personnel; and
  - (V) the details of any processes to support retention of key staff and key support personnel.

### (iii) Booking arrangements

- (A) The list of products with cross-border or cross-entity booking arrangements<sup>4</sup> for treasury and lending activities, and in relation to each product, the following information:

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<sup>4</sup> “Cross-border arrangements” include those within the same entity, e.g. among sister branches in different jurisdictions. “Cross-entity arrangements” include those involving different entities in the same jurisdiction.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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- (I) A description of the booking model;
  - (II) The location and name of the entity where the product originated from, is booked and risk managed;
  - (III) The supervisory and resolution authority overseeing the entity responsible for the risk arising from the product; and
  - (IV) Whether the product has back-to-back booking arrangements and the details of the booking flow for the product.
- (B) Where there are cross-border or cross-entity booking arrangements for treasury and lending activities, the collateral management details, including:
- (I) the type of collateral;
  - (II) the name of the entity that holds the collateral on custody;
  - (III) the linkage between transactions and level of collateral, including instances where the collateral is shared;
  - (IV) the amount of collateralised and non-collateralised exposures; and
  - (V) the amount of collateral available for contingency funding and liquidity needs.
- (iv) Intra-group guarantees
- (A) A description of how and when intra-group guarantees are used;

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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- (B) The type of intra-group guarantees extended; and
  - (C) The circumstances under which the guarantees will be enforced.
- (v) Treasury function and funding arrangements
- (A) A description of the treasury function and how it is organised;
  - (B) A description of funding arrangements within the consolidated group, including the main sources of funding and intra-group flows of funds. Branches and subsidiaries that play significant roles in intra-group funding should be highlighted;
  - (C) A list of significant intra-group balances;
  - (D) Information on major funding sources other than that described in paragraphs 30(f)(v)(B) and 30(f)(v)(C); and
  - (E) Identification and details of necessary funding strategies to maintain adequate liquidity in relevant currencies.
- (vi) Financial institution counterparties
- (A) A list of financial institution counterparties that the consolidated group or its material entities have significant dealings or relationships with, and the key metrics or indicators that the bank measures, such as the volume of trades, amount of borrowing, tenor of trades, etc.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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(vii) Joint ventures and alliances

- (A) A list of joint ventures and alliances that the bank has entered into, with the name and an overview of the roles and responsibilities of each joint venture partner.

(viii) Payment and settlement services, clearing services, cash services, and other services

- (A) The names of the entities within the consolidated group involved in providing such services and functions to financial market participants;
- (B) A list of systems used for the provision of such services and the location of these systems;
- (C) The names of the parties that the consolidated group entities provide the services to;
- (D) A list of services and functions provided by external parties to the bank;
- (E) The relevant metrics such as transaction and flow volumes on an average day;
- (F) A list of interfaces<sup>5</sup> with the systems identified above; and
- (G) The location of users with the authority to administer access to the systems. If system access is effected by a user who is different from a user with the authority to administer access to the systems, the location for both sets of users.

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<sup>5</sup> Interfaces refer to interactions and inter-dependencies between systems, where a failure of or changes in one system can have upstream or downstream impact on other systems.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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(ix) Others

(A) A description of any other significant linkages and dependencies amongst the material entities within the consolidated group or with external entities that are not already covered above, and the bank's assessment of possible external factors or internal constraints that could impact such linkages and dependencies.

(g) Contingency analysis

- (i) The bank's assessment of the extent to which entity-specific information is available upon request by authorities in respect of the bank's recovery and resolution planning;
- (ii) The bank's assessment of the extent to which material entities, core business lines, and critical functions, can be separated from the consolidated group, taking into consideration staffing, technology, operations, intra-group and external dependencies, legal and other aspects, in order to enable the consolidated group to continue operating with minimal disruption; and
- (iii) The bank's assessment of financial resources needed in resolution, including resources needed to support the continuity or mitigate the service disruption of any critical shared services.

(h) Foreign jurisdictions

- (i) A description of the legal and regulatory frameworks of the foreign jurisdictions in which the bank operates, including the resolution and insolvency regimes of each jurisdiction.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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31. In maintaining and submitting the required information for resolution planning, a local bank that performs its role as a settlement institution should also maintain and submit the information set out in paragraph 30 which pertains to its role as a settlement institution of a designated payment system, with the exception of the information specified under sub-paragraphs (e)(i), (e)(ii), (f)(i), (f)(iii) and (f)(ix).

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### ***Foreign Banks***

32. A foreign bank should maintain the required information for resolution planning for the following entities (collectively a “Singapore sub-group”):
- (a) Singapore branches of the foreign bank;
  - (b) Singapore-incorporated subsidiaries of the foreign bank, and their branches and subsidiaries, both local and overseas; and
  - (c) Any material non-bank financial institutions that have presence in Singapore.
33. A foreign bank should establish communication facilities and procedures for providing relevant stakeholders with access to information during resolution, particularly stakeholders in Singapore.
34. A foreign bank should maintain the following required information for resolution planning:
- (a) Organisational structure
    - (i) A complete organisational chart detailing the legal structure, relationships and shareholdings of all entities<sup>6</sup> within the Singapore sub-group that have linkages or dependencies with operations in Singapore; and
    - (ii) A listing of entities within the group that have linkages or dependencies with operations in Singapore, and that are assessed to be material to the operations in Singapore (“material entities”), and the factors or criteria used to assess their materiality.

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<sup>6</sup> “Entities” include bank and non-bank subsidiaries, branches and affiliates.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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(b) Material entities

In relation to each material entity -

- (i) The name of the entity and place of incorporation or operation;
- (ii) The names of directors, executive officers and key crisis-management personnel and their contact information;
- (iii) The unconsolidated financial statements, including:
  - (A) an overview of assets that are encumbered and highlight if they are intra-group or external encumbrances; and
  - (B) an overview of assets under custody;
- (iv) A description of the business activities or functions within each material entity, including the products/services offered, its geographical reach, customer segments, and contribution to the group based on internal metrics such as revenue or assets; and
- (v) Information on material operational dependencies within the group or on third parties, including:
  - (A) the name, designation, contact information, and location of key staff;
  - (B) the location and name of the entity hosting the systems and data;
  - (C) the location and name of the entity hosting the backup systems and data; and
  - (D) the name, designation, contact information, and location of key support personnel; and

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (E) the details of any processes to support retention of key staff and key support personnel.
- (c) Deposit-taking
- (i) A list of deposit-taking entities within the Singapore sub-group that have operations in Singapore, amount of deposits held, including amounts insured under the respective deposit insurance regimes and the uninsured sums.
- (d) Core business lines
- (i) A list of the core business lines in Singapore, and the factors or criteria used to assess their materiality to the operations in Singapore; and
  - (ii) In relation to each core business line in Singapore –
    - (A) A list of the other entities of the group that are involved in operating the business line;
    - (B) The location of these entities;
    - (C) Whether these entities are regulated in their respective jurisdictions and the authorities in charge<sup>7</sup>;
    - (D) Information on the location and name of the entity (or a support unit within the entity) that process transactions for the business line identified; and
    - (E) Information on material operational dependencies within the group or on third parties, including:
      - (I) the name, designation, contact information, and location of key staff;

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<sup>7</sup> Both the names of the regulator and the resolution authority should be provided if the roles are played by different agencies.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (II) the location and name of the entity hosting the systems and data;
  - (III) the location and name of the entity hosting the backup systems and data; and
  - (IV) the name, designation, contact information, and location of key support personnel; and
  - (V) the details of any processes to support retention of key staff and key support personnel.
- (e) Critical functions
- (i) A list of functions performed by the bank in Singapore that are assessed to be critical functions;
  - (ii) The relevant metrics used by the bank to assess criticality of functions;
  - (iii) A mapping of the critical functions to the material entities under which they are conducted; and
  - (iv) An assessment on impact of cessation of critical functions.
- (f) Dependencies
- (i) Capital allocation and mobility
- To provide for each material entity in Singapore -
- (A) A breakdown of regulatory capital;
  - (B) A breakdown of capital currently allocated<sup>8</sup>; and

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<sup>8</sup> This includes capital that does not qualify as regulatory capital.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (C) The bank's analysis and planning assumption with regard to the mobility of capital amongst entities within the Singapore sub-group.
  
- (ii) Critical shared services
  - (A) A list of critical shared services. This should include critical shared services that Singapore operations have linkages or dependencies on;
  
  - (B) A mapping of the critical shared services to the entities under which they are conducted, and a mapping of all service agreements which are material and all internal service-level agreements to the entities which have entered into the agreements;
  
  - (C) The relevant criticality metrics used to assess critical shared services; and
  
  - (D) Information on critical shared services, including:
    - (I) the name, designation, contact information, and location of key staff;
  
    - (II) the location and name of the entity hosting the systems and data;
  
    - (III) the location and name of the entity hosting the backup systems and data; and
  
    - (IV) the name, designation, contact information, and location of key support personnel;
  
    - (V) the details of any processes to support retention of key staff and key support personnel.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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### (iii) Booking arrangements

- (A) The list of products with cross-border or cross-entity booking arrangements<sup>9</sup> for treasury and lending activities, and in relation to each product, the following information:
- (I) A description of the booking model;
  - (II) The location and name of the entity where the product originated from, is booked and risk managed;
  - (III) The name of the regulatory authority overseeing the entity responsible for the risk arising from the product; and
  - (IV) Whether the product has back-to-back booking arrangements and the details of the booking flow for the product.
- (B) Where there are cross-border or cross-entity booking arrangements for treasury and lending activities, the collateral management details, including:
- (I) the type of collateral;
  - (II) the name of the entity that holds the collateral on custody;
  - (III) the linkage between transactions and level of collateral, including instances where the collateral is shared;
  - (IV) the amount of collateralised and non-collateralised exposures; and

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<sup>9</sup> “Cross-border arrangements” include those within the same entity, e.g. among sister branches in different jurisdictions. “Cross-entity arrangements” include those involving different entities in the same jurisdiction.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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(V) the amount of collateral available for contingency funding and liquidity needs.

(iv) Intra-group guarantees relevant to Singapore entities

(A) A description of how and when intra-group guarantees are used;

(B) The types of intra-group guarantees extended; and

(C) The circumstances under which the guarantees will be enforced.

(v) Treasury function and funding arrangements for Singapore entities

(A) A description of the treasury function and how it is organised;

(B) A description of funding arrangements between the bank and other group entities, including the main sources of funding and intra-group flows of funds. Branches and subsidiaries that play significant roles in intra-group funding should be highlighted;

(C) A list of significant intra-group balances;

(D) Information on major funding sources other than that described in paragraphs 34(f)(v)(B) and 34(f)(v)(C); and

(E) Identification and details of funding strategies to maintain adequate liquidity in relevant currencies.

(vi) Financial institution counterparties

(A) A list of financial institution counterparties that the bank in Singapore has significant dealings or relationships with, and the key metrics or indicators that the bank

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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measures, such as the volume of trades, amount of borrowing, tenor of trades, etc.

(vii) Joint ventures and alliances

- (A) A list of joint ventures and alliances that the bank in Singapore has entered into, with the name and an overview of the roles and responsibilities of each joint venture partner.

(viii) Payment and settlement services, clearing services, cash services, and other services

- (A) The names of the entities within the group that provide services and functions to financial market participants in Singapore, and the corresponding:
- (I) service and function;
  - (II) financial market participants to whom the services have been provided to;
  - (III) systems used for providing these services; and
  - (IV) location of these systems;
- (B) A list of services and functions provided by external parties to the bank;
- (C) The relevant metrics such as transaction and flow volumes on an average day;
- (D) A list of interfaces<sup>10</sup> with the systems identified above; and

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<sup>10</sup> Interfaces refer to interactions and inter-dependencies between systems, where a failure of or changes in one system can have upstream or downstream impact on other systems.

## GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING

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- (E) The location of users with the authority to administer access to the systems. If system access is effected by a user who is different from a user with the authority to administer access to the systems, the location for both sets of users.
  
- (ix) Others
  - (A) A description of any other significant linkages and dependencies between the bank and other entities within the group or external entities that are not already covered above, and the bank's assessment of possible external factors or internal constraints that could impact such linkages and dependencies.
  
- (g) Contingency analysis
  - (i) The bank's assessment of the extent to which entity-specific information is available upon request by regulators in respect of the bank's recovery and resolution planning;
  
  - (ii) The bank's assessment of the extent to which material entities, core business lines, and critical functions, can be separated from the group, taking into consideration staffing, technology, operations, intra-group and external dependencies, legal and other aspects, in order to enable the group to continue operating with minimal disruption; and
  
  - (iii) The bank's assessment of financial resources needed in resolution, including resources needed to support the continuity or mitigate the service disruption of any critical shared services.
  
- (h) Foreign jurisdiction
  - (i) A description of the legal and regulatory framework of the foreign jurisdictions (including the resolution and insolvency regimes of the jurisdictions) in which the bank's parent

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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company or head office is headquartered, and in which the Singapore sub-group operates. Where the resolution authority responsible for implementing the bank's resolution plan is located in another jurisdiction, the bank should also include a description of the legal and regulatory framework of such jurisdiction.

35. In maintaining and submitting the required information for resolution planning, a foreign bank that performs its role as a settlement institution should also maintain and submit the information set out in paragraph 34 which pertains to its role as a settlement institution of a designated payment system, with the exception of the information specified under sub-paragraphs for (e)(i), (e)(ii), (f)(i), (f)(iii) and (f)(ix).

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **V. MANAGEMENT INFORMATION SYSTEMS**

36. The bank shall maintain management information systems that are capable of producing information necessary for recovery and resolution planning, resolvability assessment and the conduct of resolution. Such information should be produced in a timely manner, whenever requested by the Authority.
37. In relation to management information systems, the bank should:
- (a) maintain a detailed inventory, including a description and the location of the key management information systems used in its material entities, mapped to its critical functions and critical shared services;
  - (b) identify and address exogenous legal constraints on the exchange of management information among the constituent entities of a group;
  - (c) demonstrate as part of the recovery and resolution process, that the bank is able to produce the essential information needed to implement such plans within a short period of time, including, for example, information on the source, use and positioning of liquidity and any unencumbered collateral; and
  - (d) maintain specific information at a legal entity level, including, for example, information on intra-group guarantees and intra-group trades booked on a back-to-back basis.
38. The bank shall maintain up-to-date details of financial contracts entered into by the bank, including records of counterparties. The bank may maintain such information through a global system as long as it is able, at any point in time, to identify the relevant information in respect of the specific financial contracts under Singapore's resolution regime. Similarly, the bank shall maintain up-to-date details of non-financial contracts pertaining to its critical functions and critical shared services.

## **GUIDELINES TO MAS NOTICE 654 ON RECOVERY AND RESOLUTION PLANNING**

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### **VI. OPERATIONAL CONTINUITY**

39. The bank should ensure that it has in place appropriate contingency arrangements that enable its critical functions and critical shared services to continue to operate while resolution or recovery measures are being implemented. This may include but is not limited to arrangements to enable the functioning of IT systems, clearing and settlement facilities and supplier and employee contracts, and arrangements to ensure continued rights of use and access to operational assets such as property and office space.
40. The bank should put in place adequate measures such that outsourcing arrangements which support critical functions and critical shared services can be maintained in crisis situations and in resolution. The underlying contracts should include provisions that prevent termination from being triggered by recovery or resolution events and facilitate transfer of the contract to a bridge institution or a third party acquirer where necessary.
41. The bank should engage financial market infrastructures (FMIs) and FMI intermediaries to establish procedures that would be triggered by the bank's entry into resolution, and the terms and conditions under which access can be maintained. The bank should also prepare contingency plans to maintain access to FMIs in crisis situations and in resolution.
42. The bank should assess the additional requirements that may be needed in order to maintain its membership in FMIs during crisis situations. The bank should identify options for addressing the additional requirements, for example, a plan for the sourcing of additional collateral, and assessment of potential constraints on the bank's total payment flows.