Basel Committee
on Banking Supervision

Regulatory Consistency Assessment Programme (RCAP)

Assessment of Basel NSFR regulations – Singapore

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BANK FOR INTERNATIONAL SETTLEMENTS

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Contents

Glossary

ASF	Available stable funding
BIS	Bank for International Settlements
C	Compliant (grade)
DBS	DBS Bank
D-SIBs	Domestic systemically important banks
EBA	European Banking Authority
G-SIBs	Global systemically important banks
HQLAs	High-quality liquid assets
LC	Largely compliant (grade)
LCR	Liquidity coverage ratio
MAS	Monetary Authority of Singapore
MDBs	Multilateral development banks
MNC	Materially non-compliant (grade)
NC	Non-compliant (grade)
NDBs	National development banks
NSFR	Net Stable Funding Ratio
OCBC	Oversea-Chinese Banking Corporation
PSEs	Public sector entities
RCAP	Regulatory Consistency Assessment Programme
RSF	Required stable funding
SGD	Singapore dollar
SIG	Supervision and Implementation Group
UOB	United Overseas Bank

Preface

The Basel Committee on Banking Supervision (Basel Committee) places a high priority on the implementation of regulatory standards underpinning the Basel III framework. The prudential benefits from adopting Basel standards can only fully accrue if these are implemented fully, consistently and in a timely manner by all member jurisdictions. The Committee established the Regulatory Consistency Assessment Programme (RCAP) to monitor, assess and evaluate its members' implementation of the Basel framework.

This report presents the findings of an RCAP Assessment Team on the domestic adoption of the Basel Net Stable Funding Ratio (NSFR) standard in Singapore. The assessment focused on the completeness and consistency of the domestic regulations in force on 31 December 2019 with the Basel NSFR standard, as applied to Singaporean banks that are internationally active or have been designated by the Monetary Authority of Singapore (MAS) as domestic systemically important banks (D-SIBs). Issues related to prudential outcomes, the resilience of the banking system or the supervisory effectiveness of MAS were not in the scope of this assessment. The assessment relied on regulations, other information and explanations provided by MAS and ultimately reflects the view of the Basel Committee.

The RCAP Assessment Team was led by Ms Isabelle Vaillant, Director of Prudential Regulation and Supervisory Policy of the European Banking Authority (EBA). It comprised four technical experts, from Germany, South Africa, Italy and Philippines (see Annex 1). The main counterpart for the assessment was MAS. The work was coordinated by the Basel Committee Secretariat with support from staff of the EBA.

The assessment began in mid-2019 and comprised (i) a self-assessment by MAS; (ii) an assessment phase (July to December 2019), including an on-site assessment involving discussions with MAS and representatives from banks in Singapore; and (iii) a review phase (January to February 2020), including a technical review of the Assessment Team's findings by a separate RCAP Review Team, the Committee's Supervision and Implementation Group (SIG), the RCAP Peer Review Board and the Basel Committee. More information on the RCAP assessment process is available on the Committee's website.[1]

The RCAP Assessment Team acknowledges the cooperation received from MAS throughout the assessment process. In particular, the team thanks the staff of MAS for playing an instrumental role in coordinating the assessment exercise.

[1] See www.bis.org/bcbs/implementation.htm.

Executive summary

In Singapore, the NSFR minimum standard and the associated disclosure requirements were adopted through MAS Notice 652 published on 10 July 2017 and MAS Notice 653 published on 28 December 2017, respectively. The framework came into effect on 1 January 2018. MAS made amendments to the NSFR framework through MAS Notice 652 (Amendment) and MAS Notice 653 (Amendment) in August 2019. The amendments came into effect on 1 October 2019. In Singapore, the NSFR requirements apply to all internationally active banks and banks designated by MAS as D-SIBs.

The Assessment Team recognises the efforts made by MAS to improve the consistency of its NSFR regulations throughout the assessment process. The amendments issued by MAS in December 2019, notably in the area of ASF, are listed in Annex 4.

Overall, as of 31 December 2019, the NSFR regulations in Singapore are assessed as compliant with the Basel NSFR standard. This is the highest possible grade. The components of the NSFR – (i) scope, minimum requirement and application issues; (ii) available stable funding (ASF); (iii) required stable funding (RSF); and (iv) the NSFR disclosure requirements – are all assessed as compliant.

Response from MAS

MAS thanks the Assessment Team led by Ms Isabelle Vaillant for their professionalism and technical expertise, which facilitated robust discussions throughout the review. We would also like to express our appreciation to the Secretariat for their efforts in supporting this process.

MAS agrees with the overall findings and welcomes the overall rating of "compliant" under the NSFR RCAP assessment. The assessment has been a useful exercise for MAS. Aside from affirming the consistency of our rules with the Basel standards, the process brought greater clarity to our domestic requirements on the treatment of operational deposits covered by deposit insurance.

MAS remains committed to the work of the Basel Committee and the consistent implementation of the Basel standards, which are an important part of the global regulatory reforms to build a more resilient financial system globally.

1 Assessment context

1.1 Status of NSFR implementation

MAS is the central bank and the integrated financial regulator overseeing all financial institutions in the banking, capital markets, insurance and payments sectors in Singapore.

In July 2017, MAS issued the minimum all-currency NSFR requirement for banks through MAS Notice 652. The regulation came into force on 1 January 2018. In December 2017, MAS issued MAS Notice 653, which specified the NSFR disclosure requirements and which came into force on 1 January 2018.

In August 2019, MAS published MAS Notice 652 (Amendment) and MAS Notice 653 (Amendment), which further clarified the application scope of the NSFR framework, assigned a 5% RSF factor to derivative liabilities and introduced proportionality to the disclosure requirement. The amendments came into effect on 1 October 2019. During the assessment process, MAS made amendments to the NSFR framework through MAS Notice 652 (Amendment) in December 2019, which clarified the treatment of operational deposits covered by deposit insurance. The amendments came into effect on 31 December 2019.

In Singapore, the NSFR framework applies to all internationally active banks and banks designated by MAS as D-SIBs. All internationally active banks and locally headquartered D-SIBs are subject to a 100% all-currency NSFR requirement on a consolidated basis. Foreign-headquartered D-SIBs that are not internationally active are subject to a 50% all-currency NSFR requirement, either at the entity-level or on the country-level group basis.

1.2 Regulatory system

MAS was established under the Monetary Authority of Singapore Act in January 1971. MAS has operational autonomy, and its Board of Directors, which comprises 11 members, is responsible for the policy and general administration of the affairs and business of MAS and informs the government of the regulatory, supervisory and monetary policies of the MAS. The Chairman of the Board is appointed by the President on the recommendation of the Cabinet. The Board is ultimately accountable to the Parliament of Singapore through the Minister-in-charge of MAS.

The Monetary Authority of Singapore Act confers on MAS powers to issue various legal instruments under the Acts it administers for the regulation and supervision of financial institutions. The Acts contain statutory laws under the purview of MAS that are passed by Parliament. Subsidiary legislation is issued under the authority of the relevant Acts, and typically fleshes out the provisions of an Act (eg Banking Regulations issued under the Banking Act). Both Acts and subsidiary legislation have the force of law and are published in the Government Gazette. MAS itself can issue regulatory instruments in the form of Directions, which detail specific instructions to financial institutions or other specified persons to ensure compliance. Directions have legal effect, meaning that MAS can specify whether a contravention of a Direction is a criminal offence. Directions consist of Directives and Notices. Directives primarily impose legally binding requirements on an individual financial institution or a specified person, while Notices primarily impose legally binding requirements on a specific class of financial institutions or persons. For example, the NSFR minimum standard is implemented through MAS Notice 652. In addition, MAS can issue Guidelines, Codes, and Practice Notes, the contravening of which would not be a criminal offence.

1.3 Structure of the banking sector

As of end-March 2019, 126 institutions had a banking licence under the Banking Act of Singapore. Of these, nine are locally incorporated banks, while the remaining institutions operate as branches of foreign banks headquartered outside Singapore. Four of the locally incorporated banks are part of three domestic banking groups: the DBS Bank (DBS), the Oversea-Chinese Banking Corporation (OCBC) and the United Overseas Bank (UOB). DBS, OCBC and UOB are the only internationally active banking groups in Singapore. The remaining five locally incorporated banks are subsidiaries of foreign-headquartered banks and are not internationally active: Bank Pictet & Cie (Asia) Ltd., Citibank Singapore Limited, HSBC Bank (Singapore) Limited, Maybank Singapore Limited and Standard Chartered Bank (Singapore) Limited. In addition, as of end-March 2019, MAS has designated the following seven banking groups as D-SIBs: DBS, OCBC, UOB, Citibank, Malayan Banking Berhad, Standard Chartered Bank and the Hongkong and Shanghai Banking Corporation.

In evaluating the materiality of the findings it raised during the assessment, the Assessment Team focused on the three banking groups that are internationally active. The total assets of DBS, OCBC and UOB (on a consolidated basis) stood at 43% of the total assets of the banking system and 100% of the total assets of the internationally active banks in Singapore as of end-March 2019. Annex 3 provides further information on the banking system in Singapore and the NSFR of the sample banks.

1.4 Scope of the assessment

The Assessment Team considered the NSFR requirements applicable to internationally active banks and D-SIBs in Singapore as of 31 December 2019. The assessment had two dimensions:

- a comparison of domestic regulations with the Basel NSFR standard to ascertain that all the required provisions have been adopted (*completeness* of the regulations); and
- whether there are any differences in substance between the domestic regulations and the Basel NSFR standard and, if so, their significance (*consistency* of the regulations).

In its assessment, the RCAP Assessment Team considered all binding documents that effectively implement the Basel NSFR standard in Singapore. Annex 2 lists the Basel standards used as the basis for the assessment. The assessment did not evaluate the adequacy of liquidity or the resilience of the banking system in Singapore or the supervisory effectiveness of MAS.

The outcome of the assessment is summarised using a four-grade scale, both at the level of each of the four key components of the Basel NSFR framework and the overall assessment of compliance. The four grades are compliant, largely compliant, materially non-compliant and non-compliant.

2 Assessment findings

2.1 Assessment grades and summary of findings

Overall, the Assessment Team finds the implementation of the NSFR in Singapore to be compliant with the Basel standards. This grade takes into account the rectifications made by MAS in December 2019 (described in Annex 4).

Assessment grades	Table 1
Component of the Basel NSFR framework	Grade
Overall grade	C
Scope, minimum requirement and application issues	C
Available stable funding (numerator)	C
Required stable funding (denominator)	C
NSFR disclosure requirements	C

Assessment scale: C (compliant), LC (largely compliant), MNC (materially non-compliant) and NC (non-compliant).

2.1.1 Scope, minimum requirement and application issues

This component is assessed as compliant with the Basel standards. No findings were identified.

2.1.2 Available stable funding

This component is assessed as compliant with the Basel standards. No findings were identified.

2.1.3 Required stable funding

This component is assessed as compliant with the Basel standards. No findings were identified.

There is one observation regarding the reduced RSF factor to be assigned to claims on central banks with a residual maturity equal to or greater than six months in the case of exceptional central bank liquidity-absorbing operations. MAS rules do not explicitly set out the requirement for supervisors to closely monitor the ongoing impact on banks' stable funding positions arising from the reduced requirement. Nevertheless, MAS has clarified that it has oversight over banks' utilisation of these reduced RSF factors and MAS could take appropriate measures as needed. Given the stated intention of MAS and the fact that supervisory monitoring is in place, this is noted as an observation.

2.1.4 Disclosure requirements

This component is assessed as compliant with the Basel standards. No findings were identified.

2.2 Detailed assessment findings

All components were assessed to be compliant with the Basel standard. No findings were identified.

2.3 Observations on the NSFR implementation in Singapore

The following observations highlight certain special features of the regulatory implementation of the Basel NSFR standard in Singapore. These are presented to provide additional context and information. Observations are considered compliant with the Basel standards and do not have a bearing on the assessment outcome.

2.3.1 Scope, minimum requirement and application issues

Basel paragraph number	43(d): Derivative liabilities
Reference in the domestic regulation	Paragraphs 40(d) and 47 – MAS Notice 652
Observation	The Basel standard assigns a 20% RSF factor to derivative liabilities. According to the "Implementation of Net Stable Funding Ratio and treatment of derivative liabilities"

	published by the Basel Committee in October 2017, jurisdictions, at national discretion, may lower the value of this RSF factor, with a floor of 5%. In Singapore, MAS Notice 652 was first issued in 2017 and assigned a 20% RSF factor to gross derivative liabilities. However, MAS subsequently amended its NSFR rules to delay the implementation of this specific requirement, as the Basel Committee was discussing a potential modification to this requirement. Thereafter, in August 2019, MAS made further amendments to its NSFR rules to implement a 5% RSF factor with effect from 1 October 2019. While the current MAS requirement is compliant with the Basel rules, the Assessment Team observed a delay in the application of a RSF factor to derivative liabilities.

2.3.2 Required stable funding

Basel paragraph number	31: Reduced RSF factor for claims on central banks; Technical Amendment "Basel III: Treatment of extraordinary monetary policy operations in the Net Stable Funding Ratio"
Reference in the domestic regulation	Paragraphs 25A and 25B – MAS Notice 652
Observation	According to the Basel standard as integrated by the Technical Amendment on the treatment of extraordinary monetary policy operations in the NSFR, in the case of exceptional central bank liquidity-absorbing operations, where a reduced RSF factor is assigned to claims on central banks, supervisors need to closely monitor the ongoing impact on banks' stable funding positions arising from the reduced requirement and take appropriate measures as needed. MAS does not include such a provision in its Notice. This could weaken banks' awareness of the extraordinary nature of the preferential treatment which is expected to trigger closer monitoring of the banks' stable funding positions by supervisors. MAS clarified that the reason for the exclusion of this provision from its Notice is that the Notice is meant to set out requirements for banks, not for supervisors. MAS has publicly communicated that banks would be informed by MAS of exceptional central bank liquidity operations conducted by MAS so that banks can apply the reduced RSF factor for their NSFR computation. Under paragraph 25B of MAS Notice 652, banks would need to seek MAS's approval before applying the reduced RSF factor for exceptional central bank liquidity operations conducted by other central banks. These measures, along with reporting requirements, allow MAS to maintain oversight over banks' utilisation of the reduced RSF factor for exceptional central bank liquidity operations and the ongoing impact on banks' stable funding positions.

Annexes

Annex 1: RCAP Assessment Team and Review Team

Assessment Team Leader

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Assessment Team members

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Mr Gerbert van der Kamp	European Banking Authority
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Review Team members

Mr Neil Esho	Basel Committee Secretariat
Ms Adriana Antonelli	Central Bank of Argentina, Argentina
Mr Stefan Blochwitz	Deutsche Bundesbank, Germany

Annex 2: List of Basel standards and implementing regulations issued by MAS

The following Basel standards were used as the basis of this RCAP assessment:

- *Basel III: the Net Stable Funding Ratio*, October 2014
- *Basel III – The Net Stable Funding Ratio: frequently asked questions,* February 2017
- *Pillar 3 disclosure requirements – consolidated and enhanced framework*, March 2017
- *Implementation of Net Stable Funding Ratio and treatment of derivative liabilities*, October 2017
- *Treatment of extraordinary monetary policy operations in the Net Stable Funding Ratio*, June 2018

Table A.1 lists the regulations issued by MAS to implement the NSFR in Singapore. Previous RCAP assessments of Singaporean implementation of the Basel standards considered the binding nature of regulatory documents in Singapore.[2] This RCAP Assessment Team did not repeat that assessment, but instead relied on the previous assessments' findings. Those assessments concluded that the types of instrument described in Table A.1 could be considered as binding on banks and supervisors for the purposes of an RCAP assessment.

Overview of relevant Singaporean liquidity regulations — Table A.1

Domestic regulations	Type, version and date
Banking Act	Banking Act (Chapter 19), version in force from November 2018
Net Stable Funding Ratio (MAS Notice 652)	Notice issued in July 2017, last revised in December 2019
Net Stable Funding Ratio Disclosure (MAS Notice 653)	Notice issued in December 2017, last revised in August 2019

Source: MAS.

[2] See Annex 4 of the RCAP assessment of the Basel III risk-based capital regulations in Singapore, March 2013, www.bis.org/bcbs/implementation/l2_sg.htm.

Annex 3: Key liquidity indicators of the Singapore banking system

Table A.2

Overview of Singapore banking sector liquidity as of 31 March 2019

Size of banking sector (SGD millions)		
Total exposures of all banks operating in Singapore (including off-balance sheet exposures)	3,458,052	
Total assets of all locally incorporated internationally active banks	1,478,414	
Total assets of locally incorporated banks to which liquidity standards under the Basel framework are applied	1,478,414	
Number of banks		
Number of banks operating in Singapore (excluding local representative offices)	126	
Number of global systemically important banks (G-SIBs)	0	
Number of D-SIBs	7	
Number of banks which are internationally active	3	
Number of banks required to implement Basel III liquidity standards	7[3]	
Number of banks required to implement domestic liquidity standards	119	
Breakdown of NSFR for three RCAP sample banks (SGD millions)	**Unweighted**	**Weighted**
Capital	141,537	141,537
Stable deposits from retail and small business customers	129,660	123,200
Less stable deposits from retail and small business customers	361,165	325,584
Unsecured funding from non-financial corporates	277,017	139,034
Unsecured funding from central banks, sovereigns, PSEs, MDBs and NDBs	136,032	33,353
Unsecured funding from financials (other legal entities)	216,916	36,493
Secured funding (all counterparties)	21,323	8,946
Other liabilities	43,629	2,923
Total available stable funding	1,327,279	811,071
Cash and central bank reserves	41,223	0
Loans to financial institutions	150,117	42,851
Securities eligible as Level 1 HQLA	93,702	5,711
Securities eligible as Level 2A HQLA	26,880	4,115
Securities eligible as Level 2B HQLA	20,708	10,354
All residential mortgages	187,888	126,093
Loans, <1 year	302,855	134,660
Other loans, >1 year, risk weight<=35%	8,492	5,526
Loans, risk weight>35%	346,466	294,429
Derivatives	17,281	5,259
All other assets	131,801	103,132
Off-balance sheet	651,047	5,000
Total required stable funding	1,978,460	737,130
NSFR		110.03%

Source: MAS

[3] All internationally active banks and locally headquartered D-SIBs are subject to a 100% all-currency NSFR requirement (total of three banking groups), while foreign-headquartered D-SIBs that are not internationally active are subject to a 50% all-currency NSFR requirement (total of four banking groups).

RCAP sample banks

Table A.3

Banking group	Share of banks' assets in the total assets of the Singaporean banking system (percent)
DBS	18
OCBC	12
UOB	13
Total	43

Source: MAS. For this purpose, banking assets are based on the measure of total exposures used in the leverage ratio, which includes both on- and off-balance sheet exposures.

Annex 4: Rectifications made by MAS

List of rectifications by the MAS

Table A.4

Basel paragraph	Reference in Singaporean regulations	Description of the rectification
24(b)	MAS Notice 652 paragraphs 9(b) and 10(a)	Paragraphs 9(b) and 10(a) of MAS Notice 652 have been amended to clarify the treatment of operational deposits that are fully covered by deposit insurance. The previous version of the MAS regulations may be interpreted by banks to mean that they can apply a 95% ASF factor to operational deposits that are fully covered by deposit insurance, in line with the treatment of stable retail deposits. The ambiguity arose due to replication of the definition of operational deposits in the Basel LCR standard in MAS Notice 652. The Basel NSFR framework assigns a 50% ASF to operational deposits, which is defined by reference to paragraphs 93–104 of the Basel LCR standard. MAS Notice 652 similarly assigns a 50% ASF to operational deposits. However, the Notice sets out the definition of operational deposits in paragraph 10, which mirrors the definition of operational deposits in the Basel LCR standard. In mirroring this definition, paragraph 10(a) of MAS Notice 652 had included paragraph 104 of the Basel LCR standard, which states that operational deposits covered by deposit insurance can receive the same treatment as stable retail deposits. This has resulted in ambiguity on the treatment of operational deposits covered by deposit insurance. The amendments removed this ambiguity, making it clear that all operational deposits, including those that are fully covered by deposit insurance, are assigned a 50% ASF factor.

Source: MAS.

Annex 5: Elements of the NSFR subject to national discretion

Implementation of national discretions by MAS

Table A.5

Basel paragraph	Description	National implementation
25(a)	Treatment of deposits between banks within the same cooperative network	Subject to prior approval from MAS, deposits between banks within the same cooperative network may be excluded from receiving a 0% ASF factor if they meet the specified criteria.
31	Treatment of excess collateral in a covered bond collateral pool allowing for multiple issuance	MAS has not exercised national discretion with regard to the treatment of excess collateral in a covered bond collateral pool allowing for multiple issuance.
31, 36	Treatment of central bank operations	All required reserves are assigned a 0% RSF factor, unless relevant supervisors or central bank have assigned other RSF factors to these reserves. MAS allows reduced RSF factors to be applied to assets in the case of exceptional central bank liquidity operations. Assets that are provided as collateral for exceptional central bank liquidity providing operations may be assigned the same RSF factor applied to the equivalent asset that is unencumbered, while claims on central banks with a residual maturity of more than six months that arise from exceptional central bank liquidity-absorbing operations may be assigned a 5% RSF factor. Prior approval from MAS has to be obtained before applying this treatment for exceptional central bank liquidity operations conducted by a central bank other than MAS. MAS allows derivative transactions with central banks arising from short-term monetary policy and liquidity operations to be excluded from a bank's NSFR computation. While it is not explicitly mentioned in MAS rules, MAS allows banks to offset unrealised capital gains and losses related to these derivative transactions from ASF in practice.
43	RSF factor for derivative liabilities	MAS assigns a 5% RSF factor for derivative liabilities.
45	Treatment of interdependent assets and liabilities	MAS allows a 0% RSF or ASF factor to be applied to interdependent assets and liabilities if they meet the qualifying criteria.
47	RSF factors for other contingent funding obligations	MAS assigns a 0% RSF factor to all contingent funding obligations other than irrevocable and conditionally revocable credit and liquidity facilities.
50	Scope of application of NSFR and scope of consolidation of entities within a banking group	MAS applies NSFR to all internationally active banks on a consolidated basis.

Source: MAS.