



Bangkok Bank Public Company Limited
Management Discussion and Analysis
for the Quarter and the Year Ended December 31, 2017



Management Discussion and Analysis

Overview of the Economy and Banking Industry

Thai Economy in 2017

In 2017, Thailand's real GDP grew by 3.9 percent, up from 3.3 percent in 2016 on the back of rising exports and a robust tourism sector, consistent with a stronger recovery in global demand. Headline inflation rose to 0.7 percent, following higher energy prices, while core inflation, which excludes energy and food prices, increased by 0.6 percent due, in part, to a sluggish recovery in consumer demand. Other contributing factors were more structural, such as the rise of e-commerce and growing global supply chains, both of which limited the pricing power of domestic firms. As a result, Thailand's nominal GDP increased by 6.3 percent, leveling at Baht 15.5 trillion (approximately US \$455 billion).

The value of Thailand's exports in 2017 surged by 9.7 percent, the highest growth rate in six years, to US \$235 billion, expanding every quarter for all key export destinations and almost all product segments. This was, to some degree, a result of a firmer economic recovery in Thailand's major trading partners. In addition, a better-than-expected performance by the global manufacturing sector and the ongoing adoption of the Internet of Things (IoT) led to a stronger demand for products in key industrial sectors, particularly in electronics and electrical appliances. For the past six years, tourism has continued to expand briskly. In 2017 alone, Thailand received approximately 35 million foreign visitors, generating Baht 1.82 trillion (approximately US \$53.6 billion) of income, an 11.7 percent increase from 2016. The main driver of tourism income was spending by Chinese tourists.

Meanwhile, global financial markets experienced occasional volatility amid uncertainties on various fronts. These include domestic and international conflicts, the UK's exit from the EU, and changing US government policies. These events were accompanied by the depreciation of the US dollar since the beginning of 2017. Furthermore, despite three policy interest rate increases in 2017, to 1.25-1.50 percent, global interest rates remained low, contributing to a "search for yield" and resulting in capital inflows to the bond and equity markets in emerging markets, including Thailand. Consequently, in 2017 the Thai baht appreciated by 10 percent from 35.82 THB/USD at the beginning of January to 32.57 THB/USD at the end of December, making the yearly average 33.94 THB/USD.

Commodity prices, including those of agricultural products, remained low despite a slight increase from the beginning of the year, depressing farm income and the purchasing power of farm households, which represent a majority of the population. Coupled with high levels of household debt, these factors limited the extent of the rebound in consumer confidence and household spending.

Throughout 2017, the Bank of Thailand maintained the policy interest rate at 1.50 percent, concurring that economic gains had not been evenly distributed to the middle and low-income population.

At the same time, the government launched a variety of tax and non-tax measures to boost household spending, particularly near the end of the year. The government also continued to implement infrastructure development projects, awarding contracts to winning bids for seven projects with a value of more than Baht 385 billion, while beginning the construction phases for eight projects with a total value of Baht 171 billion. In addition, the government pushed forward its policies to help the grass roots, such as the "Public-Private Collaboration" scheme, as well as policies to support Thailand's long term competitiveness, including the Eastern Economic Corridor (EEC) project – which aims to promote Thailand as one of the region's logistics hubs and support the development of high-value-added industries – and the modernization of the country's legal

framework to provide greater convenience for doing business. Around mid-2017, the National Reform Committee was established to help set a new platform for Thailand's future economic and social development.

Economic Outlook for 2018

In 2018, the Thai economy is forecast to grow by 4.0-4.5 percent on the back of strong exports and tourism as well as the acceleration in public and private investment. Exports and tourism are expected to remain robust given the continuing recovery of major trading partners including the US, Europe, and China, whose rate of economic growth, while lower than in previous years, is now expected to exceed previous forecasts. At the same time, the pace of public investment is set to pick up in the next two years. Government capital expenditure in the 2018 fiscal year increased by 15 percent from the 2017 fiscal year to Baht 622 billion (approximately US \$18.3 billion) while the value of scheduled infrastructure investment in the 2018 fiscal year (under the Transport Ministry's 2016-2018 action plans) amounted to Baht 150 billion. The progress of the government's infrastructure investment will help support confidence and therefore encourage investment in the private sector. However, the sluggish improvement in agricultural and non-agricultural income as well as high household debt means that it will take more time for consumption to recover.

The Thai economy will continue to face external challenges, which pose risks to the global recovery and therefore Thai exports. These include uncertainties in US economic and trade policies, Europe's ongoing regional political problems, and China's economic restructuring. In addition, the increase in the federal funds rate and the normalization of the Federal Reserve's balance sheet, the impact of which will be more evident this year, will likely contribute to occasional volatility in capital flows, prompting businesses to manage their exchange rate and interest rate risks more vigilantly.

Thailand's long-term economic policies are geared towards strengthening its local economies and developing high-value-added industries to reduce its reliance in exports on commodities and traditional products. Such policies include the ongoing development of 10 target industries: food for the future, next-generation automotive, smart electronics, medical and wellness tourism, agriculture and biotechnology, robotics, aviation and logistics, biofuels and biochemical, digital, and medical hubs. The promotion of these industries comes with investment incentives, such as tax privileges for investment in research and development. Concurrently, the country's long-term direction will emphasize regional cooperation, both within ASEAN, especially within the CLMV, and among other countries interested in investing in the region, such as Japan and China.

Overall, the Thai economy is heading towards a recovery path in line with that of the global economy, albeit with some risks. Nevertheless, strengthening the domestic economy requires a long-term strategy to solve the country's structural problems and promote a more even distribution of economic prosperity to the majority of the population.

Thai Banking Industry in 2017

In 2017, commercial banks in Thailand maintained their good performance with adequate capital to support their business operations. The combined net profit of the commercial banking system was Baht 187.3 billion, a 5.7 percent decrease from last year, due to larger loan impairment charges set aside for credit losses in compliance with IFRS9, which will be effective in 2019.

At the end of 2017, loans in the commercial banking system were 4.4 percent higher than at the end of 2016, in line with the increase in SME and consumer loans, which expanded by 5.7 percent and 6.1 percent, respectively. Corporate lending was flat. SME loans grew due to increases in lending to a range of businesses in the commercial and real estate sectors, and from

the recovery of mid-end and high-end segments. Corporates raised funds more from issuances of stocks and bonds than from loans. Consumer loans expanded from auto hire-purchase and personal loans, while growth in home loans and credit card loans slowed.

Deposits grew by 5.0 percent from the end of 2016, resulting in increased liquidity as seen in the ratio of loans to deposits, which fell from 96.9 percent at the end of 2016 to 96.3 percent. The Liquidity Coverage Ratio (LCR) stood at 180.0 percent. For liquidity management, commercial banks are placing great emphasis on deposit restructuring and cost management as well as reserve requirements to comply with LCR guidelines under Basel III.

In terms of loan quality, the ratio of gross non-performing loan (NPL) to total loans stood at 2.9 percent, up from 2.8 percent at the end of 2016, reflecting a smaller increase in loans than last year. The level of capital reserves and loan loss reserves remained high. At the end of 2017, the total Capital Adequacy Ratio (CAR) and Common Equity Tier 1 ratio (CET1) stood at 18.2 percent and 15.6 percent, respectively.

Commercial banks in Thailand faced many challenges during the year. Although Thailand's overall economic growth accelerated, the benefits of growth were not distributed equally among sectors. Consequently, commercial banks were limited in their ability to increase their lending. At the same time, banks offered help to customers who had suffered from the slow economic recovery while taking care of loan quality and cost management.

Government rules and regulations caused commercial banks to adapt their business plans and working procedures to comply with these policies, particularly the Financial Sector Master Plan Phase III and the National e-Payment Master Plan. The latter includes PromptPay, and the expansion of Electronic Data Capture (EDC) terminals to increase card acceptance by merchants.

Technological change and financial innovation have been the main factors contributing to commercial banks adapting their business models, adjusting their physical branches both in terms of number and type of service, while developing their digital banking channels. In addition, banks have been collaborating with Financial Technology (FinTech) firms on new financial products to meet the challenges of changing consumer behavior such as the increasing popularity of mobile banking and asset management for appropriate returns. At the same time, banks have had to invest in developing technology and innovation, building platforms to connect to all parts of their ecosystems, using Cloud computing technology and Big Data Analytics to collect and analyze information to better understand consumer behavior.

Thai Banking Industry in 2018

Clearer signs of global economic recovery will cause major central banks to gradually pull back on their quantitative easing programs. Interest rates will rise, affecting Thailand's financial environment although at the same time the Thai economy is still likely to expand. Contributing factors include the acceleration in the government's infrastructure investment, the recovery in private sector investment, particularly in the Eastern Economic Corridor (EEC), as well as export growth and an increasing number of foreign tourists which will benefit tourism-related businesses, especially in provinces that are tourist destinations.

Consequently, lending is likely to expand as well as deposits. The commercial banking system will have to manage its liquidity to be in line with the changing environment and Bank of Thailand requirements to comply with the Liquidity Coverage Ratio (LCR) guidelines.

Better loan management in the commercial banking system is likely to help improve loan quality, and is expected to result in the ratio of gross NPL to total loans growing at a slower pace. However, commercial banks will still be cautious in their lending policies. The relatively high level of capital and increases in reserves will continue to provide a cushion for the system's NPL.



Factors Affecting Banking Industry Performance

The megatrends of regionalization, urbanization and digitalization will continue to shape Thailand's economy over the next few years. These trends are the driving factors behind the need for the public and private sectors to establish a framework and measures to cope with changes in the economic and financial sectors.

1. Regionalization – The trend of regionalization in Asia and economic development within the ASEAN Economic Community (AEC) is helping expand markets. At the same time, governments in the region have invested in regional infrastructure development which will bring greater convenience in terms of trade, services, investment and cross-border migration, while generating economic opportunities for their countries.

2. Establishing a new foundation for the future of Thailand – The government's policies to lay a long-term foundation for the country include (1) Rebalancing the economy by strengthening the domestic sector, particularly at the local and SME levels, in order to reduce Thailand's reliance on exports; (2) Restructuring the productive sector by using technology and innovation to increase the value of existing industries and developing 10 high-value-added target industries which will serve as the new growth engine for the country; (3) Improving infrastructure, particularly transportation routes; and (4) Upgrading the EEC development project in three provinces in Eastern Thailand – Chonburi, Rayong and Chachoengsao – strategically located for the ASEAN region.

3. Thailand 4.0 policy – Structural economic change promoting a value-based economy will happen in four important areas (1) From traditional to modern agriculture with a focus on management and technology; (2) From traditional SME to smart enterprises and start-ups with high potential; (3) From traditional services to high-value services that provide more value creation; and (4) From low-skilled to high-skilled labor with knowledge and expertise.

4. Digital disruptions to banking – Digital technology will impact commercial banking businesses. Rapid growth in the use of smartphones and tablets enables consumers to increase their everyday access to digital media, which is changing how consumers use financial services. The changing nature of financial transactions make it more convenient and faster for consumers to make payments, transfer and raise funds, make loans, and perform asset-management planning. In addition, banks are benefitting from advances in IT and customer analysis using Big Data Analytics and Artificial Intelligence (AI) to set marketing strategies suited to the behavior of each customer group, as well as developing products and end-to-end solutions. However, the advent of FinTech has changed the competitive environment. FinTech firms are no longer operated only by financial institutions but also include players in other industries.

5. National e-Payment Master Plan – This initiative aims to develop a full range of e-Payment options which will increase the efficiency of the payment infrastructure. This will support its objectives of moving towards a cashless society while enabling financial transactions and economic activities to be carried out more easily and quickly. E-Payments are expected to support the business sector's competitiveness and enhance quality of life as well as strengthening the stability of the financial system.

6. Financial Sector Master Plan Phase III – This is a five-year development plan from 2016-2020 to enhance the Thai financial system in four areas: (1) Competitive – Thai financial institutions are competitive in both domestic and international markets, with low operating cost and wide range of products and services at fair prices; (2) Inclusive – Individuals, SME, and large corporates can appropriately and widely access financial services in line with their needs; (3) Connected – Thai financial institutions have more roles in the region and provide more cross-border financial services to support regional trades and investments; and (4) Sustainable – The

Thai financial institutions system is robust and able to support the country's economic growth as well as promoting sustainable economic well-being.

The five factors above will underpin the transformation of Thailand's economy through a combination of government policies and changes in private-sector business conduct, as well as changes in consumer behavior. Therefore, Thai commercial banks must be ready for these trends and able to cope with changes in order to move forward in a sustainable way.

Overall Picture of the Bank and its Subsidiaries

Item	Million Baht							
	Quarter			Change (%)		Year		Change
	4/2017	3/2017	4/2016	3/2017	4/2016	2017	2016	(%)
Net profit *	8,496	8,161	8,267	4.1%	2.8%	33,009	31,815	3.8%
Earnings per share (Baht)	4.45	4.28	4.33	4.1%	2.8%	17.29	16.67	3.8%
Net interest margin	2.31%	2.30%	2.36%	0.01%	(0.05)%	2.32%	2.34%	(0.02)%
Net fees and service income to operating income ratio	27.3%	23.2%	22.9%	4.1%	4.4%	24.5%	23.1%	1.4%
Expense to operating income ratio	45.5%	41.9%	47.4%	3.6%	(1.9)%	43.5%	47.7%	(4.2)%
Return on average assets *	1.10%	1.06%	1.13%	0.04%	(0.03)%	1.09%	1.09%	-
Return on average equity *	8.48%	8.33%	8.77%	0.15%	(0.29)%	8.49%	8.59%	(0.10)%

* Attributable to the Bank

Item	Million Baht				
	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Loans **	2,003,989	1,938,619	1,941,093	3.4%	3.2%
Deposits	2,310,743	2,300,958	2,178,141	0.4%	6.1%
Loan to deposit ratio	86.7%	84.3%	89.1%	2.5%	(2.4)%
Non-performing loan (NPL)	87,419	88,231	68,841	(0.9)%	27.0%
Ratio of NPL to total loans	3.9%	3.8%	3.2%	0.1%	0.7%
Ratio of loan loss reserves to NPL	160.2%	154.0%	173.6%	6.2%	(13.4)%
Total capital adequacy ratio	18.17%	18.73%	18.32%	(0.56)%	(0.15)%

** Less deferred revenue

Bangkok Bank and its subsidiaries' net interest income amounted to Baht 66.6 billion, an increase of 4.1 percent from 2016, with a net interest margin of 2.32 percent. Non-interest income was Baht 45.8 billion, an increase of 9.5 percent due predominantly to the increase in net fees and service income and gains on investments. The increase in net fees and service income caused by the increase in fee income from bancassurance and mutual funds, and loan-related fees. The Bank's operating expenses were Baht 48.9 billion, a decrease of 3.1 percent, with a ratio of expense to operating income of 43.5 percent. Consequently, net profit attributable to the Bank for 2017 was Baht 33.0 billion, an increase of 3.8 percent from last year.

At the end of December 2017, the Bank's loans were Baht 2,004.0 billion, an increase of 3.2 percent from the end of 2016. The ratio of non-performing loan (NPL) to total loans was 3.9 percent, while the total allowances for doubtful accounts were Baht 140.0 billion with the ratio of loan loss reserves to NPL at 160.2 percent.

In terms of capital, the Bank of Thailand (BOT) announced the guidelines for identifying and regulating Domestic Systemically Important Banks (D-SIBs) in September 2017. Bangkok Bank, which is classified as a D-SIB, is required by the BOT to hold additional capital for the Higher Loss Absorbency (HLA), which gradually increasing the required Common Equity Tier 1 capital ratio, by an increment of 0.5 percent from January 1, 2019 until completion of the increment of 1.0 percent from January 1, 2020 onwards. For the Bank, with the inclusion of net profit from July to December 2017, the total capital adequacy ratio, the Common Equity Tier 1 capital adequacy ratio and the Tier 1 capital adequacy ratio of the Bank and its subsidiaries would be 18.90 percent, 17.35 percent and 17.36 percent, respectively. These capital adequacy ratios are adequate to support the additional capital adequacy ratios specified in the guidelines on D-SIBs. Shareholders' equity as of December 31, 2017, amounted to Baht 401.7 billion. The book value per share was Baht 210.45, an increase of Baht 11.90 from the end of 2016.

Operating Income and Expenses of the Bank and its Subsidiaries

Million Baht

Item	Quarter		Change (%)		Year		Change (%)	
	4/2017	3/2017	4/2016	3/2017	4/2016	2017		2016
Net interest income	16,955	16,825	16,303	0.8%	4.0%	66,625	63,998	4.1%
Non-interest income	11,789	11,651	11,063	1.2%	6.6%	45,843	41,860	9.5%
Operating expenses	13,089	11,938	12,968	9.6%	0.9%	48,948	50,505	(3.1)%
Impairment loss of loans and debt securities	4,617	6,259	3,596	(26.2)%	28.4%	22,370	15,728	42.2%
Operating profit before tax	11,038	10,279	10,802	7.4%	2.2%	41,150	39,625	3.8%
Income tax expenses	2,457	2,037	2,469	20.6%	(0.5)%	7,832	7,556	3.7%
Net profit	8,581	8,242	8,333	4.1%	3.0%	33,318	32,069	3.9%
Net profit *	8,496	8,161	8,267	4.1%	2.8%	33,009	31,815	3.8%
Total comprehensive income *	8,705	12,196	8,128	(28.6)%	7.1%	34,763	29,205	19.0%

* Attributable to the Bank

In terms of operating results for the fourth quarter of 2017, compared with the third quarter of 2017, Bangkok Bank and its subsidiaries reported an increase of Baht 138 million or 1.2 percent in non-interest income due mainly to an increase in net fees and service income, with contributions from loan-related fees, bancassurance and mutual funds as well as fee income from underwriting commitments, while gains on investments decreased. Net interest income rose by Baht 130 million or 0.8 percent due to an increase in interest income from investments. This was coupled with the decline in interest expenses on debt issued and borrowings from the early redemption of Subordinated Debentures No. 1/2012. Impairment loss of loans and debt securities declined by Baht 1.6 billion or 26.2 percent while operating expenses rose by Baht 1.2 billion, due predominantly to an increase in other expenses, and premises and equipment expenses. Consequently, net profit attributable to the Bank in the fourth quarter of 2017 amounted to Baht 8.5 billion, an increase of Baht 335 million or 4.1 percent from the third quarter of 2017.

Compared with the fourth quarter of 2016, non-interest income rose by Baht 726 million or 6.6 percent, mainly due to increases in net fees and service income, largely due to an increase in loan-related fees and fee income from bancassurance and mutual funds. Net interest income rose by Baht 652 million or 4.0 percent mainly due to an increase in interest income from interbank and money market items and loans, while interest expenses from deposits increased in line with an increase in deposit volume. Operating expenses rose by Baht 121 million or 0.9 percent, due predominantly to increases in personnel expenses and premises and equipment expenses, while other expenses decreased due mainly to a decline in provisions for contingencies. Impairment loss of loans and debt securities rose by Baht 1.0 billion. Consequently, net profit attributable to the Bank rose by Baht 229 million or 2.8 percent from the same quarter of 2016.

Comparing 2017 to 2016, Bangkok Bank and its subsidiaries reported an increase of Baht 4.0 billion or 9.5 percent in non-interest income due predominantly to the increase in net fees and service income, caused by the increase in fee income from bancassurance and mutual funds, loan-related fees, and gains on investments. Net interest income rose by Baht 2.6 billion or 4.1 percent mainly due to an increase in interest income from interbank and money market items and an increase in interest income from loans. Operating expenses decreased by Baht 1.6 billion or 3.1 percent, due predominantly to a decrease in provisions for contingencies. Impairment loss on loans and debt securities rose by Baht 6.6 billion or 42.2 percent. As a result, net profit attributable to the Bank amounted to Baht 33.0 billion, an increase of Baht 1.2 billion or 3.8 percent from the previous year.

Net Interest Income

Item	Quarter			Change (%)		Year		Change (%)
	4/2017	3/2017	4/2016	3/2017	4/2016	2017	2016	
Million Baht								
Interest Income								
Loans	22,465	22,418	21,967	0.2%	2.3%	88,876	88,079	0.9%
Interbank and money market items	2,237	2,348	1,499	(4.7)%	49.2%	8,358	6,122	36.5%
Investments	2,158	1,987	2,055	8.6%	5.0%	8,242	8,242	-
Total interest income	26,860	26,753	25,521	0.4%	5.2%	105,476	102,443	3.0%
Interest expenses								
Deposits	5,616	5,552	4,992	1.2%	12.5%	21,596	21,410	0.9%
Interbank and money market items	310	307	235	1.0%	31.9%	1,115	1,104	1.0%
Contributions to the Deposit Protection Agency and Financial Institutions Development Fund	2,429	2,442	2,277	(0.5)%	6.7%	9,617	9,127	5.4%
Debt issued and borrowings	1,550	1,627	1,714	(4.7)%	(9.6)%	6,523	6,804	(4.1)%
Total interest expenses	9,905	9,928	9,218	(0.2)%	7.5%	38,851	38,445	1.1%
Net interest income	16,955	16,825	16,303	0.8%	4.0%	66,625	63,998	4.1%
Yield on earning assets	3.66%	3.65%	3.69%	0.01%	(0.03)%	3.68%	3.74%	(0.06)%
Cost of funds	1.54%	1.54%	1.52%	-	0.02%	1.54%	1.59%	(0.05)%
Net interest margin	2.31%	2.30%	2.36%	0.01%	(0.05)%	2.32%	2.34%	(0.02)%

Net interest income in the fourth quarter of 2017 amounted to Baht 17.0 billion, an increase of Baht 130 million or 0.8 percent from the third quarter of 2017, due to an increase of Baht 107 million or 0.4 percent in interest income, mainly from an increase of Baht 171 million or 8.6 percent in interest income from investments, due largely to an increase in investment volume. Interest income from interbank and money market items declined by Baht 111 million or 4.7 percent from a decline in transaction volume. Interest expenses declined by Baht 23 million or 0.2 percent, due mainly to a decrease of Baht 77 million in interest expenses on debt issued and borrowings from the early redemption of Subordinated Debentures No. 1/2012 in December 2017. Interest expenses from deposits rose by Baht 64 million or 1.2 percent. The net interest margin rose by 0.01 percent from the previous quarter to 2.31 percent as a result of higher yield on earning assets.

Compared with the fourth quarter of 2016, net interest income rose by Baht 652 million or 4.0 percent, due to an increase of Baht 1.3 billion or 5.2 percent in interest income. Significant items included an increase of Baht 738 million or 49.2 percent in interest income from interbank and money market items due to an increase in transaction volume, and an increase of Baht 498 million or 2.3 percent in interest income from loans due to an increase in lending volume. Interest expenses rose by Baht 687 million or 7.5 percent, mainly from an increase of Baht 624 million or 12.5 percent in interest expenses on deposits due to an increase in deposit volume. As a result, contributions to the Deposit Protection Agency and Financial Institutions Development Fund also increased. The net interest margin decreased by 0.05 percent from the same quarter last year.

In 2017, net interest income amounted to Baht 66.6 billion, an increase of Baht 2.6 billion or 4.1 percent from 2016, due predominantly to an increase of Baht 2.2 billion or 36.5 percent in interest income from interbank and money market items, and an increase of Baht 797 million or 0.9 percent in interest income on loans due to the expansion in loan volume. Interest expenses rose by Baht 406 million or 1.1 percent mainly due to an increase in interest expenses on deposits and contributions to the Deposit Protection Agency and Financial Institutions Development Fund in line with an increase in deposit volume. The net interest margin decreased by 0.02 percent from last year to 2.32 percent as a result of lower yield on earning assets.

Bangkok Bank Interest Rates	May 16, '17	Apr 25, '16	Apr 6, '16	May 26, '15
Loans (%)				
MOR	7.125	7.375	7.375	7.375
MRR	7.125	7.625	7.875	7.875
MLR	6.250	6.250	6.250	6.500
Deposits (%)				
Savings	0.500-0.625	0.500-0.625	0.500-0.625	0.500-0.625
Fixed 3 months	1.000	1.000	1.000	1.000
Fixed 6 months	1.250	1.250	1.250	1.250
Fixed 12 months	1.500	1.500	1.500	1.500
		Apr 29, '15		Mar 11, '15
Bank of Thailand Policy Rates (%)		1.500		1.750

Non-Interest Income

Million Baht

Item	Quarter		Change (%)		Year		Change (%)	
	4/2017	3/2017	4/2016	3/2017	4/2016	2017		2016
Fees and service income	10,121	8,807	8,478	14.9%	19.4%	36,460	32,936	10.7%
<u>Less</u> Fees and service expenses	2,285	2,208	2,223	3.5%	2.8%	8,934	8,444	5.8%
Net fees and service income	7,836	6,599	6,255	18.7%	25.3%	27,526	24,492	12.4%
Gains on tradings and foreign exchange transactions	1,736	1,492	2,026	16.4%	(14.3)%	6,257	7,459	(16.1)%
Gains on investments	965	2,502	1,222	(61.4)%	(21.0)%	6,428	4,272	50.5%
Share of profit from investment using equity method	16	52	41	(69.2)%	(61.0)%	205	97	111.3%
Gains on disposal of assets	209	198	542	5.6%	(61.4)%	1,196	999	19.7%
Dividend income	892	711	784	25.5%	13.8%	3,788	3,966	(4.5)%
Other operating income	135	97	193	39.2%	(30.1)%	443	575	(23.0)%
Total other operating income	3,953	5,052	4,808	(21.8)%	(17.8)%	18,317	17,368	5.5%
Total non-interest income	11,789	11,651	11,063	1.2%	6.6%	45,843	41,860	9.5%
Net fees and service income to operating income ratio	27.3%	23.2%	22.9%	4.1%	4.4%	24.5%	23.1%	1.4%

Non-interest income in the fourth quarter of 2017 amounted to Baht 11.8 billion, an increase of Baht 138 million or 1.2 percent from the third quarter of 2017, mainly due to an increase of Baht 1.2 billion in net fees and service income, due to an increase in fee income from loan-related services, bancassurance and mutual funds, and underwriting commitments. Gains on tradings and foreign exchange transactions increased by Baht 244 million and dividend income increased by Baht 181 million, while gains on investments decreased by Baht 1.5 billion. Consequently, the ratio of net fees and service income to operating income stood at 27.3 percent, 4.1 percent higher than the previous quarter.

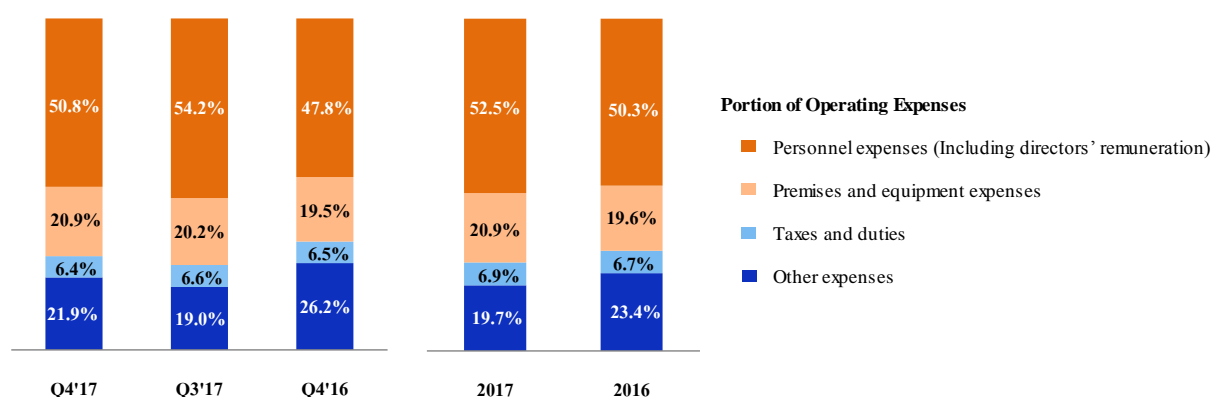
Compared with the fourth quarter of 2016, non-interest income rose by Baht 726 million or 6.6 percent due mainly to an increase of Baht 1.6 billion in net fees and service income due to an increase in fee income from loan-related services, and bancassurance and mutual funds. Gains on disposal of assets decreased by Baht 333 million and gains on tradings and foreign exchange transactions decreased by Baht 290 million.

In 2017, non-interest income amounted to Baht 45.8 billion, an increase of Baht 4.0 billion or 9.5 percent from 2016, due to an increase in net fees and service of Baht 3.0 billion, due mainly to the increase in fee income from bancassurance and mutual funds, loan-related services, and transaction services. Gains on investments increased by Baht 2.2 billion while gains on tradings and foreign exchange transactions decreased by Baht 1.2 billion. Consequently, the ratio of net fees and service income to operating income stood at 24.5 percent, compare to 23.1 percent in the previous year.

Operating Expenses

Million Baht

Item	Quarter		Change (%)		Year		Change (%)	
	4/2017	3/2017	4/2016	3/2017	2017	2016		
Personnel expenses	6,602	6,446	6,157	2.4%	7.2%	25,541	25,247	1.2%
Directors' remuneration	46	22	43	109.1%	7.0%	148	125	18.4%
Premises and equipment expenses	2,736	2,409	2,535	13.6%	7.9%	10,252	9,909	3.5%
Taxes and duties	840	790	838	6.3%	0.2%	3,357	3,388	(0.9)%
Other expenses	2,865	2,271	3,395	26.2%	(15.6)%	9,650	11,836	(18.5)%
Total operating expenses	13,089	11,938	12,968	9.6%	0.9%	48,948	50,505	(3.1)%
Expense to operating income ratio	45.5%	41.9%	47.4%	3.6%	(1.9)%	43.5%	47.7%	(4.2)%



Operating expenses in the fourth quarter of 2017 amounted to Baht 13.1 billion, an increase of Baht 1.2 billion or 9.6 percent from the third quarter of 2017 due to an increase of Baht 594 million in other expenses, partly from marketing expenses and an increase of Baht 327 million in premises and equipment expenses.

Compared with the fourth quarter of 2016, operating expenses increased by Baht 121 million, due to an increase of Baht 445 million in personnel expenses from the annual salary adjustment and an increase of Baht 201 million in premises and equipment expenses, while other expenses decreased by Baht 530 million mainly due to a decline in provisions for contingencies.

In 2017, operating expenses amounted to Baht 48.9 billion, a decrease of Baht 1.6 billion or 3.1 percent from 2016. Significant items included a decrease of Baht 2.2 billion in other expenses mainly due to lower provisions for contingencies.

Impairment Loss of Loans and Debt Securities

Million Baht

Item	Quarter		Change (%)		Year		Change (%)	
	4/2017	3/2017	4/2016	3/2017	2017	2016		
Bad debt and doubtful accounts	4,654	6,420	2,792	(27.5)%	66.7%	22,712	15,351	48.0%
Loss on debt restructuring (reversal)	(37)	(161)	804	77.0%	(104.6)%	(342)	377	(190.7)%
Total	4,617	6,259	3,596	(26.2)%	28.4%	22,370	15,728	42.2%

Impairment loss of loans and debt securities in the fourth quarter of 2017 was Baht 4.6 billion, compared to Baht 6.3 billion in the third quarter of 2017 and Baht 3.6 billion in the fourth quarter of 2016. In 2017, impairment loss of loans and debt securities amounted to Baht 22.4 billion, compared to Baht 15.7 billion in the previous year.

Significant Items in the Financial Position

Assets

Million Baht

Item	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Net interbank and money market items	437,738	607,775	394,612	(28.0)%	10.9%
Net investments	591,720	493,908	546,614	19.8%	8.3%
Net investments in associates	1,460	1,443	1,327	1.2%	10.0%
Loans *	2,003,989	1,938,619	1,941,093	3.4%	3.2%
Net properties for sale	11,415	11,378	12,262	0.3%	(6.9)%
Total assets	3,076,310	3,073,691	2,944,230	0.1%	4.5%

* Less deferred revenue

Total assets as of December 31, 2017, amounted to Baht 3,076.3 billion, an increase of Baht 2.6 billion from the end of September 2017. Significant items included net investments of Baht 591.7 billion, an increase of Baht 97.8 billion or 19.8 percent from an increase in the investment in available-for-sale securities, and loans of Baht 2,004.0 billion, an increase of Baht 65.4 billion or 3.4 percent, while net interbank and money market items of Baht 437.7 billion, a decrease of Baht 170.0 billion or 28.0 percent mainly from a decrease in lending.

Compared with the end of December 2016, total assets rose by Baht 132.1 billion. Significant items included an increase of Baht 62.9 billion or 3.2 percent in loans, an increase of Baht 45.1 billion or 8.3 percent in net investments due to the investment in available-for-sale securities, and an increase of Baht 43.1 billion or 10.9 percent in net interbank and money market items due to an increase in lending.

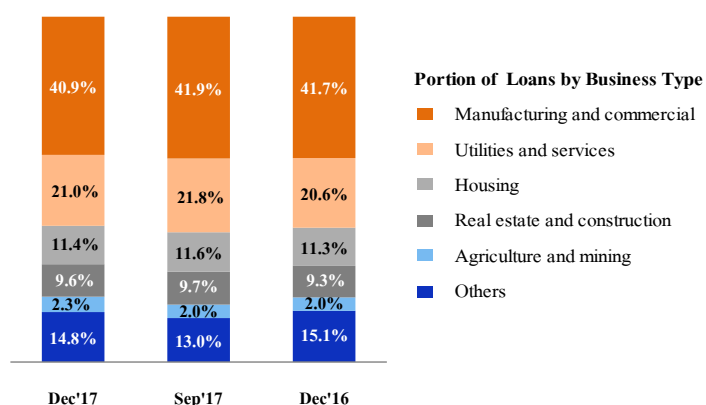
Loans

Loans as of December 31, 2017 amounted to Baht 2,004.0 billion, an increase of Baht 65.4 billion or 3.4 percent from the end of September 2017 due to the increase in all customer segments, mainly from large corporates. Compared with the end of December 2016, loans rose by Baht 62.9 billion or 3.2 percent due to an increase in loans to large corporates, medium-sized businesses and the consumer sector, as well as loans made through the Bank's international network.

Million Baht

Loans by Business Type *	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Manufacturing and commercial	819,338	812,621	810,335	0.8%	1.1%
Utilities and services	421,595	422,319	399,372	(0.2)%	5.6%
Housing	228,146	225,109	219,365	1.3%	4.0%
Real estate and construction	191,176	187,971	179,973	1.7%	6.2%
Agriculture and mining	46,658	39,019	38,541	19.6%	21.1%
Others	297,076	251,580	293,507	18.1%	1.2%
Total	2,003,989	1,938,619	1,941,093	3.4%	3.2%

* Less deferred revenue



The highest portion of lending was to various industries in the manufacturing and commercial sectors, at 40.9 percent, followed by 21.0 percent to utilities and services, 11.4 percent to housing, and 9.6 percent to real estate and construction. The main increase in loans from the end of September 2017 was to 'others' and agriculture and mining, while the increase from the end of December 2016 was mainly to utilities and services and real estate and construction.

Classified Loans and Allowance for Doubtful Accounts

Million Baht

Item	Loans & Accrued Interest Receivables *			Allowance for Doubtful Accounts Classified to Bank of Thailand Criteria		
	December 2017	September 2017	December 2016	December 2017	September 2017	December 2016
Normal	1,875,782	1,806,458	1,830,827	14,983	14,547	14,502
Special mentioned	45,815	48,646	46,058	591	619	548
Substandard	11,760	11,955	9,495	5,275	5,364	2,589
Doubtful	19,012	20,487	16,050	10,387	10,766	10,140
Doubtful of loss	56,681	55,834	43,316	36,471	36,135	27,815
Total	2,009,050	1,943,380	1,945,746	67,707	67,431	55,594
<u>Add</u> Excess allowance for doubtful accounts				70,004	66,047	61,214
Total allowance for doubtful accounts from loan classification				137,711	133,478	116,808
<u>Add</u> Revaluation allowance for debt restructuring				2,310	2,362	2,710
Total allowance for doubtful accounts				140,021	135,840	119,518

* Less deferred revenue

Million Baht

Item	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
NPL before allowance for doubtful accounts	87,419	88,231	68,841	(0.9)%	27.0%
Ratio of NPL to total loans	3.9%	3.8%	3.2%	0.1%	0.7%
NPL after allowance for doubtful accounts (net NPL)	26,576	26,928	19,156	(1.3)%	38.7%
Ratio of net NPL to net total loans	1.2%	1.2%	0.9%	-	0.3%
Ratio of loan loss reserves to minimum required provisioning	200.0%	194.6%	205.0%	5.4%	(5.0)%
Ratio of loan loss reserves to NPL	160.2%	154.0%	173.6%	6.2%	(13.4)%

Non-performing loan (NPL) at the end of December 2017 amounted to Baht 87.4 billion and the ratio of NPL to total loans was 3.9 percent.

Total allowance for doubtful accounts at the end of December 2017 was Baht 140.0 billion or 200.0 percent of the minimum amount required by the Bank of Thailand (BOT) of Baht 70.0 billion. The ratio of loan loss reserves to NPL as at the end of December 2017 was 160.2 percent.

Net Investments

Net investments as of December 31, 2017 amounted to Baht 591.7 billion, an increase of Baht 97.8 billion or 19.8 percent from the end of September 2017, and of Baht 45.1 billion or 8.3 percent from the end of December 2016, due mainly to an increase in investment from available-for-sale securities.

Investments by Investment Holding	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Trading securities	15,113	21,799	33,148	(30.7)%	(54.4)%
Available-for-sale securities	533,651	424,622	462,742	25.7%	15.3%
Held-to-maturity debt securities	11,233	14,742	18,121	(23.8)%	(38.0)%
General investments	31,723	32,745	32,603	(3.1)%	(2.7)%
Total net investments	591,720	493,908	546,614	19.8%	8.3%

Million Baht

Most of the net investments were in government and state-enterprise securities. As of December 31, 2017, these amounted to Baht 315.8 billion, accounting for 53.4 percent of total investments. Foreign debt securities were Baht 99.4 billion, private enterprise debt securities Baht 43.5 billion, and net equity securities Baht 124.1 billion.

Investments by Maturity *	December 2017		September 2017		December 2016		Change (%)	
	Amount	Portion	Amount	Portion	Amount	Portion	September 2017	December 2016
Up to one year	71,982	12.1%	70,386	14.2%	87,347	15.9%	2.3%	(17.6)%
Between one and five years	375,910	63.4%	286,528	57.9%	317,650	58.0%	31.2%	18.3%
Over five years	24,597	4.2%	18,020	3.6%	37,631	6.9%	36.5%	(34.6)%
No maturity	120,691	20.3%	120,417	24.3%	105,313	19.2%	0.2%	14.6%
Total net investments	593,180	100.0%	495,351	100.0%	547,941	100.0%	19.7%	8.3%

Million Baht

* Including net investments in associates

The remaining terms of the net investments (including net investments in associates) as of December 31, 2017 were categorized into securities with less than one year to maturity of Baht 72.0 billion, securities with one-to-five years to maturity of Baht 375.9 billion, securities with remaining maturities of more than five years of Baht 24.6 billion, and securities with no maturity of Baht 120.7 billion.

Liabilities and Shareholders' Equity

Million Baht

Item	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Deposits	2,310,743	2,300,958	2,178,141	0.4%	6.1%
Interbank and money market items	133,584	133,365	130,928	0.2%	2.0%
Debt issued and borrowings	107,190	129,518	137,815	(17.2)%	(22.2)%
Total liabilities	2,674,303	2,680,473	2,564,985	(0.2)%	4.3%
Shareholders' equity *	401,724	393,019	379,016	2.2%	6.0%

* Attributable to the Bank

Total liabilities as of December 31, 2017 amounted to Baht 2,764.3 billion, a decrease of Baht 6.2 billion or 0.2 percent from the end of September 2017, due largely to a decrease of Baht 22.3 billion or 17.2 percent in debt issued and borrowings while an increase of Baht 9.8 billion or 0.4 percent in deposits.

Compared with the end of December 2016, total liabilities rose by Baht 109.3 billion or 4.3 percent, mostly from deposits which rose by Baht 132.6 billion or 6.1 percent. Debt issued and borrowings fell by Baht 30.6 billion or 22.2 percent.

Deposits

Million Baht

Deposits Classified by Product Type	December 2017		September 2017		December 2016		Change (%)	
	Amount	Portion	Amount	Portion	Amount	Portion	September 2017	December 2016
Current	106,184	4.6%	96,560	4.2%	95,810	4.4%	10.0%	10.8%
Savings	1,065,928	46.1%	1,034,254	44.9%	958,150	44.0%	3.1%	11.2%
Fixed *	1,138,631	49.3%	1,170,144	50.9%	1,124,181	51.6%	(2.7)%	1.3%
Total	2,310,743	100.0%	2,300,958	100.0%	2,178,141	100.0%	0.4%	6.1%
Loan to deposit ratio		86.7%		84.3%		89.1%	2.4%	(2.4)%

* Including negotiable certificates of deposit

Total deposits as of December 31, 2017 amounted to Baht 2,310.7 billion, an increase of Baht 9.8 billion or 0.4 percent from the end of September 2017, due to current deposits which rose by 10.0 percent and savings deposits which rose by 3.1 percent caused by an increase in the proportion of low-cost deposits, while fixed deposits which fell by 2.7 percent.

Compared with the end of December 2016, total deposits rose by Baht 132.6 billion or 6.1 percent from all types of deposits; savings deposits rose by 11.2 percent, current deposits rose by 10.8 percent and fixed deposits rose by 1.3 percent due to the cost management of deposits by increasing the proportion of low-cost deposits.

Debt Issued and Borrowings

Million Baht

Debt Issued and Borrowings Classified by Type of Instruments	December 2017		September 2017		December 2016		Change (%)	
	Amount	Portion	Amount	Portion	Amount	Portion	September 2017	December 2016
Senior unsecured notes	98,003	86.6%	100,105	73.9%	107,556	74.7%	(2.1)%	(8.9)%
Unsecured subordinated notes	14,692	13.0%	35,007	25.8%	36,123	25.1%	(58.0)%	(59.3)%
Bills of exchange	26	0.1%	36	0.1%	74	0.1%	(27.8)%	(64.9)%
Others	384	0.3%	346	0.2%	213	0.1%	11.0%	80.3%
Total (before less discount on borrowings)	113,105	100.0%	135,494	100.0%	143,966	100.0%	(16.5)%	(21.4)%
<u>Less</u> Discount on borrowings	5,915		5,976		6,151		(1.0)%	(3.8)%
Total	107,190		129,518		137,815		(17.2)%	(22.2)%

Total debt issued and borrowings as of December 31, 2017 amounted to Baht 107.2 billion, a decrease of Baht 22.3 billion from the end of September 2017 and a decrease of Baht 30.6 billion from the end of December 2016. The declines were due mainly to the early redemption of Baht 20.0 billion of Subordinated Debentures No. 1/2012 on December 7, 2017 and to a decrease in the value of foreign-denominated debentures as a result of the Baht's appreciation.

Shareholders' Equity

Shareholders' equity attributable to the Bank as of December 31, 2017 amounted to Baht 401.7 billion, an increase of Baht 22.7 billion or 6.0 percent from the end of 2016, due mainly to the net profit attributable to the Bank for 2017 of Baht 33.0 billion, net of two dividend payments in 2017 totaling Baht 12.1 billion which consisted of the final dividend payment for 2016 performance of Baht 8.3 billion (Baht 4.50 per share) following the resolution of the shareholders' meeting dated April 12, 2017, and the interim dividend payment made from the net profit from operations for the first half of 2017 (January to June) of Baht 3.7 billion (Baht 2.00 per share), and due to an increase of Baht 7.0 billion in revaluation gains on available-for-sale investments. Loss on translation of the financial statements of foreign operations rose by Baht 5.0 billion due to the Baht's appreciation.

Contingent Liabilities

Million Baht

Item	December 2017	September 2017	December 2016	Change (%)	
				September 2017	December 2016
Avals to bills	8,187	7,424	5,529	10.3%	48.1%
Guarantees of loans	20,445	20,192	18,001	1.3%	13.6%
Liability under unmatured import bills	16,394	14,597	17,921	12.3%	(8.5)%
Letters of credit	31,803	33,009	35,623	(3.7)%	(10.7)%
Other commitments					
Underwriting commitments	1,098	3,820	-	(71.3)%	100.0%
Amount of unused bank overdrafts	174,083	176,188	175,893	(1.2)%	(1.0)%
Other guarantees	259,314	263,485	267,989	(1.6)%	(3.2)%
Others	88,622	97,230	82,088	(8.9)%	8.0%
Total	599,946	615,945	603,044	(2.6)%	(0.5)%

Contingent liabilities as of December 31, 2017 amounted to Baht 599.9 billion, a decrease of Baht 16.0 billion or 2.6 percent from the end of September 2017, with a decrease in ‘others’ (under other commitments) and other guarantees.

Compared with the end of December 2016, contingent liabilities declined by Baht 3.1 billion, due to decreases in other guarantees and letters of credit, while ‘others’ (under other commitments) increased.

Sources and Utilization of Funds

The primary sources of funds as of December 31, 2017 were Baht 2,310.7 billion or 75.1 percent in deposits, Baht 401.7 billion or 13.1 percent in shareholders’ equity attributable to the Bank, Baht 133.6 billion or 4.3 percent in interbank and money market liabilities, and Baht 107.2 billion or 3.5 percent in debt issued and borrowings.

The utilization of funds comprised Baht 2,004.0 billion or 65.1 percent in loans, Baht 437.7 billion or 14.2 percent in interbank and money market assets, and Baht 593.2 billion or 19.3 percent in net investments (including net investments in associates).

Capital Reserves and Capital Adequacy Ratio

Consolidated

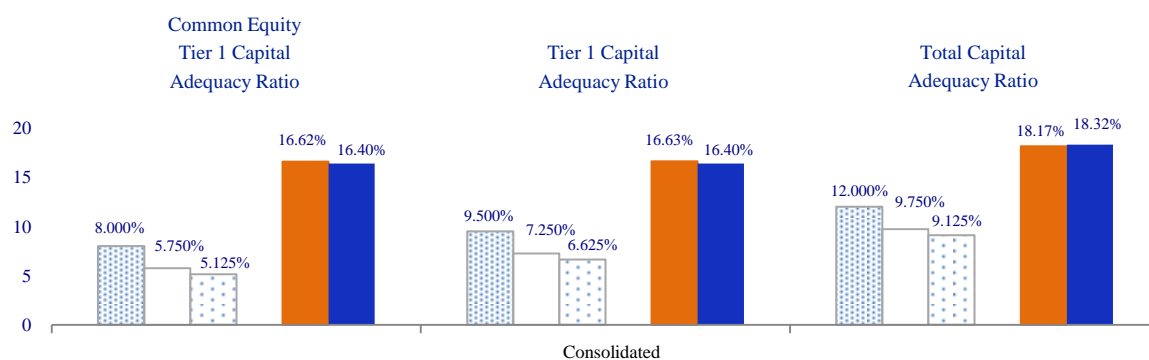
Million Baht

Item	Capital			Capital Adequacy Ratio		
	December 2017	September 2017	December 2016	December 2017	September 2017	December 2016
Total capital	419,580	423,958	403,068	18.17%	18.73%	18.32%
Tier 1 capital	383,942	383,797	360,818	16.63%	16.96%	16.40%
Common Equity Tier 1 capital	383,841	383,721	360,702	16.62%	16.96%	16.40%

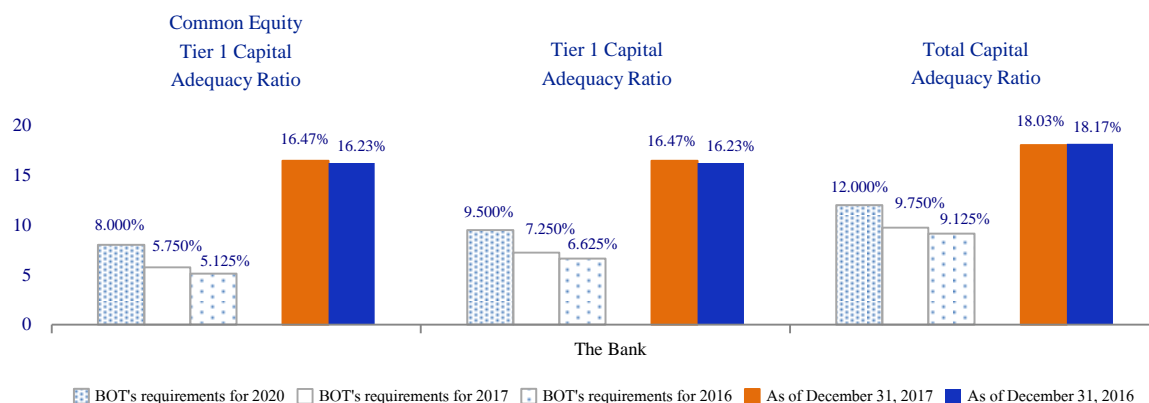
The Bank

Million Baht

Item	Capital			Capital Adequacy Ratio		
	December 2017	September 2017	December 2016	December 2017	September 2017	December 2016
Total capital	404,226	408,506	388,788	18.03%	18.60%	18.17%
Tier 1 capital	369,261	369,305	347,373	16.47%	16.81%	16.23%
Common Equity Tier 1 capital	369,261	369,305	347,373	16.47%	16.81%	16.23%



■ BOT's requirements for 2020 □ BOT's requirements for 2017 □ BOT's requirements for 2016 ■ As of December 31, 2017 ■ As of December 31, 2016



Under the principles of Basel III, the Bank of Thailand (BOT) requires commercial banks registered in Thailand and members of their financial groups to maintain minimum levels of capital adequacy as measured by three ratios, including the Common Equity Tier 1 ratio at no less than 4.50 percent, the Tier 1 ratio at no less than 6.00 percent, and the total capital ratio at no less than 8.50 percent – measured as a percentage of total risk-weighted assets. It also requires a capital conservation buffer in addition to minimum capital adequacy ratios, phasing in an additional capital ratio of more than 0.625 percent p.a. starting January 1, 2016 until completion of the increment to more than 2.50 percent from January 1, 2019 onwards. To satisfy the minimum levels and capital buffer specified by the BOT's requirements, in 2017 the Bank is required to maintain the Common Equity Tier 1 ratio at more than 5.75 percent, the Tier 1 ratio at more than 7.25 percent, and the total capital ratio at more than 9.75 percent – measured as percentages of total risk-weighted assets. In September 2017, the BOT announced the guidelines for identifying and regulating Domestic Systemically Important Banks (D-SIBs). Bangkok Bank, which is classified as a D-SIB, is required by the BOT to hold additional capital for Higher Loss Absorbency (HLA) by gradually increasing its additional capital ratio by an increment of 0.50 percent p.a. from January 1, 2019 until completion of the increment to 1.00 percent from January 1, 2020 onwards.

As of December 31, 2017, legal capital funds were Baht 419.6 billion, Common Equity Tier 1 capital was Baht 383.8 billion, and Tier 1 capital was Baht 383.9 billion. The total capital adequacy ratio was 18.17 percent, the Common Equity Tier 1 capital adequacy ratio was 16.62 percent, and the Tier 1 capital adequacy ratio was 16.63 percent. With the inclusion of net profit from July to December 2017, the total capital adequacy ratio, the Common Equity Tier 1 capital adequacy ratio and the Tier 1 capital adequacy ratio would be 18.90 percent, 17.35 percent and 17.36 percent, respectively.

Liquid Assets

Item	December 2017	September 2017	December 2016
Liquid assets (Million Baht)	1,051,982	1,109,192	956,847
Liquid assets/total assets (%)	34.2	36.1	32.5
Liquid assets/deposits (%)	45.5	48.2	43.9

Liquid assets consisted of cash, interbank and money market items, claims on securities, trading securities and available-for-sale securities. As of December 31, 2017, liquid assets totaled Baht 1,052.0 billion, a decrease of Baht 57.2 billion or 5.2 percent from the end of September 2017, due mainly to a decrease of Baht 170.0 billion in interbank and money market items, while available-for-sale securities rose by Baht 109.0 billion.

Compared with the end of December 2016, liquid assets rose by Baht 95.1 billion or 9.9 percent. Significant items included an increase of Baht 70.9 billion in available-for-sale securities and an increase of Baht 43.1 billion in interbank and money market items.

Credit Ratings

At the end of December 2017, credit-rating agencies maintained the Bank's credit ratings from the end September 2017 and the end of 2016. Details of the Bank's credit ratings are as follows:

Credit Rating Agency *	December 31, 2017	September 30, 2017	December 31, 2016
Moody's Investors Service			
Long term - Deposits	Baa1	Baa1	Baa1
Short term - Debt instruments / deposits	P-2 / P-2	P-2 / P-2	P-2 / P-2
Senior unsecured debt instruments	Baa1	Baa1	Baa1
Subordinated debt instruments	Baa3	Baa3	Baa3
Outlook	Stable	Stable	Stable
Financial strength (BCA)	baa2	baa2	baa2
Financial strength outlook	Stable	Stable	Stable
Standard & Poor's			
Long term - Debt instruments	BBB+	BBB+	BBB+
- Deposits	BBB+	BBB+	BBB+
Short term - Debt instruments / deposits	A-2 / A-2	A-2 / A-2	A-2 / A-2
Senior unsecured debt instruments	BBB+	BBB+	BBB+
Subordinated debt instruments	BBB	BBB	BBB
Financial strength (SACP)	bbb	bbb	bbb
Support	+1	+1	+1
Outlook	Stable	Stable	Stable
Fitch Ratings			
International ratings			
Long term - Debt instruments	BBB+	BBB+	BBB+
Short term - Debt instruments	F2	F2	F2
Senior unsecured debt instruments	BBB+	BBB+	BBB+
Subordinated debt instruments	BBB	BBB	BBB
Financial strength (Viability)	bbb+	bbb+	bbb+
Support	2	2	2
Outlook	Stable	Stable	Stable
National ratings			
Long term - Debt instruments	AA+(tha)	AA+(tha)	AA+(tha)
Short term - Debt instruments	F1+(tha)	F1+(tha)	F1+(tha)
Subordinated debt instruments	AA(th)	AA(th)	AA(th)
Outlook	Stable	Stable	Stable

* Long-term credit ratings classified as investment grade by Moody's Investors Service, Standard & Poor's and Fitch Ratings are Baa3, BBB- and BBB-, or higher, respectively. Short-term credit ratings classified as investment grade by Moody's Investors Service, Standard & Poor's and Fitch Ratings are P-3, A-3 and F3, or higher, respectively.