

Loan-to-Deposit Ratio vs. Basel III Net Stable Funding Ratio: Case in Korean Banks*

Tae Soo Kang** · Hyun Yeol Shin***

The Basel Committee on Banking Supervision (BCBS) will introduce a net stable funding ratio (NSFR) in 2018. The NSFR is designed to stabilize bank funding structure, thereby improving mid- to long-term liquidity conditions. We analyzed the possible risks in Korea with the overlapping implementation of NSFR when loan-to-deposit ratio (LDR) is already there for similar purposes. Simulation result shows that NSFR is more effective in securing the stability of bank funding structure than the LDR. The NSFR captures the sources of liquidity risk in relatively accurate manner vis-a-vis the LDR. NSFR recognizes the liquidity value depending on the maturity and type of assets and liabilities. Whereas LDR considers only the lump-sum amount of assets and liabilities. We suggest the suspension of LDR regulation or to remodel it to a supplementary metrics for NSFR.

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** Senior Fellow Korea Institute for International Economic Policy (KIEP), Tel: +82-2-731-2401, E-mail: taesoo.kang58@gmail.com

*** Corresponding author, Head, Financial Stability Analysis Team, The Bank of Korea, Tel: +82-2-750-6837, E-mail: hyshin68@bok.or.kr

1. INTRODUCTION

The global financial crisis have triggered range of regulations to beef up the soundness in banking sector. The financial supervisory authorities should carefully consider the unintended consequences the regulations may bring as well as the benefits from the regulations.

Unintended consequences include: (1) excessive restrictions on banks' voluntary financial intermediation (2) regulatory arbitrage due to differences in business models; and (3) heavy compliance costs attached with various regulations imposed.

Korea has been implementing loan-to-deposit Ratio (herein after LDR) since June 2012. The LDR intends to enhance the stability of the bank funding structure by restraining the bank lending that rely on non-deposit liabilities. The expected policy effect was seen as the banks' market based financing decreased after the introduction of the LDR.

Basel Committee on Bank Supervision (BCBS) designed new tools — Basel III net stable funding ratio (NSFR) regulations — to improve the stability of the bank's funding structure. The banking industry has raised the view that the NSFR will be enough to replace the existing LDR so that the LDR should be abolished in order to prevent duplication of regulations.

Although there is a conceptual similarity with the NSFR, the LDR has its own specific regulatory approach. So a rigorous review of whether these two regulations are complementary or substitutable needs to be preceded. If the objective of the LDR can be fully achieved by the NSFR introduction, the LDR could be excluded, but if not, more careful consideration is required. This discussion is of particular interest to Korean banks, one of the few countries in the world where LDR regulations are in place.¹⁾

This study will examine the relationship between the LDR and the incoming NSFR. The contents of this paper is as follows. In chapter 2, we examine

¹⁾ Very few emerging market countries are applying LDR regulation (85% in Saudi Arabia, 80% in Nigeria and Indonesia) to control mid- to long-term liquidity risk (Gobat *et al.*, 2014).

the rationale behind each tool and their specific approaches in regulation. This will allow us to estimate how likely the two regulations are to relate with each other. In chapter 3, we set up various scenarios to view whether the two ratios might have similar directions in their movement. This is a necessary process for judging whether the two regulations are substitutable. Finally, chapter 4 presents policy implications.

There are few academic and empirical studies yet about the effect of the NSFR regulation on banks behavior. This is because the NSFR regulation will be introduced in 2018. Furthermore, there is no attempt to reveal the relationship of NSFR with LDR. For this reason we have limitedly mentioned only the relevant research findings worth mentioning.

2. RATIONALE BEHIND TWO REGULATIONS

2.1. LDR Regulation

The LDR has a system to limit the bank's loan to a certain percentage of the deposit. The LDR manages the liquidity by improving the bank funding structure. However, it is also a means of restricting the lending expansion at the business cycle boom. In this respect, the LDR regulation is a kind of macroprudential policy instrument to curb the systemic risk (CGFS, 2012).

Korea defines banks' LDR as the ratio of the KRW-denominated loan balance to the KRW-denominated deposit balance (excluding CDs). Banks need to maintain LDR ratio within 100%. The LDR regulation was once abolished in November 1998, and was reintroduced in December 2009 in order to restrain immoderate banks' competition in deposit taking. Korean regulatory authorities delayed implementation of regulation until the end of 2013 to give the adjustment period for banks. However, the implementation was advanced to the end of June 2012 as part of government measures to stabilize household debt.

$$\text{LDR} = \frac{\text{Loan balance in KRW}}{\text{Deposit balance in KRW (excluding CD)}} \leq 100\%.$$

The LDR is a tool to secure banks' liquidity stability. Korean banks have increased loans mainly through financial market wholesale funding. At the end of 2008, banks' LDR stood at a level of 135.8%. The financial market wholesale funding decreased after the LDR²⁾ introduction.

The range of LDR ratio of 80-90%³⁾ is regarded as a desirable level. This is based on the logic that, in order to make loans based on deposits, some portion of deposits should be held in the form of highly liquid assets.

IMF survey shows the global tendency that advanced economies are not adopting the LDR regulation. This is because, unlike the capital adequacy ratio, regulation on the funding structure like the LDR on global level has never been recommended. Also financial authorities has been reluctant to apply the LDR regulation.⁴⁾ Developed countries have focused on short-term liquidity regulations such as reserve requirement and minimal liquid assets holdings.

2.2. Net Stable Funding Ratio (NSFR)

The NSFR is a regulatory ratio requiring banks to raise funds with stable liquidity that does not need to be repaid in a short period of time in order to operate the funds as assets with low liquidity value.⁵⁾ The NSFR will be

²⁾ Hyeong-geun Park *et al.* (2012) analyzed that the LDR regulation is a useful macro-prudential policy tool by reducing dependence on banks' wholesale funding and restraining the interconnectedness between financial institutions and pro-cyclicality of loans.

³⁾ See <http://www.forbes.com/newsletters/the-chartist/2014/09/25/chartist-hotline-september-25-2014/>.

⁴⁾ Also, since the desirable LDR may vary from bank to bank due to differences in their business model (e.g., deposit/lending business, trustee services, IB services, etc.), the LDR regulation that are uniformly applied to all banks may not be desirable.

⁵⁾ BCBS introduced the liquidity coverage ratio (LCR) and NSFR as a liquidity regulation for banks. LCR is designed to strengthen resilience in response to short-term liquidity crises within 30 days, NSFR is an indicator to lower the possibility of liquidity stress by enhancing the stability of bank assets and liabilities structure over the medium to long term. Both liquidity regulations are expected to play a complementary role.

implemented in January 2018 and is defined as follows:

$$\text{NSFR} = \frac{\begin{array}{l} \text{Available amount of stable funding} \\ (\text{capital and liabilities} \times \text{ASF factor}) \end{array}}{\begin{array}{l} \text{Required amount of stable funding} \\ (\text{assets and off-balance sheet items} \times \text{RSF factor}) \end{array}} \geq 100\%.$$

The ‘Available amount of Stable Funding’ (ASF) is calculated by adding up all the items of liability/equity in the B/S multiplied by the ASF factor. The higher the funding stability, the higher the ASF factor. The funding stability depends on the maturity, the type of fund, and the trading partner. Specifically, SMEs deposits and retail deposits are considered to be more stable than wholesale funding from financial markets and deposits of big firms and financial institution. For example, equity and debt with remaining maturity of more than one year being assigned the highest stability, so the ASF factor of 100% is applied.⁶⁾

The denominator, ‘Required amount of Stable Funding’ (RSF), is assessed by the liquidity value inherent in asset items. The lower the asset liquidity value, the more burdensome the bank in a stress situation. For assets with low liquidity value, the high RSF factor is applied. The total stable funding requirement is the sum of all items of asset multiplied by RSF factors assigned to each asset item.

The asset liquidity value depends on the maturity and the asset type. Specifically, assets with shorter maturity are recognized as having greater liquidity value. Marketable assets (bonds and stocks) have higher liquidity value than bank loan assets. The 0% RSF factor is applied to cash and bank reserves at the central bank that can be withdrawn at any time. And 100% RSF factor is applied to loan assets with a maturity of one year or more.

⁶⁾ In case of deposits, which are reliable sources of stable funding, ASF factors of 95%, 90% and 50% for the deposits of individuals, SMEs, and large corporations are granted, respectively. Refer to table A1 ‘Summary of liability categories and associated ASF factors’.

The RSF factor for marketable assets depends on the liquidity value of each assets. For highly liquid assets (government bonds and public bonds⁷⁾) 5% RSF factor is applied. RSF factor of 15% to 50% would be applied to MBS, corporate bonds and stocks.⁸⁾

Mortgage loans can be liquidated through securitization even before contracted maturity. BCBS has granted a lower RSF factor of 65% to mortgage loans.

2.3. Relationship between Two Ratios

NSFR regulation intends to minimize the possible liquidity stress by inducing a stable funding structure. Likewise, LDR limits the expansion of lending in business cycle boom period and prepares for the liquidity shortage in case of crisis.

Under the NSFR framework, RSF and ASF factors are applied to each and every assets and liabilities depending on maturities and types. On the other hand, the LDR has very simple scheme. LDR does not reasonably reflect the differences in liquidity risks or funding stability of individual items.⁹⁾ This suggests that LDR scheme does not guarantee exquisite policy outcome despite the merits of simplicity.

To sum, although the LDR and the NSFR is different in its regulatory approach, they have similar purpose of preventing the possible liquidity stress by inducing stable funding structure.¹⁰⁾

⁷⁾ These assets are classified as Level 1 HQLA (high quality liquid assets).

⁸⁾ These assets are classified as Level 2 HQLA.

⁹⁾ The LDR does not consider banks' securities or off-balance assets whose liquidity deteriorates significantly during the time of crisis. If these assets are funded through short-term wholesale funding markets, banks may face a liquidity crisis in the event of an emergency. In addition, deposits can be divided into stable deposits and unstable deposits depending on whether they are guaranteed by the public deposit insurance scheme. NSFR is designed to take into account the liquidity value of assets and the stability of liabilities that can not be fully captured by the LDR.

¹⁰⁾ Vazquez and Federico (2012) showed that the weaker the structure of portion the leverage ratio, the more likely the bank's business performance will fail from 11,000 banks in the US and Europe (during 2001-2009).

Table 1 Key Goals of LDR and NSFR

	Stable funding structure	Prevent mid- to long-term liquidity risk	Limiting the pro-cyclicality of asset	Simplification of regulation
LDR	○	○	△	○
NSFR	○	○	△	△

Note: ○ mark stands for primary goal, △ mark secondary goal.

3. SCENARIO ANALYSIS

In this chapter, various scenarios will be designed for possible portfolio change in the asset and liability items. The impact of each scenario on the two ratios will be simulated. If ratios co-move similarly under each scenario, they are likely to replace each other. When two ratios move differently, substitutability of LDR with NSFR seems to be low.

In this chapter, we use the reciprocal of NSFR for convenience of interpretation and denote it as NSFR_2 to avoid confusion. If this is done, the LDR should be within 100% and NSFR_2 within 100% by the regulatory criteria.

First, let's think about the hypothetical baseline balance sheet as shown in table 2. Assets are classified based on maturity of one year. This is because a difference in maturity has no impact in LDR calculation, while NSFR is to apply specific weights (RSF factor, ASF factor) according to maturity of assets and liabilities.¹¹⁾ For the same reason, the holdings of securities are divided into 'Level 1 HQLA' (high quality liquidity assets)¹²⁾ and 'Level 2 HQLA'¹³⁾ with relatively low market liquidity.

¹¹⁾ In the BCBS' NSFR structure, the maturity is divided into two periods, i.e., less than 6 months and longer than 6 months, shorter than 1 year. Even if the division is incorporated, the analysis outcome do not change much.

¹²⁾ Level 1 HQLA includes government bonds, public bonds, etc.

¹³⁾ Level 2 HQLA includes corporate bonds, MBS, and stocks, etc.

Table 2 Hypothetical B/S (Baseline Scenario)

Asset		RSF Factor	Liability and Equity			ASF Factor	
Loans ⁽¹⁾ (L)	Maturity ≥ 1y	30	1.00	Deposits (D)	Maturity ≥ 1y	60	1.00
	(Performing Loans)	100	0.85		Maturity < 1y	90	0.50
	Maturity < 1y	60	0.50		(Retail Deposits)	40	0.90
Bonds (S)	Level 1 HQLA	20	0.05	Borrowings (B)	Maturity ≥ 1y	20	1.00
	Level 2 HQLA	30	0.15		Maturity < 1y	80	0.50
Other Assets (OA)		60	1.00	Equity (E)		10	1.0
Sum		300		Sum		300	

Benchmark: LDR = 100.0%, NSFR₂ = 100.0%

Notes: 1) For the simplicity, mortgage loans of 65% RSF factor with a maturity of more than one year excluded. 2) For reference, actual LDR and NSFR of Korean commercial banks are 97.8 and 110.2 (NSFR₂=90.7), respectively, as of the end of the third quarter of 2017.

By definition, two ratios can be expressed as follows.

$$\text{LDR} = L/D \leq 100\%,$$

$$\text{NSFR}_2 = (a_1L + a_2S + a_3OA) / (b_1D + b_2B + b_3E) \leq 100\%.$$

a_1 , a_2 , and a_3 are RSF factors that are applied depending on the maturity or type of loans, bonds and other assets. b_1 , b_2 and b_3 are ASF factors that are applied depending on the maturity or type of deposits, borrowings and capital.

Deposits (D) and loans (L) affect the LDR and the NSFR. However, bonds (S) and other assets (OA), borrowings (B) and capital (E) 'ONLY' affect NSFR and are independent of the LDR. These characteristics are evident in the scenario analysis discussed below.

3.1. Scenario 1

When borrowing (B) and lending (L) increased by the same amount (+10), the LDR will be worse than the regulatory benchmark (100%). However, the impact on NSFR₂ depends on the maturity of debt and loans. If the loan is extended by debt with maturity of more than one year (e.g., bank debentures), the NSFR₂ ratio becomes lower (=improving). Specifically, for a loan maturity of less than one year, NSFR₂ drops more deeply (Scenario 1-1, Scenario 1-2).

However, when the bank expands long-term loans funded by short-term borrowings (CPs, RPs, etc.), NSFR₂ will go up. So the funding stability will be deteriorated (Scenario 1-3). The same factors of 50% in ASF and RSF are applied to the denominator if the loan maturity is less than one year. There is no change in NSFR₂ (Scenario 1-4).

The implications are following. Bank loans through long-term borrowings (more than one year) to improve NSFR will unintentionally violate the LDR regulation by raising the LDR ratio. In fact, although long-term marketable borrowings (ex, bank debentures) are more stable funding tools relative to short-term marketable borrowings (RPs and CPs), LDR does not capture these characteristics.

Table 3 Changes in Ratios (Scenario 1)

	Borrowing (+10)	Loan (+10)	LDR	NSFR ₂
Scenario 1-1	Maturity ≥ 1 y	Maturity ≥ 1 y	105.3 ↑	99.1 ↓
Scenario 1-2	Maturity ≥ 1 y	Maturity < 1 y	105.3 ↑	97.5 ↓
Scenario 1-3	Maturity < 1 y	Maturity ≥ 1 y	105.3 ↑	101.4 ↑
Scenario 1-4	Maturity < 1 y	Maturity < 1 y	105.3 ↑	100.0 —

Notes: 1) Arrow ↑ indicates deterioration, ↓: improvement, —: unchanged (the same applies below). 2) A loan having maturity of one year or more is assumed to be a 'performing' loan with RSF factor of 95% (the same hereinafter).

Table 4 Changes in Ratios (Scenario 2)

	Deposit (+10)	Loan (+10)	LDR	NSFR_2
Scenario 2-1	Maturity \geq 1 y	Maturity \geq 1 y	100.0 —	99.1 ↓
Scenario 2-2	Maturity \geq 1 y	Maturity < 1 y	100.0 —	97.5 ↓
Scenario 2-3	Maturity < 1 y	Maturity \geq 1 y	100.0 —	101.4 ↑
Scenario 2-4	Maturity < 1 y	Maturity < 1 y	100.0 —	100.0 —

Note: Deposits with maturities less than one year are assumed to be non-retail deposits with 50% ASF factor (the same hereinafter).

3.2. Scenario 2

When the loan is expanded by the same amount deposit funding, there is no change in the LDR. However, NSFR_2 is sensitive to the maturity of borrowing and loans. The loan funded by long-term deposits will decrease (improve) the NSFR_2 level. The drop of NSFR_2 level is especially big with the loan maturity of 1 year or less (Scenario 2-1, Scenario 2-2).

However, an increase in long-term loans (more than one year) with short-term deposits (less than one year) will boost NSFR_2 ratio. The stability of the funding structure will decrease (Scenario 2-3). The same 50% weight is applied to the denominator and numerator when maturity of both loan and deposit is less than one year. There is no change in NSFR_2.

These results show that even if lending generated by long-term deposits will beef up bank's liquidity (=NSFR improvement), the improvement will not be reflected in LDR at all. This is because the LDR depends on the total amount of deposits and loans but not on maturity. This implies that there is a limitation to capture the actual mid- to long-term liquidity situation of banks through LDR only.

3.3. Scenario 3

When the bond investment (S+10) is increased by borrowing (B+10), the LDR is unchanged. There is no change in the total deposits or loans to be

Table 5 Changes in Ratios (Scenario 3)

	Borrowing (+10)	Bond (+10)	LDR	NSFR_2
Scenario 3-1	Maturity \geq 1 y	Level 1 HQLA	100.0 —	95.5 ↓
Scenario 3-2	Maturity \geq 1 y	Level 2 HQLA	100.0 —	95.9 ↓
Scenario 3-3	Maturity < 1 y	Level 1 HQLA	100.0 —	97.7 ↓
Scenario 3-4	Maturity < 1 y	Level 2 HQLA	100.0 —	98.1 ↓

regulated by the LDR. NSFR_2 falls (=improvement of liquidity situation). In particular, the longer the maturity of borrowing and the bigger the liquidity of the bond, the greater the NSFR_2 declines. The reason is that the longer the maturity of the borrowing, the stronger the funding stability.

Bank's funding behavior that do not accompanied with the increase of deposits and loans are an effective way to improve the NSFR with no impact on LDR. This shows that the NSFR is a meticulous medium- to long-term tool, while the LDR looks rather a simple regulation.

3.4. Scenario 4

The LDR falls when bond investment (S) is increased by the same amount (+10) with deposits (D). NSFR_2 is also lowered regardless of the maturity of the deposit or the type of the bond. The NSFR_2 declines more sharply if the longer the maturity of the deposit and the higher the liquidity of the bond. The increase of bond investment based on deposit taking will

Table 6 Changes in Ratios (Scenario 4)

	Deposits (+10)	Bond (+10)	LDR	NSFR_2
Scenario 4-1	Maturity \geq 1 y	Level 1 HQLA	95.0 ↓	95.5 ↓
Scenario 4-2	Maturity \geq 1 y	Level 2 HQLA	95.0 ↓	95.9 ↓
Scenario 4-3	Maturity < 1 y	Level 1 HQLA	95.0 ↓	97.7 ↓
Scenario 4-4	Maturity < 1 y	Level 2 HQLA	95.0 ↓	98.1 ↓

Table 7 Changes in Ratios (Summary)

Funding	Maturity	Operation		NSFR_2	LDR	Scenario No.
			Maturity			
Borrowing	≥ 1 y	Loans	≥ 1 y	99.1 ↓	105.3 ↑	1-1
			< 1 y	97.5 ↓	105.3 ↑	1-2
		Bonds	Level 1	95.5 ↓	100.0 —	3-1
			Level 2	95.9 ↓	100.0 —	3-2
	< 1 y	Loans	≥ 1 y	101.4 ↑	105.3 ↑	1-3
			< 1 y	100.0 —	105.3 ↑	1-4
		Bonds	Level 1	97.7 ↓	100.0 —	3-3
			Level 2	98.1 ↓	100.0 —	3-4
Deposits	≥ 1 y	Loans	≥ 1 y	99.1 ↓	100.0 —	2-1
			< 1 y	97.5 ↓	100.0 —	2-2
		Bonds	Level 1	95.5 ↓	95.0 ↓	4-1
			Level 2	95.9 ↓	95.0 ↓	4-2
	< 1 y	Loans	≥ 1 y	101.4 ↑	100.0 —	2-3
			< 1 y	100.0 —	100.0 —	2-4
		Bonds	Level 1	97.7 ↓	95.0 ↓	4-3
			Level 2	98.1 ↓	95.0 ↓	4-4

Note: Arrow ↑ indicates deterioration, ↓: improvement, —: unchanged.

enhance liquidity reserves.

Case in scenario 4 shows that LDR and NSFR can be almost perfectly substitutable regulations.

Scenario analysis so far can be summarized as follows. First, scenarios 1-1 and 1-2 are the unique events where LDR and NSFR move in the opposite direction. If loans are extended by boosting long-term borrowing, the NSFR will be improved but the LDR will be deteriorate. The NSFR improvement comes from the fact that long-term borrowing is less likely to be exposed to liquidity risk than short-term wholesale funding. The liquidity situation improves although the LDR is getting higher. This

implies that options in improving NSFR could be constrained as long as if the LDR regulation is practiced.

Second, all funding options influencing NSFR, except scenarios 1-1 and 1-2, appear to have the same or at least neutral impact on LDR.¹⁴⁾ LDR regulation seems not to be a constraint on options for improving NSFR. These scenario analysis shows that an NSFR regulation alone could cover the domain in which LDR regulation is designed for.

4. IMPLICATIONS

An NSFR regulation is looking for a less pro-cyclical funding structure. NSFR is designed to minimize long-term lending with short-term wholesale funding. Banks can avoid exposures to liquidity risk in times of crisis. The basic intention of the LDR is same with that of NSFR. The LDR is to curb the expansion of loans which depends on funding from financial market. Both regulatory instruments share the same purpose, even if they differ in their specific paths to regulation.

However, it was hard to find the similarity in moving pattern between the NSFR and LDR for Korean banks. The scenario analysis suggests that the NSFR could capture the liquidity conditions more accurately than the LDR. This is consistent with the findings of Gobat *et al.* (2014). Gobat *et al.* argues that the NSFR is a better indicator exhibiting bank's asset and liability mismatch than the LDR. This means that NSFR is a superior prudential measure to LDR.¹⁵⁾

Scenario analysis proposes that LDR should not be an active player at the time of NSFR implementation. LDR could be used as supplementary

¹⁴⁾ Long-term loans with short-term borrowing (Scenario 1-3), NSFR and LDR deteriorate simultaneously. Bond investment with deposits (Scenarios 4-1, 2, 3, 4), NSFR and LDR improve at the same time.

¹⁵⁾ One of the reasons why the NSFR is viewed as a more sophisticated stabilization measure for funding structure than the LDR is that consideration of derivatives trading in the NSFR. NSFR provides a mechanism to minimize the potential liquidity risks stem from the bank's derivatives transactions.

metrics for monitoring. The goal of LDR regulation can be readily achieved through NSFR regulation. When LDR regulation is sustained, bank's efforts to beef up NSFR ratio would be constrained.

Maintaining LDR regulation even after NSFR is implemented, Korean banks will be exposed to excessive regulatory compliance costs compared to banks in other countries that do not have LDR regulation.

APPENDIX

Table A1 Summary of Liability Categories and Associated ASF Factors

ASF Factor	Components of ASF Category
100%	<ul style="list-style-type: none"> • Total regulatory capital (excluding Tier 2 instruments with residual maturity of less than one year). • Other capital instruments and liabilities with effective residual maturity of one year or more.
95%	<ul style="list-style-type: none"> • Stable non-maturity (demand) deposits and term deposits with residual maturity of less than one year provided by retail and small business customers.
90%	<ul style="list-style-type: none"> • Less stable non-maturity deposits and term deposits with residual maturity of less than one year provided by retail and small business customers.
50%	<ul style="list-style-type: none"> • Funding with residual maturity of less than one year provided by non-financial corporate customers. • Operational deposits. • Funding with residual maturity of less than one year from sovereigns, PSEs, and multilateral and national development banks. • Other funding with residual maturity between six months and less than one year not included in the above categories, including funding provided by central banks and financial institutions.
0%	<ul style="list-style-type: none"> • All other liabilities and equity not included in the above categories, including liabilities without a stated maturity (with a specific treatment for deferred tax liabilities and minority interests). • NSFR derivative liabilities net of NSFR derivative assets if NSFR derivative liabilities are greater than NSFR derivative assets. • "Trade date" payables arising from purchases of financial instruments, foreign currencies and.

Source: BCBS (2014).

Table A2 Summary of Asset Categories and Associated RSF Factors

RSF Factor	Components of RSF Category
0%	<ul style="list-style-type: none"> • Coins and banknotes. • All central bank reserves. • All claims on central banks with residual maturities of less than six months. • “Trade date” receivables arising from sales of financial instruments, foreign currencies and commodities.
5%	<ul style="list-style-type: none"> • Unencumbered Level 1 assets, excluding coins, banknotes and central bank reserves.
10%	<ul style="list-style-type: none"> • Unencumbered loans to financial institutions with residual maturities of less than six months, where the loan is secured against Level 1 assets as defined in LCR paragraph 50, and where the bank has the ability to freely rehypothecate the received collateral for the life of the loan.
15%	<ul style="list-style-type: none"> • All other unencumbered loans to financial institutions with residual maturities of less than six months not included in the above categories. • Unencumbered Level 2A assets.
50%	<ul style="list-style-type: none"> • Unencumbered Level 2B assets. • HQLA encumbered for a period of six months or more and less than one year. • Loans to financial institutions and central banks with residual maturities between six months and less than one year. • Deposits held at other financial institutions for operational purposes. • All other assets not included in the above categories with residual maturity of less than one year, including loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns and PSEs.
65%	<ul style="list-style-type: none"> • Unencumbered residential mortgages with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under the standardised approach. • Other unencumbered loans not included in the above categories, excluding loans to financial institutions, with a residual maturity of one year or more and with a risk weight of less than or equal to 35% under the standardised approach.
85%	<ul style="list-style-type: none"> • Cash, securities or other assets posted as initial margin for derivative contracts and cash or other assets provided to contribute to the default fund of a CCP. • Other unencumbered performing loans with risk weights greater than 35% under the standardised approach and residual maturities of one year or more, excluding loans to financial institutions. • Unencumbered securities that are not in default and do not qualify as HQLA with a remaining maturity of one year or more and exchange-traded equities. • Physical traded commodities, including gold.
100%	<ul style="list-style-type: none"> • All assets that are encumbered for a period of one year or more. • NSFR derivative assets net of NSFR derivative liabilities if NSFR derivative assets are greater than NSFR derivative liabilities. • 20% of derivative liabilities as calculated according to paragraph 19. • All other assets not included in the above categories, including non-performing loans, loans to financial institutions with a residual maturity of one year or more, non-exchange-traded equities, fixed assets, items deducted from regulatory capital, retained interest, insurance assets, subsidiary interests and defaulted securities.

Table A3 Summary of Off-balance Sheet Categories and Associated RSF Factors

RSF Factor	Components of RSF Category
5% of the Currently Undrawn Portion	Irrevocable and conditionally revocable credit and liquidity facilities to any client.
National Supervisors Can Specify the RSF Factors Based on Their National Circumstances	<p>Other contingent funding obligations, including products and instruments such as:</p> <ul style="list-style-type: none"> • Unconditionally revocable credit and liquidity facilities. • Trade finance-related obligations (including guarantees and letters of credit). • Guarantees and letters of credit unrelated to trade finance obligations. • Non-contractual obligations such as: <ul style="list-style-type: none"> – Potential requests for debt repurchases of the bank’s own debt or that of related conduits, securities investment vehicles and other such financing facilities. – Structured products where customers anticipate ready marketability, such as adjustable rate notes and variable rate demand notes (VRDNs). – Managed funds that are marketed with the objective of maintaining a stable value.

Source: BCBS (2014).

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