Basel Committee
on Banking Supervision

Regulatory Consistency Assessment Programme (RCAP)

Assessment of Basel III LCR regulations – Brazil

October 2017

BANK FOR INTERNATIONAL SETTLEMENTS

Note that this report refers to the RCAP grades prior to October 2025. The grade 'materially non-compliant (MNC)', ie one notch above the lowest grade, has since been renamed to 'partially non-compliant (PNC)' for greater clarity

This publication is available on the BIS website (www.bis.org).

ISBN 978-92-9259-109-0 (online)

Contents

Glossary

ALA	Alternative Liquidity Approaches
BCB	Central Bank of Brazil
BIS	Bank for International Settlements
BRL	Brazilian real
C	Compliant (grade)
CMN	National Monetary Council
CRO	Chief risk officer
D-SIB	Domestic systemically important bank
FGC	Credit Fund Guarantor
FGCoop	Cooperative Credit Fund Guarantor
FMI	Financial market infrastructure
G-SIB	Global systemically important bank
HQLA	High-quality liquid assets
LC	Largely compliant (grade)
LCR	Liquidity Coverage Ratio
LR	Liquidity ratio
MNC	Materially non-compliant (grade)
NC	Non-compliant (grade)
RAS	Risk appetite statement
RCAP	Regulatory Consistency Assessment Programme
RCLF	Restricted-use committed liquidity facility
RWA	Risk-weighted assets
SELIC	Special system for settlement and custody
SIG	Supervision and Implementation Group
SMM	Market and liquidity risks monitoring system
USD	US dollar

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 appropriately and consistently 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 Liquidity Coverage Ratio (LCR) standard in Brazil and its consistency with the minimum requirements of the Basel III framework. The assessment focuses on the Brazilian banks that are internationally active and of significance to domestic financial stability.

The RCAP Assessment Team was led by Mr Vasily Pozdyshev, Deputy Governor of the Central Bank of the Russian Federation. The Assessment Team comprised two technical experts from the Financial Stability Institute and the French Prudential Supervision and Resolution Authority. The main counterpart for the assessment was the Central Bank of Brazil (BCB). The work was coordinated by the Basel Committee Secretariat with support from staff at the Central Bank of the Russian Federation.

The focus of the assessment was on the consistency and completeness of the Brazilian regulations with the Basel minimum requirements, based on the regulations in force on 31 July 2017. Issues relating to prudential outcomes, the liquidity position of individual banks, or the Brazilian authorities' supervisory effectiveness were not in the scope of this RCAP assessment. The assessment reflects the expert view of the Assessment Team on the documents, data and explanations provided by the Brazilian authorities.

Starting in January 2017, the assessment comprised (i) completion of an RCAP questionnaire (a self-assessment) by the BCB; (ii) an assessment phase (February to July 2017); and (iii) a review phase (August to September 2017). The second phase included an on-site assessment, during which the Assessment Team discussed the implementation of the LCR with the Brazilian authorities and representatives of Brazilian banks. These exchanges enriched the Assessment Team's understanding of the Brazilian LCR regulations. The third stage comprised a two-stage technical review of the assessment findings: first, by a separate RCAP Review Team, as well as feedback from the Basel Committee's Supervision and Implementation Group (SIG); and, second, by the RCAP Peer Review Board and the Basel Committee. This review process is a key part of the RCAP, providing quality control and ensuring the integrity of the assessment findings.

Where domestic regulations and provisions were found to be non-compliant with the Basel framework, those deviations were evaluated for their current and potential impact (or non-impact) on the reported LCRs of a sample of Brazilian banks. Some findings were evaluated qualitatively. The assessment outcome was based on the materiality of findings and expert judgment.

The report has three sections and a set of annexes: (i) an executive summary with a statement from the Brazilian authorities on the assessment outcome; (ii) the context, scope and methodology, together with the main assessment findings; and (iii) details of the deviations and their materiality along with other assessment-related observations.

Executive summary

In Brazil, the LCR was implemented via two regulations on minimum requirements and disclosure, issued in February and March 2015. Both regulations have been in force since October 2015 and apply to the largest banks, those with assets of more than 100 billion Brazilian reals (BRL). These banks comprise around 75% of the Brazilian banking system.

Overall, as of 31 July 2017, the LCR regulations in Brazil are assessed as compliant with the Basel LCR standards. This is the highest possible grade. All four components of the LCR, high-quality liquid assets (HQLA), outflows, inflows and disclosure requirements, are also assessed as compliant.

During the RCAP assessment, the Assessment Team identified a number of differences between the Brazilian regulations and the Basel LCR standard, which the BCB subsequently decided to rectify. The amendments were passed in July 2017, with most taking effect immediately.[1] The Assessment Team compliments the BCB on its actions to improve the level of compliance with the Basel standard. Without these changes, the RCAP assessment would have generated a less positive result.

In addition to the formal assessment of the LCR standard and disclosure requirements, this report contains annexes that summarise Brazil's implementation of the LCR monitoring tools and the Basel Committee's *Principles for sound liquidity risk management and supervision* (see Annexes 9 and 10). Further, Annex 12 summarises the key national discretions and approaches that the BCB has adopted when implementing the LCR. These annexes show how national authorities implement certain aspects of the Basel standards that are not in the scope of the formal RCAP-LCR assessment. Over time, the information in these annexes will provide a basis for designing sound practices and additional supervisory guidance that will benefit the regulatory community and the banking industry. This should raise the consistency of LCR implementation and improve the ratio's effectiveness in practice.

[1] The amendments are described in Annex 5. Two amendments (which, had they not been made, would have resulted in two additional non-material findings) will take effect on 1 January 2018.

Response from the BCB

The Central Bank of Brazil (BCB) hereby acknowledges its gratitude towards Mr Vasily Pozdyshev and all the RCAP-LCR Assessment Team members for the very productive discussions and insightful comments pertaining to the implementation of the Liquidity Coverage Ratio in Brazil. We would also like to thank the Central Bank of the Russian Federation, the French Prudential Supervision and Resolution Authority, the Financial Stability Institute and the Basel Committee on Banking Supervision (Basel Committee) for supporting this process.

The RCAP process is very important to ensure full, timely and consistent implementation of the Basel standards and thus strengthen public confidence in banks, enhance the effectiveness of prudential regulation and provide a level playing field for the financial institutions operating across multiple jurisdictions. As a member of the Basel Committee, Brazil is fully committed to implementing all the Basel standards.

The BCB agrees with the Assessment Team's overall findings and observations and has enacted all the necessary amendments to its LCR regulation. This common understanding achieved by both parties reflects the high level of commitment and collaborative work experienced throughout the assessment process.

Once again, the BCB would like to seize this opportunity to reaffirm its firm commitment to the Basel III regulatory reforms and, furthermore, acknowledge the importance of the LCR standard in consolidating its supervisory practices related to liquidity risk.

1 Assessment context and main findings

1.1 Context

Status of implementation

In Brazil, the National Monetary Council (CMN) and the BCB are responsible for implementing the Basel LCR standards in Brazilian regulations. The LCR minimum requirements were implemented in Resolution 4401, issued in February 2015. Circular 3749, issued in March 2015, establishes the methodology for calculating the LCR and disclosure requirements. Both regulations took effect in October 2015. The minimum LCR requirement is being phased in between 2015 and 2019, starting at 60% as of 1 October 2015 and increasing by 10 percentage points annually to reach 100% on 1 January 2019.

The LCR applies to the largest banks in the Brazilian banking system. Specifically, the requirements apply to all multiple banks, commercial banks, investment banks, foreign exchange banks and savings banks that (i) have total assets of more than BRL 100 billion; or (ii) are part of a prudential conglomerate with total assets of more than BRL 100 billion. Currently, eight banks must meet the LCR requirements, six of which are internationally active.

The Basel standard allows jurisdictions that have a structural shortfall in high-quality liquid assets (HQLA) to implement Alternative Liquidity Approaches (ALA). It also allows other jurisdictions to use restricted-use committed liquidity facilities (RCLF) under stringent conditions. At the time of the assessment, the Brazilian authorities have not implemented ALA or an RCLF.

Structure of the banking sector

As of July 2017, there were 133 banks operating in Brazil. Around 70% of the assets of the banking system are concentrated in the five largest banks. These banks, two of which are government-controlled, have been designated as domestic systemically important banks (D-SIBs). Banks' activities are focused on traditional intermediation and are concentrated in the domestic market, with foreign operations mainly supporting Brazilian corporates overseas.

In evaluating the materiality of its findings, the RCAP Assessment Team focused on the five Brazilian D-SIBs (all of which are subject to the LCR requirements).

Regulatory system and model of supervision

The BCB was established as a federal agency in 1965, when Law 4595 came into effect. This law, passed in December 1964, also established the National Financial System, which comprises the CMN, the BCB and similar bodies for insurance and pensions. The CMN is the main regulatory authority of the financial market, responsible for establishing monetary, currency and credit policies, as well as prudential regulations for banks. Its members are the Minister of Finance, the Governor of the BCB and the Minister of Budget and Planning. The BCB has the prerogative of proposing regulations on banking issues to the CMN for approval. It is also responsible for ensuring banks' compliance with the regulations.

In addition to the supervision of minimum liquidity requirements, the BCB has monitored banks' liquidity positions daily since 2002, based on comprehensive supervisory data from banks and clearing houses. This includes reporting on individual securities and derivatives transactions, as well as many credit facilities and deposit accounts. This monitoring uses the Basel liquidity monitoring tools, as well as other metrics. One of the complementary metrics is a Liquidity Ratio, which is conceptually similar to the LCR and which has been used by the BCB to monitor the liquidity position of all banks since 2002. The BCB has also implemented some of the Basel monitoring tools for intraday liquidity management. The liquidity monitoring conducted by the BCB is explained in more detail in Annex 9. Annex 10 describes the BCB's implementation of the Basel principles for sound liquidity risk management.

1.2 Structure, enforceability and binding nature of prudential regulations

RCAP assessments only take into consideration documents that implement the Basel framework in a manner that provides a formal basis for regulators, banks and associated third parties to ensure compliance with the minimum requirements. The hierarchy of prudential regulations in Brazil is summarised in Table 1. Annex 2 lists the main regulations implementing the LCR in Brazil.

Structure of Brazilian laws and regulatory instruments — Table 1

Laws that empower the BCB as supervisor	Law 4595 of December 1964 established the CMN and the BCB as regulators and the BCB as the supervisory authority over the National Financial System. Resolution 4019 empowers the BCB to require financial institutions to adopt preventative prudential measures in situations deemed capable of impairing the soundness, stability or regular functioning of the National Financial System.
Legal instruments issued by the CMN and the BCB under the above law	Resolutions, proposed by the BCB and approved by the CMN, used for the main exercise of regulatory powers.
	Circulars and circular letters, issued by the BCB, used for a limited range of issues, generally establishing procedures and methodologies.

Source: BCB.

The Assessment Team concluded that laws, resolutions, circulars and circular letters could be considered binding in Brazil and thus eligible for the RCAP assessment. This analysis is set out in Annex 6.

1.3 Scope of the assessment

The Assessment Team considered the LCR requirements applicable to banks in Brazil as of 31 July 2017. The assessment had two dimensions:

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

In its assessment, the RCAP Assessment Team considered all binding documents that effectively implement the Basel LCR standards in Brazil. Importantly, the assessment did not evaluate the adequacy of liquidity or resilience of the banking system in Brazil or the supervisory effectiveness of the Brazilian authorities.

Assessment grading and methodology

As per the RCAP methodology approved by the Basel Committee, the outcome of the assessment was summarised using a four-grade scale, both at the level of each of the four key components of the Basel LCR framework and the overall assessment of compliance. The four grades are: compliant, largely compliant, materially non-compliant and non-compliant.[2]

The materiality of the deviations was assessed in terms of their current or, where applicable, potential future impact (or non-impact) on banks' LCRs. The quantification was, however, limited to the agreed sample of banks. Wherever relevant and feasible, the Assessment Team, together with the BCB,

[2] This four-grade scale is consistent with the approach used for assessing countries' compliance with the Basel Committee's *Core principles for effective banking supervision*. The actual definition of the four grades has been adjusted to take into account the different nature of the two exercises. In addition, components of the Basel framework that are not relevant to an individual jurisdiction may be assessed as not applicable. See www.bis.org/implementation/rcap_role.htm for further details.

attempted to quantify the impact based on data collected from the Brazilian sample banks (see Annex 8). In addition to the available data, the assessment relied on expert judgment as to whether the domestic regulations met the Basel framework in letter and in spirit. The non-quantifiable aspects of identified deviations were discussed and reviewed in the context of the prevailing regulatory practices and processes with the BCB.

Ultimately, the assignment of the assessment grades was guided by the collective expert judgment of the Assessment Team. In doing so, the Assessment Team relied on the general principle that the burden of proof rests with the assessed jurisdiction to show that a finding is not material or not potentially material. Section 2 describes the materiality analysis for each finding and it is summarised in Annex 8.

In a number of areas, the Brazilian rules go beyond the minimum Basel standards (see Annex 11). Although these elements provide for a more rigorous implementation of the Basel framework in some aspects, they have not been taken into account for the assessment of compliance, as per the agreed RCAP methodology.

1.4 Main findings

Overall, the Assessment Team finds the Brazilian LCR requirements to be compliant with the Basel standard.

Summary of assessment grades — Table 2

Key component of the Basel LCR framework	Grade
Overall grade	C
Definition of high-quality liquid assets (numerator)	C
Definition of net outflows (denominator)	C
Definition of net inflows (denominator)	C
LCR disclosure requirements	C

Compliance assessment scale (see also Section 1.3): C (compliant), LC (largely compliant), MNC (materially non-compliant) and NC (non-compliant).

Main findings by component

High-quality liquid assets (numerator)

The Brazilian rules on HQLA are compliant with the Basel standards. The HQLA of Brazilian banks are made up mostly of domestic currency-denominated Brazilian federal government bonds, which are less volatile than other traded instruments in Brazil. Foreign currency-denominated bonds are not a significant part of HQLA and Level 2 assets are almost zero. Brazilian banks also have limited operations abroad relative to their home operations.

The Assessment Team has one non-material finding on how the Basel standards were transposed into Brazilian regulations. This relates to the exclusion of certain elements of the calculation of the caps on Level 2 and Level 2B assets, which the BCB has omitted in order to simplify the domestic regulations.

Outflows (denominator)

The rules on the definition of net outflows in the Brazilian LCR regulations are compliant with the Basel standards.

Two differences were identified between the Brazilian regulations and the Basel standard, neither of which is material. The first relates to the absence of a separate run-off rate for foreign currency deposits. The second affects the calculation of the liquidity impact of market valuation changes for derivatives, where the BCB has implemented a different method to that specified in the Basel standard.

Inflows (denominator)

The Assessment Team considered the definition of inflows in the Brazilian LCR regulations to be compliant with the Basel standards.

Disclosure requirements

The Brazilian LCR disclosure requirements are compliant with the Basel standards. No deviations were identified. The Assessment Team made one observation on the implementation of qualitative disclosure requirements in Brazil.

2 Detailed assessment findings

The detailed findings of the Assessment Team on compliance of the Brazilian LCR with the Basel framework are described below, component by component. Sections 2.1 and 2.2 focus on findings that were assessed to deviate from the Basel minimum standards, with an assessment of their materiality. Section 2.3 lists some observations on the specific implementation practices in Brazil.

2.1 LCR

High-quality liquid assets (numerator)

Section grade	Compliant
Summary	Only one non-material finding was identified, reflecting the BCB's decision to simplify the Brazilian LCR regulations in light of limited use of Level 2 HQLA.
Basel paragraph number	48: cap on Level 2 assets
Reference in the domestic regulation	Circular 3749, Article 7, paragraphs 1 and 2
Finding	The Basel LCR standard limits the amount of Level 2 assets within HQLA. Level 2 assets can comprise up to 40% of HQLA and Level 2B can comprise up to 15% of HQLA (and must be included in the overall 40% cap on Level 2 assets). The amount allowed is determined after the unwinding of short-term securities financing transactions and collateral swap transactions maturing within 30 days that involve the exchange of HQLA. The Brazilian regulations include the caps on Level 2 and Level 2B assets, but do not require banks to take into account the unwinding of securities financing or collateral swap transactions when calculating the caps. This requirement was omitted to simplify the Brazilian framework, given the limited use of Level 2 HQLA by Brazilian banks. Only two of the five sample banks reported any Level 2 assets in HQLA at end-2016, in both cases comprising less than 0.5% of HQLA. The Assessment Team agreed with the view of the BCB that this simplification does not currently affect banks' LCRs and is unlikely to have a material impact in the short or medium term, given the very limited current use of Level 2 HQLA and the low probability of this changing significantly over the next few years.
Materiality	Not material

Outflows (denominator)

Section grade	Compliant
Summary	Two findings remain, on the outflows relating to foreign currency deposits and derivatives. The first difference reflects a decision by the BCB to simplify its regulations in light of restrictions on the use of foreign currency deposit accounts. In relation to the second, the BCB has developed an alternative method to that in the Basel standard, but the effect is not expected to be material for banks' LCRs.
Basel paragraph number	81: foreign currency deposits
Reference in the domestic regulation	Not implemented
Finding	The Basel standard expects supervisors to determine a higher run-off rate for retail deposits denominated in any currency other than the domestic currency in a jurisdiction in which the bank operates. The BCB has not introduced a separate run-off rate for foreign currency deposits in its regulations. Circular 3691 (Article 187) restricts who can place deposits in a foreign currency in Brazil; such accounts are not available to the general public. Holders of such accounts are limited to travel agencies, embassies, the Brazilian Post and Telegraph Company, international credit card administration companies, insurance companies and brokers, companies in the transportation or energy sector, foreigners temporarily in the country, Brazilians resident or domiciled abroad and agents authorised to operate on the exchange market. Only three of the five sample banks have deposits denominated in foreign currencies. At each bank, such deposits comprise less than 3% of total deposits. Given the small volume of such deposits, the BCB omitted the requirement in order to simplify the LCR regulations. The Assessment Team agrees with the BCB's view that this finding is not material. The restrictions on using such an account make it unlikely that the difference would become material in the future.
Materiality	Not material
Basel paragraph number	123: market valuation changes for derivatives
Reference in the domestic regulation	Circular 3749, Article 25 (item VII and paragraph 2)
Finding	The Basel standard requires the outflow relating to market valuation changes on derivatives to be calculated by identifying the largest absolute net 30-day collateral flow realised during the preceding 24 months. The Brazilian regulations use a different method to calculate outflows, assuming instead an outflow of 30% of the required margin at the calculation date. As the Basel standard does not provide a discretion to use alternative methods, the Assessment Team judged this to be a deviation from the Basel standards. The Brazilian approach is more correlated to the actual volume of derivatives held by a bank at the date of the calculation. Simulations by the BCB showed that the Brazilian method was generally more conservative between 2012 and mid-2016, but less conservative thereafter. Brazilian banks' use of derivatives is relatively limited. Banks typically use exchange-traded derivatives to hedge their own positions, rather than as a means of taking on risk. The share of LCR outflows represented by market valuation changes for derivatives for the sample banks was between 0.2% and 1.0% on an unweighted basis at end-2016 and between 1.0% and 6.7% on a weighted basis. The Assessment Team concluded that the difference in methods is not likely to have a material impact on banks' LCRs.
Materiality	Not material

Inflows (denominator)

Section grade	Compliant
Summary	The Brazilian regulations follow the Basel standards for determining inflows allowed in the denominator of the LCR.

2.2 LCR disclosure requirements

Section grade	Compliant
Summary	No deviations from the Basel LCR disclosure standard were identified.

2.3 Observations specific to the implementation practices in Brazil

The following observations highlight special features of the regulatory implementation of the Basel LCR standards in Brazil. 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.

Outflows (denominator)

Basel paragraph number	73 and 89: definition of retail and small business deposits
Reference in the domestic regulation	Circular 3749, Article 11
Observation	The Basel standard defines retail deposits as those placed by natural persons. Small business customers are captured in wholesale deposit categories, but those managed as retail customers can receive the same run-off rates as retail deposits. The Brazilian definition for retail deposits includes small private legal entities managed as retail clients as well as natural persons, reflecting the application of the same run-off rates to both types of deposits.
Basel paragraph number	93 and 97: operational deposits
Reference in the domestic regulation	Circular 3749, Article 15
Observation	The Basel LCR standard requires supervisors to approve banks' methodologies to identify operational deposits. In addition to allowing banks to determine their own methodologies, the BCB established a standardised approach that banks may use, which limits operational deposits to demand deposits. It calculates the operational deposit balance for each client as the lower of the current demand deposit balance and the average of the five smallest daily balances during the 30 days prior to the LCR calculation date.
Basel paragraph number	111 and 113: prime brokerage
Reference in the domestic regulation	Not implemented
Observation	The Brazilian LCR regulations have not implemented certain provisions in the Basel standard relating to prime brokerage, including requirements on the treatment of collateral lent to customers to effect short positions as a form of secured funding. Prime brokerage operations are not relevant for the Brazilian or foreign operations of Brazilian banks. Therefore, for the sake of simplicity in the LCR regulation, the BCB has not implemented these requirements.

Inflows (denominator)

Basel paragraph number	155: securities maturing within 30 days
Reference in the domestic regulation	Circular 3749, Article 35
Observation	Under the Basel LCR standard, banks may recognise inflows from securities maturing within 30 days, including inflows from the release of balances held in segregated accounts linked to customer trading activity, providing such balances are maintained in HQLA. There are no such segregated accounts in Brazil, so the Brazilian LCR regulation does not include this specific requirement. To the extent that Brazilian banks maintain such customer accounts in other jurisdictions, not considering inflows from these segregated accounts would be stricter than the requirements in the Basel standard.

Annexes

Annex 1: RCAP Assessment Team and Review Team

Assessment Team Leader

Mr Vasily Pozdyshev	Central Bank of the Russian Federation

Assessment Team members

Mr Philippe Billard	Prudential Supervision and Resolution Authority, France
Mr Jermy Prenio	Financial Stability Institute

Supporting members

Ms Elena Dzigoeva	Central Bank of the Russian Federation
Ms Louise Eggett	Basel Committee Secretariat
Mr Olivier Prato	Basel Committee Secretariat

Review Team members

Mr Toshio Tsuiki	Basel Committee Secretariat
Mr Defri Andri	Indonesia Financial Services Authority
Mr Alberto Munguia	Comisión Nacional Bancaria y de Valores, Mexico
Ms Delia Novello	Central Bank of Argentina

Annex 2: Local regulations issued by the Brazilian authorities to implement the LCR

Overview of issuance dates of important Brazilian liquidity regulations — Table A.1

Domestic regulations	Type, version and date
Resolution 4401	Issued February 2015, effective October 2015
Circular 3749	Issued March 2015, effective October 2015. Revised by Circular 3,841 in July 2017.

Source: BCB.

Hierarchy of Brazilian laws and regulatory instruments — Table A.2

Level of rules (in legal terms)	Description
Laws	Issued by the National Congress of Brazil
Resolutions	Issued by the CMN
Circulars	Issued by the BCB
Circular letters	Issued by the BCB's Heads of Department

Source: Basel Committee, *RCAP Assessment of Basel III regulations – Brazil*, December 2013, www.bis.org/bcbs/implementation/l2_br.pdf.

Annex 3: List of Basel LCR standards used for the assessment

Basel documents in scope of the assessment

- *The Liquidity Coverage Ratio* (January 2013), including the *Frequently asked questions on Basel III's January 2013 Liquidity Coverage Ratio* (April 2014)
- *The Liquidity Coverage Ratio and restricted-use committed liquidity facilities* (January 2014)
- *Liquidity Coverage Ratio disclosure standards* (January 2014)

Basel documents reviewed for information purposes

- *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools* (January 2013), part on liquidity risk monitoring tools only
- *Monitoring tools for intraday liquidity management* (April 2013)
- *Principles for sound liquidity risk management and supervision* (September 2008)

Annex 4: Details of the RCAP assessment process

Off-site evaluation

- Completion of a self-assessment questionnaire by the Brazilian authorities
- Evaluation of the self-assessment by the RCAP Assessment Team
- Independent comparison and evaluation of the domestic regulations issued by the Brazilian authorities with corresponding Basel standards issued by the Basel committee
- Identification of observations
- Refinement of the list of observations based on clarifications provided by the Brazilian authorities
- Assessment of materiality of deviations for all quantifiable deviations based on data and non-quantifiable deviations based on expert judgment
- List of observations sent to the Brazilian authorities

On-site assessment

- Discussion of individual observations with the Brazilian authorities
- Meeting with selected Brazilian banks
- Discussion with the Brazilian authorities and revision of findings to reflect additional information received
- Assignment of component grades and overall grade
- Submission of the detailed findings and grades to the Brazilian authorities
- Receipt of comments on the detailed findings from the Brazilian authorities

Review and finalisation of the RCAP report

- Review of comments by the RCAP Assessment Team, finalisation of the draft report and sending to the Brazilian authorities for comments
- Review of the Brazilian authorities' comments by the RCAP Assessment Team
- Review of the draft report by the RCAP Review Team
- Report of findings to the SIG by the Team Leader
- Review of the draft report by the Peer Review Board
- Approval of the report by the Basel Committee and publication

Annex 5: List of rectifications by the Brazilian authorities

List of rectifications by the Brazilian authorities — Table A.3

Basel paragraph	Reference in Brazilian regulations	Description of the rectification
24–25	Circular 3749, Article 4	The BCB added "low volatility" to the defining characteristics of HQLA.
36 and 171	Circular 3749, Article 4-A	The Brazilian regulations now limit the recognition in HQLA of assets of subsidiaries that cannot be transferred to other entities in the conglomerate. This is in addition to the operational requirements on HQLA, which already applied when calculating the LCR at both the legal entity and the consolidated level.
50(e)	Circular 3749, Articles 4 and 6	The inclusion in Level 1 HQLA of the securities of foreign sovereigns with a non-zero risk weight is now limited to the amount of a bank's stressed net outflows in the respective currency stemming from the bank's operations in the jurisdiction where the bank's liquidity risk is being taken. Previously, such assets were allowed in HQLA without any limit.
75	Circular 3749, Article 12	The BCB amended the definition of stable deposits to require more than one kind of relationship where an account is not a transactional account, in addition to a requirement for the customer to have a continuous relationship with the bank of at least three years. This change will take effect on 1 January 2018, to ease the operational impact of the amendment on affected banks.
75–78	Circular 3749, Articles 13 and 16	The run-off rate for stable deposits was changed from 3% to 5%. This reflects the fact that the Brazilian deposit insurance scheme generally does not provide access to insured deposits within seven business days.
118	Circular 3749, Article 25	The Brazilian LCR regulation now requires banks to take into account rehypothecation rights in calculating the impact of a rating downgrade on a bank's liquidity needs. This had previously been omitted as rehypothecation is not feasible in Brazil (though it may be in other jurisdictions in which banks operate).
134, 135 and 140	Circular 3749, Article 27	The BCB introduced a 100% outflow rate for cash outflows expected in the next 30 days relating to non-contractual contingent funding obligations.
136	Circular 3749, Article 27	The BCB introduced a 1% outflow rate on judicial deposits. These deposits are placed with a bank (usually a public or state-owned bank) during the course of a court case, as ordered by a judge. They may not be released until the conclusion of the case, whereupon the judge orders the funds to be made available to one of the parties.
137 and 165	Circular 3749, Article 27	The BCB introduced a 100% outflow rate for cash outflows expected in the next 30 days due to the potential provision of financial support to unconsolidated entities.
153	Circular 3749, Article 38	The BCB amended the treatment of inflows linked to post-payment instruments (credit cards) to exclude from this inflow category, receiving a 100% factor, any repayment of previous credit operations that must receive a 50% inflow rate according to the Basel standard. This change will take effect on 1 January 2018, to allow banks time to make the necessary operational adjustments.
163	Circular 3749, Article 45-D	Banks must now notify the BCB immediately if they expect not to comply with the minimum LCR requirement of 100% (in addition to the previous notification requirement when they fell below 100%).
169–170	Circular 3749, Article 45-C	The Brazilian LCR regulation now requires banks with operations in other Basel Committee member countries to use parameters adopted in those host jurisdiction with respect to retail and small business deposits.

Source: BCB.

Annex 6: Assessment of the bindingness of regulatory documents

Table A.4 summarises the assessment of the seven criteria used by the Assessment Team to determine the eligibility of Brazilian regulatory documents. The Assessment Team concluded that the regulatory instruments issued and used by the BCB as set out in Annex 2 are eligible for the RCAP assessment.

Criteria for assessing bindingness — Table A.4

Criterion	Assessment
(1) The instruments used are part of a well defined, clear and transparent hierarchy of legal and regulatory framework.	Yes. Legal documents establishing the financial regulatory framework in Brazil follow a clear and transparent hierarchy, with well defined competences and powers. Law 4595 of December 31, 1964, established the CMN and the BCB as regulators and the BCB as the supervisory authority over the National Financial System. The CMN comprises the Minister of Finance, the Minister of Budget and Planning and the Governor of the BCB. The regulatory powers vested in the CMN are exercised in the form of resolutions and extend over a range of issues including prudential regulation. The BCB has the prerogative of proposing regulation on banking issues for the CMN's approval. The regulatory powers of the BCB are exercised in the form of circulars and cover a limited range of issues, generally establishing procedures and methodologies. Regulatory documents in the form of a resolution or a circular are equally enforceable and legally binding, and non-compliance with either can lead to supervisory actions by the BCB. The LCR framework in Brazil was implemented through regulation issued by the CMN and the BCB. Resolution 4401 of February 27, 2015 provides for the minimum limits of the LCR and the conditions for compliance, while Circular 3749 of March 5, 2015 establishes the methodology of calculation of the LCR and provides for the disclosure of related information.
(2) They are public and easily accessible.	Yes. Regulations issued by the CMN and by the BCB are first published in the National Gazette. All resolutions issued by the CMN and circulars issued by the BCB are available on the BCB's website and thus easily accessible by the general public (www.bcb.gov.br/en/#!/n/NORMS). They may be searched by regulation number, keywords or date of publication. The regulations are available both in their original wording and in their current version after reflecting any amendments made after the initial publication.
(3) They are properly communicated and viewed as binding by banks as well as by supervisors.	Yes. Resolutions issued by the CMN and circulars issued by the BCB are originally published in the National Gazette and posted on the BCB's website. These regulations are legally binding and viewed as such by banks and supervisors.
(4) They would generally be expected to be legally upheld if challenged and are supported by precedent.	Yes. All regulations issued by the CMN and by the BCB are embedded in regulatory powers conferred by Law 4595 of 1964. All the regulatory provisions contained in a resolution or a circular are enforceable and expected to be legally upheld if challenged in court.
(5) The consequences of failure to comply are properly understood and carry the same practical effect as for the primary law or regulation.	Yes. Law 4595 of 1964 establishes the BCB as the supervisory authority over the National Financial System with powers to ensure compliance with the resolutions issued by the CMN and circulars issued by the BCB, and to apply the penalties specified in those regulations. The consequences of failure to comply with regulations issued by the CMN and the BCB are properly understood by the supervised entities.

	The BCB is also empowered by Resolution 4019 to impose preventive prudential measures on a financial institution when encountering any situation that is deemed capable of impairing the soundness, the stability and the regular functioning of the National Financial System. These measures include the adoption by the financial institution of additional controls and operational procedures, more restrictive operational limits, reduction in the degree of risk exposures, restoration of liquidity levels and limitations on the distribution of earnings and the transfer of assets.
(6) The regulatory provisions are expressed in clear language that complies with the Basel provisions in both substance and spirit.	Yes. All regulations are written in clear language, following the provisions contained in Complementary Law 95 of 1998, which defines the principles and rules for setting regulatory standards in Brazil. Regulations issued by the CMN and the BCB also follow the specific format and rules defined in the Manual for Writing Documents established and adopted by the BCB. Ever since Brazil was admitted to the Basel Committee on Banking Supervision, all Brazilian prudential regulations are elaborated in compliance with the Basel provisions in both substance and spirit.
(7) The substance of the instrument is expected to remain in force for the foreseeable future.	Yes. Regulations remain in force until revoked or amended through the appropriate regulatory document issued by the CMN or the BCB. As a result, they are expected to remain in force for the foreseeable future.

Annex 7: Key liquidity indicators of the Brazilian banking system

Overview of Brazilian banking sector liquidity as of end-2016

Table A.5

Size of banking sector (BRL millions)		
Total assets of all banks operating in Brazil (including off-balance sheet assets)	7,894,930	
Total assets of all locally incorporated internationally active banks	5,677,577	
Total assets of locally incorporated banks to which liquidity standards under the Basel framework are applied	5,977,661	
Number of banks		
Number of banks operating in Brazil (excluding local representative offices)	133	
Number of global systemically important banks (G-SIBs)	0	
Number of D-SIBs	5	
Number of banks which are internationally active	6	
Number of banks required to implement Basel III liquidity standards	8	
Number of banks required to implement domestic liquidity standards	0	
Breakdown of LCR for the five RCAP sample banks (BRL millions)	**Unweighted**	**Weighted**
Total HQLA	769,808	758,706
Level 1 HQLA	767,927	757,766
Level 2A HQLA	0	0
Level 2B HQLA	1,881	941
ALA HQLA	-	-
Total cash outflows	3,870,314	591,858
Retail and small business stable deposits	837,301	25,157
Retail and small business less stable deposits	508,635	65,949
Wholesale unsecured operational deposits	35,456	596
Wholesale unsecured non-operational funding	520,587	235,685
Secured funding	913,176	21,019
Debt issued instruments (including credit and liquidity facilities)	483,163	39,797
Other contractual outflows	277,291	190,834
Contingent funding obligations	294,705	12,822
Total cash inflows	1,207,015	252,434
Financial institutions	79,985	79,985
Retail and small business customers, non-financial corporates, central banks and other entities	132,944	75,040
Secured lending and collateral swaps	874,622	66
Other cash inflows	119,465	97,343
LCR		224%

Note: indicators presented in this table do not reflect the amendments made during the course of the RCAP assessment (see Annex 5).

Source: BCB.

Annex 8: Materiality assessment

The outcome of the RCAP assessment is based on the materiality of the findings. As a general principle, and mirroring the RCAP assessment methodology for the risk-based capital standards, a distinction is made between quantifiable and non-quantifiable findings. The RCAP-LCR materiality assessment is based on both quantitative and qualitative information with an overlay of expert judgment. Where possible, teams also take into account the dynamic nature of liquidity risks and seek to address the materiality of any deviations at different points in time.

In line with underlying RCAP principles, the materiality assessment for quantifiable gaps is based on a determination of the cumulative impact of the identified deviations on the reported LCRs of banks in the RCAP sample. For non-quantifiable gaps, the Assessment Team relies on expert judgment only. Following this approach, the findings are classified as "not material", "potentially material" or "material". The following table summarises the deviations according to their materiality.

Number of deviations by component — Table A.6

Component	Not material	Potentially material	Material
HQLA (numerator)	1	0	0
Outflows (denominator)	2	0	0
Inflows (denominator)	0	0	0
LCR disclosure requirements	0	0	0

RCAP sample of banks

The following Brazilian banks were selected for testing the materiality of quantifiable deviations. Together these banks represent over 70% of Brazilian banking system assets and over 97% of the assets of internationally active banks in the Brazilian banking system.

RCAP sample banks — Table A.7

Banking group	Share of banks' assets in the total assets of the Brazilian banking system (per cent)
Caixa Econômica Federal	16.91
Banco Itaú	16.82
Banco do Brasil	14.40
Banco Bradesco	14.23
Banco Santander	8.00
Total	70.36

Source: BCB. 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 9: Brazil's implementation of the liquidity monitoring tools

In addition to the minimum standard for the LCR, the Basel liquidity framework outlines the metrics to be used to monitor liquidity risks ("the monitoring tools"). The monitoring tools capture specific information related to a bank's cash flows, balance sheet structure, available unencumbered collateral and certain market indicators. The monitoring tools supplement the LCR standard and are a cornerstone for supervisors in assessing the liquidity risk of a bank.

In Brazil, liquidity risk supervision is supported by three integrated sources of information: bank-held information assessed by the on-site supervisory team; data provided from trade repositories/central securities depositories; and information reported by the financial institutions themselves.

Brazilian regulation requires mandatory registration of all financial instruments issued or held by financial institutions, including term deposits above BRL 5,000 (USD 1,600), derivatives, foreign exchange transactions above USD 3,000 and credit operations above BRL 200 (65 USD).

Banks are also required to report to the BCB data on savings and demand deposits on a daily basis with a three-business day lag, as well as produce monthly reports (Liquidity Risk, Market Risk and LCR-Daily info, including off-balance sheet data).

Domestic information is registered at the transaction level on a daily basis. This particular characteristic of Brazilian Financial Market Infrastructures (FMIs) allows BCB to develop precise and timely liquidity risk monitoring tools, which are integrated into the Market and Liquidity Risks Monitoring System (SMM). The SMM comprehends a wide range of standardised and tailor-made tools to assess liquidity risk.

The Basel III Monitoring tools are considered in the Brazilian liquidity risk monitoring framework as described below.

Contractual maturity mismatch

Granular data permit regular supervisory assessment of any contractual maturity mismatches at the transaction level, and in any relevant time bands.

Short-term analysis includes stress scenarios such as the inability to roll over existing liabilities, flight to quality behaviour and contagion effects on peer groups due to a triggered event (bank default or economic sector crisis).

Long-term analysis is guided by the Structural Liquidity Ratio, a NSFR proxy calculated automatically by the SMM.

Concentration of funding

"Funding Profile" is one of the SMM's relevant outputs. It provides detailed information on a financial institution's funding portfolio, such as the type of instrument, counterparties, time buckets and economic group/sector. Based on that data, supervisors assess a financial institution's funding behaviour, including concentration issues.

Available unencumbered assets

The SMM provides granular information on the total domestic asset portfolios reported by financial institutions on their close-of-business day positions. Assets from overseas portfolios are reported by financial institutions on a monthly basis. Information regarding non-HQLA unencumbered assets available is also used to assess short-term liquidity stress scenarios. In fact, since 2002, the BCB has calculated a 30-day time horizon Liquidity Ratio (LR) similar to the LCR, where some non-HQLA unencumbered assets are also included in the metric.

LCR by significant currency

Banks are required to submit a LCR report (Form 2160) detailing their liquidity positions in each significant currency and jurisdiction in which they operate. The BCB monitors the LCR by significant currency based on this information. A currency is considered "significant" if the aggregate cash outflows denominated in that currency amount to more than 5% of the total cash outflows of the bank.

Market-related monitoring tools

The SMM estimates the market-related impact on liquidity risk by re-pricing the portfolio of a financial institution registered in a domestic TR/CSD. The Liquidity Ratio (LR) incorporates the worst 30-day mark-to-market loss for each financial institution with a 99% confidence level.

Supervision also addresses potential market-related liquidity issues (idiosyncratic and systemic issues) with the support of the following SMM facilities:

- the Sensitivity Matrix, a heat map graphical tool, highlights the impact on liquidity associated with a wide range of high and low scenarios for the USD/BRL exchange rate and BRL interest rates based on a bank's daily exposures. The SMM designed two applications: one to estimate a financial institution's individual exposure and an aggregate one, highlighting the financial institutions that exceed a certain threshold that signals a large liquidity impact; and
- the Daily Settlement and Margin Call Report estimates the impact on liquidity due to margin requirements and the settlement of exchange traded derivatives.

Basel monitoring tools for intraday liquidity management

The Basel Committee issued a standard on monitoring tools for intraday liquidity management in April 2013.

Some tools are used by the BCB to monitor the banks' intraday liquidity risk and their ability to meet payment and settlement obligations on a timely basis. In that regard, the BCB monitors various liquidity indicators such as daily maximum intraday liquidity usage, the intraday liquidity available at the start of the business day and the total intraday payments effected by banks. In addition, the BCB receives all the relevant information related to a bank's time-specific obligations on a daily basis.

Regarding banks that provide correspondent banking services, the BCB monitors their activities and collects all the information needed to assess the proportion of a correspondent bank's payment flows arising from its correspondent banking services.

Furthermore, the BCB is the payments system overseer and manager of the main settlement systems for funds (STR, Reserves Transfer System) and federal government securities (SELIC, Special System for Settlement and Custody). In that role, the BCB collects and monitors in real time the intraday positions in domestic currency of the financial institutions that are direct participants in those systems. While acting as the banking supervisor, the BCB uses all the information it collects for supervisory and monitoring purposes and performs specific on-site inspections.

Annex 10: Brazil's implementation of the *Principles for sound liquidity risk management and supervision*

This annex outlines the implementation of the Basel Committee's *Principles for sound liquidity risk management and supervision* in the Brazilian liquidity framework. The principles are not part of the formal RCAP-LCR assessment and no grade is assigned. The description is for information only.

The Sound Principles were implemented in Brazil through Resolution 4090, of May 24, 2012, issued by the CMN. This resolution requires all the financial institutions, along with the other institutions licensed by the BCB, to establish a liquidity risk management structure consistent with the Sound Principles. This regulation was amended by Resolution 4557, of February 23, 2017, which provides for the capital and risk management structures that all the financial institutions, along with the other institutions licensed by the BCB, must have in place. Resolution 4557 also includes specific provisions related to liquidity risk management that incorporate the Sound Principles and enhance those embedded initially in Resolution 4090 of 2012. The provisions of Resolution 4557 of 2017 became effective in August 2017 for internationally active and systemically important banks and will become effective in February 2018 for the remaining financial institutions.[3]

The following sections present the main provisions of the aforementioned regulations regarding liquidity risk management.

Fundamental principle for the management and supervision of liquidity risk – Principle 1

Resolution 4557 of 2017 states that institutions must establish a structure for continuous and integrated risk management commensurate with their business model, the nature of their operations and the complexity of their products, services, activities and processes.

This structure must include policies, strategies and procedures ensuring proper identification, measurement, evaluation, monitoring, reporting, control and mitigation of liquidity risk. The institutions' risk management structure must also guarantee that an adequate stock of liquid assets is available to be promptly converted into cash under stressed circumstances and that its funding profile is adequate to the liquidity risk arising from its assets and off-balance sheet exposures, among other requirements such as certifying that its funding sources are properly diversified.

The BCB monitors the institutions' liquidity positions daily and verifies compliance with regulatory requirements by means of off-site monitoring and on-site inspections, taking the necessary actions whenever any deficiency is identified.

Governance of liquidity risk management – Principles 2–4

According to Chapter II of Resolution 4557, institutions must prepare a Risk Appetite Statement (RAS) documenting their risk appetite levels. The RAS must reflect the types and levels of risks, including liquidity risk, that the institution is willing to assume, its ability to manage risks in an effective and prudent manner, its strategic goals, the competitive conditions and the regulatory framework in which it operates. The risk appetite levels should be defined and revised by the institution's board along with the risk committee, senior management and Chief Risk Officer (CRO), who are jointly responsible for ensuring the institution's compliance with the risk appetite levels defined in the RAS.

Consistent with Principle 3, Chapter V of Resolution 4557 provides for the risk management governance and defines the responsibilities of the board, the senior management, the risk committee and the CRO. The CRO's responsibilities include the implementation of policies, processes, reports, systems

[3] Meanwhile, the provisions contained in Resolution 4090 of May 24, 2012, remain in force.

and models for the purposes of risk management, including liquidity risk management, that must be consistent with the institution's RAS and strategic goals. It is the board and senior management's responsibility to ensure that the institution maintains adequate levels of capital and liquidity.

In line with the provisions of Resolution 4557, the institution's risk management structure must provide timely reports to senior management, the risk committee and to the board on its risk exposure, including liquidity risk. These reports must include, among other information, the aggregate risk exposure and its main determinants, compliance of risk management practices with RAS and with risk management policies and procedures, actions to mitigate risks and the assessment of their effectiveness. The institution's risk management structure must also have information systems to report the size, composition and quality of its liquidity risk exposure, which must reflect the risk profile and liquidity needs of the institution.

For the purpose of risk management, the board is responsible for approving and reviewing, at least annually, the policies, strategies and limits governing the risks assumed in the course of the institution's business practices, limiting senior management to conduct its risk-taking activities in compliance with those policies and strategies approved by the board.

As part of their risk management framework, Resolution 4557 requires institutions to have adequate policies, procedures and controls in place to ensure prior identification of the risks inherent to new products and services, material modifications in existing products and services, and material changes in processes. Therefore, liquidity risks related to new products and services or related to significant modifications in existing products and services must be identified ex ante by the institutions. Consequently, institutions must assess the adequacy of the risk-taking incentives related to modifying existing products and services, as well as creating new ones, vis-à-vis the liquidity risk exposure such initiatives may create.

Measurement and management of liquidity risk – Principles 5–12

Regulatory requirements for the measurement and management of liquidity risk are defined in Sections I and VII of Chapter III of Resolution 4557.

According to the aforementioned regulation, institutions must implement adequate policies, strategies and procedures to ensure the proper identification, measurement, evaluation, monitoring, reporting, control and mitigation of the liquidity risk on different time horizons, including intraday, under normal circumstances and in periods of stress, comprising a daily assessment of operations maturing in less than 90 days;

For the purposes of liquidity risk management, Resolution 4557 requires institutions to have specific policies, strategies and procedures in place to ensure an adequate supply of liquid assets to be promptly converted into cash under stressed circumstances, and a funding profile adequately diversified and commensurate with the liquidity risk arising from the institution's assets and off-balance sheet exposures.

In addition, liquidity risk must be considered separately in each country the institution operates in and in each currency it is exposed to, taking into account the existence of any restrictions to the transfer of funds and to the convertibility of currencies, such as those caused by operational issues or decisions imposed by any given country.

Liquidity risk management must consider all the transactions carried out in financial and capital markets, as well as contingent or unexpected exposures, such as those arising from settlement services, the provision of endorsements and guarantees, and undrawn credit lines.

In line with Section II of Chapter III of Resolution 4557, the institution's risk management structure must include a stress-testing programme aimed mainly at identifying the institution's potential vulnerabilities. Within the stress-testing programme, potential vulnerabilities related to liquidity risks in particular should also be considered. Stress test outcomes must be considered by each institution for the purposes of risk and capital management, including the revision of the institution's risk appetite level, policies, strategies and limits in place, and in the development of contingency plans.[4]

Public disclosure – Principle 13

According to Circular 3678 of October 31, 2013, institutions must disclose qualitative information related to their risk management structure.

In addition, Resolution 4557 requires institutions to disclose, at least annually, their liquidity risk structure in a report accessible to the public, as well as provide a summary of the institution's risk and capital management practices along with the publication of its financial statements. The board of directors or senior management, depending on the case, is responsible for the information disclosed.

As for institutions subject to the LCR, quantitative and qualitative information related to that liquidity risk indicator must also be disclosed.

The role of supervisors – Principles 14–17

The BCB's supervision is risk-based and tailored to each type of institution, taking into account the quality of its management, the reliability of its internal controls, and the institution's size, complexity and risk profile. As part of the supervisory process, a comprehensive assessment of the institution's liquidity risk management framework and its liquidity positions is performed. Within this supervisory process, an integrated qualitative and quantitative evaluation of the institution's risk and internal controls is conducted, including an assessments of the institution's liquidity risk. In addition, banks subject to ICAAP should also consider the liquidity risk in their assessment process. The supervisory process is a continuous cycle that combines off-site monitoring with on-site inspections.

During its on-site assessments, the BCB evaluates both the institution's risk profile and its risk management framework. When evaluating the risk profile, on-site teams pay special attention to both the size and composition of the bank's liquid assets. Furthermore, the marketability of those assets, the bank's funding profile and off-balance exposures are also considered. This analysis includes data from off-site supervision as well as from the institution's internal sources. Regarding the institution's risk management framework, the BCB's on-site supervision teams evaluate the institution's internal policies, risk appetite, limits, metrics, management reports, human resources weaknesses, internal processes and controls, as well as internal audit reports, in order to identify potential risks. Moreover, each bank operating in Brazil is submitted to a regular comprehensive risk and internal controls assessment by the BCB. The frequency of these assessments depends on the institution's size, complexity and risk profile, including liquidity risk, being performed on a yearly basis for the largest institutions and every three years for smaller institutions. With respect to off-site supervision, institutions are required to submit to the BCB standardised liquidity risk information, which is used, along with information obtained directly from market participants such as clearing houses, to monitor their liquidity positions and risks. In addition, the BCB monitors market-wide information such as government debt yields, equity indices, foreign exchange rates and interbank rates. This information feeds the Market and Liquidity Risks Monitoring System (SMM) allowing the BCB to identify potential liquidity problems faced by the market as a whole or by specific banks and to take timely action to address those scenarios.

Resolution 4019 of September 29, 2011 allows the BCB to intervene and, as appropriate, require a bank to address deficiencies in its liquidity risk management, internal processes or liquidity positions, by, for example, selling assets or limiting dividend payments, among other possible actions.

[4] According to Resolution 4557, the risk management structure should specify a liquidity contingency plan. This is in conformity with Principle 11, which requires banks to have a formal contingency funding plan.

Banking supervision and oversight of the payment and settlement systems that operate in Brazil are an integral part of the BCB's responsibilities. In this regard, there is intensive cooperation between the teams responsible for those activities within the BCB. Regarding other sources of cooperation, one of the BCB's strategic goals for the upcoming years is to strengthen its relationship with its counterparts abroad and enhance its international presence. As a result, the BCB frequently collaborates with other national supervisors and central banks, through both ad hoc activities and international projects involving technical cooperation.

Annex 11: Areas where Brazilian LCR rules are stricter than the Basel standards

In some instances, the Brazilian authorities have adopted a stricter approach than the minimum standards prescribed by the Basel Committee. These are listed below for information. It should be noted that the stricter rules have not been taken into account as mitigants for the overall assessment of compliance.

- Although the BCB's definition of a small business customer is in line with paragraph 231 of the Basel II framework, in order for a counterparty to qualify as a small business customer for the purposes of the LCR, its annual gross revenue must also be limited to BRL 15 million (around EUR 4 million).
- The Brazilian LCR regulations do not consider rehypothecated securities in HQLA since rehypothecation is not allowed in Brazil. Brazilian banks, however, may operate in jurisdictions where rehypothecation is allowed. In these cases, rehypothecated securities, where they exist, are still not eligible for inclusion in HQLA.
- The Basel standard permits central bank reserves to be included in Level 1 HQLA, to the extent that the central bank policies allow them to be drawn down in times of stress. Brazilian banks may draw down all central bank reserves, including, but not only, in times of stress, with only a limited financial penalty for not fulfilling a reserve requirement at the end of the day (and without any penalty for intraday use). Notwithstanding this fact, the BCB's implementation limited the amount of central bank reserves that can be included in the stock of HQLA to ensure proper diversification of HQLA. The BCB's implementation is thus stricter than the Basel standard.

Annex 12: Implementation of LCR elements subject to prudential judgment or discretion in Brazil

The following tables provide information on elements of LCR implementation that are subject to prudential judgment and national discretion. The information provided helps the Basel Committee to identify implementation issues where clarifications and additional frequently asked questions could improve the quality and consistency of implementation. It should also inform the preliminary design of any peer comparison of consistency across the membership that the Committee may decide to conduct, in similar fashion to the studies on variation in risk-weighted assets for the risk-based capital standards.

Elements requiring judgment (non-exhaustive list) Table A.8

Basel paragraph	Description	Implementation by the BCB
24f	Treatment of the concept of "large, deep and active markets"	The concept of "large, deep and active markets" is included in the definition of HQLA (Circular 3749, Article 4). The BCB considers that an asset is being traded in a "large, deep and active markets" if the asset is traded in an active and significant market, characterised by low bid-ask spreads, high trading volume and a large number of participants.
50	Treatment of the concept of "reliable source of liquidity"	The concept of "reliable source of liquidity" is included in the definition of HQLA (Circular 3749, Article 4). Assets that remain liquid during periods of stress and are, historically, highly sought assets during systemic crises are considered reliable sources of liquidity. Maximum price declines, limited to the levels prescribed by the Basel standard, were established as a requirement for Level 2 assets.
52	Treatment of the concept of "relevant period of significant liquidity stress"	The Basel LCR standard prescribes that Level 2 assets must not have a price decline or a haircut increase exceeding specific levels over a 30-day period during a "relevant period of significant liquidity stress". Likewise, the BCB requires that assets must be deemed as a source of liquidity in markets even during periods of stress, characterised by the fact that their prices must not have declined, at levels greater than those prescribed by the Basel LCR standard, over any 30-day period since issuance or, at least, in the last five years of trading. Thus, a period of stress is defined with respect to the most severe 30-day price decline in the life of the instrument (or, at least, in the last five years of trading).
74–84	"Stable" and "less stable" retail deposits	The BCB has defined retail deposits as "stable" or "less stable" based on the LCR Standard. Stable funding is defined as those liabilities denominated in the currency of the country where they were raised, insured by the Credit Fund Guarantor (FGC), or by the Cooperative Credit Fund Guarantor (FGCoop); or by another effective deposit insurance scheme; and arising from customers with a strong relationship with the institution, so as to make withdrawals highly unlikely, characterised by compliance with at least one of the following criteria: - If the counterparty is a natural person: • the customer has maintained a checking or savings account at the institution for at least the past three years and uses at least another product or service of the institution that is not the checking or savings account; or • the customer receives regular benefits through the institution, such as salaries or pensions. - If the counterparty is a small business customer: • the customer has maintained a checking or savings account at the institution for at least the past three years and uses at least another product or service of the institution that is not the checking or savings account; or • the customer performs his cash management activities at the institution.

		The balances that exceed the deposit insurance coverage limit are considered as less stable deposits. Circular 3749, articles 12 and 13, provides for “stable” and “less stable” retail deposits.
83 (retail), 86 (wholesale)	Treatment of the possibility of early withdrawal of funding with maturity above 30 days	Circular 3749, article 13, determines that retail deposits with a residual maturity greater than 30 days, without any legal, regulatory or contractual impediments to early withdrawal, or without a substantial penalty charge in case of early withdrawal, are subject to retail deposits run-offs. The penalty charge is considered substantial when the loss in the deposit’s value because of the early withdrawal is greater than the real yield of the operation (ie if the early withdrawal, in which a penalty applies, results in a return to the deposit holder lower than the accumulated inflation in the period). Retail run-off rates also apply to deposits maturing beyond 30 days, if daily liquidity is granted to the client. Additionally, even if there are legal, regulatory or contractual impediments or significant penalty charges in case of early withdrawal, the total balance of deposits with residual maturity greater than 30 days must be included in the retail funding cash outflows if the institution allows, not exceptionally, early withdrawals without imposing significant penalty charges. As for wholesale funding, Circular 3749, Article 14, determines that the balances with a residual maturity greater than 30 days should be considered cash outflows if daily liquidity or a withdrawal option within the next 30 days is granted to the client, provided that: - For funding carrying a withdrawal option exercisable at the institution’s discretion, reputational factors that may limit the institution’s ability to deny the exercise of the option must be taken into account; - If market participants expect to withdraw the funding before its maturity, the institution must consider this possibility when calculating its LCR.
90–91	Definition of small business customers	In order to be considered a small business customer for the purposes of the LCR, the following must be observed: - the counterparty must be managed by the institution as a retail client; - the bank must have less than BRL 3 million in current exposures and funding with the counterparty, calculated separately, including debits and credits arising from derivative transactions; and - the counterparty must have yearly gross revenues not exceeding BRL 15 million.
94–103	Deposits subject to “operational” relationships	According to Circular 3749, operational deposits are those arising from resources held at the bank by its wholesale customers for clearing, custody, or cash management services, on the condition that such services are provided by the bank itself and that: - the customer is reliant on the bank to perform the aforementioned services; and - the services are provided under a specific contract, subject to a minimum 30-day notice period prior to its termination, or with a penalty clause in case termination occurs in the next 30 days. Circular 3749, Article 15, describes operational deposits in detail.
131	Definition of other financial institutions and other legal entities	The Basel LCR standard requires a 100% outflow rate for committed liquidity facilities to “other financial institutions” and committed credit and liquidity facilities to “other legal entities”. These terms are not employed in Circular 3749. Instead, the BCB defines specifically the entities subject to other run-off rates and assigns a 100% run-off rate for credit and liquidity facilities committed to all entities not mentioned. The defined counterparties are retail customers, non-financial corporates, PSEs, governments, central banks, multilateral development organisations, financial institutions, security brokerage companies, security distribution companies, consortium managers, insurers, clearing houses and fiduciary companies (Circular 3749, Article 26).

Source: BCB.

Elements left to national discretion (non-exhaustive list)

Table A.9

Basel paragraph	Description	Implementation by the BCB
5	Parameters with elements of national discretion should be transparent to provide clarity both within the jurisdiction and internationally.	The elements of national discretion are clearly outlined in Brazil's LCR regulation, which is available at the BCB's website.
8	Use of phase-in options	The BCB's phase-in arrangements to implement the LCR in Brazil are aligned with the Basel Committee's proposal. The minimum LCR requirement is being phased in between 2015 and 2019, starting at 60% as of 1 October 2015 and increasing by 10 percentage points annually to reach 100% on 1 January 2019.
11	Supervisory guidance on HQLA usability; implementation schedule for countries receiving financial support for macroeconomic and structural reform purposes	Banks may use their stock of HQLA during specific periods, thereby falling below the prevailing minimum requirement. If the LCR falls below the minimum, banks are required to inform the BCB: - the reasons why it occurred, whether it being due to idiosyncratic or market conditions; - to what extent idiosyncratic or market conditions contributed to the decline; - the institution's liquidity contingency plan, detailing the availability of contingent funding sources; and - the institution's liquidity recovery plan, including a prediction of the period in which the LCR will remain below the minimum; the expected cash flows, the measures already adopted and to be adopted, as well as the sources of funds intended to be used to reach the minimum limit of the LCR again. Furthermore, Brazil is not receiving any financial support for macroeconomic and structural reforms.
50b	Eligibility of central bank reserves	According to Circular 3749, the following central bank reserves are eligible Level 1 assets: - unencumbered reserves held at central banks (ie the amount of reserves deposited with the BCB that is in excess of the required value); - required reserves held at the BCB related to savings and demand deposits, limited to the total amount of cash outflows estimated for each type of deposit; - other required reserves held at the BCB, limited to the amount to be returned to the institution as a result of cash outflows; and - required reserves held at foreign central banks not considered in the first item, limited to the amount allowed to be drawn down by the local LCR regulation.
50c	Marketable securities that are assigned a 0% risk-weight under the Basel II standardised approach for credit risk	The BCB has adopted, at national discretion, the 0% risk weight in the Basel II Standardised Approach for credit risk, and transactions involving the National Treasury fall within this risk weight. As a result, Brazilian federal government securities may be included in Level 1 assets.
53–54	Eligible Level 2B assets	Brazilian regulation allows for the possibility of including Level 2B assets in the stock of HQLA provided that all the qualifying criteria (detailed in Circular 3749, Article 9) are observed. Level 2B assets include corporate debt securities and liquid shares issued by non-financial institutions, residential mortgage-backed securities and liquid securities issued or guaranteed by central governments of foreign countries

		(or their respective central banks) with a risk rating better than, equal to or equivalent to BBB–. Furthermore, in line with paragraph 53 of the LCR Basel standard, banks are required to have appropriate systems in place to measure and control the risks that they could be exposed to while holding Level 2B assets.
54a	Provision relating to the use of restricted contractual committed liquidity facilities	Not applicable. The BCB chose not to include the undrawn value of contractual committed liquidity facilities within Level 2B assets.
55f	Treatment for jurisdictions with insufficient HQLA	Not applicable.
68	Treatment of Shariah-compliant banks	Not applicable.
78	Treatment of deposit insurance	The BCB assessed that deposits insured by the FGC or by the FGCoop do not satisfy all the criteria set out in paragraph 78 of the LCR Basel standard. As a result, deposits insured by the FGC or by the FGCoop are not subject to the 3% run-off rate. The FGC has well defined characteristics such as explicit protection, compulsory membership, clearly defined coverage, ex ante private funding and independent private management. The rules applicable to the FGC can be found in Resolution 4222 of May 23, 2013, and subsequent amendments. The FGCoop also has well defined characteristics, similar to the FGC's, which are consolidated in Resolution 4284 of November 5, 2013, and in Resolution 4518 of August 24, 2016.
79f	Categories and run-off rates for less stable deposits	The BCB has set the following run-off rates for less stable deposits: - 20% of the outstanding balances owned by the natural persons whose sum of funds held at the institution are equal to or greater than BRL 1.5 million. - 10% of the remaining balances not considered in the category above or not considered stable retail funding (5%, if fully insured by the FGC, by the FGCoop or by some other effective deposit insurance scheme).
123	Market valuation changes on derivative transactions	The LCR Basel standard look-back approach for increased liquidity needs related to market valuation changes on derivatives or other transactions was not considered risk-sensitive enough. For instance, if a bank stops conducting derivatives transactions under the Basel standard look-back approach, the bank would still have to calculate an outflow over a considerable period of time, without actually being exposed to the risk the run-off is intended to capture. When analysing the best approach to measuring the risk related to market valuation changes on derivatives or other transactions, considering that the Basel standard allows for an adjusted treatment according to particular circumstances, the BCB also took into account the fact that the historical 30-day net collateral flow would not differentiate the margin calls from valuation changes due to market stress or increased positions. In this light, a different approach was adopted, based on the required margin that banks already have to comply with at the LCR calculation date, which is based on their actual exposures. Based on internal studies, the BCB concluded that 30% of the required margin at the LCR calculation date would be appropriate to capture the outflow risk, since it is significantly higher than the historical volatility observed.
134–140	Run-off rates for other contingent funding liabilities	The BCB defined the following run-off rates, at national discretion, for contingent funding obligations (Circular 3749, Article 27): - 100% of the value of the assets received in securities borrowing agreements that have been sold outright or posted as collateral in operations maturing over 30 days, in which the maturity of the securities

		borrowing agreements are of less than 30 days or in which the beneficial owners have the right to withdraw the assets within 30 days without the institution's prior consent; - 100% of the value of the assets received as collateral, including those received in collateral swap transactions, that have been sold outright or posted as collateral in operations maturing over 30 days, whose beneficial owners have the right to withdraw the assets within 30 days, without the institution's prior consent; - 2% of the undrawn amount of credit and liquidity facilities unconditionally revocable; - the greater of the two values consisting of the largest non-judicial guarantee provided, including sureties and those guarantees related to trade finance obligations, and 1% of the total balance of these transactions, including judicial guarantees; - the greater of the two values consisting of the largest guarantee related to trade finance obligations and 5% of the total balance of these transactions; - 100% of the clients' short positions in which the assets sold or pledged as collateral, by the institution, are owned by a third party; and - the greater of the two values consisting of the total assets received by the institution in order to carry out market-making operations and the largest disbursement observed, in any 30-day period over the last five years, related to market-making operations.
160	Weight assigned to other contractual inflows	The BCB defined, at national discretion, that the following items must be considered as other contractual cash inflows (Circular 3749, Article 38): - a variable percentage of the value of the assets that will become unencumbered within the next 30 days, if they are eligible HQLA (100% to 50%); - the expected value received from post-paid payment instruments (100%); and - the amounts related to credit portfolio purchases (100%).
164–165	Scope of application of LCR and scope of consolidation of entities within a banking group	According to Resolution 4401 of 2015, the LCR applies to the banks whose consolidated assets are greater than or equal to BRL 100 billion, which include all internationally active banks in Brazil. The LCR requirements are applicable on a consolidated basis only.
168–170	Differences in home/host liquidity requirements	With respect to the treatment of retail/small business deposits, the BCB has established that all consolidated legal entities must observe any liquidity parameters set by their host jurisdictions.

Source: BCB.