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SCB
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BASEL III PILLAR 3 MARKET DISCLOSURE

December 2021

New Mothership to Unlock Value

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1. INTRODUCTION

Siam Commercial Bank PCL (SCB) and its Financial Group have adopted Basel III, the latest global regulatory framework for assessing bank capital adequacy and liquidity, on January 1, 2013 to further strengthen its risk management practices. The Bank's implementation of Basel III strictly follows the Basel Committee on Banking Supervision's guidelines and the Bank of Thailand (BOT)'s regulations.

In September 2017, the Bank was designated as one of the Domestic Systemically Important Banks (D-SIBs) by the BOT. This status resulted in a requirement to maintain an additional Common Equity Tier 1 (CET1) of 1.0% on top of the capital conservation buffer of 2.5%. Moreover, a countercyclical capital buffer (CCyB) of no more than 2.5% is being considered by the BOT as an additional macroprudential instrument to increase financial stability and resilience. This capital buffer can help dampen cyclicality by raising capital requirements during the upward credit cycle which can then be used to mitigate losses during the downward cycle. However, given the severe impact of COVID-19 on the Thai economy, the BOT is unlikely to impose CCyB for the time being.

Following the TFRS 9 adoption in January 2020, commercial banks are required to hold minimum provisions relative to a defined list of performing and under-performing assets and off-balance sheet items according to the following schedules: 0.33% in 2020, 0.67% in 2021, and 1.0% for 2022 onwards. If available provisions fall short of the required minimum, banks must adjust for such differences in the capital fund items starting from January 1, 2020.

According to the Extraordinary General Meeting of Shareholders of The Siam Commercial Bank Public Company Limited No. 1/2021, SCB Financial Group Restructuring Plan was approved, in which the Bank arranged for the establishment of SCB X Public Company Limited ("SCB^{X}") to be a parent company of the companies in the financial group in order to broaden its vision and aspire to become "the most admired financial technology group in ASEAN" amid rapidly changing consumer behavior and business landscape upon technological development and intense competition from both existing and new players.

SCB and SCB^{X} Financial Group are still subject to BOT regulations under the consolidated supervision guidelines and are required to maintain the minimum capital requirements including additional buffers as prescribed by the BOT. The policy of maintaining capital levels well above the minimum regulatory requirements, as well as adequate loan loss provisions, remains in place to allow the Financial Group to absorb unexpected events and new types of risks that may arise from new businesses under SCB^{X} Financial Group in the future.

The current Basel Capital Accord comprises three pillars, each of which is essential for promoting the stability of financial institutions:

Pillar I provides guidelines on minimum capital requirements for credit risk, market risk and operational risk.

Pillar II addresses the key principles of supervisory review processes and relevant internal risk assessment beyond Pillar I, with an emphasis on a bank's internal capital adequacy assessment process (ICAAP).

Pillar III leverages market mechanism for bank supervision by requiring public disclosure of key information on capital adequacy and risk exposure as well as risk assessment and management.

This Pillar III report presents both qualitative and quantitative information on capital adequacy and measurement of credit risk, market risk in the trading book, and operational risk for both SCB (referred to as 'Bank-only') and its Financial Group (referred to as 'Consolidated'). The report also provides information on risk management guidelines and frameworks, risk components, risk monitoring and reporting, and methodologies used to assess capital adequacy.

Qualitative information is updated annually, or whenever there is any material policy change. The Bank's Pillar III reports are published twice a year to disclose half-year and full-year information within four months of the report date (i.e. end of June 30 and December 31) as required by the BOT. A copy of the report can be found on the Bank's website under Investor Relations at *https://www.scb.co.th/en/investor-relations/financial-information.html*

Beginning January 1, 2020, the BOT's disclosure requirement has been revised to include key prudential metrics to reflect the provisioning impact from TFRS 9. Moreover, the BOT also revised disclosure of general provision, which is eligible as Tier 2 capital, amended terminology to be in line with financial statements and updated capital disclosure during a transitional period according to the Basel III framework.

Although external audit is not required for this report, the Bank has an internal verification and approval process to ensure that contents of the report adhere to the Bank's Pillar III disclosure policy. In addition to following the Basel III framework in disclosure principles, information in this report is the same as that used internally by management and for reports submitted to the BOT.

2. SCOPE OF APPLICATION

Standardized Approach

SCB and its Financial Group have adopted the Standardized Approach (SA), which follows the BOT's guidelines on credit risk, market risk, and operational risk measurement, as a computational framework for regulatory capital requirements.

Accounting Consolidation

Consolidated financial statements present information on combined assets and liabilities of SCB and all its subsidiaries. The methodology for consolidating financial statements in accordance with the Thai Financial Reporting Standards can be found in SCB's 2021 Annual Report.

Regulatory Consolidation[1/]

Regulatory consolidation consists of **solo consolidation**, which considers only financial entities of which SCB owns more than 75%, and **full consolidation** (referred to as 'Consolidated'), which encompasses all entities within the Financial Group, including those under solo consolidation, other subsidiaries in finance or support businesses of which the Bank owns more than 50%. Under Basel III, investment in life insurance businesses or other financial entities in which SCB holds more than 10% but less than 50% of issued shares is considered 'investment outside the scope of consolidation' and will be treated separately according to the BOT's guidelines.

Treatment of investment outside the scope of consolidation such as life insurance companies, depends on how much of issued common shares are held by the Bank with 10% being the threshold level:

- The Bank's investment does not exceed 10% of issued common shares:

  The BOT requires that calculation be split into two parts. The portion of investment that exceeds 10% of the Bank's net common equity Tier 1 capital (net CET1) must be deducted from the corresponding tier of capital (Corresponding Approach). The remaining portion under 10% of net CET1 is assigned a risk weight according to the BOT's guidelines.

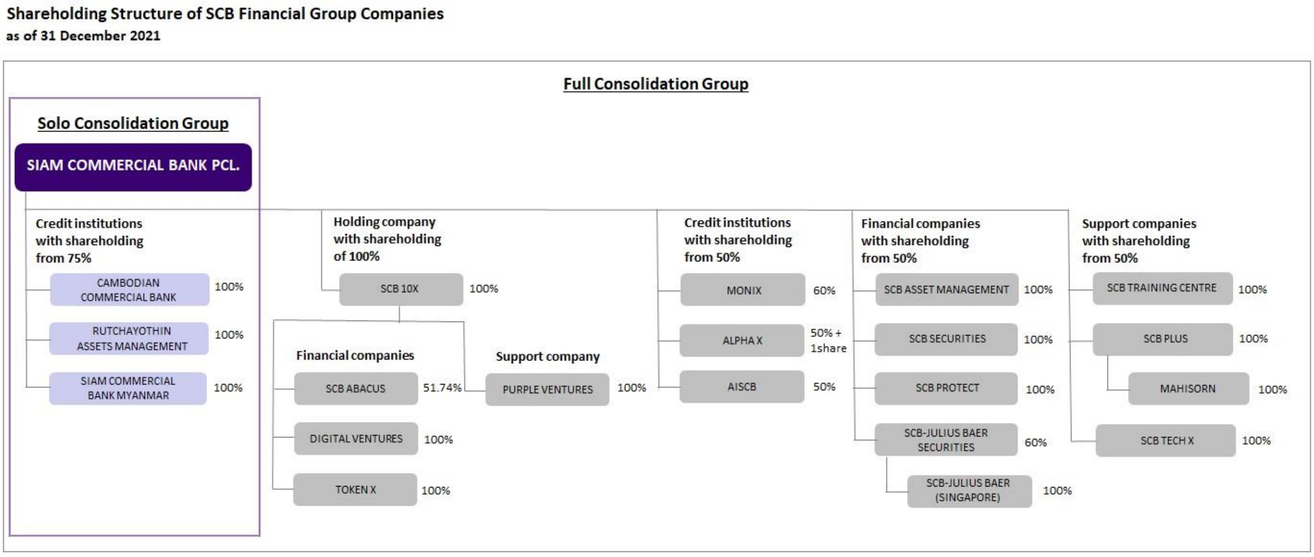
- The Bank's investment exceeds 10% of issued common shares:

  In this case which is considered a significant investment based on the threshold approach, the BOT requires calculation to be split into two parts. The portion of investment that exceeds 10% of the Bank's net CET1must be deducted from the corresponding tier of capital. Any shortfall must be deducted from the next higher tier of capital. The remaining portion under 10% of net CET1 will be assigned a risk weight of 250%.

This report presents quantitative information for both bank-only and consolidated basis.

[1/] See more details on regulatory consolidation in the Appendix.

Figure 1: List of Companies and Business Types within the SCB Financial Group as of December 31, 2021



3. KEY PRUDENTIAL METRICS

Table 1: Key Prudential Metrics

Unit: Baht million, %

		Bank-Only		Consolidated	
		31 Dec 21	30 Jun 21	31 Dec 21	30 Jun 21
1.	**Available Capital (amounts)**				
1.1	Common Equity Tier 1 (CET1)	397,032	375,635	399,566	377,585
1.2	Fully loaded ECL CET1	397,032	375,635	399,566	377,585
1.3	Tier 1	397,032	375,635	399,566	377,585
1.4	Fully loaded ECL Tier 1	397,032	375,635	399,566	377,585
1.5	Total capital	421,644	400,079	424,235	402,053
1.6	Fully loaded ECL total capital	421,644	400,079	424,235	402,053
2.	**Risk-weighted assets (amounts)**				
2.1	Total risk-weighted assets (RWA)	2,238,352	2,224,434	2,265,443	2,245,067
3.	**Risk-based capital ratios as % of RWA**				
3.1	Common Equity Tier 1 ratio (%)	17.74%	16.89%	17.64%	16.82%
3.2	Fully loaded ECL Common Equity Tier 1 (%)	17.74%	16.89%	17.64%	16.82%
3.3	Tier 1 ratio (%)	17.74%	16.89%	17.64%	16.82%
3.4	Fully loaded ECL Tier 1 ratio (%)	17.74%	16.89%	17.64%	16.82%
3.5	Total capital ratio (%)	18.84%	17.99%	18.73%	17.91%
3.6	Fully loaded ECL total capital ratio (%)	18.84%	17.99%	18.73%	17.91%
4.	**Additional CET1 buffer requirements as % of RWA**				
4.1	Capital conservation buffer requirement (%)	2.5%	2.5%	2.5%	2.5%
4.2	Countercyclical buffer requirement (%)	0.0%	0.0%	0.0%	0.0%
4.3	Higher loss absorbency for D-SIB (%)	1.0%	1.0%	1.0%	1.0%
4.4	Total capital buffer requirements (%)	3.5%	3.5%	3.5%	3.5%
4.5	CET1 available after meeting the bank's minimum capital requirements (%)1/	10.3%	9.5%	10.2%	9.4%
5.	**Liquidity Coverage Ratio for Bank-Only basis2/**				
5.1	Total HQLA	816,947	757,481		
5.2	Total net cash outflows	405,324	396,454		
5.3	LCR ratio (%)	202%	191%		

1/ An excess of CET1 above the minimum regulatory capital adequacy ratio including minimum ratios for Tier 1, and Tier 2 which CET1 is used to maintain minimum capital requirement.

2/ Average LCR for Q4/2021 and Q2/2021 were calculated using simple averages of month-end data for each quarter. For example, Q4 data were obtained by taking a simple average of month-end data in October, November and December.

Highlight of changes to the Bank’s capital and key drivers

As of December 31, 2021, the Bank's common equity Tier 1 (CET1) / Tier 1 capital was 17.74% and 17.64% on a consolidated basis, an increase of around 0.8-0.9% from June 2021 mainly due to the appropriation of 1H21 net profit and higher revaluation on premises from new appraisal value, partially offset with higher risk-weighted assets from equity investments. The Bank’s capital position at the end of 2021 from both bank-only and consolidated perspectives far exceeded the minimum regulatory requirements including additional buffers.

Given its strong CET1 capital position, the Bank opted to recognize the full amount of capital impact from provisioning based on Expected Credit Loss (ECL) as required by TFRS 9 right from the first day that the new accounting standard came into effect on January 1, 2020. As a result, the Bank’s Common Equity Tier 1 / Tier 1 capital is the same as fully loaded ECL Common Equity Tier 1 / Tier 1 capital.

4. REGULATORY CAPITAL

4.1 Capital Management

Since capital is the most critical resource for the banking business, SCB and its Financial Group have adopted the Internal Capital Adequacy Assessment Process (ICAAP) to assess material risks and capital adequacy under both normal and stress conditions. Moreover, policies and procedures have been developed and put in place to ensure that SCB and its Financial Group's capital:

- Provides adequate cushion to absorb unexpected losses and builds market confidence in the Bank's financial strength by maintaining capital in excess of the minimum regulatory requirements at all times;
- Matches the risk profile of SCB and its Financial Group, facilitates growth based on their business strategies, and provides the ability to withstand potential risks from an economic downturn or other adverse scenarios; and
- Strikes the right balance between shareholders' returns and the Bank's capital position.

Senior management is responsible for reviewing capital adequacy regularly based on business needs and potential regulatory changes as primary considerations.

4.2 Capital Structure and Adequacy

Capital Structure

Regulatory capital under Basel III consists of 3 following categories:

(1) Common Equity Tier 1 Capital (CET1) represents the highest-quality component of capital which includes:

- Fully paid-up common shares
- Premium on common shares
- Appropriated retained earnings
- Legal reserves
- Other comprehensive income, i.e. revaluation surplus on land and premises, and revaluation surplus on FVOCI investment

(2) Additional Tier 1 Capital consists of high-quality capital, which includes:

- Fully paid-up non-cumulative preferred shares
- Premium on the above-mentioned preferred shares
- Perpetual subordinated debt

(3) Tier 2 Capital consists of:

- Long-term subordinated liabilities
- General provisions (eligibility limited to 1.25% of credit risk-weighted assets)

Capital Adequacy

Maintaining adequate capital is crucial for the Bank's financial stability since the capital provides cushion against risk that arises from the business operation. SCB and its Financial Group identify and manage risk by setting internal control procedures and performing stress tests as well as assessing and managing risk impacts through the capital planning process. Scenario analysis and stress tests are employed to assess the sensitivities of regulatory capital to business plans and adverse shocks from extreme yet plausible events. SCB and its Financial Group use these analytical tools to forecast financial impacts from the business plans and capital needs and to come up with impact mitigation plans should such adverse events occur.

To comply with the regulatory requirements, SCB and its Financial Group must maintain capital at a level deemed sufficient to cover credit risk, market risk, and operational risk. In addition, the Bank is required to maintain a capital conservation buffer of 2.5% of CET1. Furthermore, banks designated as Domestic Systemically Important Banks (D-SIBs) by the BOT must maintain additional CET1 of 1% to enhance their ability to absorb losses and mitigate any impact to the overall financial sector and the economy.

As a result, throughout 2021, the Bank must maintain the minimum ratios of Common Equity Tier 1 (CET1) at 8.0%, Tier 1 capital at 9.5%, and total CAR at 12.0%.

At December 31, 2021, the total CAR was 18.73% on a consolidated basis and 18.84% on a bank-only basis, while CET1 capital stood at 17.64% on a consolidated basis and 17.74% on a bank-only basis.

Note: To comply with the BOT's guidelines, the ratios as of December 31, 2021 excluded net profit after dividend payment for 2H21; otherwise, the capital would have been 18.11% and 19.20% for CET1/Tier1 and CAR respectively on a bank-only basis and 18.00% and 19.09% on a consolidated basis.

Figure 2: Basel III Capital Structure as of December 31, 2021

(In Baht billion)

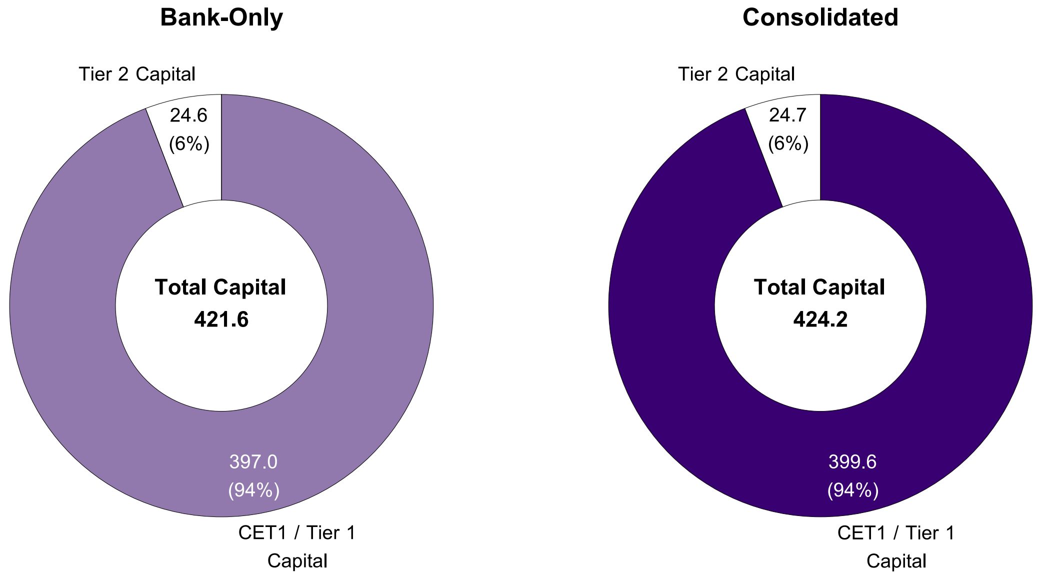


Figure 3: Capital Adequacy Ratios under the Standardized Approach (SA) of SCB and its Financial Group

(In % of RWAs)

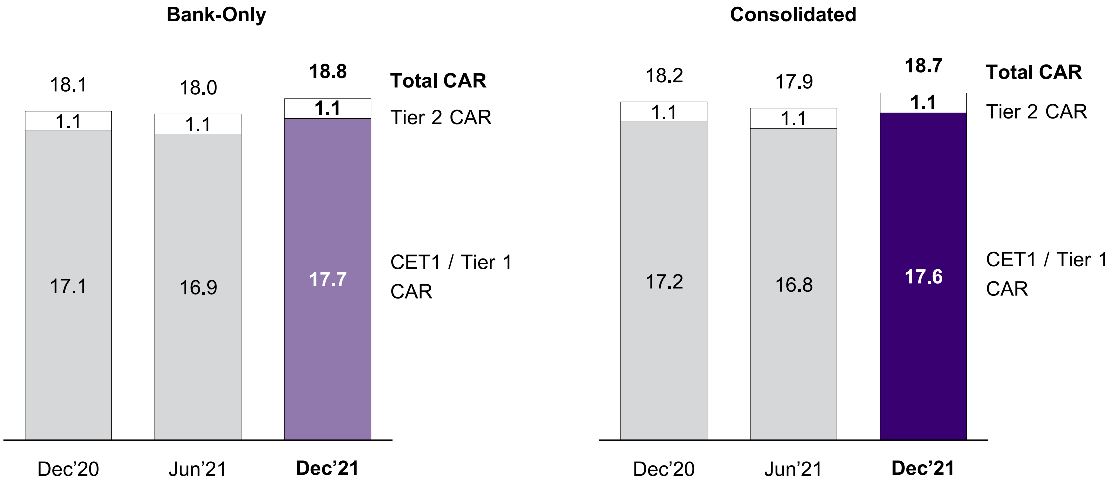


Table 2: Comprehensive Regulatory Capital and Capital Adequacy

Unit: Baht million, %

	Bank-Only			Consolidated		
	31 Dec 21	30 Jun 21	31 Dec 20	31 Dec 21	30 Jun 21	31 Dec 20
Tier 1 capital	**397,032**	**375,635**	**375,490**	**399,566**	**377,585**	**377,036**
Common Equity Tier 1 (CET1)	**397,032**	**375,635**	**375,490**	**399,566**	**377,585**	**377,036**
Paid-up common shares capital	33,992	33,992	33,992	33,992	33,992	33,992
Surplus (deficit) net worth	11,124	11,124	11,124	11,124	11,124	11,124
Legal reserve	7,000	7,000	7,000	7,000	7,000	7,000
Net profit after appropriation	345,471	332,891	332,326	347,169	334,589	334,705
Other reserves						
Other comprehensive income	20,131	13,008	14,157	21,458	13,782	14,468
Others owner changes items	-	-	-	0	-	-
Regulatory deduction to CET1 capital	(20,686)	(22,380)	(23,108)	(21,178)	(22,902)	(24,253)
Additional Tier 1	**-**	**-**	**-**	**-**	**-**	**-**
Tier 2 capital	**24,612**	**24,444**	**24,015**	**24,669**	**24,468**	**23,875**
Proceeds from issuing subordinated debt securities	-	-	-	-	-	-
General provision	24,612	24,444	24,015	24,669	24,468	23,875
Total Regulatory Capital	**421,644**	**400,079**	**399,505**	**424,235**	**402,053**	**400,911**
Risk-weighted assets						
Credit risk	1,968,929	1,955,485	1,921,189	1,973,536	1,957,465	1,909,982
Market risk	45,854	48,595	62,299	61,929	61,448	64,369
Operational risk	223,569	220,355	217,666	229,977	226,154	223,317
Total Risk-Weighted Assets	**2,238,352**	**2,224,434**	**2,201,154**	**2,265,443**	**2,245,067**	**2,197,668**
Total capital/ Total risk-weighted assets	**18.84%**	**17.99%**	**18.15%**	**18.73%**	**17.91%**	**18.24%**
Total Tier 1 capital/ Total risk-weighted assets	**17.74%**	**16.89%**	**17.06%**	**17.64%**	**16.82%**	**17.16%**
Total CET1 capital/ Total risk-weighted assets	**17.74%**	**16.89%**	**17.06%**	**17.64%**	**16.82%**	**17.16%**
Minimum regulatory capital adequacy ratios:						
Minimum total capital/ Total risk-weighted assets	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
Minimum Tier 1 capital/ Total risk-weighted assets	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Minimum CET1 capital/ Total risk-weighted assets	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Capital conservation buffer requirements	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Higher loss absorbency for D-SIBs [1/]	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Total minimum CAR including capital conservation buffer	12.00%	12.00%	12.00%	12.00%	12.00%	12.00%

1/ D-SIB buffer requires additional CET1 of 1.0% in 2020 onwards.

Table 3: Capital Requirements by Risk Type

Unit: Baht million

	Bank-Only			Consolidated		
	31 Dec 21	30 Jun 21	31 Dec 20	31 Dec 21	30 Jun 21	31 Dec 20
Credit risk - Standardized Approach						
Performing						
Governments, Central Banks, MDBs [1/] and PSEs [2/] treated as Sovereign	371	507	474	1,345	1,277	778
Banks and PSEs [2/] treated as banks	1,719	1,623	2,949	1,794	1,794	3,111
Corporates [3/] and PSEs [2/] treated as corporates	87,915	90,482	88,620	87,800	90,640	88,919
Retail	43,118	42,901	41,611	43,611	43,083	41,697
Retail mortgage loans	18,038	17,788	17,471	18,038	17,788	17,471
Other assets [4/]	12,818	9,624	8,867	11,766	8,496	7,044
Non-performing	3,379	3,292	3,311	3,396	3,307	3,328
First-to-default credit derivatives and securitization	-	-	-	-	-	-
Minimum capital requirements for credit risk	**167,359**	**166,216**	**163,301**	**167,751**	**166,385**	**162,348**
Market risk - Standardized Approach						
Interest rate risk	3,212	3,563	4,449	3,219	3,571	4,453
Equity position risk	-	-	765	115	17	775
Foreign exchange risk	686	568	81	1,929	1,635	243
Commodity risk	-	-	-	-	-	-
Minimum capital requirements for market risk	**3,898**	**4,131**	**5,295**	**5,264**	**5,223**	**5,471**
Operational risk - Standardized Approach						
Minimum capital requirements for operational risk	**19,003**	**18,730**	**18,502**	**19,548**	**19,223**	**18,982**
Total minimum capital requirements [5/]	**190,260**	**189,077**	**187,098**	**192,563**	**190,831**	**186,802**

1/ Multilateral development banks

2/ Public sector entities

3/ Including claims on individuals and their related parties when aggregated limits exceed conditions of claims on retail

4/ Other assets under Basel III include investment outside the scope of consolidation which carries a 250% risk-weight

5/ Minimum capital requirements are calculated based on the minimum regulatory capital adequacy ratio at 8.5%. If capital conservation buffer of 2.5% and D-SIB buffer of 1.0%, total capital requirements at end of December 2021 would have been Baht 268,602 million on a bank-only basis and Baht 271,853 million on a consolidated basis.

Table 4: Main Features of Regulatory Capital Instruments

Ordinary share	
Issuer	The Siam Commercial Bank PCL
Unique identifier	ISIN Code: TH0015010000
Regulatory treatment	
Instrument type	Common Equity Tier 1 capital
Qualified or non-qualified Basel III	Qualified
Non-qualified Basel III features	-
Phased-out or full amount	Full amount
Eligible at Solo / Group / Group and Solo	Group and Solo
Amount recognized in regulatory capital	33,992 million Baht[1/]
Par value of instrument	10 Baht
Accounting classification	Shareholder's equity
Original date of issuance	Multiple
Perpetual or dated	Perpetual
Original maturity date	No maturity
Issuer's authority to call prior to supervisory approval	No
Optional call date, contingent call date and redemption amount	-
Subsequent call dates, if applicable	-
Coupons / dividends	
Fixed or floating dividend / coupon	Discretionary dividend amount
Coupon rate and any related index	The ordinary shares receive distributable profit that has been declared as dividend.
Existence of a dividend stopper	No
Fully discretionary, partially discretionary or mandatory	Fully discretionary
Existence of step up or other incentive to redeem	No
Non-cumulative or cumulative	Non-cumulative
Convertible or non-convertible	Non-convertible
Write-down feature	No
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	The ordinary shares shall receive the return of capital in a winding-up, allowing the holders the rights to participate in any surplus profit or assets of the company after all senior obligations have been paid off.

1/ Preferential rights of the Bank's preferred shares (Baht 36 million) expired on May 10, 2009. Since then, preferred shareholders have had the same rights as ordinary shareholders.

Table 5: Reconciliation of regulatory capital items

Unit: Baht million

Capital related items as of 31 December 2021	Balance sheet as per the published financial statements[1/]	Balance sheet under the regulatory scope of consolidation [2/]	References
Assets			
Cash	50,421	50,421	
Interbank and money market items, net	618,269	618,269	
Financial asstes measured at FVTPL	68,707	68,707	
Derivative assets	57,579	57,579	
Investments, net	222,634	222,634	
Investments in subsidiaries, associates and joint venture, net	781	934	
Loans to customers and accrued interest receivables, net			
Loans to customers	2,301,834	2,301,834	
Accrued interest receivables and undue interest receivables	15,031	15,031	
Total loans to customers and accrued interest receivables and undue interest receivables	2,316,865	2,316,865	
Less Unamortised modification loss	(5,756)	(5,756)	
Less Allowance for expected credit loss	(145,653)	(145,653)	
Qualified as capital		(24,669)	O
Non-qualified as capital		(120,984)	
Total loans to customers and accrued interest receivables, net	2,165,456	2,165,456	
Properties for sale, net	18,201	18,201	
Investment properties, net	511	511	
Premises and equipment, net	45,196	45,196	
Goodwill and other intangible assets, net	18,385	18,385	
Goodwill	1,270	1,270	K
Other intangible assets	17,115	17,115	L
Deferred tax assets	3,681	3,681	M
Other assets, net	44,744	44,744	
Total assets	**3,314,565**	**3,314,718**	
Liabilities			
Deposits	2,467,495	2,467,795	
Interbank and money market items	180,961	180,961	
Liabilities payable on demand	10,539	10,539	
Financial liabilities measured at FVTPL	6	6	
Derivative liabilities	49,200	49,200	
Debt issued and borrowings	74,922	74,922	
Provisions	20,342	20,342	
Deferred tax liabilities	888	888	N
Other liabilities	67,596	67,596	
Total liabilities	**2,871,950**	**2,872,250**	

Table 5 (Cont.)

Unit: Baht million

Capital related items as of 31 December 2021	Balance sheet as per the published financial statements[1/]	Balance sheet under the regulatory scope of consolidation [2/]	References
Owner's Equity			
Share capital			
Issued and paid-up share capital			
Preferred shares	35	35	**A**
Common shares	33,956	33,956	**B**
Premium on share capital			
Premium on preferred shares	14	14	**C**
Premium on common shares	11,110	11,110	**D**
Other reserves			
Surplus on revaluation of land and premises	22,135	22,135	
Qualified as capital		20,756	**G**[3/]
Non-qualified as capital		1,379	
Revaluation surplus (deficit) of investments classified at FVTOCI	1,120	1,120	**H**
Foreign currency translation differences	(418)	(418)	**I**
Others owner changes items	0	0	**J**
Retained earning			
Appropriated retained earning			
Legal reserve	7,000	7,000	**E**
Unappropriated retained earning	366,053	366,053	
Net profit after appropriation to capital		347,169	**F**[4/]
Net profit unappropriated to capital		18,884	
Total owners of the company	441,006	441,006	
Non-controlling interest	1,609	1,462	
Total shareholders' equity	**442,615**	**442,468**	
Total liabilities and shareholders' equity	**3,314,565**	**3,314,718**	

1/ Balance sheet per the published financial statements refers to audited financial statements on a consolidated basis as reported to the Stock Exchange of Thailand.

2/ Balance sheet under the regulatory scope of consolidation refers to financial statements on a consolidated basis under the BOT's regulation.

3/ Surplus on revaluation of land and premises can be counted toward capital only for items that the BOT has approved.

4/ Net profit for the second half of the year after being appropriated in accordance with the approved resolutions from the shareholders' meeting or profit for the first half of the year in accordance with the rules as specified by the Bank.

Table 5 (Cont.)

Unit: Baht million

Capital related items as of 31 December 2021	Regulatory capital reported by financial group	References based on balance sheet under the consolidated supervision
Tier 1 capital		
Common Equity Tier 1 (CET1) capital		
Paid-up common shares after deducting treasury shares	33,992	**A + B**
Surplus (deficit) net worth	11,124	**C + D**
Legal reserve	7,000	**E**
Net profit after appropriation	347,169	**F**
Other comprehensive income		
Revaluation surplus on land and building appraisal	20,756	**G**
Gain (loss) on investments designated at FVTOCI	1,120	**H**
Gain (loss) from converting foreign currency operation to the Bank	(418)	**I**
Others owner changes items	0	**J**
Total CET1 capital before regulatory adjustments and deduction	420,744	
Regulatory adjustments on CET1	-	
Regulatory deductions on CET1		
Goodwill	1,270	**K**
Other intangible assets	17,115	**L**
Deferred tax assets	2,793	**M - N**
Total regulatory deduction on CET1	21,178	
Total CET1 capital	**399,566**	
Additional Tier 1 capital		
Total Additional Tier 1	-	
Total Tier 1 capital	**399,566**	
Tier 2 capital		
General provision	24,669	**O**
Total Tier 2 capital before regulatory adjustments and deduction	24,669	
Regulatory adjustment and deduction on Tier 2 capital	-	
Total Tier 2 capital	**24,669**	
Total regulatory capital	**424,235**	

Table 6: Capital Position During Transitional Period

Unit: Baht million

	Bank-only		Consolidated	
	Capital amount as of December 2021	Net value of items with transitional phase subject to Basel III	Capital amount as of December 2021	Net value of items with transitional phase subject to Basel III
Tier 1 capital				
Common Equity Tier 1 (CET1) capital				
Paid-up common shares capital	33,992		33,992	
Surplus (deficit) net worth	11,124		11,124	
Legal reserve	7,000		7,000	
Net profit after appropriation	345,471		347,169	
Other comprehensive income				
Revaluation surplus on land and buidling appraisal	19,663		20,756	
Gain (loss) on investments designated at FVTOCI	1,117		1,120	
Gain (loss) from converting foreign currency operation to the Bank	(650)		(418)	
Others owner changes items	-		0	
CET1 capital before regulatory adjustments and deduction	417,718	-	420,744	-
Regulatory adjustments on CET1	-		-	
Regulatory deduction on CET1				
Goodwill	(1,270)		(1,270)	
Other intangible assets	(16,076)		(17,115)	
Deferred tax assets	(3,340)		(2,793)	
Total regulatory deduction on CET1	(20,686)	-	(21,178)	-
Total CET1 capital	**397,032**	**-**	**399,566**	**-**
Additional Tier 1 capital	-		-	
Total Tier 1 capital	**397,032**	**-**	**399,566**	**-**
Tier 2 capital				
Proceeds from issuing subordinated debt	-	-	-	-
General provision	24,612		24,669	
Tier 2 capital before regulatory adjustments and deduction	24,612	-	24,669	-
Regulatory adjustments and deduction on Tier 2 capital	-		-	
Total Tier 2 capital	**24,612**	**-**	**24,669**	**-**
Total regulatory capital	**421,644**	**-**	**424,235**	**-**

5. RISK MANAGEMENT

SCB's solid performance over the past years has led to rapid growth in assets, customers, and employees and, unavoidably, increased complexity and size. Hence, sustainable growth has become an important part of the Bank's agenda. Furthermore, past success has also raised expectations of customers, shareholders, and other stakeholders. Against this backdrop, the Bank believes that effective risk management remains a crucial element to achieve sustainable growth and maintain profitability.

Therefore, a robust risk management framework has been put in place under a transparent governance structure to maximize the effectiveness in risk management. Further details on risk management framework will be discussed in the rest of this section.

By continually strengthening the Bank's risk management framework and governance, SCB will be well-prepared to respond appropriately to any current and future economic conditions, whether favorable or otherwise.

An overview of the Bank's risk management structure, risk management policy, and risk management system is presented below.

5.1 Risk Management Structure

The Bank's risk management structure is separated into two levels:

5.1.1 Sub-Board Committees

The Board of Directors has the authority and responsibility to delegate risk management authority to management and other committees, which includes credit approval authority along with authority to set risk limits for other types of risk. To ensure appropriate decentralization, authority is determined by the underlying risk level (risk-based authority). The following committees have been appointed to oversee the Bank's risk management implementation:

1. **The Executive Committee** is responsible for credit approval, investment approval and other management functions as assigned by the Board of Directors.
2. **The Risk Oversight Committee** is responsible for reviewing risk management policies, risk strategies, and risk appetite to ensure that the Group's risk management practice is aligned the Board's policy.
3. **The Audit Committee** comprises independent members of the Board who are responsible for reviewing the adequacy of the Bank and its Financial Group's risk management measures and systems, as well as internal control. Audit Function is responsible for evaluating the overall effectiveness of risk management and internal control within the Bank and its Financial Group and communicating their review to the Audit Committee.
4. **The Technology Committee** assists the Board of Directors in long-term strategy formulation, service integrity, and technology risk.

5.1.2 Management Committees relating to Risk Management of the Bank

In addition to the above sub-board committees, the Bank also set up various management committees to handle risk management responsibilities:

- **The Risk Management Committee** reviews and makes recommendations on risk management policies and frameworks to the Risk Oversight Committee and the Board of Directors. The Risk Management

Committee is also responsible for managing the overall risk of the Bank.

- **The Assets and Liabilities Management Committee** is responsible for managing liquidity risk and interest rate risk in banking book.
- **The Equity Investment Management Committee** is responsible for approving investment in equities within its approval authority and have an authority to set investment process, operation process and other management pertaining to investment. Including managing risk of the Bank's equity investment portfolio.
- **The Credit Committee, the Retail Credit Committee, Wealth Credit Committee, and the Special Assets Committee** are authorized to approve credits within a pre-specified limit which varies by each committee's approval authority level. Any loan amount exceeding the authorized level must be approved by the Executive Committee or by the Board of Directors. In addition, loans for bank-related businesses, major shareholders, or any related parties must be approved by the Board of Directors only. For any loans considered sensitive or highly complicated which may materially impact the Bank's reputation, the Chairman of the Executive Committee may escalate the matter to the Board of Directors as deemed appropriate.

  For NPAs, the Management Committee is responsible for approving NPAs that fall within its approval limit. Any NPAs with FMV above such limit require approval from the Executive Committee and the Board of Directors as specified by the rules on NPLs and NPAs approval authority.
- **The Underwriting Risk Committee** considers, reviews, and approves securities underwriting limits based on market risk, as well as making recommendations to the Executive Committee or the Board of Directors for cases beyond its approval authority or for any high-risk transactions.
- **The Model Risk Management Committee** is responsible for validating and overseeing all internal risk models employed by the Bank to ensure that model risk management frameworks perform as expected. The committee is also responsible for approving models as well as model validation results.
- Other committees, such as the Investment Committee.

Chief Risk Office

The Chief Risk Office, which reports to the Chief Risk Officer and the Chief Executive Officer and the Chairman of the Executive Committee, is responsible for setting risk management framework, making risk policy recommendations, as well as monitoring and reporting major types of risk. The Chief Risk Office has the responsibility to bring the Bank's risk management policies and practices up to global standards while meeting all relevant regulatory requirements, and to ensure that the Bank and its subsidiaries have a comprehensive and integrated risk management framework. In addition to the Chief Risk Office performing the above risk management roles, there are other functions overseeing specific risks, i.e., Chief Financial Office for capital adequacy, liquidity risk, and interest rate risk in the banking book (IRRBB), Chief People Office for people risk, Chief Strategy Office for strategic risk, and Chief Marketing Office for reputational risk.

5.2 Risk Management Policy

The Bank, as the parent company, has a duty to oversee risk management of subsidiary companies in the Financial Group. Every subsidiary must ensure that its risk management system meets the Bank's standard and complies with the BOT's Consolidated Supervision Policy and other relevant laws.

SCB and its Financial Group have established and applied the Risk Management Policy Framework at two levels:

- **SCB as the parent company**, by its Board of Directors, sets the strategy and approves the risk management policy of the Financial Group. Every subsidiary is required to tailor its risk management policy, organizational structure, risk tolerance limit, and risk management approach to specific risks relevant to the nature of its business. Such policy shall be reviewed and approved by the Group Risk Management Committee, the Bank's Risk Oversight Committee, and the Audit Committee accordingly.

  The Risk Management Policy Framework covers major risks facing the Financial Group which are strategic risk, credit risk, market risk including interest rate risk in banking book, liquidity risk, operational risk, model risk, reputational risk, people risk, and technology risk. The policy also identifies major risks for every subsidiary's line of business, establishes risk management and control guidelines for each business, as well as specifying reporting standards for effective and consistent risk control and monitoring across all businesses.

- **Subsidiary companies in the Financial Group** are responsible for establishing risk management policies that materially reflect business-specific risks and align with the Group Risk Management Policy. Each subsidiary's risk management policy must be approved by the company's board and agreed by the Bank.

The Board of Directors reviews and approves the Bank's major risk management policies, including:

- Risk Management Policy of SCB Financial Group
- Intra-SCB Financial Group Transaction Policy
- Credit Policy Guide
- Internal Capital Adequacy Assessment Process Policy (ICAAP Policy)
- Stress Testing Policy
- Recovery Plan Policy
- Market Risk Policy Guide
- Trading Book Policy
- Interest Rate Risk in the Banking Book Management Policy
- Equity Investment Policy
- Liquidity Risk Management Policy
- Operational Risk Policy
- Business Continuity Management Policy
- Strategic Risk Management Policy
- Reputational Risk Management Policy
- People Risk Management Guidelines
- Technology Risk Management Policy
- Model Risk Management Policy

5.3 Risk Management System

One of the Group's objectives is to ensure that risk management systems across all Group companies are consistent and well-aligned at both the Bank level and the Group level. As the focal point for risk management within its Financial Group, SCB has a responsibility to establish a risk management framework together with setting guidelines and overseeing risk management of all subsidiaries to facilitate sustainable growth and increase its short-term and long-term competitiveness under transparent management and good governance.

SCB's risk management system consists of four key processes:

5.3.1 Risk Identification

The Bank's major risks arise from transactions and business activities with customers and counterparties. The followings are major risks faced by the Bank:

- **Strategic risk** refers to risks on financial performance (e.g. revenues, profits, capital) and stability of the Bank and its Financial Group both at present and in the future that arise from changes in business environment, inappropriate strategic decisions, ineffective strategic implementation, or untimely responses to industry, economic, and technological changes.
- **Credit risk** refers to risks that borrowers fail to make the required principal and interest payments, or counterparties fail to meet their contractual obligations, either because of inability or unwillingness, which may result in loss of revenue and lower capital for SCB and its Financial Group. Credit risk covers both on- and off-balance sheet items, including loans, investments, commitments, obligations, and similar transactions.
- **Market risk** refers to risks from changes in values of on- or off-balance sheet positions due to movements of market risk factors, such as exchange rates, interest rates, stock prices, credit spreads, and commodity prices, which may have an impact on revenue and capital of SCB and its Financial Group.
- **Interest rate risk in the banking book (IRRBB)** refers to risks of losses in net interest income and/or economic value of equity for the on- and off-balance sheet positions in the banking book as a result of interest rate movements.
- **Liquidity risk** arises from the Bank's inability to repay any debts and contingent liabilities due to the inability to secure sufficient funds, high costs from emergency borrowing, or losses incurred from asset sales.
- **Operational risk** refers to risks from inadequacy or failure of internal processes, personnel, systems, or external events. Legal or reputational risks (but not strategic risk) that arise from operational risk are treated as operational risk. Operational risk can be influenced by both internal and external factors, such as changes in personnel, organizational structure, procedures, systems, products, customers, business environment or operational standards, as well as business activities.
- **Model risk** means risks arising from decisions made based on outcomes or reports derived from inappropriate risk models or from misuse of risk models which may trigger adverse impacts to the Bank.
- **Reputational risk** can arise from negative public perception of the Bank. This type of risk is difficult to identify or assess because it is driven by changing political, economic, and social conditions, including specific public expectations of the Bank which might affect the revenue and capital of SCB and its Financial Group.
- **People risk** refers to risks born to an organization from people's actions or negligence and, vice versa, risks born to people from an organization's actions or negligence. People risk can influence other risk types, i.e. credit risk, market risk, liquidity risk, reputational risk, operational risk, and strategic risk.
- **Technology risk** refers to risks from technological changes that may have a negative impact on the Bank's transaction and service delivery, as well as risks from technology people, technology processes, technology systems and data, e.g. technology obsolescence, insufficient security, instability and unavailability of technology systems to meet customer demands or handle crises. The negative impacts on

the Bank and customers will likely hurt the Bank's competitiveness and profitability.

5.3.2 Risk Assessment and Measurement

To assess and measure each type of risk, the Bank and its Financial Group apply a variety of quantitative and qualitative methods based on internal ratings- based approaches and/or other appropriate internal models:

- For **strategic risk**, the Bank measures and assesses this risk using primarily qualitative risk factors and quantitative economic indicators.
- For **credit risk**, the Bank uses risk rating to gauge the probability of default (PD) based on credit scoring, such as application scores and behavior scores, to construct risk profiles for retail and small SME customers and uses Borrower Risk Rating model for corporate customers. Moreover, risk models are used to estimate loss given default (LGD) and exposure at default (EAD). For derivative products, the Bank relies upon the potential future exposure (PFE) methodology to measure credit risk exposure.
- For **market risk**, the Bank uses both statistical tools, such as value at risk (VaR) , and non-statistical methods, including risk-factor sensitivity analysis, position measures, and stress testing for the trading book.
- For **interest rate risk in the banking book (IRRBB)**, the Bank assesses this risk by measuring the impact of interest rate fluctuation on net interest income and economic value of equity (EVE) using interest rate volatility assumption under stress scenarios.
- For **liquidity risk**, the Bank uses a wide variety of measurements, such as balance-sheet structure, cash flows of assets and liabilities, and off-balance sheet items. The liquidity risk measurement framework includes liquidity coverage ratio (LCR), net stable funding ratio (NSFR), liquidity ratio, and maximum cumulative outflow (MCO).
- For **operational risk**, the Bank developed Risk and Control Self Assessment (RCSA) as a tool to identify and assess risk and control as well as loss incident data to determine operational risk and internal control effectiveness for each Business Unit/ Product of the Bank. And, developed Key Risk Indicators (KRIs) to identify causes of risks and track movement of risk trends as the early warning to effectively manage risks. In addition, tolerance level of each KRI is defined and KRI reporting is required to perform as per defined period. All related Business Units/ Products has been communicated to acknowledge their roles and responsibilities as defined in the RCSA & KRI internal regulation to ensure consistent and transparent practice of operational risk management. As part of its risk mitigation process, the Bank has established business continuity management plan (BCM) to ensure continuity of key activities during crisis or disasters that may cause business disruptions. Moreover, the Bank has an extensive risk assessment process for new products to ensure that risk from new products as well as risk from any changes to existing products is still within the tolerance limit to minimize potential operational risk.
- For **model risk**, the Bank measures model performance using quantitative statistics, such as key performance indicators, and other qualitative indicators to ensure that the adopted models are suitable. Qualitative analyses and measurements are also employed to assess model risk.
- For **reputational risk** and **technology risk**, the Bank relies primarily on qualitative methods for assessment.

- For **people risk**, the Bank employs quantitative indicators, such as loss of key personnel and required skills for the organization, to measure and evaluate the risk.

Moreover, to achieve forward-looking risk management, the Bank has added stress testing to the existing risk assessment toolkit, particularly for market risk, credit risk and liquidity risk.

5.3.3 Risk Control and Mitigation

The Bank's Board of Directors and senior management establish the Bank's acceptable risk level or risk appetite statement (RAS) in order to meet SCB's long-term financial targets and to facilitate risk monitoring and management, as well as capital adequacy review.

The Bank monitors and controls risk by setting key risk indicators and risk limits for different levels of exposure: organization, customer, product, transaction, and others. The Bank has a variety of internal control mechanisms to manage risks in accordance with the Bank's policies and procedures as well as an audit process conducted by the Internal Audit Function to review risk management practices.

5.3.4 Risk Monitoring

SCB and its Financial Group have established schedules and formats for risk monitoring and reporting, which must be submitted by relevant functions to senior management on a timely basis to ensure effective risk control and management. The Chief Risk Office reports risk levels, trends, and key risk issues to the Group Risk Management Committee, the Audit Committee, the Risk Oversight Committee, and the Board of Directors on a regular basis.

5.4 Emerging Risks

The Bank analyzes both short-term (within 1 year) and long-term (between 3-5 years) emerging risks to develop timely response measures which enable the Bank to control potential impact. The Bank identified 4 key emerging risks in 2021.

Risks from climate change and approaches to achieving Carbon Neutrality

SCB has kept a close monitor on the global coalition and the commitment of financial institutions worldwide to reach Carbon Neutrality 2050. In this regard, Thailand took an important milestone in 2021 when the government joined the 26th UN Climate Change Conference (COP26) and pledged to accomplish Carbon Neutrality by 2050 with provision of support on finance and technology as well as international cooperation. Since the new goal is 15 years earlier than Thailand's initial Carbon Neutrality commitment by 2065, the Bank has examined potential transition risks which could arrive ahead of the plan, particularly regulatory changes and government policy to mitigate GHG emissions. Similarly, modern markets and technology will focus on high-capability and environmentally friendly alternatives in transition to a low-carbon and green economy. Under such circumstances, certain projects not aligning or supporting a decarbonization target might face constraints as well as adverse impacts on asset values and operating costs due to regulatory changes, especially the fossil fuel industry and heavy GHG emitters.

Furthermore, the Bank consistently monitors physical risks from climate change which could have impacts on the economy from the slowdown of economic activities to business interruption; property damages; and shortfalls and degradation of natural resources, farm crops, and commodities.

Aside from that, SCB also monitors the EU Carbon Border Adjustment Mechanism (CBAM) to help clients reshape their business plans and stay competitive in the global market.

Given potential regulatory shifts towards GHG management, there might be long-term impacts on project finance of which business model or technology does not align with the Carbon Neutrality target.

Moreover, since project finance receives a longer repayment period than other loan products, there are higher risks of stranded assets that could significantly damage the Bank's revenue and performance. Certain projects with high risks are heavy polluters such as coal mining and unconventional petroleum production.

SCB recognizes that the Carbon Neutrality ambition could deter competitiveness of companies that face constraints in adopting clean technology or reshaping business model to accommodate the target both within firms and along the supply chain. Any regulatory changes or financial measures related to GHG reduction will likely affect the business performance and expansion strategy of SCB clients, thus causing ripple effects onto the Bank if we end up failing to present financial solutions as planned.

Considering the estimated impacts, SCB adopts the Equator Principles, which require every large-scale project finance with high environmental impacts and annual GHG emissions of over 100,000 tons of carbon dioxide equivalent to undergo and report climate risk assessment both in terms of transition and physical risks. By doing so, any project finance will be made aware of potential environmental impacts and thus able to identify appropriate solutions and concrete management plans.

For general business, SCB has continued to offer loans to clean energy businesses and low-carbon infrastructure projects. As the world and Thailand took further steps on GHG mitigation to meet the Carbon Neutrality commitment, the Bank also started to develop wide-ranging financial solutions and loan products to assist our clients in their journey to a low-carbon transition. The Bank offers solutions in the form of loans and financial products such as derivatives all subject to industrial standards ranging from the Green Bond Principles to the Sustainability Linked Bond Principles. Most recently, SCB became the first financial institution in Thailand to launch the ESG-Linked Interest Rate Swap in 2021.

Moreover, the Bank plans to review projects and companies in its portfolio exposed to high-risk industry in order to identify appropriate measures such as reduce proportion of such industries, consult with clients on GHG emission approach through low-carbon projects.

Cybersecurity risks from increasing reliance on digital technology and adoption of new business model and operation

Today's business landscape has forced companies including SCB to heavily rely on technology as a key business driver. Cybersecurity risks thus become inevitable and even more evident in the wake of COVID-19 outbreaks, which prompted the Bank to shift from onsite to remote work. The Work from Anywhere arrangement could pose risks to the security system as it allows a more convenient access to Bank's internal system and data.

Risk management and proactive measures to ensure cybersecurity thus play a pivotal role in strengthening cyber protection and preventing damages in case of unfavorable events such as infra-structure shutdown, service disruption, security breach, and personal data theft. In particular, the Bank has employed the Cybersecurity Mesh Architecture, which emphasizes building cybersecurity and expanding coverage beyond

SCB premise to anywhere, that is, extending cybersecurity controls any where needed.

Increased reliance on digital technology as well as the adoption of advanced data management and storage system could imperil the SCB's position against cybersecurity risks. As the Bank strives to enhance digital platforms and data networks with partners, such unfavorable conditions would affect not only SCB but also our clients and business partners.

Cyber risks might result in financial damage, worsening reputation, and loss of trust from clients and other stakeholders including the regulators who could impose a penalty on the Bank.

For customers, cyberattacks could cause inconveniences due to system disruption, whereas data privacy abuse and misuse might result in financial damages.

Meanwhile, cyber risks would threaten business partner's confidence in the Bank's system security, internal management, and business operation, thus negatively affecting decision-making on current and future partnerships.

To level up the security of our operation and digital platform, SCB has increased the share of investment in infrastructure, tools, and cybersecurity technology based upon the 'Three-Line of Defense Framework.' The procedure is overseen by the IT and cybersecurity governance structure comprising the Technology Committee and operating officers. In addition, SCB has an internal Cyber Intelligence Unit to examine and monitor cyber threats from type to feature, trend, and case study to develop and maintain modern and efficient response procedures. The Cyber Intelligence Unit works closely with the Security Operations Center who is tasked with responsibility for scrutinizing access to SCB network and IT system as well as preparing to counter cyberattacks in a timely manner.

As the Bank becomes more exposed to cyber risks due to the Work from Anywhere arrangement, SCB adopts the 'Cyber Security Mesh Architecture' to create a collaborative ecosystem of security tools. The model ensures end-to-end security points to both onsite and remote work; the tasks are connected and monitored through a centralized aggregation point.

In addition, all business partners and suppliers are required to undertake a cybersecurity risk assessment before commencing work with SCB, in order to determine their readiness and necessary risk management approaches. By doing so, the Bank can ensure that every access and transfer of data proceeds in compliance with prudent standards and management approaches while recognizing cybersecurity risks.

Epidemic and Dangerous Contagious Diseases

In today's era where the world people, technology, news, and data intertwine through a seamless connection, novel disease outbreaks have inevitable impacts on economic, social, and political stability. Throughout the past two years, the COVID-19 pandemic has led to wide-ranging effects such as:

- The global economy entering a recession
- Exacerbating social inequality in terms of income distribution, access to healthcare, and adaptability
- Rising unemployment and uncertainties
- Financial fragility of small entrepreneurs and swelling household debt
- New threats such as fraud, cybersecurity, and data privacy

Furthermore, the pandemic has brought about the New Normal where all stakeholders from personal to organizational, societal, and national levels must seek approaches and collaborative efforts to embrace the new global paradigm.

As one of the epidemic and contagious diseases, the COVID-19 pandemic has affected the Bank's operation in various aspects such as:

Business Operation: The Bank might fail to meet a target performance if the economy falls into a recession. Meanwhile, virus control measures have prompted the Bank to reshape our business strategy. Furthermore, our current business model may be unlikely to fulfill customer demand or expectation in the New Normal era where coronavirus outbreaks forever change consumer behavior and way of life. Therefore, SCB must develop a new business game plan to pursue sustainable growth ahead.

Customer Service: The COVID-19 pandemic has also accelerated digital transformation, as evident in a rapid increase in the number of consumers adopting online financial transactions during the outbreaks. In response, the Bank must enhance service capacity to facilitate a seamless transaction while ensuring data security and privacy to deliver a distinct customer experience with the highest satisfaction.

Credit Quality: Loans, the largest contribution in SCB assets, are facing higher risks of debt service default as corporate clients in some industries and regions are confronted with income and profit shortfalls, whereas some have been operating at a deficit. Also, there could be more potential debt defaults among retail borrowers as the unemployment crisis continues.

Employee Care: SCB has introduced the Work from Anywhere arrangement to increase workforce flexibility during the pandemic. Therefore, the Bank needs to enhance IT system capacity to ensure that SCB employees at head offices and branch network can still work efficiently while maintaining access to skill development and learning courses.

As the post of COVID-19 pandemic remains highly uncertain, it is of paramount importance for the Bank to formulate policy responses against arising challenges and uncover innovation to uplift business resilience in the New Normal era after the outbreaks subside. In doing so, the Bank has in place key risk management policies which consist of the followings:

Business Operation: SCB actively prepares and rehearses Business Continuity Plan to ensure readiness and service continuity in case of emergency and, at the same time, reshapes our business model and strategy in efforts to stay buoyant in the new business paradigm. In 2021, the Bank announced the establishment of SCBX, which reflects our aspiration to march beyond traditional banking services and ride on financial strength to fully transform into FinTech business and platform of the future

Customer Service: SCB Digital Bank (DBank) was established as an internal unit that focuses on digital business growth and strategy to strengthen access and meaningful relationship with our customers. DBank leverages AI technology and expansive database to present tailor-made financial solutions that cater to each client's demand and condition. The Bank also strives to protect customer data privacy at the highest standards, thus adopting the Cybersecurity Mesh Architecture—which aims to build and extend cybersecurity controls anywhere needed and beyond the Bank's premises.

Credit Quality: SCB places emphasis on assessing impacts upon credit portfolios in a timely manner. The Bank must be able to identify affected debtors from each situation that might deteriorate overall credit quality and find approaches to control, monitor, and report risks to executives. In addition, SCB maintains sufficient monetary reserves in case of urgency and regularly conduct scenario analysis to ensure that current assessment models are practical to any circumstance.

Employee Care: SCB prioritizes taking care of employees and ensuring safety in all aspects. Our employee cares include enforcing the Work from Anywhere policy as a permanent arrangement; providing essential work devices and tools; uplifting cybersecurity measures to global standards; providing alternative vaccines to employees at all levels; organizing activities to uplift physical and mental health; and offering financial assistance to employees affected by the COVID-19 outbreaks.

Geopolitical risk

Geopolitical risk is a risk arising from tension between nations due to political situation, conflicts, scramble for natural resources, terrorism, threat from weapon of mass destruction, which could be escalated to regional and global level. Geopolitical risk can transmit to economic sectors via investors' confidence and sentiment, and economic activity. In a time of geopolitical stress, the tension affects overall confidence and results in investment volatility, slowdown or stagnant economic activity, or acceleration toward economic recession.

The Bank is aware of geopolitical risk and potential impact associated with credit risk. As Thailand heavily relies on import of raw material and intermediate goods and export products to foreign countries, and with a significant number of customers in the Bank's portfolio operate in import/export sector, manufacturing, transportation, and supply chain. Political tension in one country or between nations could negatively impact cashflow and performance deterioration of businesses, and their ability to meet financial obligation while demands for financial products for import/export business decline. If the situation becomes more severe or prolonged, it could accelerate the economic crisis and unemployment. These affect creditworthiness of business and retail customers of the Bank.

Recognizant of impacts resulted from geopolitical risk, the Bank establishes effective and proactive risk management process to ensure that the risk is appropriately assessed and monitored by embedding geopolitical risks in the credit decision process and credit review to ensure that the credit decision is forward-looking. In addition, the Bank controls country risk by setting limits on lending, investment, and contingent liabilities for each country. SCB's Country Risk Management Policy requires both direct and indirect country-specific exposure to be included when calculating the country-risk limits. When situation arises or becomes intensified, the Bank promptly assesses the impact on the portfolio and conduct stress test to ensure that the Bank has sufficient provision and capital to mitigate potential losses.

6. CREDIT RISK

6.1 Credit Risk Management Structure

To manage credit risk efficiently and effectively, SCB and its Financial Group have established specific credit risk management units with a clear separation of duties from other business functions. These credit risk management units, which report to the Chief Risk Office, are:

- **Credit Risk Management Function** has primary responsibilities to approve loans that fall within its scope of authority and make independent recommendations for credit approval at a higher level based on the Credit Policy Guide and related underwriting standards.
- **Credit Policies and Procedures Division** makes recommendations on credit risk management of SCB Group companies as well as formulating and revising the Credit Policy Guide along with other policies and procedures related to credit risk management, including guidelines on credit approval authority, the collateral and non-performing asset appraisal policy, and the loan classification, provision, and bad debt written-off policy.
- **Retail and Small SME Portfolio Management Function** oversees risk management for retail and small SME by formulating credit policy, setting approval authority, and establishing product programs and risk programs of all retail lending products. This Function also provides guidance on customer targeting and selection, risk-based pricing, credit line adjustments, risk segmentation by product and customer segment, and retail portfolio management, as well as working with the Retail and Small SME Collection Unit of SCB (SCB Plus) to set collection strategy.
- **Special Business Unit** has been set up to prevent and resolve problem loans as well as oversee NPL management.

  Debt restructuring, legal action, debt collection after a charge-off, as well as property foreclosure are within the purview of the Special Business Unit. These NPL resolution alternatives are to follow the Workout Policy Guide which sets the framework for managing non-performing assets to maximize debt recovery within an appropriate timeframe.
- **Portfolio Analytics and Measurement Function** is in charge of performing credit portfolio analysis, monitoring and controlling credit risk to be within the risk appetite, measuring and monitoring Risk-Adjusted Return on Capital (RAROC) which is used for risk-based pricing, as well as overseeing provision and capital adequacy.
- **Credit Risk Analytics Function** develops credit risk models, maintains the credit scoring system for retail lending, and manages necessary IT systems for credit risk management.
- **Model Risk Management Division** is responsible for validating and testing credit risk models.

6.2 Credit Risk Management Policy and Guidelines

The Group's Risk Management Policy requires SCB and all companies in its Financial Group whose businesses are related to banking, financing, leasing, securities, asset management and fund management with material credit risk exposures to establish a credit risk management policy which consists of the following implementation:

- Formulate a credit risk management policy
- Have written risk-based limits and authorities
- Have checks and balances in the credit approval process to ensure both transparency and accountability under the 'four-eye' principle
- Set a concentration limit; for the Bank, this limit must take into account both borrower and industry characteristics.

6.2.1 Collateral and Credit Risk Mitigation Policy

Credit risk mitigation reduces losses from default on repayment obligations by liquidating collateral and/or claiming payment from guarantors.

SCB and its Financial Group have adopted the Standardized Approach for credit risk calculation. Accordingly, collateral that qualifies for credit risk mitigation falls within one of these two following categories:

1. **Financial collateral** comprises items that can be easily liquidated for cash with clear mark-to-market values, such as cash, deposits, bonds, securities, and unit trusts.
2. **Guarantees and credit derivatives**

SCB establishes the Collateral and Non-Performing Asset Appraisal Policy to serve as a guideline for collateral management to ensure that appraised collateral value is in line with fair market value both before and after acceptance of the collateral.

For financial collateral, SCB and its Financial Group follow the broad principles below to optimize the value of collateral:

- Collaterals must not be concentrated in a particular asset type or issuer;
- Collaterals must not be significantly correlated with borrowers' default risk;
- Currency of the collateral should match that of the debt obligation. If there is a difference, collateral value must be further discounted toto reflect the underlying currency risk;
- Contractual term or duration of the collateral should match that of the debt obligation. If any mismatch exists, contractual term should be monitored and extended prior to expiration date to ensure that the collateral remains valid throughout the term of the loan;
- Collateral contracts must meet the standards and must be reviewed to ensure that they are legally binding and enforceable.

Appraisal of financial collateral is typically reviewed at least once a month using the latest bid price as a benchmark. As for guarantees, an acceptable guarantor for credit risk mitigation purposes must have a lower risk weight than the borrower. A private business entity acting as a guarantor must have a better credit rating than the borrower based on ratings from external credit bureaus.

Other types of collateral must follow the Collateral and Non-Performing Asset Appraisal Policy to ensure that collateral and NPA values reflect fair market value both before and after admission as collateral.

6.2.2 On- and Off-Balance Sheet Netting Policy, Scope, and Process

SCB and its Financial Group will only use netting to reduce credit risk when contracts are legally binding and enforceable for all relevant parties. Contracts must meet the minimum standards set by the Bank of Thailand and must be approved by legal functions of SCB and relevant companies. Contracts must be regularly reviewed to assess any impact on enforceability from legal and regulatory changes. In addition, SCB and its Financial Group must have a system to monitor and control risk from maturity mismatch of assets and liabilities used for netting. Netting cannot be used if the above conditions are not met.

6.2.3 Definition of Default

SCB and its Financial Group define default and loss based on the occurrence of either or both of the following events:

- Borrower is unable to make a full contractual repayment, excluding any payment that can be recovered from collateral. An example of this case is an event of debt restructuring with a significant haircut or postponement of principal, interest, or fee payments due to the borrower's deteriorated financial position.
- Delinquency on payment (principal or interest) for more than 90 days or borrowers being reclassified as "Non-performing" according to the Bank of Thailand's notification on Loan Classification and Provision Criteria for Financial Institutions.

For asset impairment, SCB and its solo consolidation companies are required to use the Bank of Thailand's asset classification criteria, which classify loans into performing (Stage 1), under-performing (Stage 2) and non-performing (Stage 3). Loan classifications are done at the borrower level except for retail credit which are classified at the account level for both secured and unsecured loans. In addition to delinquency duration, the Bank also adopts a qualitative credit review process to enhance the accuracy of loan classifications and to ensure adequate loan loss provisions.

6.2.4 Classification and Provisioning Policy

The Bank's approach on loan classifications, loss provisions, and write-offs for bad debt or bad debt recovery complies with the regulations of the Bank of Thailand or other related regulatory bodies to ensure that the Bank has adequate provisions to absorb losses from asset impairment, particularly from loans which are the Bank's main assets.

Loans are typically classified based on the borrower's ability to meet his/her debt service obligations. Borrowers or related parties whose cashflows are from the same source will be assigned the same classification to ensure adequate provisions based on both quantitative and qualitative criteria.

Provision based on Expected Credit Loss (ECL)

SCB and its Financial Group determine expected credit loss in accordance with TFRS 9 and the BOT's guidance. Furthermore, the Bank has internal audit and credit review processes to assess the adequacy of provisions based on borrowers' statuses. If warranted, additional provision based on individual assessment and/or management overlay will be used to protect against future losses.

Management Overlay

Management overlay for the Bank and its Financial Group refers to additional reserves for ex-post events which include current market conditions, identifiable factors not fully covered by credit risk models, forecast revisions by credit experts, and economic risks. SCB and its Financial Group have an internal control framework to regularly assess the adequacy of management overlay along with a process for model and ECL revisions to accurately reflect the current economic conditions.

6.3 Credit Approval Process

SCB and its Financial Group place heavy emphasis on a separation of duties between business functions and credit underwriting functions. Retail credit approval is based on the Product Program/Risk Program as well as credit scoring model approved by the Executive Committee or the Retail Credit Committee. Approval authorities and criteria, as well as exceptions, are clearly specified.

Approval Authority

As approved by their respective boards, all SCB Financial Group companies have established credit approval authority which may be delegated to committees and further to individuals at different corporate levels. Any credit request that deviates from the Credit Policy Guide or the underwriting standard must be escalated to the higher authorization chain for approval.

SCB has two levels of credit approval authority: committee level and individual level. Committees with credit approval authority are the Credit Committee, the Executive Committee, and the Board of Directors, for instance. Individual authorizers range from credit managers, SEVPs, to Chief Risk Officer. In addition, the Bank also grants individual approval authority within prespecified limits to business relation functions up to the President, starting at sector /regional manager level for corporate functions and branch manager level/ Credit Approval Processing Officer for retail functions.

Approval authority is determined by risk level which will depend on credit line, borrower risk rating, severity class, and fees and/or interest rates. The Bank also assigns approval authority based on group exposure where groups and relations are defined mainly by shareholding and controlling authority in accordance with Section 4 of the Financial Institution Act.

6.4 Credit Risk Measurement

Since credit risks vary by loan type, borrower, and collateral, it is necessary to use different risk measurement approaches from simple to sophisticated statistical tools to appropriately reflect credit risk exposure.

For business loans, credit risk is assessed at the borrower level by considering the following factors:

- **Probability of default (PD)** : For corporate and business customers, borrower risk ratings based on individual assessment are used to evaluate the borrower's ability to pay. The assigned risk ratings are reviewed annually or whenever there is any material change that affects the borrower's risk behavior.
- **Loss given default (LGD)**: LGD is calculated from losses given three recovery paths: cure, restructuring, and liquidation. Losses will depend on loan-to-value ratio (LTV), or the ratio of loan outstanding to discounted collateral value, and severity class.
- **Exposure at default (EAD)**: EAD is calculated from the current outstanding balance and the undrawn portion of credit lines which vary by product type. All off- balance sheet items must be converted to on-balance items using a credit conversion factor (CCF).

For small business and retail loans, credit risk measurement is calculated at the portfolio level using a similar methodology on a pooled basis. In addition to PD, LDG and EAD, the following factors are also included:

- **Non-performing loan ratio (NPL)** is based on the percentage of borrowers in a portfolio who are delinquent for more than 90 days or 3 months. For retail loans, NPL ratios are calculated by product and customer segment to facilitate portfolio management with information on the underlying credit quality.

- **Percentage of write-off** is the ratio of bad debts that were non- collectable and written-off in a given portfolio. This ratio is calculated by product and customer segment to facilitate portfolio management with information on the underlying credit quality.

The above measures serve as inputs into the credit approval process, which includes specifying approval authority, setting interest rates and other terms such as collateral terms, to ensure risk-based credit decisions.

6.4.1 Credit Risk Measurement under the Standardized Approach

SCB and its Financial Group adopted the Standardized Approach to calculate credit risk assets. Since this approach requires external credit ratings, the Bank uses Standard & Poor's ratings for sovereign and financial institutions and TRIS Ratings and/or Fitch Ratings (Thailand) for corporate borrowers.

In the event that a borrower is rated by multiple rating agencies, SCB and its Financial Group will follow the Bank of Thailand's guidelines which is to choose the rating with a higher risk weight. For non-rated companies that have issued rated securities, SCB will use the Bank of Thailand's guidelines to determine the appropriate risk weights.

6.5 Credit Risk Monitoring and Control

6.5.1 Risk Monitoring Guidelines

Credit risk monitoring is an important element of the credit risk management process to ensure that credit risk assessment is accurate, appropriate, unbiased, complete, and up-to-date.

The credit risk monitoring process of SCB and its Financial Group has three components:

- **Part I** is to monitor credit risk with risk management tools, such as credit scoring, borrower risk rating, and other similar tools. These risk management tools have been statistically validated to ensure that they can accurately reflect the risk level and customer behaviors at an acceptable confidence level to SCB and its Financial Group. The models are regularly reviewed to ensure their continued validity.

- **Part II** is to monitor credit risk by imposing limits on approval authority, transaction volume and credit concentration. SCB and its Financial Group have set customer transaction limits and intra-group transaction limits, as well as industry concentration limits.

- **Part III** is to monitor retail credit risk which involves analyzing loan portfolios, credit quality, and repayment behavior measured against target benchmarks to reflect the Bank's risk management policy for retail loans.

Credit review is an important part of risk monitoring. The Bank and its Financial Group focuses on forward-looking analysis to gain insights on positive and negative changes that affect customers' businesses or industries as well as their future financial stabilities to determine appropriate business strategies and action plans. Credit reviews are conducted annually and triggered by events that have material impacts on customers' positions.

At the portfolio level, credit risk is monitored to ensure that credit quality and loan growth stay within the annual targets. Portfolio monitoring enables SCB to analyze trends in loan growth and identify future problem loans, as well as assess the effectiveness of its credit-related strategies. For retail credit, SCB also analyzes repayment behavior and monitors credit quality by focusing on key target indicators.

The Bank also monitors credit risk by benchmarking current credit and NPL data against historical data of both SCB and the commercial banking industry to analyze credit risk trends. In addition, the Bank also performs credit risk stress testing for a wide range of scenarios to forecast losses and capital adequacy. Stress testing results are also used as important inputs for risk mitigation and capital planning.

6.5.2 Risk Control Guidelines

The Bank limits the concentration of lending, investments, contingent liabilities, and lending-like transactions with major borrowers at two levels in accordance with the BOT's regulations:

1. **Bank level**: Concentration shall not exceed 25% of the Bank's total capital. Additionally, for all major borrowers whose loans exceed 10% of the Bank's capital, the aggregate loan balance must not exceed three times of the Bank's capital.
2. **Full consolidation level**: Concentration must not exceed 25% of the full consolidation capital.

For related lending, the Bank imposes limits on lending, investment, contingent liabilities, and lending- like transactions in accordance with the Bank of Thailand's regulations at both bank-only and solo consolidation levels.

SCB has a process to monitor and limit lending, investment, and contingent liabilities to major borrower groups. The Bank assigns a Primary Account Manager (PAM) to each customer group to ensure that lending, investment, and contingent liabilities of major borrower groups do not exceed the limits set by the Bank of Thailand. Specifically, credit must be allocated by PAM before approval can be granted by full consolidation companies or by related persons to companies in the solo consolidation group. Moreover, full consolidation companies are required to report credit lines and outstanding loans for such customer groups to the Bank on a monthly basis.

For lending to any particular industry, the Bank determines industry exposures based on industry trends, market share relative to the banking industry, probability of loss, and probability of default. The Bank uses the Herfindahl - Hirschman Index (HHI) to measure industry concentration and determine industry lending limits.

For Product Program/ Risk Program lending, credit line must be clearly specified for each customer segment or product. In addition, this type of lending requires clearly specified objectives, types of credit line, customer qualifications, criteria, standard terms and conditions, as well as monitoring and assessment approach according to performance targets.

6.5.3 Counterparty Credit Risk and Country Risk

SCB and its Financial Group control counterparty credit risk by setting counterparty limits to ensure that potential losses will remain within the risk appetite if there is a contractual breach.

In addition, SCB controls country risk by setting a maximum exposure limit and country limits that include both direct and indirect country-specific risks. The Bank actively monitors and controls the actual drawdowns against the approved country limits to ensure compliance with its Country Risk Management Policy.

6.6 Credit Risk Report

SCB and its Financial Group require all relevant functions to regularly report credit risk by preparing monthly reports for the functional heads to use for managing risk. Credit risk information on loan growth, credit quality, concentration, and investment diversification is then reported to the Risk Management Committee and/or the Risk Oversight Committee on a monthly basis.

SCB and its Financial Group's Credit Risk Report presents information on significant on- and off-balance sheet items. The report also shows unadjusted bad debts written-off by geographical area and business type (Table 7-15). Moreover, exposures by risk types and risk weights under the Standardized Approach are also presented in Table 16-18.

Table 7: Significant On- and Off-Balance Sheet Exposure Items

Unit: Baht million

	Bank-Only		Consolidated	
	31 Dec 21	31 Dec 20	31 Dec 21	31 Dec 20
On-balance sheet items	**3,086,582**	**3,079,308**	**3,104,249**	**3,091,778**
Net loans [1/]	2,733,644	2,629,863	2,739,015	2,632,479
Net investment in debt securities [2/]	262,792	327,164	262,946	327,136
Deposits [3/]	32,529	35,186	44,709	45,333
Derivative assets	57,617	87,095	57,579	86,830
Off-balance sheet items [4/]	**3,706,291**	**3,876,838**	**3,706,519**	**3,873,407**
Contingent	99,396	70,576	99,966	71,123
OTC derivatives [5/]	3,570,837	3,758,640	3,570,495	3,754,662
Undrawn committed lines	36,058	47,622	36,058	47,622

1/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss) and allowance for expected credit loss and including loans and accrued interest receivables of interbank and money market

2/ Excluding accrued interest receivables and net of allowances for revaluation and allowance for expected credit loss

3/ Including accrued interest receivables and net of allowance for expected credit loss

4/ Before using credit conversion factor

5/ Including equity-related derivatives

Table 8: Exposures by Geographical Area

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
On-balance sheet items	**3,060,447**	**26,135**	**3,086,582**	**3,056,724**	**22,584**	**3,079,308**
Net loans [1/]	2,713,801	19,843	2,733,644	2,611,406	18,457	2,629,863
Net investment in debt securities [2/]	261,691	1,101	262,792	325,581	1,583	327,164
Deposits [3/]	27,367	5,162	32,529	32,642	2,544	35,186
Derivative assets	57,588	29	57,617	87,095	0	87,095
Off-balance sheet items [4/]	**3,700,726**	**5,565**	**3,706,291**	**3,871,269**	**5,569**	**3,876,838**
Contingent	99,176	220	99,396	67,840	2,736	70,576
OTC derivatives [5/]	3,565,762	5,075	3,570,837	3,755,807	2,833	3,758,640
Undrawn committed lines	35,788	270	36,058	47,622	-	47,622

Consolidated	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
On-balance sheet items	**3,074,556**	**29,693**	**3,104,249**	**3,056,442**	**35,336**	**3,091,778**
Net loans [1/]	2,715,934	23,081	2,739,015	2,611,300	21,179	2,632,479
Net investment in debt securities [2/]	261,510	1,436	262,946	325,524	1,612	327,136
Deposits [3/]	39,562	5,147	44,709	32,788	12,545	45,333
Derivative assets	57,550	29	57,579	86,830	0	86,830
Off-balance sheet items [4/]	**3,700,656**	**5,863**	**3,706,519**	**3,867,291**	**6,116**	**3,873,407**
Contingent	99,177	789	99,966	67,840	3,283	71,123
OTC derivatives [5/]	3,565,421	5,074	3,570,495	3,751,829	2,833	3,754,662
Undrawn committed lines	36,058	-	36,058	47,622	-	47,622

1/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss) and allowance for expected credit loss and including loans and accrued interest receivables of interbank and money market

2/ Excluding accrued interest receivables and net of allowances for revaluation and allowance for expected credit loss

3/ Including accrued interest receivables and net of allowance for expected credit loss

4/ Before using credit conversion factor

5/ Including equity-related derivatives

Table 9: Exposures by Remaining Maturity

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	Less than 1 year	Within 1-5 years	More than 5 years	Less than 1 year	Within 1-5 years	More than 5 years
On-balance sheet items	**1,379,620**	**820,228**	**886,734**	**1,378,779**	**889,615**	**810,914**
Net loans [1/]	1,164,791	745,309	823,544	1,121,408	761,551	746,904
Net investment in debt securities [2/]	156,494	66,437	39,861	201,259	109,685	16,220
Deposits [3/]	32,529	-	-	35,186	-	-
Derivative assets	25,806	8,482	23,329	20,926	18,379	47,790
Off-balance sheet items [4/]	**2,131,885**	**1,033,017**	**541,389**	**1,905,885**	**1,386,726**	**584,227**
Contingent	81,212	3,695	14,489	44,971	9,990	15,615
OTC derivatives [5/]	2,036,894	1,028,190	505,753	1,839,468	1,375,897	543,275
Undrawn committed lines	13,779	1,132	21,147	21,446	839	25,337

Consolidated	31 Dec 21			31 Dec 20		
	Less than 1 year	Within 1-5 years	More than 5 years	Less than 1 year	Within 1-5 years	More than 5 years
On-balance sheet items	**1,394,204**	**821,148**	**888,897**	**1,388,324**	**890,367**	**813,087**
Net loans [1/]	1,167,715	746,341	824,959	1,121,723	762,365	748,391
Net investment in debt securities [2/]	156,545	66,526	39,875	200,998	109,877	16,261
Deposits [3/]	43,975	-	734	44,688	-	645
Derivative assets	25,969	8,281	23,329	20,915	18,125	47,790
Off-balance sheet items [4/]	**2,133,791**	**1,031,340**	**541,388**	**1,905,134**	**1,384,046**	**584,227**
Contingent	81,782	3,695	14,489	44,974	10,534	15,615
OTC derivatives [5/]	2,038,230	1,026,513	505,752	1,838,714	1,372,673	543,275
Undrawn committed lines	13,779	1,132	21,147	21,446	839	25,337

1/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss) and allowance for expected credit loss and including loans and accrued interest receivables of interbank and money market

2/ Excluding accrued interest receivables and net of allowances for revaluation and allowance for expected credit loss

3/ Including accrued interest receivables and net of allowance for expected credit loss

4/ Before using credit conversion factor

5/ Including equity-related derivatives

Table 10: Exposures and Provisions by Type of Financial Instruments

Unit: Baht million

Bank-only

31 Dec 21	Exposures [1/]			Provisions			Net exposures [2/]
	Defaulted exposures	Non-defaulted exposures	Total	General provisions	Specific provisions	Total	Net exposures
Net loans [3/]	106,120	2,772,123	2,878,243	83,390	61,209	144,599	2,733,644
Investment in debt securities [4/]	-	262,820	262,820	28	-	28	262,792
Deposits [5/]	-	32,529	32,529	-	-	-	32,529
Loan commitments and financial guarantee contracts [6/]	2,469	279,017	281,486	5,655	581	6,236	275,250

Bank-only

31 Dec 20	Exposures [1/]			Provisions			Net exposures [2/]
	Defaulted exposures	Non-defaulted exposures	Total	General provisions	Specific provisions	Total	Net exposures
Net loans [3/]	100,049	2,666,217	2,766,266	78,903	57,500	136,403	2,629,863
Investment in debt securities [4/]	-	327,211	327,211	47	-	47	327,164
Deposits [5/]	-	35,186	35,186	-	-	-	35,186
Loan commitments and financial guarantee contracts [6/]	1,819	260,571	262,390	5,028	275	5,303	257,087

Table 10 (Cont.)

Unit: Baht million

Consolidated

31 Dec 21	Exposures[1/]			Provisions			Net exposures[2/]
	Defaulted exposures	Non-defaulted exposures	Total	General provisions	Specific provisions	Total	Net exposures
Net loans[3/]	107,210	2,777,609	2,884,819	83,793	62,011	145,804	2,739,015
Investment in debt securities[4/]	-	262,974	262,974	28	-	28	262,946
Deposits[5/]	-	44,729	44,729	20	-	20	44,709
Loan commitments and financial guarantee contracts[6/]	2,469	280,753	283,222	5,726	581	6,307	276,915

Consolidated

31 Dec 20	Exposures[1/]			Provisions			Net exposures[2/]
	Defaulted exposures	Non-defaulted exposures	Total	General provisions	Specific provisions	Total	Net exposures
Net loans[3/]	101,211	2,668,682	2,769,893	79,090	58,324	137,414	2,632,479
Investment in debt securities[4/]	-	327,183	327,183	47	-	47	327,136
Deposits[5/]	-	45,351	45,351	18	-	18	45,333
Loan commitments and financial guarantee contracts[6/]	1,819	262,079	263,898	5,124	275	5,399	258,499

1/ Financial Instruments measurement based on TFRS9

2/ Net exposure = Exposure - Provision

3/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss), and including loans and accrued interest receivables of interbank and money market

4/ Excluding accrued interest receivables and net of allowances for revaluation

5/ Including accrued interest receivables

6/ Before credit conversion factor. Loan commitments shown in the table are undrawn committed lines which align with the BOT regulations on the calculation of credit risk-weighted assets and information disclosed in the Bank’s financial statement

Table 11: Loans and Investment in Debt Securities by Geographical Area and Asset Classification

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
Total loans [1/]	**2,857,428**	**20,815**	**2,878,243**	**2,747,280**	**18,986**	**2,766,266**
Stage 1	2,562,866	19,737	2,582,603	2,452,089	17,785	2,469,874
Stage 2	189,503	17	189,520	196,152	191	196,343
Stage 3	105,059	1,061	106,120	99,039	1,010	100,049
Investment in debt securities [2/]	**261,709**	**1,128**	**262,837**	**325,622**	**1,629**	**327,251**
Stage 1	261,709	1,128	262,837	325,622	1,425	327,047
Stage 2	-	-	-	-	204	204
Stage 3	-	-	-	-	-	-

Consolidated	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
Total loans [1/]	**2,860,588**	**24,231**	**2,884,819**	**2,747,884**	**22,009**	**2,769,893**
Stage 1	2,565,179	22,358	2,587,537	2,451,800	20,236	2,472,036
Stage 2	189,370	702	190,072	196,167	479	196,646
Stage 3	106,039	1,171	107,210	99,917	1,294	101,211
Investment in debt securities [2/]	**261,527**	**1,464**	**262,991**	**325,564**	**1,659**	**327,223**
Stage 1	261,527	1,464	262,991	325,564	1,455	327,019
Stage 2	-	-	-	-	204	204
Stage 3	-	-	-	-	-	-

1/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss), and including loans and accrued interest receivables of interbank and money market

2/ Excluding accrued interest receivables and net of allowances for revaluation

Table 12: Provisions[1/] and Bad Debts Written-Off During Period on Loans and Investment in Debt Securities by Geographical Area

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
Total loans [2/]						
General provisions [3/]			83,390			78,903
Specific provisions	60,472	737	61,209	57,073	427	57,500
Bad debts written-off during period	19,666	-	19,666	12,020	-	12,020
Investment in debt securities						
General provisions [3/]			45			87
Specific provisions	-	-	-	-	-	-

Consolidated	31 Dec 21			31 Dec 20		
	Thailand	Foreign Countries	Total	Thailand	Foreign Countries	Total
Total loans [2/]						
General provisions [3/]			83,793			79,090
Specific provisions	61,262	749	62,011	57,743	581	58,324
Bad debts written-off during period	19,854	-	19,854	12,051	-	12,051
Investment in debt securities						
General provisions [3/]			45			87
Specific provisions	-	-	-	-	-	-

1/ Allowance for expected credit loss

2/ Including provision for outstanding amounts and accrued interest receivables of interbank and money market

3/ General provisions disclosed in total amount

Table 13: Loans[1/] by Type of Business and Asset Classification

Unit: Baht million

Bank-only	31 Dec 21				31 Dec 20			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Agriculture and mining	8,882	978	3,768	13,628	12,568	1,346	3,455	17,369
Manufacturing and commercial	1,116,856	46,170	45,801	1,208,827	1,020,719	62,827	43,255	1,126,801
Real estate and construction	152,481	7,770	17,660	177,911	156,018	18,210	16,763	190,991
Utilities and services	360,058	38,005	13,485	411,548	353,887	23,548	11,177	388,612
Housing loans	528,362	34,438	15,235	578,035	496,160	47,061	15,808	559,029
Others	415,964	62,159	10,171	488,294	430,522	43,351	9,591	483,464
Total	**2,582,603**	**189,520**	**106,120**	**2,878,243**	**2,469,874**	**196,343**	**100,049**	**2,766,266**

Consolidated	31 Dec 21				31 Dec 20			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Agriculture and mining	8,882	978	3,768	13,628	12,568	1,346	3,455	17,369
Manufacturing and commercial	1,114,580	46,587	45,911	1,207,078	1,020,444	63,115	43,539	1,127,098
Real estate and construction	152,529	7,770	18,460	178,759	156,062	18,210	17,568	191,840
Utilities and services	360,080	38,005	13,484	411,569	354,068	23,548	11,177	388,793
Housing loans	528,435	34,438	15,235	578,108	496,220	47,061	15,808	559,089
Others	423,031	62,294	10,352	495,677	432,674	43,366	9,664	485,704
Total	**2,587,537**	**190,072**	**107,210**	**2,884,819**	**2,472,036**	**196,646**	**101,211**	**2,769,893**

1/ Including accrued interest receivables, net of deferred income, unamortised modification gain (loss), and including loans and accrued interest receivables of interbank and money market

Table 14: Provisions[1/] and Bad Debts Written-Off for Loans[2/] by Type of Business

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	General provisions[3/]	Specific provisions	Bad debts written-off	General provisions[3/]	Specific provisions	Bad debts written-off
Agriculture and mining		4,532	245		4,177	99
Manufacturing and commercial		29,093	4,818		28,343	3,350
Real estate and construction		10,649	564		10,479	859
Utilities and services		7,226	3,281		5,780	2,119
Housing loans		3,086	511		3,691	184
Others		6,623	10,248		5,030	5,407
Total	**83,390**	**61,209**	**19,666**	**78,903**	**57,500**	**12,020**

Consolidated	31 Dec 21			31 Dec 20		
	General provisions[3/]	Specific provisions	Bad debts written-off	General provisions[3/]	Specific provisions	Bad debts written-off
Agriculture and mining		4,532	245		4,177	99
Manufacturing and commercial		29,105	4,818		28,469	3,350
Real estate and construction		11,266	564		11,080	859
Utilities and services		7,226	3,281		5,798	2,119
Housing loans		3,086	511		3,697	184
Others		6,795	10,436		5,103	5,439
Total	**83,793**	**62,011**	**19,854**	**79,090**	**58,324**	**12,051**

1/ Allowance for expected credit loss

2/ Including outstanding amounts of loans, accrued interest receivables, and interbank and money market

3/ General provisions disclosed in total amount

Table 15: Reconciliation of Changes in Provisions [1/] and Bad Debts Written-Off for Loans [2/]

Unit: Baht million

Bank-only	**31 Dec 21**			**31 Dec 20**		
	General provisions	**Specific provisions**	**Total**	**General provisions**	**Specific provisions**	**Total**
Balance, beginning of year	78,903	57,500	136,403	58,071	50,778	108,849
Bad Debts Written-Off during period	-	(19,666)	(19,666)	-	(12,020)	(12,020)
Increase/decrease in provisions during period [3/]	4,487	23,375	27,862	20,832	18,742	39,574
Balance, end of year	**83,390**	**61,209**	**144,599**	**78,903**	**57,500**	**136,403**

Consolidated	**31 Dec 21**			**31 Dec 20**		
	General provisions	**Specific provisions**	**Total**	**General provisions**	**Specific provisions**	**Total**
Balance, beginning of year	79,090	58,324	137,414	58,158	51,433	109,591
Bad Debts Written-Off during period	-	(19,854)	(19,854)	-	(12,051)	(12,051)
Increase/decrease in provisions during period [3/]	4,703	23,541	28,244	20,932	18,942	39,874
Balance, end of year	**83,793**	**62,011**	**145,804**	**79,090**	**58,324**	**137,414**

1/ Allowance for expected credit loss

2/ Including provisions for outstanding amounts of loans, accrued interest receivables, and interbank and money market

3/ Excluding allowance for expected credit loss on financial instruments measured at FVOCI

Table 16: Exposures by Asset Type under the Standardized Approach (SA)

Unit: Baht million

Bank-only	31 Dec 21			31 Dec 20		
	On-balance sheet	Off-balance sheet 1/	Total	On-balance sheet	Off-balance sheet 1/	Total
Performing						
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	229,154	545,652	774,806	303,509	492,326	795,835
Claims on Bank, PSEs-Bank	43,527	106,210	149,737	65,326	145,162	210,487
Claims on Corporate, PSEs-Corporate	968,968	159,896	1,128,864	973,604	163,366	1,136,970
Claims on Retail portfolios	678,228	4,969	683,197	658,688	4,822	663,510
Claims on Retail mortgage loans	548,644	-	548,644	525,744	-	525,744
Other assets	298,417	-	298,417	285,972	-	285,972
Non-Performing loans	45,471	945	46,417	42,991	757	43,748
Total	**2,812,410**	**817,672**	**3,630,082**	**2,855,833**	**806,433**	**3,662,266**

Consolidated	31 Dec 21			31 Dec 20		
	On-balance sheet	Off-balance sheet 1/	Total	On-balance sheet	Off-balance sheet 1/	Total
Performing						
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	239,074	545,652	784,726	307,105	492,329	799,434
Claims on Bank, PSEs-Bank	45,839	105,557	151,397	69,839	144,870	214,709
Claims on Corporate, PSEs-Corporate	966,627	161,138	1,127,765	976,771	164,136	1,140,907
Claims on Retail portfolios	685,994	5,426	691,420	660,038	4,993	665,032
Claims on Retail mortgage loans	548,644	-	548,644	525,744	-	525,744
Other assets	289,593	-	289,593	269,234	-	269,234
Non-Performing loans	45,673	945	46,618	43,198	757	43,955
Total	**2,821,444**	**818,718**	**3,640,162**	**2,851,930**	**807,085**	**3,659,015**

1/ Off-balance sheet exposures (including Repo and Reverse Repo transactions) after multiplying by Credit Conversion Factor (CCF), net of specific provision

Table 17: Adjusted Exposures by Asset Type and Risk Weight under the Standardized Approach (SA)

Unit: Baht million

Bank-Only

31 Dec 21	Rated exposure					Unrated exposure									
Risk weights (%)	0	20	50	100	150	0	20	35	50	75	100	250	625	938	100/8.5%
Performing															
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	239,157	0	7,119	290	347										
Claims on Bank, PSEs-Bank	-	44,118	11,212	6,121	-										
Claims on Corporate, PSEs-Corporate	-	36,086	91,389	51,349	2,475						925,996				
Claims on Retail portfolios										659,514	12,629				
Claims on Retail mortgage loans								498,810		48,687	1,112				
Other assets						147,612	-				150,806	-			
Risk weights (%)	0	20	50	100	150					75					
Non-Performing loans		-	13,648	30,587	1,477					175					

Bank-Only

31 Dec 20	Rated exposure					Unrated exposure									
Risk weights (%)	0	20	50	100	150	0	20	35	50	75	100	250	625	938	100/8.5%
Performing															
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	322,572	-	9,802	217	305										
Claims on Bank, PSEs-Bank	-	49,492	31,254	9,644	-										
Claims on Corporate, PSEs-Corporate	-	30,120	97,018	59,406	7,612						916,753				
Claims on Retail portfolios										645,709	5,255				
Claims on Retail mortgage loans								472,848		51,204	1,636				
Other assets						181,660	-				104,312	-			
Risk weights (%)	0	20	50	100	150					75					
Non-Performing loans		-	11,456	28,515	2,921					433					

Capital deduction prescribed by the BOT: - None -

Table 17 (Cont.)

Unit: Baht million

Consolidated

31 Dec 21	Rated exposure					Unrated exposure									
Risk weights (%)	**0**	**20**	**50**	**100**	**150**	**0**	**20**	**35**	**50**	**75**	**100**	**250**	**625**	**938**	**100/8.5%**
Performing															
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	239,768	0	7,119	5,305	4,641										
Claims on Bank, PSEs-Bank	-	45,686	11,088	6,753	-										
Claims on Corporate, PSEs-Corporate	-	36,086	91,389	51,349	2,475						924,220				
Claims on Retail portfolios										665,167	14,201				
Claims on Retail mortgage loans								498,810		48,687	1,112				
Other assets						151,172	-				138,421	-			
Risk weights (%)	**0**	**20**	**50**	**100**	**150**					**75**					
Non-Performing loans		-	13,660	30,777	1,477					175					

Consolidated

31 Dec 20	Rated exposure					Unrated exposure									
Risk weights (%)	**0**	**20**	**50**	**100**	**150**	**0**	**20**	**35**	**50**	**75**	**100**	**250**	**625**	**938**	**100/8.5%**
Performing															
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	322,593	-	9,802	3,795	305										
Claims on Bank, PSEs-Bank	-	52,188	31,713	10,555	150										
Claims on Corporate, PSEs-Corporate	-	30,120	97,018	59,406	7,612						920,276				
Claims on Retail portfolios										647,046	5,269				
Claims on Retail mortgage loans								472,848		51,204	1,636				
Other assets						186,360	-				82,873	-			
Risk weights (%)	**0**	**20**	**50**	**100**	**150**					**75**					
Non-Performing loans		-	11,456	28,723	2,921					433					

Capital deduction prescribed by the BOT: - None -

Table 18: Collateralized Exposures by Asset and Collateral Type under the Standardized Approach (SA)

Unit: Baht million

Bank-only	31 Dec 21		31 Dec 20	
	Eligible financial collateral[1/]	Guarantee and credit derivatives	Eligible financial collateral[1/]	Guarantee and credit derivatives
Performing				
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	538,486	-	482,449	-
Claims on Bank, PSEs-Bank	81,734	5,772	110,172	10,230
Claims on Corporate, PSEs-Corporate	19,198	25,330	20,165	25,903
Claims on Retail portfolios	9,547	1,507	8,862	3,685
Claims on Retail mortgage loans	35	-	56	-
Other assets	-	-	-	-
Non-Performing loans	365	165	418	4
Total	**649,365**	**32,774**	**622,121**	**39,822**

Consolidated	31 Dec 21		31 Dec 20	
	Eligible financial collateral[1/]	Guarantee and credit derivatives	Eligible financial collateral[1/]	Guarantee and credit derivatives
Performing				
Claims on Sovereign & Central Banks, MDBs, PSEs-Sovereign	538,486	-	482,449	-
Claims on Bank, PSEs-Bank	81,739	5,772	110,176	10,230
Claims on Corporate, PSEs-Corporate	19,453	25,330	20,579	25,903
Claims on Retail portfolios	10,545	1,507	9,032	3,685
Claims on Retail mortgage loans	35	-	56	-
Other assets	-	-	-	-
Non-Performing loans	365	165	418	4
Total	**650,624**	**32,774**	**622,709**	**39,822**

1/ Financial collateral permitted by the BOT. When using the Comprehensive approach, values reported are after haircut.

7. MARKET RISK

7.1 Market Risk Management

SCB and its Financial Group classify market risk positions into trading book and non-trading book. Trading book positions comprise short-term market trades intended for resale to make profits from price fluctuation or market arbitrage, while non-trading book positions mainly comprise positions from risk management activities, such as interest rate risk in the banking book and investment risk.

7.2 Market Risk Management Policy

Companies in the Financial Group with material market risk exposures have their own Market Risk Policy, Trading Book Policy, or Investment Policy to manage market risk in the trading book. The policies must be submitted to the Group Risk Management Committee for review prior to seeking approval from their respective boards. These policies must be reviewed at least once a year, or when deemed appropriate and/or upon any significant strategic or market change. Companies in the Financial Group with material market risk exposure are required to set up an independent market risk management function responsible for measuring, evaluating, controlling, monitoring, and reporting market risk to ensure that market risk is effectively managed to be within the target risk limits.

7.3 Market Risk Assessment

SCB and its Financial Group use both statistical and non-statistical tools to assess market risk in the trading book and in the non-trading book depending on individual company's risk characteristics. These tools include stress testing, value at risk (VaR), position size, sensitivity analysis, management action trigger, and others.

SCB and its Financial Group conduct stress testing for all material positions held in portfolios. Stress testing is a methodology to quantify potential losses on a portfolio in case of extreme yet plausible market events. Risks from stress events, although unlikely, can cause substantial losses and may impact the stability of the Bank. The independent market risk management function is responsible for defining and reviewing market risk stress testing methodology, performing stress testing, and reporting stress exposure to senior management regularly.

7.4 Market Risk Limits

Market risk limits constitute a key control mechanism to ensure that market risk exposure is aligned with market risk appetite of SCB and its Financial Group. The process to review market limits considers factors such as business strategy, historical performance, market risk capital requirement, market depth, liquidity, etc. Market risk limits are reviewed and approved by SCB board, company boards or other appointed committees at least once a year and/or upon any significant strategic or market change. Market risk limits are applied at the close of the business day and are monitored daily. There are also intraday limits on foreign exchange net open positions and interest rate sensitivity limits.

7.5 Market Risk Monitoring and Reporting

Market risk reports presenting trading risk exposure against limits are prepared and delivered to relevant parties including book owners and senior management daily. Market risk exposures are regularly reported to SCB board, company boards or other appointed committees. Moreover, market risk exposures of SCB and its Financial

Group are also summarized and reported monthly to the Group Risk Management Committee.

7.6 Capital Adequacy

SCB and its Financial Group maintain capital against market risk in the trading book based on the Standardized Approach as required by the Bank of Thailand. From December 31, 2013 onward, SCB has been granted permission from the Bank of Thailand to apply the Duration Method for calculating market risk capital charges for interest rate risk and the Contingent Loss Method to determine capital requirements for currency and interest rate options. The following table shows capital requirements for market risk of the Bank and its Financial Group as of December 31, 2021.

Table 19: Minimum Capital Requirements for Market Risk under the Standardized Approach (SA)

Unit: Baht million

	Bank-Only		Consolidated	
	31 Dec 21	31 Dec 20	31 Dec 21	31 Dec 20
Interest rate risk	3,212	4,449	3,219	4,453
Equity position risk	-	765	115	775
Foreign exchange risk	686	81	1,929	243
Commodity risk	-	-	-	-
Total minimum capital requirements for market risk	**3,898**	**5,295**	**5,264**	**5,471**

8. OPERATIONAL RISK

8.1 Operational Risk Management Principles

SCB and its Financial Group recognize that operational risk is inherent in any business and have always considered operational risk management a priority. This priority is more pressing in today's rapidly changing environment rife with economic uncertainties, increased competition, growing complexity of products, dependency on technology, natural disasters, Covid 19 and new epidemics, and political/civil condition, for instance.

SCB requires all business functions to manage their own operational risks by using risk management tools (Risk and Control Assessment: RCSA) to identify, assess, control, monitor, and report risks. Senior management has the duty to manage operational risk within their areas of responsibilities in parallel with implementing and maintaining a sound internal control environment and control effectiveness.

8.2 Governance Framework

SCB and its Financial Group have established a governance framework for operational risk management using the 'three lines of defense' principle:

- 1st **line of defense** consists of business and support functions taking primary responsibilities for managing risks within their own functions.
- 2nd **line of defense** consists of centralized risk management and control functions, such as the Operational Risk Management Function and Compliance Function, with the duties to support, assist, and provide risk management guidance to the 1st line functions.
- 3rd **line of defense** is the internal audit function which independently checks and reviews business processes and operations to assure the Board of Directors and the Audit Committee of the effectiveness of the Group's internal control system.

8.3 Risk Management Process and Approach

Because operational risk is a major risk from conducting business, SCB and its Financial Group place heavy emphasis on continually improving the Group's operational risk management practice.

Every functions within SCB and its Financial Group, either business or support function, has a duty to oversee and manage their operational risks with appropriate methodologies and approaches. A sound risk management approach must include risk identification and assessment, internal control effectiveness assessment in dimension of design and performance, as well as risk mitigation planning and implementation to ensure that operational risk is within the Bank's risk appetite given the nature of the business.

As part of the risk mitigation effort, SCB and its Financial Group implement a wide variety of methods to manage operational risk. In addition to the core operational risk framework mentioned above, SCB and its Financial Group also use other risk management tools, such as risk and control self-assessment (RCSA), key risk indicators (KRI) containing qualitative and quantitative measurement, and incident and loss management (ILM).

The Bank also adopts other risk mitigation practices, such as business continuity planning (BCP), business impact analysis (BIA), new product approval process (NPP), insurance management, and outsourcing/insourcing management.

8.4 Operational Risk Report

Key functions of the Bank and Group companies are required to regularly report operational risk to senior management so that management is informed of the risk level and risk issues. Moreover, Group companies are required to report their operational risks to SCB. The Operational Risk Management Function analyzes this risk information to prepare a monthly report for the Group Risk Management Committee which will then be used as input into the Committee's risk management decisions.

8.5 Capital Adequacy

SCB and its Financial Group have adopted the Standardized Approach to calculate capital requirements for operational risk. The table below shows capital requirements for operational risk as of December 31, 2021.

Table 20: Minimum Capital Requirements for Operational Risk under the Standardized Approach (SA)

Unit: Baht million

	Bank-Only		Consolidated	
	31 Dec 21	**31 Dec 20**	**31 Dec 21**	**31 Dec 20**
Operational risk - Standardized Approach	19,003	18,502	19,548	18,982
Total minimum capital requirements for operational risk	**19,003**	**18,502**	**19,548**	**18,982**

9. INTEREST RATE RISK IN THE BANKING BOOK (IRRBB)

Interest rate risk in the banking book arises from financial instruments or other positions held by SCB and its Financial Group for non-trading purposes which may impact the Group's net interest income and economic value due interest rate fluctuations. The Bank is faced with four sources of interest rate risk:

- **Repricing risk** arises from maturity/timing mismatch of the Bank's assets and liabilities, which causes interest rates at reset to differ due to yield curve movements. For example, assuming all other factors are constant, if the Bank's assets can be repriced faster than liabilities (a positive gap), interest margins increase when interest rates rise. On the other hand, if the Bank's ability to reprice assets is slower than liabilities (a negative gap), then interest margins narrow when interest rates rise.

- **Yield curve risk** arises from interest rates at different maturities changing differently.

- **Basis risk** occurs when the Bank's assets and liabilities are based on different reference interest rates, e.g. fixed-deposit rates, interbank lending rates, THBFIX interest rates. Therefore, any change in reference rates will affect interest rates tied with assets and liabilities differently.

- **Options risk** arises from implicit and explicit options in the Bank's assets and liabilities and off-balance sheet items where exercising these options might affect the Bank's revenue and costs. For example, an option on three-month deposit that allows early withdrawal before maturity will, if exercised, cause the Bank's costs to rise sooner than expected.

9.1 Governance

For the purpose of managing interest rate risk in the banking book, SCB and its Financial Group divide companies into two groups:

- **SCB and companies with material interest rate risk in the banking book,** i.e., banking business

- **Companies with non-material interest rate risk in the banking book,** i.e., securities, asset management, debt management, and other supporting businesses

SCB and Financial Group companies with material exposures to interest rate risk in the banking book have their own policies and guidelines to manage this risk. Companies may pursue different risk management approaches depending on the scope, volume, and complexity of transactions, local regulations, business-specific regulatory requirements as well as each company's risk appetite. Despite some differences, all companies have set up independent IRRBB risk management functions responsible for measuring, evaluating, controlling, monitoring, and reporting interest rate risk in the banking book, as well as ensuring that interest rate risk in the banking book exposure stays within the risk limits.

SCB has established the Interest Rate Risk in the Banking Book Management Policy which has been approved by the Board of Directors. The Assets and Liabilities Management Committee is responsible for ensuring compliance with such policy.

Other relevant functions include the Group Treasury Function, which manages the overall interest rate risk in the banking book, and the Balance Sheet Risk Monitoring Division, which monitors IRRBB based on both Net

Interest Income (NII) and Economic Value of Equity (EVE).

9.2 Risk Assessment and Control

The Bank sets risk limits for IRRBB by measuring the impact of interest rate fluctuations on net interest income and economic value of equity (EVE) under stress situations. To monitor IRRBB, the Bank produces repricing gap reports for risk analysis and assessment which are then reported to the Assets and Liabilities Management Committee (ALCO) for further actions. The Bank has structured assets and liabilities to achieve its business targets which may require the use of derivative instruments to hedge against residual interest rate risk. Risk analysis reports are submitted to the Assets and Liabilities Management Committee, the Risk Management Committee, the Risk Oversight Committee, and the Board of Directors on a regular basis.

The Bank measures the risk of interest rate fluctuations by measuring the impact on net interest income and economic value of equity (EVE). This analysis is conducted monthly for the Bank and annually for the SCB Financial Group.

At the end of December 2021, a 1% interest rate increase would have lowered the Bank's net interest income by Baht 4,135 million or 4.90% of target net interest income. For the SCB Financial Group, net interest income would have declined by Baht 4,076 million or 4.40% of target net interest income

Table 21: Impact on Net Interest Income in the Event that Interest Rates Rise by 1%

Unit: Baht million

Currency	Bank-Only		Consolidated	
	31 Dec 21	31 Dec 20	31 Dec 21	31 Dec 20
THB	(3,961)	(2,453)	(3,895)	(2,317)
USD	(265)	(57)	(272)	(65)
EURO and other foreign currencies	91	160	91	158
Total impact on net interest income	**(4,135)**	**(2,350)**	**(4,076)**	**(2,225)**
% of target net interest income	**-4.90%**	**-2.55%**	**-4.40%**	**-2.40%**

Table 22: Impact on Economic Value of Equity in the Event that Interest Rates Rise by 1%

Unit: Baht million

Currency	Bank-Only		Consolidated	
	31 Dec 21	31 Dec 20	31 Dec 21	31 Dec 20
THB	(24,163)	(17,674)	(24,167)	(17,679)
USD	(34)	61	(47)	52
EURO and other foreign currencies	4	(4)	2	(9)
Total impact on economic value of equity	**(24,193)**	**(17,617)**	**(24,212)**	**(17,636)**
% of total capital	**-5.74%**	**-4.41%**	**-5.71%**	**-4.40%**

10. LIQUIDITY RISK

Liquidity risk is the risk that SCB and its Financial Group cannot meet their contractual obligations because of an inability to convert assets or to secure the required funding at a reasonable cost, thus resulting in losses to the Bank.

10.1 Governance

For liquidity risk management, SCB and its Financial Group separate companies into two groups:

- **SCB and companies with material liquidity risk,** i.e., banking, securities, asset management
- **Companies with non-material liquidity risk,** i.e., debt management and other supporting businesses

SCB and companies with material liquidity risk develop their own liquidity risk management policies and guidelines. Companies may pursue different risk management approaches depending on the scope, volume, and complexity of transactions, local regulations, business-specific regulatory requirements as well as each company's risk appetite.

SCB has established the Liquidity Risk Management Policy which has been approved by the Board of Directors. The Assets and Liabilities Management Committee is responsible for ensuring compliance with this policy. The Group Treasury Function is responsible for managing the overall liquidity risk, while the Balance Sheet Risk Monitoring Division is responsible for monitoring and controlling liquidity risk.

10.2 Liquidity Coverage Ratio (LCR)

The 2008 financial crisis had shown that a liquidity crunch can inflict severe damages to financial and real sectors. In response, the BCBS introduced new liquidity standards under Basel III, namely Liquidity Coverage Ratio (LCR) and Net Stable Fund Ratio (NSFR), to promote strong liquidity positions among commercial banks both short-term and long-term. In Thailand, the BOT has prescribed the LCR standard in line with the BCBS's guidelines since January 1, 2016.

The LCR requirement aims to ensure that commercial banks have adequate unencumbered High-Quality Liquid Assets (HQLA) to meet their liquidity needs, specifically to cover total net cash outflows for a 30-calendar day severe liquidity stress scenario according to the BOT's computation methodology. The intent is to allow commercial banks, along with the BOT and relevant regulators, sufficient time to identify and implement appropriate measures to address the situation.

The LCR components:

$$\text{LCR} = \frac{\text{High-quality liquid assets}}{\text{Total net cash outflows}}$$

I. High-quality liquid assets (HQLA)

HQLA under the LCR requirement must have the following characteristics:

- Fundamental characteristics such as having low risk, straightforward valuation; and
- Market-related characteristics such as being actively traded, having low volatility, and attracting high demand during a crisis

Additionally, HQLA is categorized into two levels according to their convertibility under stress conditions.

- **HQLA Level 1** are cash, deposits, central bank reserves, and bonds issued or backed by governments and central banks which have the highest ratings and the highest liquidity.

- **HQLA Level 2** are considered lower tier in terms of asset quality and liquidity. This level of assets is further sub-categorized into Level 2A and Level 2B which consist of lower-rated government bonds and corporate bonds. Level 2 assets are subject to a range of haircuts as specified by the BOT. Level 2 assets and Level 2B assets may not exceed 40% and 15% respectively of a commercial bank's aggregate HQLA.

In addition, HQLA must meet certain operational requirements to ensure timely convertibility through a secondary market either by outright or repo transactions during periods of financial stress. Commercial banks should ensure that their HQLA portfolios are properly diversified even though certain classes of liquid assets are likely to remain liquid both under normal and stressed conditions. Banks should also impose limits to avoid concentration risk with respect to asset types, issue and issuer types, and currency within each asset class.

II. Total net cash outflows

Total net cash outflows within 30 days under a severe liquidity stress scenario are defined as total expected cash outflows less total expected cash inflows for 30 days under a severe liquidity stress scenario. In this computation, total expected cash inflows are capped at 75% of total expected cash outflows.

Total net cash outflows = **Total expected cash outflows** - **Total expected cash inflows**

- **Total expected cash outflows** are the sum of outstanding balances of various categories of liabilities and off-balance sheet commitments multiplied by their expected run-off or drawdown rates over the next 30 days under severe liquidity stress scenario. Cash outflows can be categorized into 5 types as follows:
  - Retail deposits and borrowings
  - Unsecured wholesale funding
  - Secured funding
  - Contractual obligations
  - Non-contractual obligations
- **Total expected cash inflows** are the sum of outstanding balances of various categories of contractual receivables multiplied by their expected flow-in rates over the next 30 days under severe liquidity stress scenario. In this computation, total cash inflows are capped at 75% of total expected cash outflows. Cash inflows can be categorized into 3 types as follows:
  - Secured lending
  - Fully performing loans
  - Contractual obligations

III. The BOT's Minimum requirement

A commercial bank must maintain its LCR above 100%.

LCR report

This LCR disclosure presents information on a bank-only basis and all data are simple averages of month-end observations of the previous quarter in Baht currency. Specifically, the Bank's average LCR, HQLA, and total net cash outflows for the 4th quarter of 2021 was a simple average of month-end LCR, HQLA, and total net cash outflows, respectively, in October, November and December 2021 (3 months).

Liquidity Coverage Ratio (LCR)

Under the new requirement, the Bank has been able to maintain its LCR well above the regulatory requirement on both bank-only and consolidated basis.

The Bank's average LCR for the 4th quarter of 2021 was 202%. This level exceeded both the Bank's risk tolerance limit and the BOT's minimum requirement at 100%, showing the Bank's ample liquidity.

High-Quality Liquid Assets (HQLA)

The average HQLA for the 4th quarter of 2021 was Baht 816,947 million, of which 99.6% were level 1 assets mainly consisting of government bonds and fixed-income instruments issued by the BOT. It is the Bank's policy to hold high quality liquid assets unencumbered by legal, regulatory, or operational restrictions that can be converted into cash during a stress situation.

Total net cash outflows (Net COF)

The average net cash outflows over the next 30 days for the 4th quarter of 2021 was Baht 405,324 million. Most of the estimated cash outflows were from withdrawal of retail and wholesale deposits using the BOT's run-off rates. Meanwhile, most of the estimated cash inflows were from repayment of normal loans using the BOT's inflow rates.

10.3 Risk Assessment and Control

The Bank manages and controls liquidity risk to ensure adequate liquidity and sufficient future cash flows to cover its activities under both normal and stress situations. Cash flow report and liquidity gap report are some of the mechanisms used to monitor and control the Bank's overall liquidity risk. The Bank's policy is to maintain Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR) and the liquidity ratio (liquid assets as a percentage of total deposits) at an appropriate level and to monitor net cash outflows over different time horizons to ensure that the Bank can effectively manage its liquidity risk.

Additionally, the Bank conducts stress testing on a regular basis under the BOT's scenarios and the Bank's own scenarios. Stress test results are incorporated into the Bank's contingency funding plan which establishes scenario-specific action plans and explicit roles and responsibilities for liquidity management in a stress situation.

The Bank has a policy to maintain its daily liquidity ratio of at least 20%, measured as total liquid assets to total deposits. At the end of December 2021, the Bank's liquid assets represented 33% of total deposits.

Table 23: Liquidity Coverage Ratio (LCR)

Unit: Baht million

Bank-only	**Q4/2021 (Average)**[1/]	**Q4/2020 (Average)**[1/]
(1) Total HQLA	816,947	779,080
(2) Total net cash outflows	405,324	414,523
(3) LCR (%) [2/]	**202**	**188**
Minimum requirement by the BOT (%)	*100*	*100*

Table 24: LCR data for comparison [3/]

Unit: Percentage

Bank-only	2021 (Average)[1/]	2020 (Average)[1/]
3rd Quarter	186	196
4th Quarter	202	188

1/ Calculation based on a simple average using month-end data for each quarter. For example, Q4 data were calculated by taking a simple average of month-end data in October, November, and December.

2/ Data of item 3 (LCR) might not be equal to item 1 (Total HQLA) divided by item 2 (Total net cash outflows).

3/ LCR data will show Q1-Q2 for the first half period and Q3-Q4 for the second half period.

11. EQUITY INVESTMENTS IN THE BANKING BOOK

SCB and its Financial Group have the following objectives for equity investments in the banking book:

- Equity investments intended mainly to generate dividend yield and/or capital gains from changes in equity prices within an appropriate timeframe and/or to strengthen business alliances in some cases.
- Strategic investments in high-growth equity and/or those that support the SCB Financial Group's business.
- Both direct and indirect equity investments in Fintech businesses via venture capital funds as well as investments in digital assets under regulatory conditions imposed by relevant authorities.

According to the Group's Risk Management Policy, equity investments are only permitted to only companies that engage in the financial business under regulation of supervisory bodies or those permitted by the BOT.

11.1 Governance

SCB and its Financial Group have established investment approval authority at the committee level and/or individual executive level in accordance with the Investment Policy that has been approved by SCB's Board of Directors and/or each company's board of directors. Investment approval authority varies by transaction type and investment value which has different risk attributes.

Business units with risk management duties to oversee SCB's equity investments portfolio and to monitor investments made by the Financial Group companies, are under the Finance Function. These units are responsible for monitoring, overseeing, and controlling equity investment transactions to be in line with relevant rules and regulations. Another key responsibility is to prepare a summary report on equity investment transactions to be proposed to the Equity Investment Management Committee, the Risk Management Committee, and/or the Board of Directors in accordance with approval authorities.

SCB and its Financial Group also monitor and control investment risks through SCB's Risk Management Committee and/or the risk management committees of the Financial Group companies in accordance with the specified risk management structure. This includes but not limited to the consideration of policy set up and the determination of risk ratios relating to investment transaction.

11.2 Risk Assessment and Control

SCB and its Financial Group shall carry out fair value assessment of securities of each type as required by Thai Financial Reporting Standards 9 (TFRS 9). The fair value will show the intrinsic value of equity investments and identify market risk limit to include equity investments to accurately reflect the potential impact to the investment of SCB and its Financial Group.

Moreover, there is a periodic review of equity investments at the portfolio level and the company level to determine an appropriate investment strategy.

11.3 Capital Adequacy

SCB and its Financial Group have adopted the Standardized Approach to calculate capital requirements for equity exposures.

Table 25: Minimum Capital Requirements for Equity Exposures in the Banking Book

Unit: Baht million

	Bank-Only		Consolidated	
	31 Dec 21	31 Dec 20	31 Dec 21	31 Dec 20
Equity exposures - Standardized Approach (domestic and foreign)				
Listed equity exposures (domestic and foreign)	1,272	2,020	6,167	4,158
Others (domestic and foreign)	37,845	30,601	22,888	8,494
Total gains (losses) arising from sales during the period	1,384	1,275	2,272	1,019
Increase (decrease) in value from remeasuring FVOCI investments	1,267	1,663	1,271	1,662
Total minimum capital requirements	**3,325**	**2,773**	**2,470**	**1,075**

12. STRATEGIC RISK

Strategic risk refers to risks on financial performance (e.g. revenues, profits, capital), reputation and stability of the Bank and its Financial Group both at present and in the future that arise from changes in business environment, poor strategic decisions, ineffective strategic implementation, or untimely responses to industry, economic, and technological changes. The Board of Directors sets the Strategic Risk Management Policy as a framework to provide a structured approach to manage strategic risk. Strategic risk is managed through the strategy process consisting of 1) strategic planning, 2) alignment and change management, 3) implementation and monitoring, and 4) performance evaluation and feedback. The goal of this process is to ensure adequate input into strategy formulation and implementation. The Bank also has a process to assess and monitor strategic risk in order to monitor any changes in external and internal factors that may affect the Bank's operations.

The Strategy Group currently supports the Board of Directors and senior management in formulating and reviewing SCB Group's strategies. In addition, the Strategy Group is also responsible for conducting strategic risk assessment on a regular basis.

13. REPUTATIONAL RISK

Reputation is of paramount importance for any business, especially for financial businesses, which can only be built gradually by earning confidence and trust for the business over a long period of time. As the old adage says, it takes years to build one's reputation, and only seconds to destroy it.

The Bank recognizes the importance of reputational risk and therefore has developed reputational risk guidelines and process to be implemented by all companies in SCB Group. Each company is expected to protect their reputation from both internal and external risk factors without regard to revenue generating potential.

Application of the reputational risk guidelines will depend on the nature of each business in terms of the level of exposure to reputational risk. Companies in the financial business which are subject to high reputational risk need to follow the Reputational Risk Management Policy and have a clear process to manage such risk. Companies with non-material reputational risk must still report any incidents that may jeopardize the company's reputation to their senior management.

For any business transactions with potential reputational risk, especially lending, the management concerned must seek prior approval from the Executive Committee. The Chairman of the Executive Committee may escalate the matter to the Board of Directors if necessary.

The Marketing Function is responsible for coordinating with business and functional units within the Bank and the Financial Group companies to identify and monitor reputational risk factors. This Function also assesses and reports the overall reputational risk to senior management and related committees.

14. TECHNOLOGY RISK

Today's technology is changing rapidly. Failure to adapt or lack of a long-term plan to accommodate changes may affect the Bank's operations and cause the Bank to lose market share since the Bank may be unable to serve customers effectively by meeting their product or pricing needs. Moreover, technology risk may also cause business and service disruptions which may lower the Bank's profitability and market share.

Because of these wide-ranging and inter-related impacts, technology risk management is one of the Bank's top priorities. Therefore, the Bank adopts a proven framework for technology risk management consisting of: 1) Risk Identification, 2) Risk Assessment, 3) Risk Response, and 4) Monitoring and Reporting.

Furthermore, the Bank recognizes and has taken steps to build and enhance the organization's risk culture, particularly for technology risk, by educating and training employees, maintaining technology risk and knowledge databases that are accurate and up-to-date, adopting best-in-class risk management tools along with continually improving its risk management framework to be in line with global practices.

Moreover, the technology risk management process enables the Bank to adequately manage technology risk at both strategic and operational levels.

At the strategic level, the Bank aims to build a modern, flexible, and secure technology architecture to support a wide variety of customer service platforms along with providing data management capability for marketing and credit management analysis.

At the operational level, the process covers assessing organizational structure on the technology side; technology people; system acquisition, development, and maintenance; accuracy and security of technology systems and important data (e.g., customers' information); system's capacity to accommodate high volume transactions, as well as service continuity during crises and IT vendor management. These components of technology risk management process will bolster the Bank's competitiveness and profitability.

15. PEOPLE RISK

People are vital resources in the banking business. Not only must the Bank provide suitable products and services that meet customer needs, the Bank and its employees must also comply with rules and regulations on customer protection which may give rise to market conduct risk. Therefore, the Bank needs knowledgeable and capable people to help achieve its business goals in a sustainable manner.

The Bank recognizes the importance of human resources which present significant and constant challenges in today's environment. A key challenge is the advent of new technologies which may replace the existing service model and put pressure on the organization to reform or transform itself. Such broad-scale organizational change raises demand on human resources both in terms of quality and quantity. Specifically, an organization requires knowledgeable, well-rounded, and adaptable people to drive its transformation efforts.

The Bank manages such risks by implementing several key initiatives which include:

- Building a risk culture in which risk awareness and ownership are the norm and risk prevention and mitigation are the responsibility of all employees
- Establishing SCB Academy to build additional skills and knowledge necessary for future business changes, such as knowledge in product areas and data analytics for business analysis and planning
- Providing attractive career paths for employees to ensure business success and sustainable growth
- Providing safe and conducive work environment to foster employee engagement with the Bank.

Governance

Boards of directors of the Bank and Group companies have established an effective people risk management framework and regularly reviewed the overall people risk. Senior management is responsible for managing people risks within their areas of responsibilities and establishing effective control as well as coordinating with the People Function and other relevant functions.

People Function, business functions, and relevant supporting functions are responsible for identifying people risks using appropriate analyses given the function's inherent business complexity with regular updates/reviews of potential risks.

For people risk management, the Bank and its Financial Group also apply the 'three lines of defense' principle used in operational risk management to ensure effectiveness in risk management and internal control.

16. MODEL RISK

The Bank has prepared for changes which may affect its business operations by developing models to facilitate business analysis and decision making, which may give rise to model risk. For instance, models may produce inaccurate results or may be misused. Model risk may appear in four following forms:

- **Input** which may arise from low quality or untimely data, insufficient historical data or small sample size;
- **Methodology** which may arise during the stage of model development or data processing, including wrong theories, models derived from outdated historical data that are no longer applicable to today's context, or inappropriate assumptions, etc.;
- **Implementation** which may arise from poor implementation or inappropriate IT environment for model calculation;
- **Usage** which may arise from outright misuse or disregarding model limitations.

To minimize the above model risks, the Bank has laid out a Model Risk Management Policy to serve as an operational framework. The policy provides the Model Risk Governance Framework and requires periodic model validation to manage and control potential model risks.

16.1 Model Risk Management Structure

The Bank has set up a dedicated unit for model risk management to ensure that there are checks and balances as well as independence in model validation. This unit is part of the second line of defense which offers recommendations, support, and validation after the first line of defense. Model risk oversight consists of 1) Model Validation using both quantitative and qualitative approaches to ensure that the models work as expected, and 2) Model Governance to prevent any misuse of models and minimize model risks. The Model Risk Management Unit, which is part of the Risk Management Function, consists of:

- **Model Governance** is responsible for overseeing model risk management and other relevant conceptual frameworks, making a model inventory by collecting data and details for models used by the Bank, and planning for model validation resources. The unit also oversees model development and implementation according to each model's life cycle to ensure compliance with model governance;
- **Model Validation** is responsible for validating models independently and effectively within the scope of the Model Risk Management Policy to ensure that models work as expected, meet their objectives, and fulfill their intended purposes. An effective validation must identify possible model limitations or weaknesses and assess their impacts.

16.2 Model Risk Management Policy and Guideline

Guided by the Bank's Model Risk Management Framework, the Model Risk Management Policy specifies key components to manage and control model risks. The policy specifies model tiering for managing and controlling model risks according to their life cycles, along with model validation principles and procedures. The Model Risk Management Committee was set up to oversee model risk and all models used within the Bank, to verify the effectiveness of the Model Risk Management Framework, and to approve models and validation outcomes.

16.3 Model Risk Monitoring and Control

Approval for model releases follows standard protocols. Conditional approval must be accompanied by a monitoring process within a specified timeframe to ensure that model effectiveness is maximized. In addition, mitigation actions or compensating controls may be required to minimize any potential risks from using such model.

16.4 Model Risk Report

The policy requires that model risks, risk status, and risk management effectiveness be reported to the Model Risk Management Committee, the Risk Management Committee, and the Risk Oversight Committee.

APPENDIX

Details of companies within SCB Financial Group (Solo and Full Consolidation)

Solo Consolidation Group	Business Type
Siam Commercial Bank PCL	Banking
Cambodian Commercial Bank Co., Ltd.	Banking
Rutchayothin Asset Management Co., Ltd.	Asset management
Siam Commercial Bank Myanmar	Banking

Non-Solo Consolidation Group	Business Type
SCB Securities Co., Ltd.	Securities
SCB Asset Management Co., Ltd.	Asset management
Mahisorn Co., Ltd.	Property management
SCB Training Centre Co., Ltd.	Training center
SCB Plus Co., Ltd.	Collection
SCB 10X Co., Ltd.	Venture capital, venture builder and strategic investments
Digital Ventures Co., Ltd.	Financial technology
Purple Ventures Co., Ltd.	E-Commerce and digital services
SCB Abacus Co., Ltd.	Data analytics and digital lending
SCB Protect Co., Ltd.	Insurance broker
SCB-Julius Baer Securities Co., Ltd.	Securities
SCB-Julius Baer (Singapore) Pte. Ltd.	Securities
Monix Co., Ltd.	Digital lending
Token X Co., Ltd.	Initial Coin Offering Portal
Alpha X Co., Ltd.	Hire purchase, leasing, and refinancing business
AISCB Co., Ltd.	Digital lending
SCB Tech X Co., Ltd.	Specialised technology services provider

The structure of the Consolidated Supervision Group can be divided into two levels:

(1) Solo consolidation which includes the Bank and its subsidiaries whose businesses involve lending or lending-related transactions for which the Bank holds more than 75% of issued and paid-up shares.

(2) Full consolidation which includes the parent company and subsidiaries categorized as solo and non-solo consolidation subsidiaries, whereby non-solo consolidation subsidiaries mean any of the Bank's subsidiaries engaging in finance or supporting businesses for which the Bank has management control and holds more than 50% of issued and paid-up shares. (The Bank is assumed to have management control over a subsidiary's business if the Bank holds more than 20% of issued and paid-up shares unless proven otherwise.)

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