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PROJECT AQUA

Ipsos Strategy3

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Abbreviations

AEONTS	AEON Thana Sinsap
ADF	Advance Finance
AYCAP	Ayudhya Capital Services
BAAC	Bank for Agriculture and Agricultural Cooperatives
BAY	Bank of Ayudhya
BBL	Bangkok Bank
BOT	Bank of Thailand
CAGR	Compound Annual Growth Rate
CBs	Commercial Banks
CDD	Community Development Department
DBD	Department of Business Development
EXIM Bank	Export-Import Bank of Thailand
EASY	Easy Buy
FDI	Foreign Direct Investment
FIDF	Financial Institution Development Fund
Fis	Financial Institutions
GCAP	G Capital
GDP	Gross Domestic Product
GET	Gold Exchange of Thailand
GH Bank	Government Housing Bank
GSB	Government Savings Bank
HENG	Heng Leasing and Capital
Ibank	Islamic Bank of Thailand
Kbank	Kasikornbank
KKP	Kiatnakin Phatra Bank
KTB	Krungthai Bank
KTC	Krungthai Card
LHFG	LH Financial Group
LINE BK	Kasikorn Line
LTV	Loan-To-Value
MPC	Monetary Policy Committee
MSME	Micro Enterprise and SME
MTC	Muangthai Capital
NBFIs	Non-bank Financial Institutions
NCB	National Credit Bureau
NPL	Non-Performing Loan
NSO	National Statistic Office
OIC	Office of Insurance Commission
OSMEP	Office of Small and Medium Enterprises Promotion
PGS	Portfolio Guarantee Scheme
RBP	Risk Based Pricing
SAK	Saksiam Leasing
SAWAD	Srisawad Corporation
SCB	Siam Commercial Bank
SEC	Securities and Exchange Commission of Thailand
SFIs	Specialized Financial Institutions

SGF	SGF Capital
SME	Small and Medium Enterprises
SME D Bank	Small and Medium Enterprise Development Bank
TCRB	The Thai Credit Retail Bank
TDR	Troubled Debt Restructuring
TGC	Thai Credit Guarantee Corporation
TGTA	Thai Gold Trading Association
TIDLOR	Ngern Tid Lor
TISCO FG	TISCO FINANCIAI GROUP
TTB	TMBThanachart Bank
VF	Village Fund

Part 1: Market Overview

The loan market for Micro, Small and Medium-sized Enterprises (MSMEs) in Thailand presents significant potential for growth despite the challenges faced in accessing financial loans. The loan for the SMEs market from all Commercial Banks (CBs) accounted for approximately 27% of the total business outstanding loan or totaled 3,441 billion Baht (as of 3Q2022). The lack of collateral and financial records among MSMEs, especially among micro-enterprises and small enterprises, has resulted in them relying on alternative funding sources such as consumer loans. The estimated outstanding loans among micro-enterprises and small enterprises with a loan value of 200,000 Thai Baht or below are projected to be worth approximately 4,295 billion Thai Baht by 2022, with a CAGR of 5% between 2015 and 2021. In additionto loans supported by financial institutions, many micro and small enterprises also rely on informal loans with an estimated value of 2,354 billion Thai Baht, or around 14% of total household loans in the country. The high demand for financial services among MSMEs presents an opportunity for financial institutions and other stakeholders to tap into this underserved market and support the growth and development of the MSMEs sector.

Moreover, the COVID-19 pandemic has added further stress to the challenges MSMEs faces, causing disruptions to their operations and reducing their revenue streams. This has made it even more difficult for these enterprises to access financial loans, leading to an increased reliance on informal funding sources. It highlights the importance of providing support and resources to MSMEs during these challenging times, including increasing access to financial services and providing education and training on financial literacy. Addressing the challenges faced by MSMEs will not only support their survival and growth but also contribute to Thailand's overall economic stability and resilience during and after the pandemic.

THE THAI ECONOMY REMAINS POSITIVE DESPITE HIGH INFLATION AND RISING HOUSEHOLD DEBT

The Bank of Thailand (BOT) forecasts that the country's GDP will grow by 3.7% in 2023 and 3.9% in 2024, despite the global economic sluggishness due to high-interest rates, high energy prices, high inflation, and slow growth in China and geopolitical conflicts. In 2022, Thailand experienced its highest inflation over a decade, reaching 6.3%. To control inflation and address financial stability concerns, the BOT has been using monetary policy to adjust the cost of borrowing and the money supply in the economy, raising the policy rate from 0.5% to 1.25% during the second half of 2022. The policy rate is expected to rise to 2% around the middle of 2023.

Thailand's household debt has risen significantly in recent years, reaching 90.8% of GDP in 1Q2021, mainly due to fiscal stimulus measures such as soft loans and increasing credit limits for consumer and business loans in response to the COVID-19 pandemic. The household debt slowed down to 86.8% by 3Q2022. Bad debts are also rising, and the BOT aims to bring the debt-to-GDP ratio to a sustainable level of 80% or below.

Despite the global headwinds and the threat to the country's export growth, the outlook for the Thai economy remains positive. One of the main drivers of economic growth is expected to be the tourism sector, driven primarily by MSMEs as the number of foreign tourists continues to rise. Industries such as hospitality, transportation, retail, food and beverage, tour operators, and businesses that provide services related to the tourism sector could see increased demand. Additionally, private consumption is supported by improving economic activities and a broader recovery in employment and labor income.

MSMES IN THAILAND: A DYNAMIC BACKBONE TO THE THAI ECONOMY

In Thailand, micro-enterprises are defined as businesses or individuals with less than 1.8 million Thai Baht in annual revenue or employing less than five people. There are approximately 2.7 million micro-enterprises. In addition, there are also 421,588 small enterprises and 43,191 medium enterprises, making the total of MSMEs of approximately 3.17 million enterprises in the Thai economy.

MSMEs account for approximately 34.6% of the total GDP for 2021 and are responsible for 99.6% of all businesses in Thailand. They also employ approximately 71.9% of the country's workforce, or approximately 4.9 million people, making them vital to the economic growth. MSMEs were significantly affected by the COVID-19 pandemic, but with government stimulus measures, micro-enterprises have made a fast recovery and registered a double-digit growth in GDP at 11% for the year 2021. On the other hand, small enterprises, particularly in terms of working capital, have been greatly affected by the COVID-19 pandemic. Despite the debt relief measures provided by the BOT for existing loans, small enterprises have faced challenges in obtaining additional funding for working capital, as COVID-19 has negatively impacted their business performance, and financial institutions have been cautious in lending. This has impeded the recovery process, leading to small enterprises' GDP dropped by 0.9% for the year 2021. However, medium enterpriseshave been less impacted by COVID-19 in comparison to micro and small enterprises. They are more financially secure with adequate funding. Furthermore, the export growth in 2021 has been strong, with a 17.4% increase in Thailand's export growth, allowing medium enterprises to recover at a faster pace.

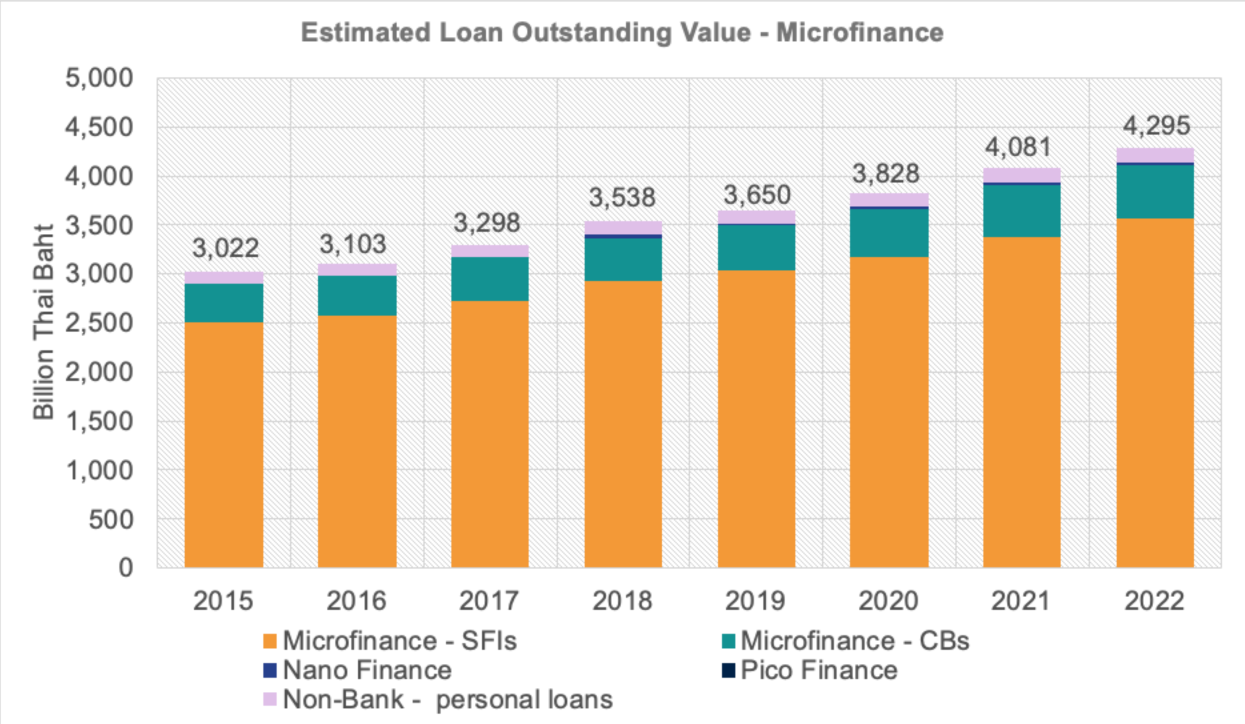
The Thai government recognizes the importance of MSMEs in the country's economy and is committed to promoting financial inclusion for this underserved segment of the market. One of the channels through which the government supports MSMEs to gain financial access is the Thai Credit Guarantee Corporation (TCG). The TGC is essential in promoting long-term financial access for these enterprises in Thailand. By providing credit guarantees to financial institutions, TCG reduces the risk associated with lending to MSMEs and supports their ability to secure loans. Its success is evident, with outstanding guarantee loans reaching 660.7 billion Thai Baht by 9M2022, an increase of 10.8% compared to 9M2021. TCG also plans to introduce new and innovative credit guarantee products to drive the Bio-Circular-Green Economy in the future, further supporting the growth and development of MSMEs. The TCG's efforts during the COVID-19 pandemic and for the future demonstrate its commitment to promoting financial inclusion for MSMEs in Thailand and helping them achieve long-term success.

Access to loans is a major challenge for MSMEs in Thailand, especially among micro and small enterprises, as they often need credit history and collateral to obtain loans from formal financial service providers. As a result, micro enterprises and small enterprises also have to rely on consumer loans such as personal loans, refinance for home mortgages, and other financial loan products to fund their working capital and support their business operations. This highlights the need of more accessibility for these enterprises in Thailand so that these businesses can have the necessary financial resources to grow and thrive.

MICRO ENTERPRISE: THE UNDERSERVED MARKET OPPORTUNITY

Microfinance, first introduced in 2011, is a well-known loan product that offers loans of up to 200,000 Thai Baht for business or occupational purposes. However, these loans typically require collateral and credit history, making it difficult for micro and small enterprises to access financial support. As a result, the concept of Microfinance has evolved to include other financial products such as SME loans, personal loans for business or occupational purposes, Nano-Finance, and Pico-Finance that require less or no collateral.

The market for the microfinance loans, which offer loans under 200,000 Thai Baht for business and occupational purposes, is estimated to be worth 4,295 billion Thai Baht in 2022, with a CAGR of 5% between 2015 and 2022. Special Financial Institutions (SFIs) are estimated to hold the largest share of these loans at 83%, followed by commercial banks (13%) and others, including Nano-Finance, Pico-Finance, and personal loans from Non-Banks.



Source: Ipsos Strategy3

The market for loans under the microfinance concept presents a resilient opportunity, as evidenced by the growth of Nano-Finance and Pico-Finance. These financial products were created to provide access to micro-enterprises that face challenges in obtaining collateral and building a credit history. Nano-Finance offers collateral-free credit of up to 100,000 Thai Baht with an effective interest rate of 33%. It has seen a CAGR of 136.3% between 2015 and 2021 and a year-on-year growth of 57.9% in 9M2022. Pico-Finance has also experienced a rapid growth, with a CAGR of 196% between 2015 and 2021 and a 39% increase in outstanding loans in 3Q2022 compared to the previous year. Pico-Finance provides a credit of up to 100,000 Thai Baht, with a maximum annual rate of 36% without collateral and 33% with collateral.

In addition to traditional loan products, micro enterprises and small enterprises seeking quick liquidity to fund their operations can access loans through Kai Fak and Home-for-Cash products. Kai Fak is a process where the ownership of land or property is transferred to the buyer/ lender as collateral for the loan. At the same time a mortgage is a term loan that uses a property as collateral without transferring ownership. Kai Fak is a more convenient option as it requires less effort for credit checks or assessments. According to 3Q2022 data, the Kai Fak market value is approximately 11.7 billion Thai Baht, an increase of 15.1% compared to the same period last year.

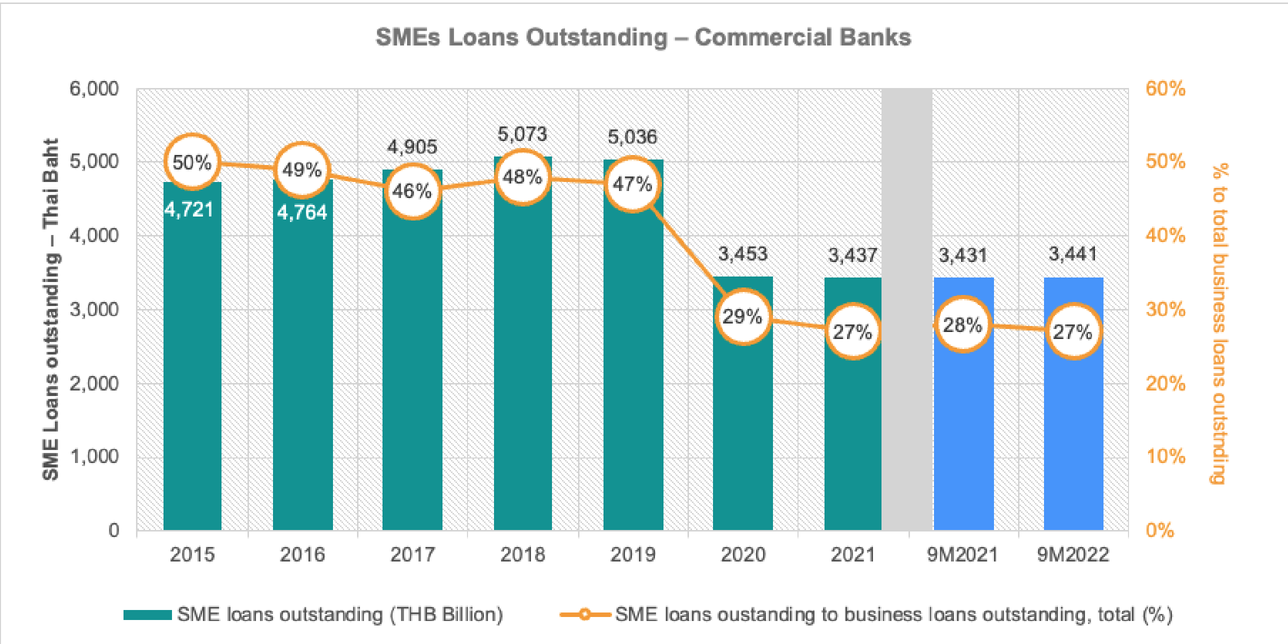
Meanwhile, Home for Cash is defined as a secured or collateralized consumer lending product. It is not considered a mortgage or housing loan and typically has a lower Loan-To-Value ratio and a shorter payment term. The Home for Cash market is estimated to have an outstanding loan value of around 290-320 billion Thai Baht. Similar to the refinance market, the Home for Cash market is anticipated to grow significantly as consumer demand for liquidity to expand their businesses and make new investments increases as the economy continues to recover from the pandemic.

In addition to formal loans from financial service providers, there is a significant market for informal loans among micro enterprises in Thailand. According to GSB Research, approximately 11 million individuals continue to borrow from informal business operators. Many of these loans comes from loan shark operators charging exorbitant interest rates of 60% to 240% per year. The estimated value of this market in 2022 could reach as high as 2,354 billion Thai Baht. As the economy improves, particularly in the tourism sector, demand for informal loans is expected tol rise in 2022 as businesses require working capital to restart operations.

SME LENDING: BALANCING RISK AND OPPORTUNITY

SME lending by commercial banks in Thailand has traditionally been a critical source of external financing for the sector. In 2019, SME outstanding loans totaled THB 5,036 billion or 47% of the total business outstanding loan. However, since the onset of the COVID-19 pandemic, the SME loan market has experienced a significant decline, with SME outstanding loan loans standing at only 27% of total outstanding loans as of 9M2022, valued at THB 3,441 billion. The decline is mainly due to the financial challenges faced by SMEs as a result of the pandemic, including reduced revenue and cash flow. The situation has been exacerbated by limited access to financing, low productivity, and a lack of technical know-how.

While the Bank of Thailand (BOT) has introduced a series of relief measures, including soft loan programs to support SMEs and reduce the risk of loan defaults, the rising non-performing loan (NPL) levels among SMEs remain a concern. According to the BOT's data, the NPLs for SME loans by commercial banks increased from 4.6% in 2019 to 7.38% as of 3Q2022, mainly due to the impact of the pandemic. These NPLs could lead to lower profitability, lower credit ratings, and higher capital requirements for banks. Additionally, the mentioned loans for SME loans have increased from 3.5% in 2019 to 14.9% in 3Q2022. This highlights SMEs' challenges and the importance of measures to support the sector.



Source: Bank of Thailand

Despite the impact of COVID-19, the SME loan market in Thailand is poised for growth, and several banks are well-positioned to capitalize on this growth. Kasikorn Bank (KBank) is the market leader in SME loans, focusing on acquiring micro enterprise and self-employed customers via digital channels and untapped industries by leveraging on data analytics to improve credit opportunities in specific industries. Siam Commercial Bank (SCB) is the second-largest player in the SME loan market and has achieved a strong growth by expanding into small SME customers with good credit track records and offering soft loans to SMEs struggling with cash flow under relief measures. Bangkok Bank (BBL) is the third-largest player in the SME loan market, and despite a decline in SME outstanding loan, there is a significant growth potential in the SME sector for BBL and other banks to capture.

In addition to these major players, Thai Credit Retail Bank (TCRB) is a medium-sized bank with a long-standing focus on the SME segment, providing a wide range of financing products and services tailored to the needs of SMEs. As a bank serving the SME market for an extended period, TCRB has developed the experience and expertise necessary to evaluate the risk associated with lending to SMEs effectively, giving it a competitive advantage.

As the economy recovers and demand for credit increases, SME lending is expected to remain a key growth driver for commercial banks in Thailand. This presents opportunities for investors to capitalize on this trend by investing in banks with a strong presence in the SME lending market. Overall, banks that can effectively balance risks and opportunities in the SME lending market have the potential to generate significant returns and contribute to Thailand's broader economic growth.

CONSUMER LENDING MARKET GROWTH CONTINUES

Loans to a household in Thailand have been growing at a rapid pace. Credit card and personal loan growth have a CAGR of 10% between the years 2015 to 2021. Housing loans have increased by a CAGR of 5.6%, and auto loans have registered a CAGR of 4.5% over the same period.

Loan to household	2015	2016	2017	2018	2019	2020	2021	3Q2022	CAGR '15 – '21
Loan to household - personal consumption, total (THB Billion)	8,368	8,732	9,146	9,775	10,360	10,785	11,156	11,405	4.9%
_Personal consumption - housing loan (THB Billion)	3,625	3,866	4,076	4,332	4,534	4,791	5,031	5,168	5.6%
_Personal consumption - auto loan (THB Billion)	1,397	1,372	1,436	1,609	1,735	1,793	1,814	1,806	4.5%
_Personal consumption - education (THB Billion)	378	415	408	408	380	300	248	224	-6.8%
_Personal consumption - others (THB Billion)	2,968	3,080	3,226	3,426	3,712	3,901	4,063	4,207	5.4%
__others: of which credit card and personal loan under BOT supervision (THB Billion)	657	698	744	798	1,035	1,027	1,165	1,263	10.0%
Loan to household - occupational purpose (THB Billion)	2,152	2,231	2,297	2,382	2,416	2,516	2,644	2,702	3.5%
Other loan to household (THB Billion)	634	620	658	672	713	727	776	796	3.4%
Total loan to household (THB Billion)	11,154	11,584	12,101	12,829	13,489	14,029	14,577	14,903	4.6%
Loan to household per GDP (%)	81.2	79.4	78.1	78.4	79.9	89.7	90.1	86.8	

Source: Bank of Thailand

[a]Data as of the end of September 2022

Note: data are collected from all commercial banks, SFIs, Financing companies, Credit Foncier, saving cooperatives, non-banks including credit cares, personal loans, leasing companies, insurance companies, asset management companies, pawn shops and other financial institutions

STAYING COMPETITIVE IN THAILAND’S DIGITAL BANKING MARKET

Thailand’s financial services sector has recently adopted digital banking at a rapid pace, particularly after launching the PromptPay infrastructure in 2017. The volume of transactions has grown at a CAGR of 86.9% between 2017 and 2021 and 56.5% in value transactions. The BOT plans to introduce virtual banks to increase competition in the financial sector, with the first three licence holders expected to begin operations in 2Q2025.

The competition in the digital banking market in Thailand is intense, with traditional banks facing competition from new digital-only banks, as well as from fintech companies entering the market, such as Seamoney (Capital), the first Non-Banks to obtain the digital personal loan licence and operate their loan products on the Shopee platform. These new players offers various innovative financial services and products, such as peer-to-peer lending, digital wallets, and e-commerce payments. Traditional banks have responded by investing in digital technologies,developing their digital platforms to remain competitive and partneringwith fintech. Today, essential products accessible via mobile banking include unsecured personal loans and Nano-finance while their main target customers are the micro-enterprises segment. Digital depository accounts are also becoming popular, with commercial banks offering digital deposit accounts with attractive interest rates.

However, digital banking is one of many competitive advantages in the market. Small and medium-sized commercial banks are adopting main strategies to expand their market coverage by building solid relationships with customers, community involvement, excelling and offering specialized services to niche markets, leveraging on local knowledge, and offering flexibility to offer innovative products

In conclusion, despite the challenges of high inflation and rising household debt, the Thai economy remains positive, with a projected GDP growth of 3.7% in 2023 and 3.9% in 2024. The BOT has used monetary policy to control inflation and address financial stability concerns. The outlook for the country's tourism sector, driven by MSMEs, is expected to be a significant driver of economic growth. These enterprises make up 99.6% of all businesses in Thailand and account for 34.6% of the country's GDP. However, access to loans remains a major challenge, highlighting the need for the loan market to be more accessible for these businesses to grow and thrive. Microfinance, which includes loans of up to 200,000 Thai Baht and other financial products, has evolved to offer more accessible options for MSMEs. The MSMEs segment, therefore, presents a significant opportunity for financial service providers in Thailand to serve the underserved market and support the country's economic growth.

Part 2: Thailand Macro-Economic Overview

2.1 Thailand Economic Indicator

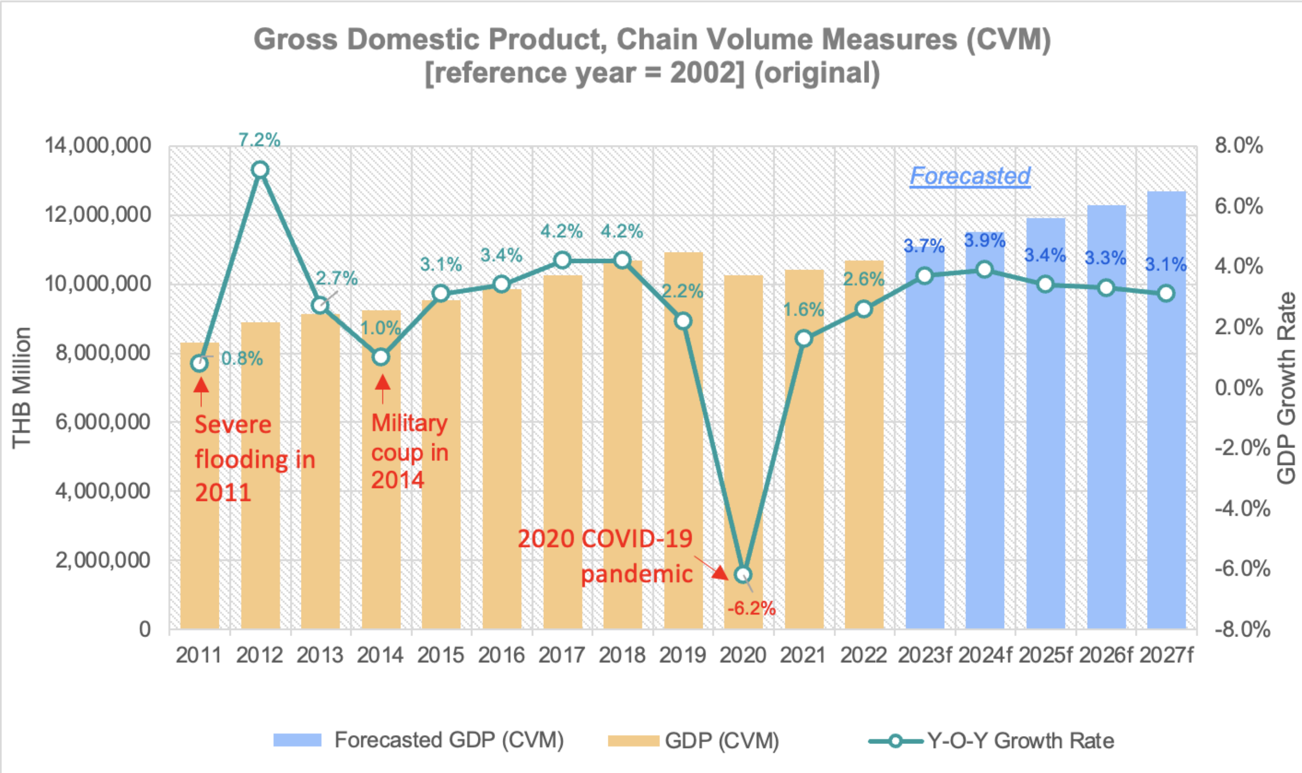
Thailand is a middle-income country with a dynamic urban center. Its open economy is mainly driven by exports, including industrialization, agriculture, tourism, and services. Thailand has successfully integrated its industrial production into the regional value chain, particularly in the automotive and electronics industries. Its location, with long coastlines and proximity to rapidly growing neighboring markets, has made it a regional hub for transportation and logistics, with a world-class airport. Its economy has diversified into tourism, healthcare, and other services.

Thailand has experienced a series of shocks that have impacted its economy, including the Asian financial crisis in 1997-1998, a coup in 2006, the global financial crisis from 2008 to 2009, major flooding in 2011, another coup in 2014, and the ongoing COVID-19 pandemic since 2019. These events have impacted investor confidence and affected domestic demand and economic growth. Thailand has also faced structural issues, such as an aging population, labor quantity and quality, slow wage growth, high household debt, deteriorating infrastructure, and prolonged low investment.

However, Thailand has demonstrated high resilience in the face of economic challenges and has been able to maintain a relatively strong economic growth over the past several decades. According to the World Bank report, the Thai economy is resilient to recent global shocks. Thai economy is expected to continue its road to recovery in 2023 and 2024, with tourism recovery and private consumption remaining the major growth drivers. The International Monetary Fund (IMF) projected Thailand to be one of the two nations in Asia that can be expected to grow in real GDP terms in 2023 and 2024. The other country is China.

2.1.1 Gross Domestic Product

Chart 1: GDP Growth Rate

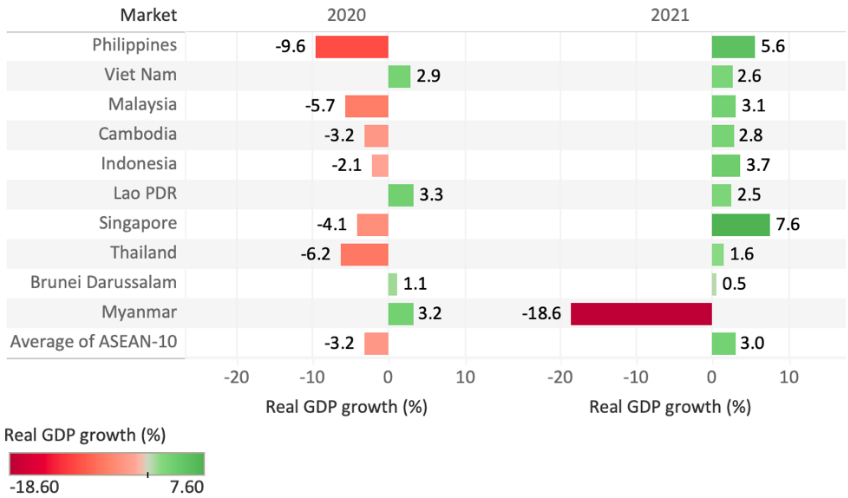


Source: Office of The National Economic and Social Development Council between the year 2011 to 2021 and forecasted data based on Bank of Thailand (Monetary Policy Report / Analyst Meeting as of November 2022 and World Economic Outlook Database April 2022)

The GDP forecasts for Thailand are generally optimistic, with growth expected to strengthen in the coming years. According to the BOT, Thailand's GDP grew by 2.6% in 2022, driven by an improvement in domestic demand, mainly due to a recovery in tourism, as well as household consumption, and investment.

Despite battling global headwinds, the economy has shown tenacity and rebounded faster than anticipated. In the 3Q2022, output exceeded its pre-pandemic level (2019) but fell behind that of several countries in ASEAN. The real GDP growth advanced to 4.5%, underpinned by a rebound in private consumption and robust tourism inflows. In September 2022, tourism arrivals surpassed those of Indonesia and the Philippines, reaching 45% of their pre-pandemic level. Due to the importance of tourism to Thailand's economy, its recovery has been slower than many of its ASEAN peers, most of which returned to pre-pandemic levels by late 2021.

Chart 2: Real GDP growth in ASEAN



Note: The 2020 figures are based on national sources. The 2021 actual figures for Indonesia, Malaysia, the Philippines, Singapore, Thailand and Viet Nam are based on national sources.

The 2022 projections are based on the OECD Economic Outlook No. 110.

Source: OECD Development Centre and OECD (2021).

2.1.2 GDP Economic Growth Forecast

The Thai economic recovery has continued to gain traction. Tourism and private consumption will continue to be vital economic drivers going forward and help alleviate the impact of the global slowdown on the Thai economy. The Monetary Policy Committee (MPC) meeting revealed the forecast for the Thai economy in its 6th meeting in November 2022. It projected the GDP for 2023 to increase by 3.77% (previously projected to be 3.8%) and 3.9% in 2024. The growth will be mainly contributed by the tourism sector, which continues to strengthen as the number of foreign tourists rise. Hospitality, transportation, retail, food, and beverage, as well as tour operators and business that provide services related to the tourism sector could see increased demand as more tourists visit the country. Additionally, private consumption is supported by improving economic activities and a more broad-based recovery in employment and labor income. However, exports and manufacturing investment might slowdown, reflecting the impact of the global economic recession.

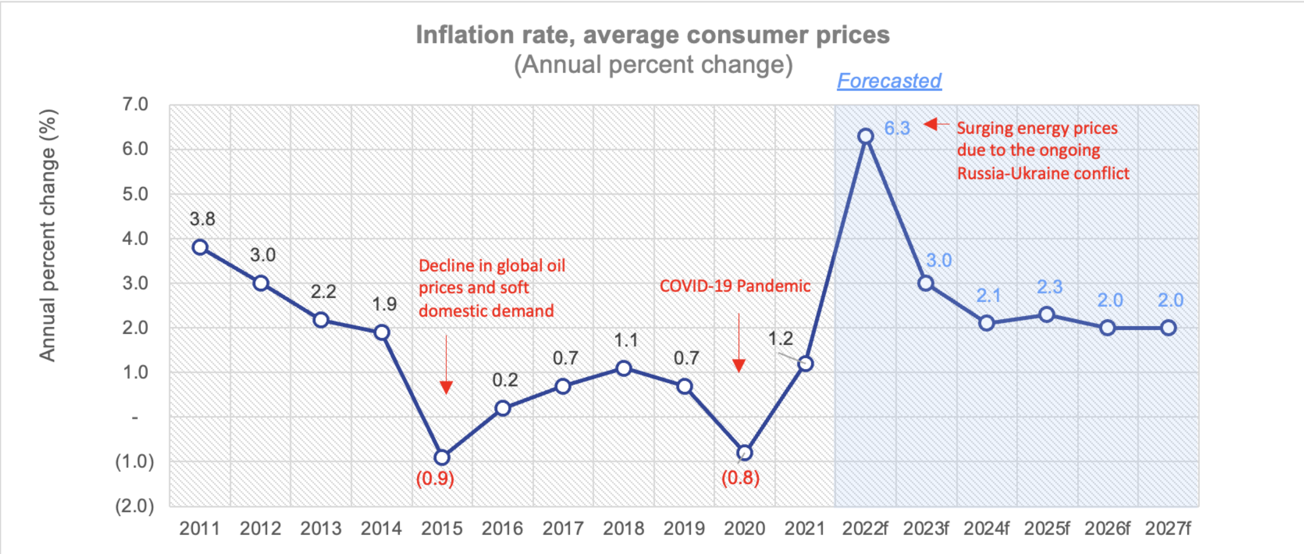
Based on the IMF, World Economic Outlook database, Thailand's long-term potential growth rate is estimated at 3.0%. As the reopening boost fades, private consumption growth is also projected to moderate in 2023. Employment is expected to return to pre-pandemic level and will continue to support consumer spending.

2.1.3 Headline Inflation

For the year 2022, the headline inflation is projected by the BOT to be 6.3% due to higher fuel and transportation costs, raw food prices, and prepared food[1] prices. This is the highest level of inflation in 24 years. The headline inflation is expected to decrease to 3.0% in 2023 and 2.1% in 2024 as global energy and food prices moderate.

[1] Prepared food includes take-away and dine-in food

Chart 3: Inflation Rate, Average Consumer Prices (Annual Percent Change)



Source: Bank of Thailand (Monetary Policy Report / Analyst Meeting as of November 2022 and World Economic Outlook Database April 2022)

2.1.4 Policy Interest Rate

Monetary policy is a tool central banks use to determine the cost of borrowing and the money supply in an economy. The policy interest rate is a key monetary policy instrument the BOT uses. The BOT can influence the supply of money in the economy and the demand for credit by adjusting the policy rate.

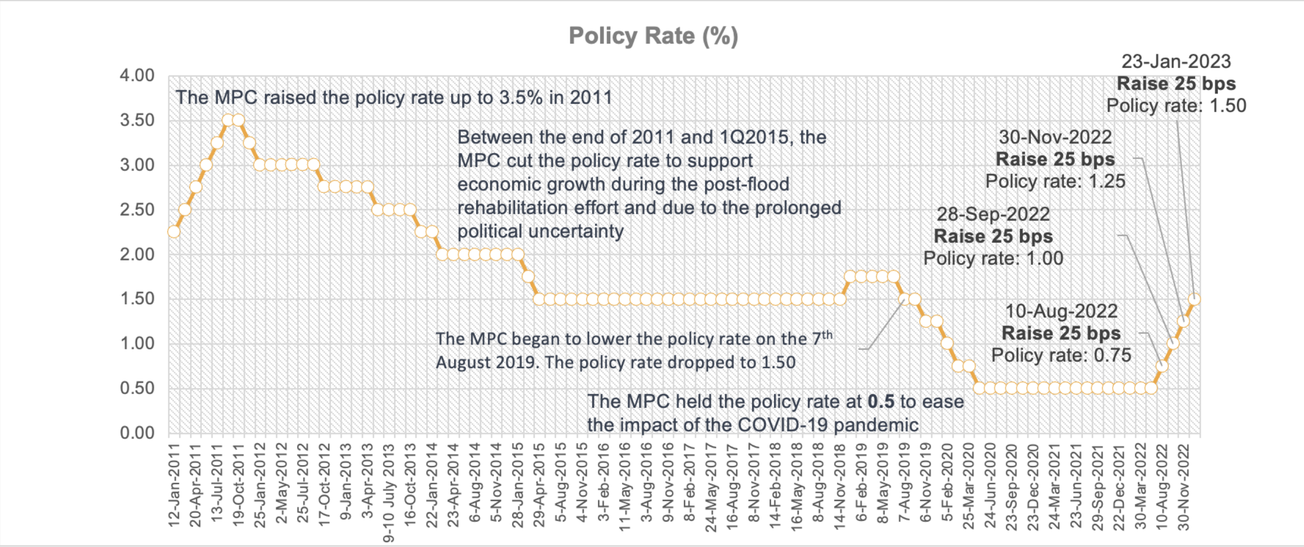
When the BOT wants to boost economic growth, it can lower the policy rate, making borrowing more affordable for businesses and households. This can stimulate economic activity by increasing spending and investment. If, on the other hand, the BOT wishes to slow the economy in order to contain inflation or address financial stability concerns, it can raise the policy rate, making borrowing more expensive and potentially leading to a decrease in spending and investment.

Due to the impact of the COVID-19 pandemic and other macroeconomic conditions, the BOT cut and held the policy interest rate as low as 0.5% between May 2020 and June 2022. With to rising inflation and ongoing economic recovery, on August 10th, 2022, the MPC voted to raise the rate by 25 basis points at its fourth meeting. The BOT also decided to tighten its stance further. The BOT raised the policy interest rate again on the 5th and 6th MPC meetings raising the policy rate to 1.25% on 30th November 2022. On 25th January 2023, the MPC voted unanimously to raise the policy rate by 0.25 percentage points from 1.25 to 1.50%.

Following the Bank of Thailand's third rate hike in November, Commercial Banks (CBs) began to raise deposit and loan interest rates across the board in early December 2022. Deposit and loan rates will continue to rise in line with the policy rate hike in 2023. As the global high inflation trend is expected to persist, the policy rate is expected to rise to 2%

approximately in the middle of 2023 from the current 1.5%. The rate is then expected to stabilize to restore price stability while fiscal policy aims to alleviate cost-of-living pressures.

Chart 4: Policy Interest Rate



Source: Bank of Thailand

2.1.5 Household Debt

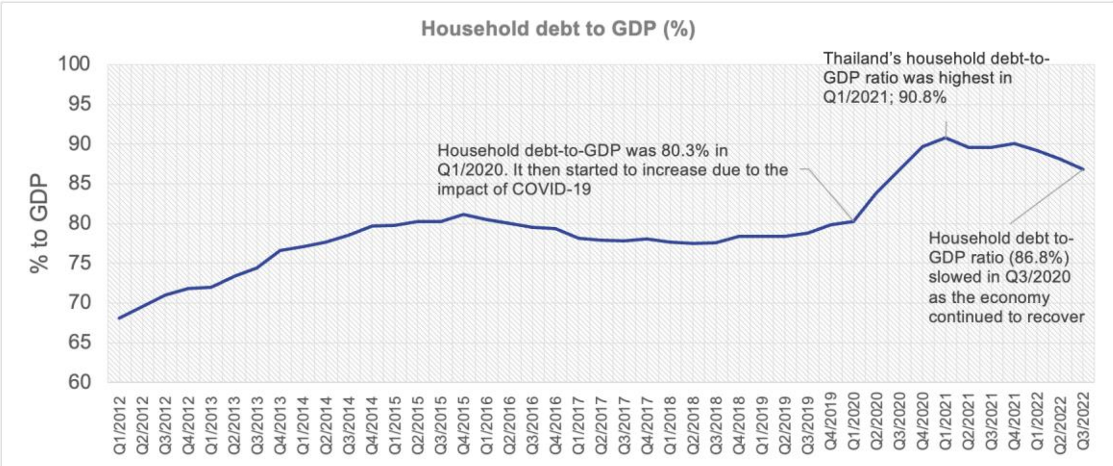
Thailand's household debt was below 70% of the GDP in 2012 before it ballooned to 90.8% in 1Q2021. The increase in the household debt ratio is primarily attributable to the impact of the COVID-19 pandemic, which resulted in significant job losses and decreased income for many households, which in turn led to a rise in borrowing as individuals attempted to make ends meet. In addition, the Thai government's stimulus initiatives, including low-interest loans and cash handouts, couldhave contributed to the rise in household debt by increasing people's access to credit.

High levels of household debt can pose significant risks to the Thai economy. In 3Q2022, although the Thailand's household debt to GDP ratio slowed down to 86.8%, the amount of household debt has continued to rise. According to National Credit Bureau (NCB) data, total household debt for its financial institution members[2] amounted to 13.1 trillion Baht in 3Q2022, up from 12.5 trillion year-on-year, or a growth of approximately 4.7%[3].

[2] As of September 2022, NCB had 125 members, comprising banks, non-banks and specialised financial institutions.

[3] Source: Bangkok Post, Credit bureau wary of digital loans, 6 December 2022 [Link]

Chart 5: Household debt to GDP



Source: Bank of Thailand

The Thai government and the BOT are concerned about the high level of household debt, as it increases the risk of financial instability and makes the economy more vulnerable to shocks. The BOT aims to improve borrowers' ability to repay debt and bring the debt-to-GDP ratio to a sustainable level, not exceeding 80%, in accordance with international standards[4].

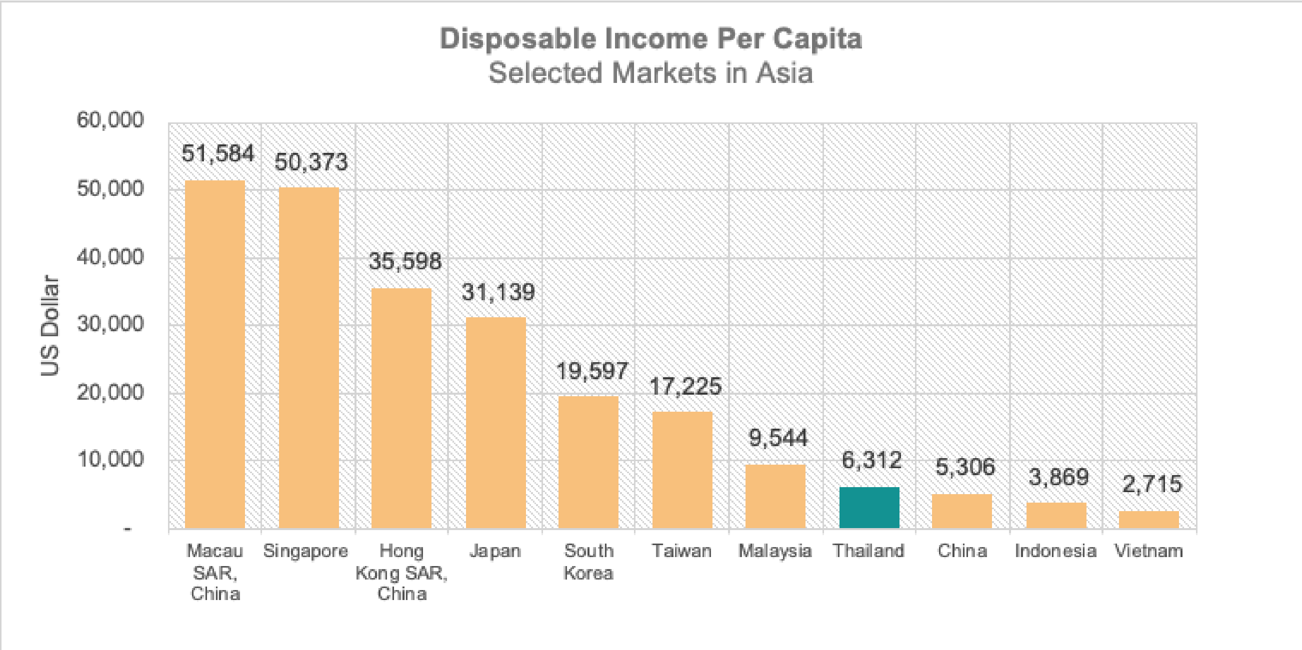
To achieve this, the BOT is launching measures to address existing household debt by focusing on unsecured loan products, such as credit cards and personal loans. One of the BOT's plans is to ask banks and non-banks to stop heavy marketing of unsecured loan products that encourages unnecessary borrowing in 1Q2023. Additionally, the BOT is reviewing criteria for unsecured loan applications, including the minimum income required for credit card applications, currently set at 15,000 Baht per month. The BOT does not stipulate a minimum income for personal loan applicants but allows financial institutions to set their criteria.

2.2 Thailand Household Income and Expenditure

The household income and expenditure in Thailand vary depending on a number of factors, including the region, the household size, and the household members' occupations. In general, Thailand's average monthly earning is relatively low compared to other advanced economies and developing countries in Asia.

[4] Source: Bangkok Post, Central bank tackling rise in unsecured loans, 4 October 2022 [Link]

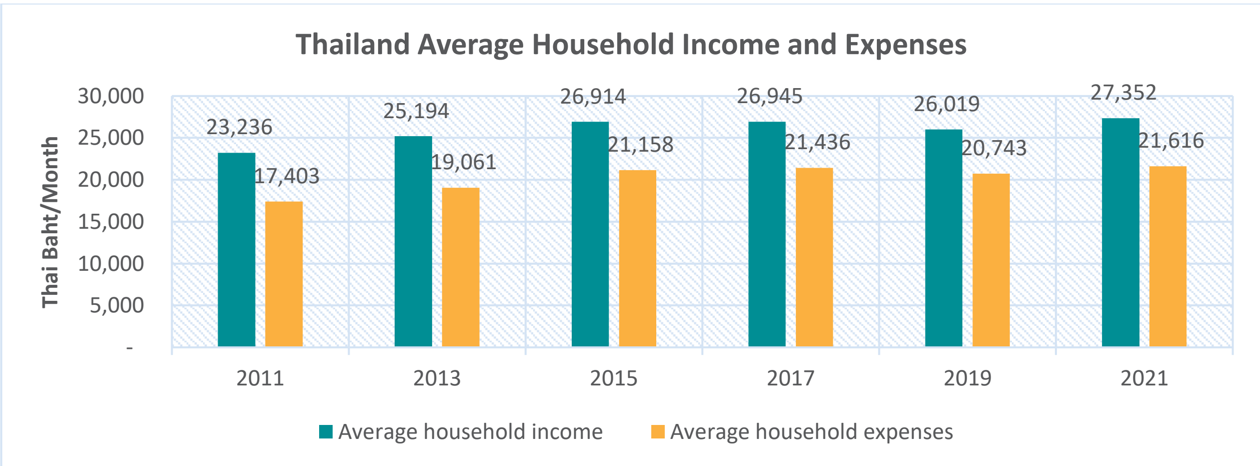
Chart 6: Disposable Income Per Capita for Selected Markets in Asia For Year 2019

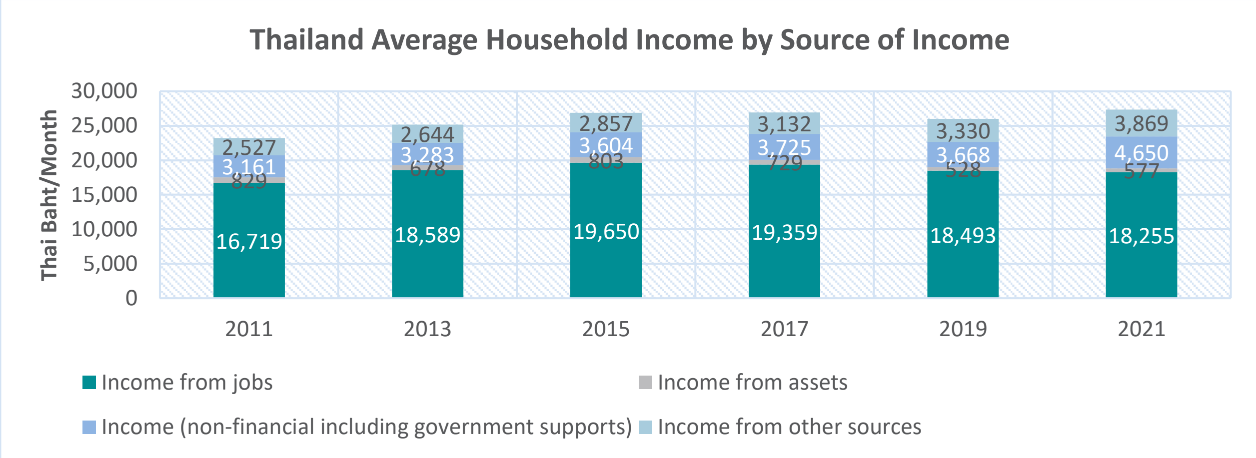


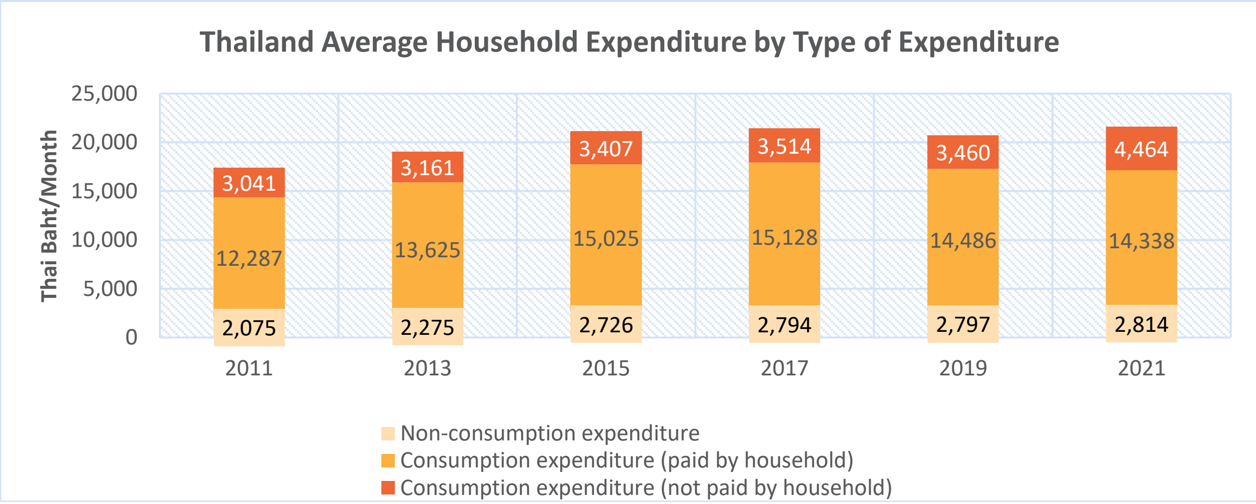
Source: Country statistic year books

Note: Figures are based on different sources and may vary depending on the method of calculation. Data sources include Singapore: Department of Statistics Singapore, Key Household Income Trends, 2020, South Korea: Statistics Korea, Household Income and Expenditure Survey, 2020, Hong Kong: Census and Statistics Department, Hong Kong Special Administrative Region, Household Income Distribution in Hong Kong, 2020, Japan: Ministry of Health, Labour and Welfare, Statistical Handbook of Japan 2021, Macau: Statistics and Census Service, Macao SAR Government, Statistics by Topic, National Accounts, Gross Domestic Product, 2020, Taiwan: Directorate-General of Budget, Accounting and Statistics, Executive Yuan, R.O.C. (Taiwan), Monthly Bulletin of Interior Statistics, 2020, China: National Bureau of Statistics of China, China Statistical Yearbook, 2021, Malaysia: Department of Statistics Malaysia, Household Income and Basic Amenities Survey Report, 2019, Thailand: National Statistical Office (NSO) Thailand, Household Socio-Economic Survey 2019, Vietnam: General Statistics Office of Vietnam, Vietnam Household Living Standards Survey 2020, Indonesia: Central Bureau of Statistics, Indonesia, Statistical Yearbook of Indonesia, 2020. Please note that some of these sources are in the native language of the country and have been translated for ease of understanding.

Chart 7: Household Income and Expenses







Source: Thai Household Socio Economic Survey by National Statistic Office (conducted every 2 years)

According to a survey conducted by the National Statistical Office of Thailand (NSO), the average household income among Thais in 2021 is 27,352 Baht per month, with monthly expenditures accounting for approximately 79% of their income. In 2021, the increase in average household income was primarily attributable to the income from government incentives provided to support Thai households during the COVID-19 pandemic. Comparing the survey conducted in 2021 to the previous survey conducted in 2019, the income from jobs/ employment decreases by 1%, while income from non-financial sources, including government support, increases by 27%.

The average monthly expenditures of Thai households were 21,616 Baht in 2021, of which 18,802 Baht were consumption expenditures. This consisted of expenditures on food, beverages, and tobacco at 7,660 Baht (35.5% of total expenditures), followed by expenditures on housing and home appliances at 4,632 Baht (21.4%), travel and vehicle expenses at 3,467 Baht (16%), personal care/ clothing/ shoe expenditures at 1,060 Baht (4.9%), and others such as healthcare (1.7%), education (1.6%), entertainment (1%) and religious ceremony expenses (0.9%). Non-consumer expenditures (such as taxes, gifts, and insurance premiums) totaled 2,814 Baht (13%).

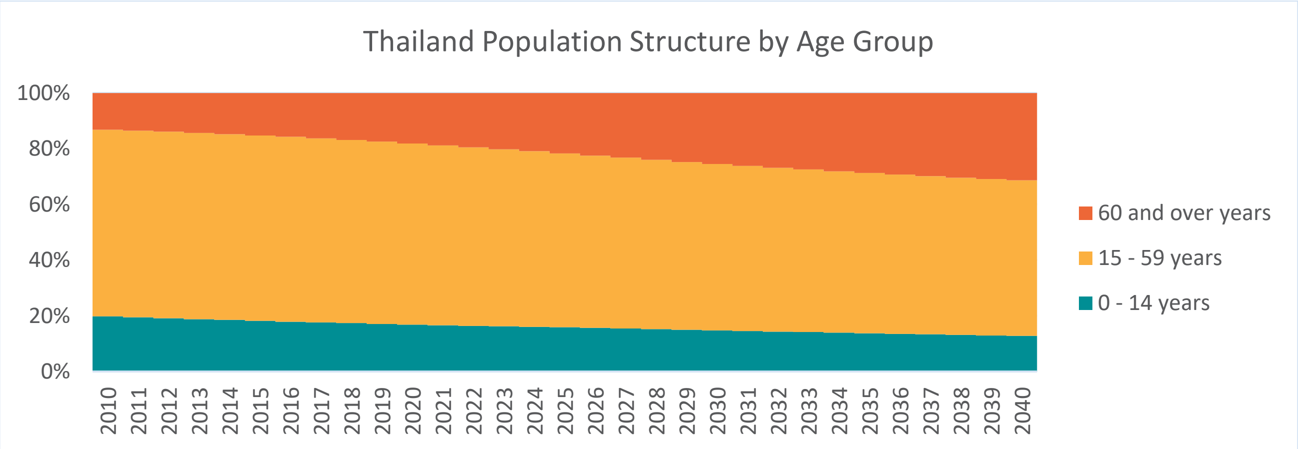
2.3 Thailand Population

According to the latest data from the United Nations, the population of Thailand is approximately 69.3 million people. Thailand is the 20th most populous country in the world, and it is the second most populous country in Southeast Asia after Indonesia.

Thailand has a population density of approximately 148 people per square kilometer, which is relatively high compared to other countries in the region. The majority of the population is concentrated in urban areas. The urban population was 52.2% in 2021, with the largest cities being Bangkok, Chiang Mai, and Pattaya. One of the main drivers of urbanization in Thailand has been the economic development. As the country has industrialized and attracted foreign investment, many people have migrated from rural areas to cities in search of job opportunities. Another factor contributing to urbanization in Thailand has been improvements in transportation and communication infrastructure, which have made it easier for people to travel to and from cities. This has facilitated the flow of people and goods between urban and rural areas and has helped to drive economic development.

Thailand's population has been growing steadily in recent years as the country's relatively high fertility rate has contributed to this growth. However, the population is also aging, and this is expected to have significant economic and social implications in the coming years.

Chart 8: Thailand Population Structure



Source: Population projections for Thailand 2010-2040 by the Office of the National Economic and Social Development Council

Thailand is experiencing a rapid aging of its population, and this is expected to have significant economic and social implications in the coming years. According to data from the United Nations, the proportion of the population aged 60 and over is expected to reach 31.4% by 2040, compared to 15.2% in 2015.

The aging of the population in Thailand is the result of a number of factors. These include increased life expectancy, declining fertility rates, and changes in the country's economic and social conditions. The aging of the population is also a consequence of the government's successful public health campaigns, which have reduced the incidence of infectious diseases and improved overall health outcomes.

The aging of the population in Thailand is expected to have a number of consequences. These include increased demand for healthcare and social services, as well as potential challenges for the country's pension and retirement systems. The aging population is also likely to impact on the labor market. The supply of workers may decline, leading to potential shortages in certain industries, especially services that rely heavily on the use of labor, such as retail, healthcare, education, and tourism. These industries often require a large number of workers to interact with customers, provide services, and perform other tasks. In terms of Foreign Direct Investment (FDI), an aging population may affect the attractiveness of a country as a destination for foreign investment. A country with a large aging population may be less attractive to foreign investors, as the potential market for goods and services may be smaller. At the same time, an aging society may also lead to an increase in the number of retirees, which could put pressure on social security and pension systems. This could be a concern for foreign investors, as it could increase the cost of business conduct in the country.

Overall, the aging of the population in Thailand is a significant trend expected to have widespread implications for the country's economy and society. The government and other stakeholders must address these challenges to ensure that the country is prepared for the changing demographic profile.

2.4 Thailand Unemployment Situation

Thailand International Labor Organization reported that the country has a relatively low unemployment rate and a well-developed labor market. According to data from the NSO, the unemployment rate[5] in Thailand was 1.2% as of 3Q2022, one of the lowest rates in the world, regardless of COVID-19's impact.

The low unemployment rate in Thailand can be attributed to a number of factors. The country has a diverse economy with strong manufacturing, tourism, and agricultural sectors. In recent years, Thailand has also made significant investments in education and training, which has helped to develop a skilled and productive workforce.

However, the low unemployment situation in Thailand has its challenges. The country's economy has faced a number of headwinds in recent years, including trade tensions and slowing growth. These factors have led to some job losses in certain sectors and contributed to increased uncertainty in the labor market.

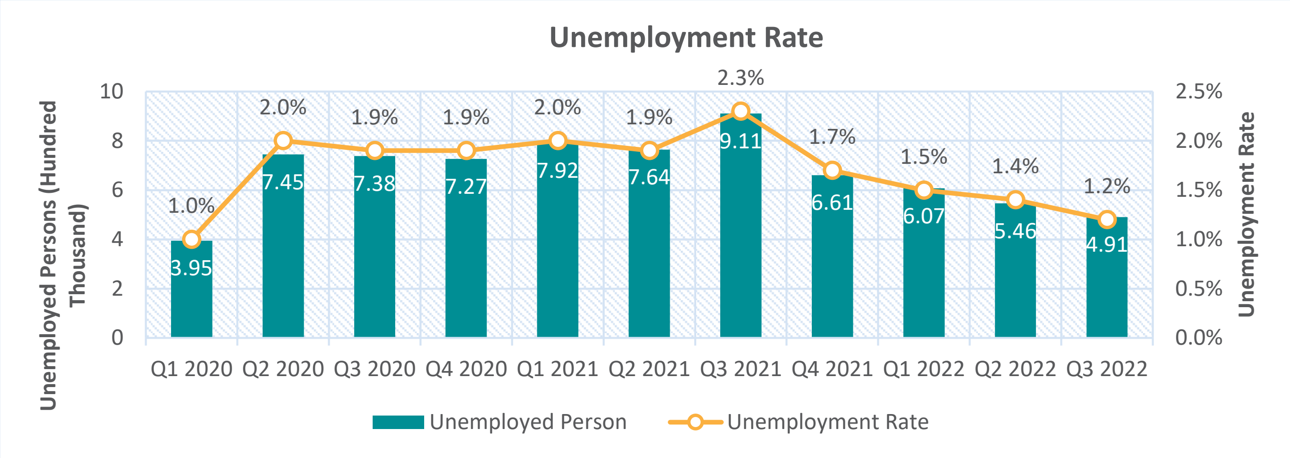
In addition, there are some structural challenges within the labor market in Thailand. These include a mismatch between the skills of the workforce and the needs of employers, as well as low levels of labor productivity and high levels of informality in certain sectors.

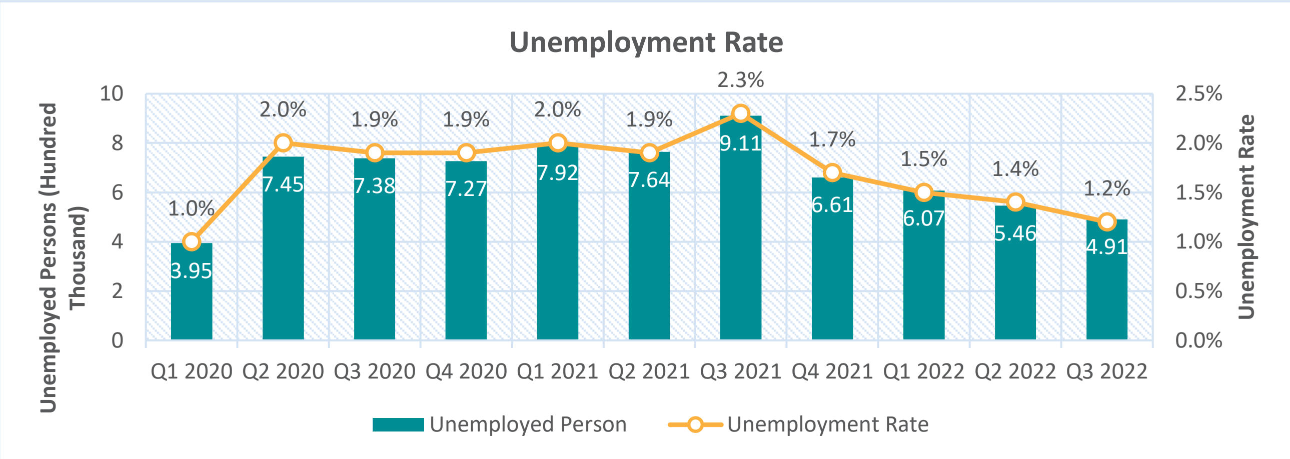
Overall, the unemployment situation in Thailand is generally positive. However there are some challenges, such as the aging population, skills mismatch to employment needs, low wages that lead to labour shortages as workers migrate to

[5] Thailand's unemployment rate is calculated in accordance with the international standard definition. However, unemployment rate that remains low does not reflect structural problems that plague the Thai labor market. The International Labour Organization (ILO) defines the unemployed as all persons who are without work or work less than one hour per week. This definition is adopted by countries all over the world including Thailand. However, the U.S. has added to the definition to include those who work for family businesses without any compensation and work for less than 15 hours per week.

other countries as well as the large number of informal employment that have limited access to social protection, making it harder for workers to advance their careers. These challenges must be addressed to ensure that the country's labor market remains healthy and dynamic.

Chart 9: Unemployment Rate





Source: The Labor Force Survey by National Statistic Office

2.5 COVID-19 Impacts

The COVID-19 pandemic has had a significant impact on the Thai economy. The country's economy was already facingd challenges before the outbreak, including slowing growth and trade tensions. The pandemic has exacerbated these challenges, leading to job losses and reduced demand for goods and services in many sectors.

One of the major impacts of the COVID-19 pandemic on the Thai economy has been a decline in exports. Thailand is a major exporter of goods, and the country's economy heavily depends on exports. The pandemic has led to a reduction in global demand for Thai exports, and this has had a negative impact on the country's trade balance.

Another impact of the COVID-19 pandemic on the Thai economy is a tourism decline. Thailand is a popular tourist destination, and the country's tourism industry is a major contributor to the economy. The pandemic has led to a sharp decline in the number of international visitors to Thailand, which has negarively impactedthe country's tourism industry.

Measures in Response to the COVID-19 Pandemic

The Thai government has implemented a number of fiscal stimulus measures in response to the COVID-19 pandemic. These measures are designed to support businesses and individuals affected by the economic impact of the pandemic, and stimulate the economy. One of the critical measures is the Thai government's "Emergency Decree on Public Administration in Emergency Situations B.E. 2548 (2005)" issued in March 2020. Key supports and stimulus measures includee:

- **Half-half co-payment scheme (Kon La Krueng)**: The government initiated the half-half co-payment scheme to stimulate domestic consumption and boost the economy by giving pocket money to successful Thai registrants. The scheme offered a 50% discount on products and services, capped at 150 Baht daily. The budget per person for each phase varies from 800 Baht to 3,500 Baht. By the end of 2022, there were five phases of the scheme, starting from October 2020 throughout 2022, with the budget spending approximately 207,792 million Baht[6].
- **Win-win financial aid scheme (Rao Chana)**: A cash handout and co-payment schemes that offered 7,000 Baht per person for two months. The scheme covers approximately 31 million low-income people affected by the pandemic, worth 240.24 billion Baht, and ended by June 2021. On April 2021, the Thai government approved the extension of the scheme with an extra budget of 3.04 billion Baht to cover another 2.4 million people, which ended by May 2021.
- **We Travel Together (Rao Tiew Duay Kan)**: A domestic tourism promotion scheme that offers discounts on airfare and accommodation room rate as well as free food vouchers, 60% of the expenses are borne by individuals joining the scheme and 40% by the government through taxes, in the form of vouchers. The scheme had four phases during 2020 and 2021 and ended by October 2022. The Thai government set a 9 billion Baht budget to fund the scheme.
- **Tax relief:** The government implemented various tax measures to help businesses affected by the pandemic, including a reduction in the corporate income tax rate, a postponement of the filing and payment of value-added tax (VAT), and a delay in the payment of social security contributions. These measures ended in 2022.
- **Refinancing and consolidating debts:** The government has provided financial assistance for those refinancing and consolidating debts available though a ban on penalty fees for early repayment of personal loans. This will be in place until the end of 2023, allowing debtors to consolidate several smaller loans into one large package that includes a home loan to negotiate a lower interest rate.

[6] Source: Thai Rath, คนละครึ่ง เฟส 6, 1 November 2022 [Link]

- **Wage subsidies:** The government has also provided wage subsidies to qualified Small and Medium Enterprises (SMEs) to help retain their employees during the pandemic, such as a co-pay of 50% of the monthly salary of employees in SMEs to prevent mass layoffs nationwide. The scheme ran from September to October 2020 and was extended to December 2020.
- **Increased credit limits:** This is a temporary ease of the regulations regarding the retail debtors on credit card loans, supervised personal loans, and digital personal loans to alleviate the debt burden of debtors and to provide additional liquidity to those debtors still with the ability to pay. The new regulations were effective from 3rd September 2021 to the end of 2022, which also increased the credit limit to double the monthly income on credit card and personal loans for debtors whose monthly income resided below 30,000 Baht. Other measures included extending the period of the lowered minimum percentage paid on credit card loans, which was lowered to 5% during the previous pandemic phase, until the end of 2022 and increased the credit limit on digital personal loans from 20,000 Baht to 40,000 Baht and extended the maturity from no more than 6 months to no more than 12 months.
- **Pre-emptive debt restructuring for borrowers:** This is to deal with debt repayment problems which are not yet classified as NPL. Debt restructuring for these borrowers will not be classified as trouble debt restructuring (TDR), thus not affecting borrowers' credit history (valid until the end of 2023). The new classification of NPLs allowed CBs to lower their reserved capital requirement as a way to provide additional support to banks during the COVID-19 pandemic. This allowed banks to continue lending to customers and support the boarder economy while managing the risk of NPLs during the pandemic.
- **Social security:** The government has increased social security benefits for those affected by the pandemic, including unemployment insurance and welfare payments.

Measures to Assist MSMEs Affected by COVID-19

Due to the intensified and longer-than-anticipated outbreak, the BOT implemented a number of financial measures to assist MSMEs affected by the COVID-19 pandemic. These measures are designed to provide financial support to MSMEs and help them weather the economic downturn caused by the pandemic. Key measures are as follows:

- **A loan payment holiday** of 6 months for all MSMEs with a credit line not exceeding 100 million Baht to provide the much-needed liquidity to the MSMEs. MSMEs with a line of credit with a commercial bank or a Specialized Financial Institutions (SFIs) not exceeding 100 million Baht are automatically eligible to pause principal and interest payment for six months. This payment holiday will not be considered a missed payment and thus will not impair credit history.
- **Soft loans** to support liquidity for MSMEs with a credit line not exceeding 500 million Baht, with a concessional interest rate of 2% per annum and interest-free for the first 6 months. The BOT makes soft loans to financial institutions worth 500 billion Baht with an annual interest rate of 0.01% for a period of two years. Financial

Institutions (FIs) then lend to MSMEs at a 2% annual interest rate. Soft loans are made available under the emergency decree helping businesses impacted by COVID-19 until April 2023.

- **The Asset Warehousing program** provides a standardized debt restructuring program with buy-back options for high-potential businesses that were adversely affected by the pandemic and would take time to recover (this will run until the end of April 2023).
- **Reduced the Financial Institution Development Fund (FIDF) fee** to ease the loan interest burden of businesses and households between the years 2020 to 2022. The BOT halved the contribution rate from financial institutions to the FIDF from 0.46% of the deposit base to 0.23% per annum. This was intended for financial institutions to immediately pass on such cost savings to businesses and households by further reducing their loan rates (ended by December 2022).
- **Increasing the credit limit** of Special Loan to those MSMEs with a low existing credit line or those who had never been issued credit because they had been using mainly their funds or the revenue from their businesses.
- **Increasing individual credit guarantee rates and lowering the guarantee fees** for debtors deemed risky such as MSMEs and businesses in sectors hard-hit by the pandemic, notably those in tourism and services.

Several financial measures and subsidy schemes ended by the end of 2022 as the Thai economic recovery continues to gain traction. Based on the Monetary Policy Committee's decision on August 2022, the BOT announced the normalizing policy towards both monetary and financial policy to ensure a smooth take-off. A gradual and measured normalization includes the shift from broad blanket-type to target measures to stay in place in order to support those that still lag behind as the recovery is uneven. Targeted financial measures that will still be in place are as follows:

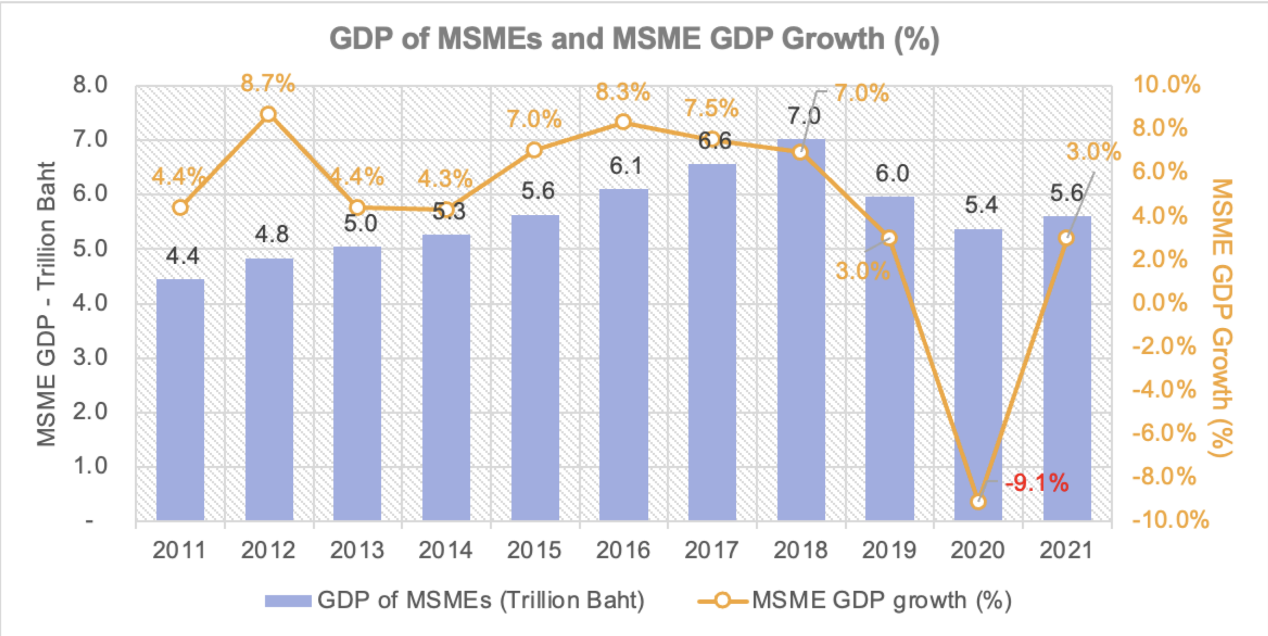
1) Long-term debt restructuring until “at least” end of 2023 to be in line with the recovery path of the economy/ income of retail borrowers;
2) Asset warehousing program until “at least” April 2023, by which the tourism sector is expected to recover; and
3) Special loan scheme until “at least” April 2023 to encourage businesses to adapt to new trends of the post-pandemic world (digital, technology, green).

Part 3: Micro Enterprise and SMEs Market

3.1 Micro Enterprises and SMEs GDP

MSMEs play a significant role in the economy of Thailand, accounting for approximately 34.6% of the total GDP for the year 2021, making them a vital contributor to the country’s economic growth. According to data from the Office of Small and Medium Enterprises Promotion (OSMEP), MSMEs make up 99.6% of all registered businesses in Thailand and employ approximately 71.9% of the country's workforce or approximately 4.9 million persons (the overall employment number by all enterprise were 17.5 million persons).

Chart 10: GDP of MSMEs and MSME GDP Growth (%)



Source: ADB Asia SME Monitor 2021 database. Data from Office of Small and Medium Enterprise Promotion, MSME White Paper (2022)

Table 1: Value and Growth of Thailand's GDP in 2021, Divided by Type of Enterprise

Size of Enterprise	Micro Enterprise	Small Enterprise	Medium Enterprise	MSME	Large Enterprise	Total
Value of GDP (Trillion Baht)	0.42	2.34	2.84	5.60	10.58	16.18
Share of total GDP (%)	2.6	14.4	17.6	34.6	65.4	100.0
Growth rate (yoy %)	11.0	-0.9	4.9	3.0	0.9	1.5

Source: Data from Office of Small and Medium Enterprise Promotion, MSME White Paper (2022)

Micro enterprises such as bakery shops, beauty salons, street vendors, small restaurants, and many others, which are small businesses with limited employees and relatively low sales volume, have more superficial business structures and lower funding requirements. Thus, micro enterprises have made a faster recovery than other MSMEs. The government provided various stimulus packages and support to assist these businesses, allowing them to adapt by using online channels, cutting expenses, or pivoting to new business operations. Micro enterprises registered 11% growth in 2021, the highest among the MSME segment.

On the other hand, small enterprises, particularly in terms of working capital, have been greatly affected by the COVID-19 pandemic. Despite the debt relief measures provided by the BOT for existing loans, small enterprises have faced challenges in obtaining additional funding for working capital, as COVID-19 has negatively impacted their business performance, and financial institutions have been cautious in lending. This has resulted in a slower recovery. Small enterprises GDP dropped by 0.9% for the year 2021.

However, medium enterprises have been less impacted by COVID-19 in comparison to micro and small enterprises. They are more financially secure and have adequate funding. Furthermore, the export growth in 2021 has been strong, with a 17.4% increase in Thailand's export growth, allowing medium enterprises to recover at a faster pace.

3.2 Micro Enterprises and SMEs in Thailand

According to Ministerial Regulations on Designation of the Characteristics of SME Promotion Act B.E., 2562 (2019) and Announcement of the Office of SME Promotion Subject Designation of Characteristics of MSMEs), the characteristics have been redefined on the basis of annual revenue and employment in order to effectively promote the targeted entrepreneurs in accordance with the current economic situation (Table 2).

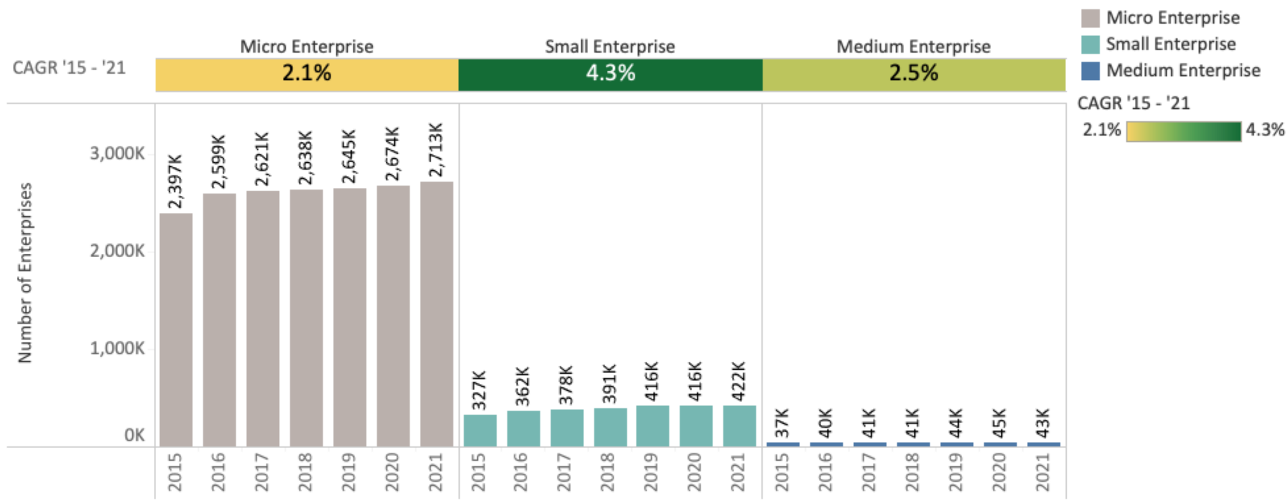
Table 2: Definition of MSMEs

Type of EnterpriseEnterprise	Micro and Small Enterprise				Medium Enterprise	
	Micro Enterprise		Small Enterprise			
	Annual RevenueRevenue (Million Baht)	Employment (Person)	Annual RevenueRevenue (Million Baht)	Employment (Person)	Annual Revenue (Million Baht)	Employment (Person)
Manufacturing	≤ 1.8	≤ 5	≤ 100	≤ 50	≤ 500	≤ 200
Service and Merchandising	≤ 1.8	≤ 5	≤ 50	≤ 30	≤ 300	≤ 100

Source: Office of Small and Medium Enterprises Solution

In 2021, there were approximately 3.17 million MSMEs, which accounted for 99.6% of all enterprises in Thailand. There are 2,713,345 micro enterprises (85%), 421,588 small enterprises (13%), and 43,191 medium-sized enterprises (1%). From 2015 to 2021, the number of MSMEs grew at a CAGR of 2.4% annually. Small enterprises grew at the highest rate during the same period (Chart 11).

Chart 11: Number of MSMEs in Thailand by Firm Size



Source: Thai Office of SMEs Promotion

On the basis of business registration types in 2021, MSMEs can be further divided into three categories: juristic person, ordinary person and others, and community enterprise. Only approximately 25.1% of all micro enterprises are the juristic person (registered corporations). Approximately 92.8% of medium enterprises are registered as legal entities, compared to 73.2% of small enterprises. A registered legal entity is required to submit audited financial statements annually to the Department of Business Development (DBD), Ministry of Commerce, regardless of whether its business operations are active or inactive. As a result, it is easier for registered SMEs to obtain loans from CBs. On the other hand, it is more difficult for unregistered businesses, especially those owned by ordinary people who lack a well-structured accounting system and bank statement, to demonstrate their ability to repay a loan, thereby limiting their access to business loans.

Table 3: Micro Enterprises and SMEs by Business Registeration

Number of Enterprises

	Juristic person	Community enterprise	Ordinary person and others	All
Micro Enterprise	448,457	94,964	2,169,924	2,713,345
Small Business	308,315		113,273	421,588
Medium Business	40,062		3,129	43,191
MSMEs	796,834	94,964	2,286,326	3,178,124

% to Total

	Juristic person	Community enterprise	Ordinary person and others	All
Micro Enterprise	16.5%	3.5%	80.0%	100.0%
Small Business	73.1%		26.9%	100.0%
Medium Business	92.8%		7.2%	100.0%
MSMEs	25.1%	3.0%	71.9%	100.0%

Source: Thai Office of SMEs Promotion

MSMEs primarily engage in retail and service-based activities. Approxinately 41.0% of MSMEs are in the retail sector, and the number of enterprises in this sector has increased by a CAGR of 1.8% between 2015 and 2021. Service is the second largest industry in terms of the number of enterprises, accounting for approximately 40.1%, with an annual growth rate of 3.2% during the same period (Chart 12).

Chart 12: MSMEs by Type of Business Operation

Number of Enterprise	2015	2016	2017	2018	2019	2020	2021	% to Total FY 2021	CAGR '15-'21
Agriculture	36,258	42,282	45,829	46,051	49,193	57,327	60,510	1.9%	8.9%
Manufacturing	503,728	520,977	524,705	527,938	530,698	532,104	540,235	17.0%	1.2%
Retail	1,167,824	1,249,418	1,265,196	1,270,157	1,280,740	1,288,256	1,302,164	41.0%	1.8%
Service	1,052,560	1,188,199	1,204,587	1,226,471	1,244,465	1,256,755	1,275,215	40.1%	3.2%
Not specify	91	36		142					-100.0%
All	2,760,461	3,000,912	3,040,317	3,070,759	3,105,096	3,134,442	3,178,124		2.4%

Source: Office of Small and Medium Enterprises Promotion

There are more than 2.1 million micro enterprises in the retail and service sectors which accounted for approximately 69.3% of total MSMEs for the year 2021, and SMEs in the retail and service sectors accounted for approximately 11.9% (Table 4).

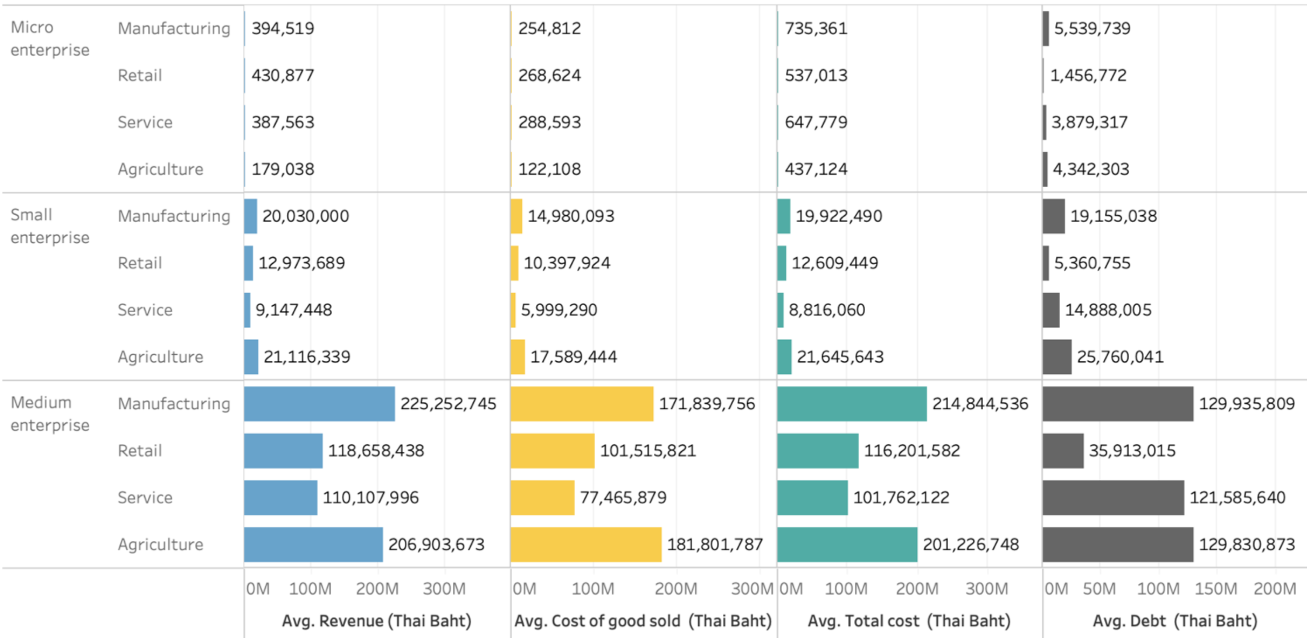
Table 4: Breakdown of Micro Enterprises and SMEs by Type of Business Operation for Year 2021

No. of Enterprise	Agriculture	Manufacture	Retail	Service	All
Micro Enterprise	58,110	453,466	1,138,309	1,063,460	2,713,345
Small Business	2,045	79,642	142,798	197,103	421,588
Medium Business	355	7,127	21,057	14,652	43,191
MSMEs	60,510	540,235	1,302,164	1,275,215	3,178,124

% to Total	Agriculture	Manufacture	Retail	Service	All
Micro Enterprise	1.8%	14.3%	35.8%	33.5%	85.4%
Small Business	0.1%	2.5%	4.5%	6.2%	13.3%
Medium Busin..	0.0%	0.2%	0.7%	0.5%	1.4%
MSMEs	1.9%	17.0%	41.0%	40.1%	100.0%

Source: Thai Office of SMEs Promotion

Chart 13: Business Performance by Type of Business Operation for year 2021



Source: Thai Office of SMEs Promotion

Note: Data are averaged based on number of enterpsies. Data are collected only from MSMEs which are juristic person

Chart 14: Top 10 Businesses Breakdown by Business Operation (Industry Sector) for year 2021

Rank	Top 10 Businesses (Micro Enterprises)	% Numbers of Enterprises
1	Retail sales excluding cars and motorcycles	31%
2	Food and beverage service	11%
3	Other personal services	7%
4	Wholesale, retail sales, and repair of cars and motorcycles	6%
5	Real estate activities	6%
6	Wholesale sales excluding cars and motorcycles	5%
7	Food product manufacturing	4%
8	Textile manufacturing	2%
9	Clothing and apparel manufacturing	2%
10	Wood and wood product manufacturing, except furniture, straw and other woven products manufacturing.	2%

Rank	Top 10 Businesses (Small Enterprises)	% Numbers of Enterprises
1	Wholesale sales excluding cars and motorcycles	15%
2	Retail sales excluding cars and motorcycles	15%
3	Food and beverage service	7%
4	Building construction	7%
5	Real estate activities	6%
6	Wholesale, retail sales, and repair of cars and motorcycles	4%
7	Food product manufacturing	3%
8	Specialized construction activities	3%
9	Land transport and pipeline transport	3%
10	Hotel accommodations	2%

Rank	Top 10 Businesses (Medium Enterprises)	% Numbers of Enterprises
1	Wholesale sales excluding cars and motorcycles	24%
2	Retail sales excluding cars and motorcycles	19%
3	Wholesale, retail sales, and repair of cars and motorcycles	5%
4	Building construction	5%
5	Real estate activities	4%
6	Land transport and pipeline transport	3%
7	Food product manufacturing	3%
8	Hotel accommodations	2%
9	Food and beverage service	2%
10	Specialized construction activities	2%

Source: Thai Office of SMEs Promotion

Part 4: MSME Lendings and Consumer Lendings

4.1 Relevant Laws and Regulations

Due to their overall lack of credit history, collateral, and dependable financial statements, MSMEs' access to commercial bank loans is restricted. In response to these constraints, the government has enacted a number of measures to facilitate financial access for MSMEs, including establishing of the TCG created to alleviate the financial restraints of MSMEs by offering credit guarantees to viable MSMEs with insufficient collateral. In 2009, the TCG launched the Portfolio Guarantee Scheme (PGS) to stimulate bank loans. TCG also provides various other services, including business counseling, training, and assistance with access to government support programs. The organization works closely with banks, financial institutions, and other stakeholders to support the growth and development of MSMEs in Thailand.

4.1.1 Thai Credit Guarantee Corporation (TCG)

Loan guarantees from a government body are necessary to improve MSMEs access to funding sources. To provide loan guarantees for viable MSMEs, the TCG was established as a state-owned, specialized financial organization under the direction of the Ministry of Finance. Credit guarantees are provided in the form of portfolio guarantees, allowing financial institutions to select MSMEs that are eligible based on the banks' assessment and evaluation.

Table 5: Thai Credit Guarantee

Thai Credit Guarantee	2015	2016	2017	2018	2019	2020	2021	9M2021	9M2022	CAGR '15-'21	Change %[a]
Outstanding guaranteed loans (THB Billion)	308.9	331.0	353.9	373.8	388.7	451.4	626.2	596.1	660.7	12.5%	10.8%
Guaranteed loans approved (THB Billion)	102.8	87.5	86.6	88.9	90.6	141.9	245.6	192.7	122.7	15.6%	-36.3%
Guaranteed loans to SME loans (%)	2.2	1.8	1.8	1.8	1.8	4.1	7.1	5.6	3.6	n.a.	n.a.
Number of Letter of Guarantee (accumulated)	212,505	269,012	388,160	469,077	560,565	734,224	979,467	900,390	1,059,603	29.0%	17.1%
Number of Letter of Guarantee (new approval)	79,248	56,507	119,148	80,917	91,488	173,659	245,243	166,166	80,136	20.7%	-51.8%

Source: Thai Credit Guarantee Corporation

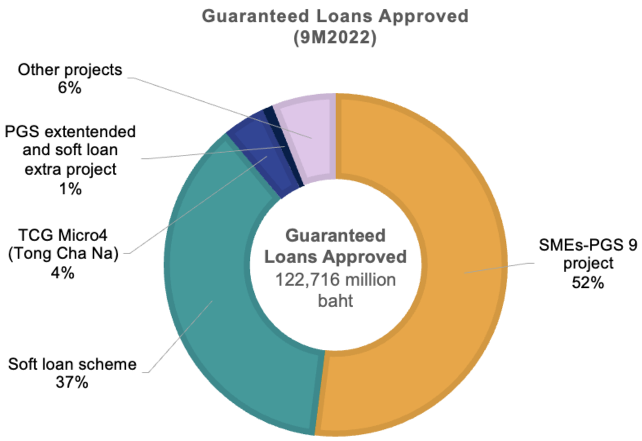
[a]Growth between 9M2021 and 9M2022

As the Ministry of Finance governs TCG, its credit guarantee budget is required to get approval from the cabinet. TCG offers two types of portfolio guarantees which are (1) credit guarantee products incorporative with Financial Institutions (FIs) and (2) Portfolio Guarantee Scheme (PSG) that TCG compensates a fixed percentage of the coverage ratio to lenders if their loans are guaranteed under the scheme turn sour, while FIs must shoulder the remaining Non-Performing Loans (NPLs).

During the COVID-19 pandemic, outstanding guaranteed loans saw a significant increase at a year-on-year rate of 16.1% and 38.7% for the years 2019-2020 and 2020-2021, respectively, in support of the BOT's financial and loan measures to aid Thai people and businesses, particularly MSMEs that were heavily affected by the crisis. The TCG's support includes the funds under the Portfolio Guarantee Scheme Phase 8 and 9 (PGS 8 and PGS 9), allocated to assist troubled debtors impacted by COVID-19. These projects include the SMEs Tourism Rehabilitation program (with a total size of 3.7 billion Baht) and the SMEs New Life program (with a total size of 10 billion Baht).

Between January and September 2022, TCG approved a total of 122,716 million Baht in guaranteed loans, with 52% being for the SMEs-PGS 9 project, 37% for the soft loan scheme, 4% for TCG Micro4 (Tong Cha Na), 1% for the PGS extended and soft loan extra project, and the remaining 6% for other projects.

Chart 15: Guaranteed Loans Approved



Source: Thai Credit Guarantee Corporation

From 2019 to 2021, guaranteed loan approvals significantly increased as part of the BOT's financial and loan measures. However, in 2022, the rate of approvals slowed as FIs exercised caution due to concerns about NPLs. Despite this, TCG continues to support MSMEs in recovering from the impact of COVID-19. In August 2022, TCG introduced a renewal scheme for the second round of credit guarantee extension to improve the liquidity of existing business operators. This scheme applies to credit guarantee letters that expire between 2022 and 2024 and may face difficulties while still having an outstanding debt. The scheme offers two options for business operators as follows:

1) "TCG Ready-to-help," which will extend the credit guarantee for up to 10 years for credit guarantee letters that have expired between years 2022 – 2024, starting from 22nd August 2022 and,
2) "Continue-to-guarantee" (Tor-Phromt-Term) that will provide additional liquidity support with an additional credit guarantee with a total credit limit of up to 40 million Baht per company per financial institution.

In November 2022, TCG introduced new products to provide support to MSMEs through credit guarantee products in collaboration with FIs or Bilateral 7 (BI 7) with a credit limit of 11,000 million Baht for MSMEs that require credit but lack collateral. The guaranteed fee ranges between 2-3.25% depending on the level of risk. Additionally, TCG launched a new credit guarantee product, Risk-Based Pricing (RBP) which charges a fee based on the risk level of MSMEs, using credit scoring tools developed under the Sandbox program. This will provide credit guarantee services to MSMEs in the supply chain group. For 2023, TCG plans to introduce more new innovative credit guarantee products to drive the Bio-Circular-Green Economy in line with Thailand's strategy to drive the Bio-Circular-Green Economy between 2021 and 2026.

4.1.2 MSMEs and Consumer Lendings

In Thailand, the regulations of business lending and consumer lending are carried out by a number of government agencies and regulatory bodies. The main regulatory bodies responsible for financial regulation in Thailand include the BOT, the Fiscal Policy Office – Ministry of Finance, and the Office of Insurance Commission (OIC).

The BOT is responsible for the regulation and supervision of banks, finance companies, and other FIs in Thailand. It sets the rules and guidelines for these institutions, including guidelines for loan issuance and lending practices. The BOT also has the authority to impose penalties on financial institutions that fail to comply with regulatory requirements.

The BOT also regulates consumer leading in Thailand through a number of guidelines and regulations. These regulations include guidelines on credit risk management, capital adequacy, and loan classification and provisioning. In addition, the BOT limits the types of consumer loans that financial institutions can offer and the maximum interest rates that can be charged on these loans.

Table 6: Maximum Interest Rate and Loan Amount

Type of loans	Interest Rate	Maximum Loan Amount
Microfinance	Effective rate - 28%	THB 200,000
Nano-Finance	Effective rate - 33%	THB 100,000
Pico-Finance – title loan	Effective rate - 33%	THB 50,000
Pico-Finance – unsecured loan	Effective rate - 36%	THB 50,000
Pico plus – title loan	Effective rate - 28%	THB 100,000
Pico plus – unsecured loan	Effective rate - 28%	THB 100,000
Personal loan – title loan	Effective rate - 24%	n/a
Personal loan – unsecured loan	Effective rate - 25%	1.5 times/ 5 times of salary or cashflow
Home for cash	Effective rate - 15%	n/a
Digital personal loan	Effective rate - 25%	THB 20,000 and extended to THB 40,000 (by the end of 2022)
Credit Card	Effective rate - 16%	1.5 times of salary or cashflow below THB 30,000 (extended to be 2 times of salary – by the end of 2022) 3 times of salary or cashflow between THB 30,001 – 50,000 5 times of salary or cashflow more than THB 50,000
Hire purchase (auto) *Effective from 11 January 2023 onwards	Effective Interest Rate 23% for motorcycles, 10% for new cars, and 15% for used car	n/a

Source: Complied information from latest relelvant regulations from the Bank of Thailand

4.1.3 Potential Change in Loan Regulation

According to data from the BOT, household debt in Thailand has been steadily increasing over the past decade. The household debt in Thailand peaked at 90.8% during 1Q2021 and slowed down to approximately 86.8% of GDP by 3Q2022. In addition to the impact of COVID-19 on the domestic economy, there are also several factors that have contributed to the growth of household debt in Thailand. One of the main drivers has been the increase in the availability of consumer credit, including credit cards, auto loans, and personal loans. Additionally, low-interest rates have made borrowing more attractive for households.

However, the growth in household debt has also raised concerns about the ability of households to manage their debt and the potential impact on the overall economy. If households are unable to manage their debt, it could lead to defaults and financial instability, negatively affecting the overall economy.

To address these concerns, the BOT and other regulatory bodies in Thailand have implemented a number of measures to improve the management of household debt. One of the potential solutions is to set lower ceiling interest rates for consumer loan products, which are currently over 20% per year. There is a high possibility that the BOT shall review interest rates for credit cards and personal loans to tackle household debt. The focus is likely to be on retail loan products with interest rates above 20% per year, including personal loans, car title loans, and nano-and-pico-finance. If the BOT decides to lower the interest rate on consumer loans, it may make borrowing more affordable for consumers. This could stimulate borrowing and spending, which would be beneficial to the economy. However, it is important to note that the decision to change interest rates is based on a variety of economic factors; for example, it could lead to increased borrowing and debt levels among consumers, which could lead to financial difficulties if borrowers are unable to make their loan payments. It could also lead to higher levels of inflation, as increased spending and economic activity can sometimes lead to rising prices for goods and services.

Under the BOT's debt restructuring programme for retail loans to ease the financial burden of individual borrowers In 2020, the regulator has reduced the annual ceiling rate of personal loans from 28% to 25%, car title loans from 26% to 24% (effective from 1st August 2020 onward), and credit card loans from 18% to 16% (effective from 1st August 2020 onward). However, regulators have set nano-finance and pico-finance (unsecured loans) ceiling rates at 33% and 36%, respectively. The Committee on Contracts of the Office of the Consumer Protection Board recently issued a new notification regarding hire-purchase contracts to cap the maximum interest rate. Hire purchase contracts can no longer calculate interest using a flat interest rate. Instead, interest will be calculated based on the amount of principal remaining after each installment ("Effective Interest rate"). Effective interest rates will also be capped as follows:

- No more than 10% per annum for a new car;
- No more than 15% per annum for a used car; and
- No more than 23% per annum for a motorcycle.

The Committee on Contracts has the right to adjust maximum interest rates every three years based on economic conditions in the country. The new hire purchase contract interest rate for vehicles and motorcycles became effective from January 2023 onward.

4.2 Market Landscape – Micro Enterprises and SMEs Lending

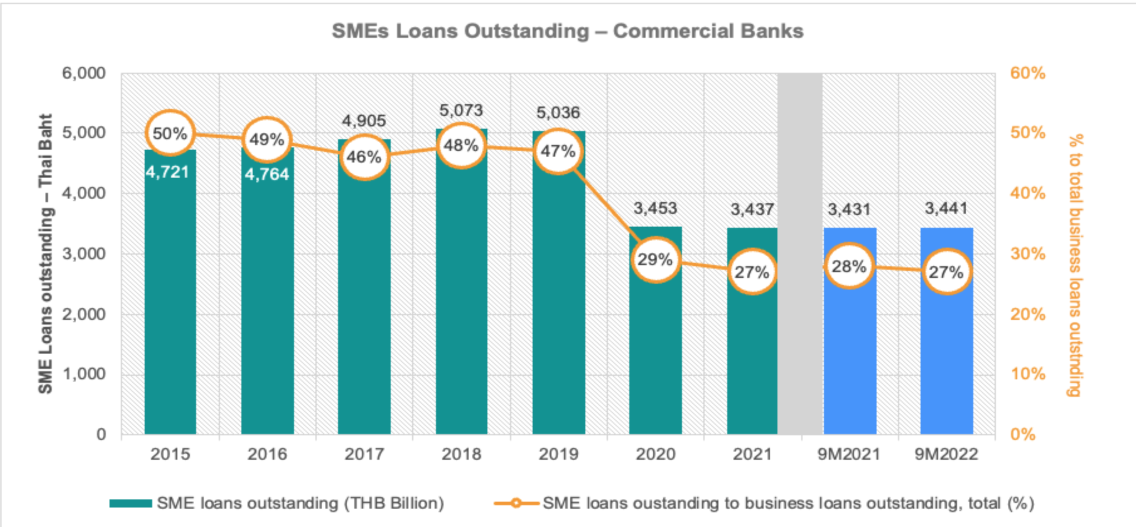
In Thailand, financial service providers are commonly classified into three types: formal, semi-formal, and informal.

- **Formal financial service providers** are financial intermediaries or FIs,legislated and under the supervision of the BOT or the Ministry of Finance. These FIs include commercial banks, finance companies, credit fonciers, government-owned SFIs, and Non-bank Financial Institutions (NBFIs).
- **Semi-formal financial service providers** refer to FIs whose legal status is granted by specific laws and are supervised by other government authorities. In Thailand, semi-formal financial service providers include cooperatives and credit unions, the National Village and Urban Community Fund (Village Fund – VF), set up by the Government in 2001, and Savings Groups for Production, which is associated with the Community Development Department (CDD).
- **Informal financial service providers** have no legal status under any business or specific law including loan sharks, self-help savings, and credit groups. Loans from informal financial service providers are not supervised bythe BOT, and the Ministry of Finance, often quoted as daily interest rates and exceeding the legal cap on interest rates.

4.2.1 SME Loan from CBs

Commercial bank lending is the largest source of external financing for SMEs. On September 2022, outstanding SME loans from all CBs (including foreign bank branches) totaled 3,441 billion Baht or 27% of total business loans outstanding. SME outstanding loans from all CBs expanded by a CAGR of 1.6% from 2015 to 2019 until the impact of COVID-19, which halted the growth primarily due to banks' discretion over concerns linked with non-performing loans, despite the BOT's relief measures to support SMEs via soft loan program for 252 billion Baht or 1.5% of GDP.

Chart 16: SMEs Oustanding Loans from CBs



Source: Bank of Thailand

The wholesale and retail trade sector has the highest percentage of SME credit, receiving 32% of the total of THB 1,100 billion, followed by the manufacturing sectorwith 19.3% of the total or THB 662 billion. Real estate activities, accommodation and food service activities, along with financial and insurance activities also received a significant amount of credit, collectively representing over one-third of the total SME credits. The data suggest that for SMEs loan, CBs tend to prioritise lending to businesses in sectors that are expected to drive economic growth, such as the wholesale and retail trade sector, a key driver of domestic consumption, and the manufacturing sector, a key contributor to exports.

Chart 17: SMEs Loans Outstanding from CBs by Type of Businesses as of 3Q2022

	(Million Thai Baht)	%
Wholesale and retail trade; repair of motor vehicles and motorcycles	1,100,031	32.0%
Manufacturing	662,917	19.3%
Real estate activities	381,773	11.1%
Accommodation and food service activities	323,419	9.4%
Financial and insurance activities	225,844	6.6%
Construction	177,683	5.2%
Electricity, gas, steam and air conditioning supply	124,396	3.6%
Transportation and storage	104,706	3.0%
Agriculture, forestry and fishing	62,065	1.8%
Administrative and support service activities	58,477	1.7%
Information and communication	53,969	1.6%
Professional, scientific and technical activities	44,568	1.3%
Human health and social work activities	36,583	1.1%
Other service activities	27,142	0.8%
Education	17,907	0.5%
Arts, entertainment and recreation	14,829	0.4%
Mining and quarrying	11,372	0.3%
Water supply; sewerage, waste management and remediation activities	10,220	0.3%
Public administration and defence; compulsory social security	3,296	0.1%
Activities of households as employers	182	0.0%
Activities of extraterritorial organizations and bodies	7	0.0%

Source: Bank of Thailand

In 3Q2022, Kasikorn Bank (KBank) is the market leader for SME loans, with 783 billion Thai Baht in outstanding loans, or approximately 32% of the bank's overall loan portfolio. KBank's primary growth strategy is to acquire micro enterprise and self-employed customers via "Self-Apply" digital channels and from previously untapped industries by leveraging on data analytics to improve credit opportunities in specific industries, i.e., online/ offline merchant, contractor, agriculture trader, and restaurant models.

Siam Commercial Bank (SCB) is the second-largest player, which achieved SME loan growth of approximately 38.8% in 3Q2022 as compared to the end of the year 2021, primarily due to aggressive expansion into small SME customers with good credit track record and soft loans for SMEs who have been struggling with cash flow under loan relief measures. Bangkok Bank (BBL) is the third-largest player in the SME loan market, with SME loans comprising approximately 18% of the bank's loan portfolio by 9M2022. Compared to the end of the year 2021, the bank's SME outstanding loan declined significantly by 17.6%.

Table 7: SME Outstanding loan Loan by Top 10 CBs - 9M2022

Rank by SME loan	Selected CBs	Total Loan (THB Billion)	SME Loan (THB Billion)	Proportion of SME Loan to Total Loan Portfolio (%)	SME Loan Growth (%) (Dec2021 – Sep2022)
1	Kasikornbank (KBank)	2,480	783	32%	-1.3%
2	Siam Commercial Bank (SCB)	2,345	559	20%	38.8%
3	Bangkok Bank (BBL)	2,797	411	18%	-17.6%
4	Krungthai Bank (KTB)	2,612	313	12%	-0.5%
5	Krungsri Bank (BAY)	1,965	308	16%	1.8%
6	TMBThanachart Bank (TTB)	1,394	112	8%	1.4%
7	Land and House Bank (LH Bank)	198	76	39%	0.5%
8	Thai Credit Retail Bank (TCRB)	118	82	69%	19.4%
9	Kiatnakin Phatra Bank (KKP)	366	32	9%	7.3%
10	TISCO Bank (TISCO)	213	45	21%	22.6%

Source: Data collected from annual reports, fact sheets and investor presentation

[a]Including loans to small SME

[b]Excluding loans to small SME or Micro-Finance

4.2.2 MSME Loan from SFIs

SFIs played an essential role in providing financial services to sectors CBs do not adequately serve, especially micro enterprises, small enterprises, and the unbanked. Six SFIs that are active in the MSME loan market include Small and Medium Enterprise Development Bank (SME D Bank), Government Savings Bank (GSB), Islamic Bank of Thailand (IBank), Bank for Agriculture and Agricultural Cooperatives (BAAC), Export-Import Bank of Thailand (EXIM Bank), and Government Housing Bank (GH Bank). Between 2015 and 2021, outstanding SFI loans increased at a CAGR of 3.4%. SFIs' MSME loans are estimated to account for 9.7% of total outstanding loans or 542 billion Thai Baht in 2021. As SFIs play a crucial role in implementing financial measures to assist SMEs in weathering the COVID-19 crisis, its loan to SMEs increased by 17.8% in 2020.

Table 8: SFIs' Total Credits and SMEs Credits

Specialized Financial Institutions	2015	2016	2017	2018	2019	2020	2021	CAGR '15 – '21
Total loans - SFIs (THB Billion)[a]	**4,597**	**4,922**	**5,240**	**5,492**	**5,690**	**5,830**	**5,605**	3.4%
Estimated SME loans - SFIs (THB Billion)[b]	379	396	430	459	456	538	542	6.2%
Estimated Microfinance - SFIs (THB Billion)	2,512	2,575	2,731	2,923	3,033	3,170	3,379	5.1%
Estimated SME loan growth - SFIs (%)	11.1%	4.6%	8.4%	6.9%	-0.7%	17.8%	0.9%	n.a.
Estimated SME outstanding loans to total loans, - SFIs (%)	8.2%	8.1%	8.2%	8.4%	8.0%	9.2%	9.7%	n.a.

Important Note: Microfinance also includes loans offer to small enterprises and total loans include retail loans, corporate loans, SME loans, microfinance loans and etc. Microfinance loans also include small enterprises loans with below than 200,000 Thai Baht in value.

Source: Bank of Thailand, Asian Development Bank and SFIs' Annual Reports. Ipsos Strategy3 estimated microfinance – SFIs.

[a]**Six SFIs combined:** Small and Medium Enterprise Development Bank (SME D Bank), Government Savings Bank (GSB), Islamic Bank of Thailand (IBank), Bank for Agriculture and Agricultural Cooperatives (BAAC), Export-Import Bank of Thailand (EXIM Bank), and Government Housing Bank (GH Bank). For year 2021, the figure is estimated.

[b]**Four SFIs combined:** Data collected from annual reports from SME D Bank, GSB, BAAC and, EXIM Bank. GH Bank's loan classification is not relevant to SME segment. Data is not available for IBank. In addition, IBank accounted only approximately 1% of total outstanding loan from six SFIs combined.

SFIs play a significant role in supporting the government's social and development policies. They provide financial access to MSMEs withdifficulty obtaining working capital funds to run their businesses with a competitive-interest loan rate. It is estimated that nearly 65% of SFIs' loans are used to support MSMEs, as well as individuals seeking funds to support their occupations or small shops, through a range of government-supported financial products, not limited to SME loans.

For example, GSB is a social bank and the largest SFI in outstanding loan balances, totaling 2,270 billion Thai Baht by the end of 2021. Approximately 62% of the bank's loans in 2021 were used to support individuals, micro and small enterprise, and 8% for SMEs via soft loans, especially to enterprises in the tourism sector and those who need financial rehabilitation as their businesses was affected by the COVID-19 crisis. GSB has also adopted a new digital channel to distribute its SME loan products. The bank has recently cooperated with LINE MAN Wongnai to offer SME loans, especially to micro and small enterprises or individuals who are restaurant owners or riders of the platform. GSB also has a strong connection via its cooperation with trade associations, the Chamber of Commerce and Board of Trade of Thailand, the Federation of Thai Industries, and the Federation of Thai SME to offer SME loans to viable SMEs.

BAAC, as a rural development bank, also focuses on creating opportunities for farmers to access funding to develop the grassrootss economy, with approximately 1,253 branches throughout Thailand. For 2021, its total outstanding loan was 1,606 billion Thai Baht, of which 13% are loans to entrepreneurs to support agricultural occupations.

SME D Bank was set up to support the development of Thai SMEs specifically. According to the Government's policy, approximately 92% of the bank's loan was for SME customers. It has also recently expanded its credit limit from 15 million Thai Baht to 50 million Thai Baht for viable SMEs.

Table 9: SME loan by SFIs as of 30 December 2021

Rank by SME loan	SFIs	Total Loan - SFI (THB Billion)	SME Loan - SFI (THB Billion)	Proportion of SME Loan to Total Loan Portfolio – SFI (%)	Y-O-Y Growth (%) (2020 – 2021)
1	BAAC[a]	1,606	201	13%	1.2%
2	GSB[b]	2,270	190	8%	2.3%
3	SME D Bank	105	96	92%	4.4%
4	EXIM Bank	153	55	36%	-9.4%
5	GH Bank	1,459	n.a.	n.a.	n.a.
6	IBank	58	n.a.	n.a.	n.a.

Source: Data collected from annual reports

[a]Including loans to entrepreneur

[b]Excluding loans under the People's Bank Project, which offers small businesses and individuals a maximum of 200,000 Thai Baht for occupational use. By the end of June 2022, the GSB's outstanding loans for the People's Bank Project totaling 41,612 million Thai Baht, a decline of 4,938 million Thai Baht from the end of December 2021.

4.2.3 Microfinance

In 2016, the BOT estimated that 92.4% of loans were accessible through formal FIs, 7.4% through semi-formal FIs, and 0.2% through informal FIs. Nearly 70% of the total estimated loans from formal, semi-formal, and informal FIs were issued by CBs. In 2016, SMEs accounted for nearly half of all commercial bank loans (49% or 4,764 billion Baht), while CBs were considerably less active in the microfinance[7] market, with microfinance loans totaling 391 billion Baht. On the other hand,

[7]Microfinance was defined by BOT in June 2011 as loans for business or professional reasons of up to THB 200,000 with a maximum interest rate of 28%.

SFIs have been actively promoting financial access for micro and small enterprises. Over the same year, SFIs provided approximately 2,512 billion Baht in microfinance loans, while NBFIs granted approximately 123 billion Baht. Formal FIs accounted for approximately 68% of the formal microfinance loan, while semi-formal FIs (Cooperatives and Village Funds[8]) contributed approximately 31% or 1,404 billion Baht, and informal FIs accounted for less than 1% or approximately 35 billion Thai Baht. The total outstanding debt of microfinance loans was anticipated to be approximately 4,466 billion Baht in 2016.

Table 10: Loans from formal, semi-formal and informal sector for year 2016

Financial Institutions	Total Loan		Microfinance Loan		Proportion of Microfinance to Total Loan (%)
	THB Billion	%	THB Billion	%	
1. Commercial Banks	13,218[a]	69.74	391	8.77	3%
2. Special Financial Institutions	4,161[b]	21.96	2,512	56.24	60%
3. Non-Banks	133	0.7	123	2.77	92%
Total of Formal FIs (1+2+3)	17,513	92.40	3,027	67.77	17%
4. Cooperatives	1,197	6.32	1,197	26.81	100%
5. Village Fund	206	1.09	206	4.63	100%
Total of Semi-Formal FIs (4+5)	1,404	7.41	1,404	31.44	100%
Informal FIs	35	0.18	35	0.78	100%
Total	18,163	100	4,466	100	25%

[a]Total commercial banks' loan was later adjusted to be THB 13,627 billion
[b]Total SFIs' loan was later adjusted to be THB 4,922 billion
Source: Financial Inclusion in Thailand Presentation by Fiscal Policy Office, Ministry of Finance on May 2016

Microfinance is one of the government's 2011 initiatives to combat informal loan problems that offer loans for business or professional reasons of up to 200,000 Baht with a maximum interest rate of 28%. Based on a household survey conducted by the NSO, in 2011, approximately 1.38 million Thai households received loans from informal FIs (representing approximately 12% of all indebted Thai households). This number decreased to approximately 900,673 households in 2015 (representing approximately 8.6% of all indebted Thai households). Other initiatives launched by the Thai government to combat informal loan problems include the Financial Consumer Protection Center (2012), which helps protect financial consumers from injustice and educates them about illegal lending, the surveying project on businesses resembling personal loans (2012), which aims to persuade businesses such as gold shops and motorcycle shops that typically offer informal lending to register with the BOT for personal loan lending licences and the project to create a database of businesses offering informal loans. The Ministry of Finance initiated the Nano-Finance project in 2015 and designated the BOT as its regulator.

Table 11: Estimated Outstanding Loan Value - Microfinance

Estimated Outstanding loan Value - Microfinance	2015	2016	2017	2018	2019	2020	2021	2022	CAGR '15 – '21
Microfinance - SFIs (THB Billion)	2,512.2	2,575.3	2,730.7	2,922.9	3,033.0	3,170.3	3,378.5	3,564.4	5.1%
Microfinance – CBs (THB Billion)	391.0	403.1	435.7	447.1	462.3	497.4	528.3	542.2	5.1%
Nano Finance - Outstanding Loans (THB Billion)	0.2	1.4	4.8	35.6	19.3	17.4	23.5	33.5	131.3%

[8] The village fund program is a government initiative launched since 2001 to provide financial support to villages and communities in order to improve the standard of living and promote economic development. The village fund program is administered by The National Village and Urban Community Fund Office under the supervision of the Office of the Prime Minister

Pico Finance - Outstanding Loans (THB Billion)	-	-	0.1	0.6	2.7	3.8	5.4	6.4	n/a
Non-Bank loans (THB Billion)	118.6	123.0	126.6	131.3	133.2	138.7	145.8	149.0	3.5%
Total Microfinance	3,021.9	3,102.8	3,297.9	3,537.5	3,650.5	3,827.6	4,081.5	4,295.4	5.1%
GrowthG rate (%)	5.3%	2.7%	6.3%	7.3%	3.2%	4.9%	6.6%	5.2%	n/a

Source: Ipsos Strategy3

Important note: The estimation is based on the proportion of microfinance as per the available data from 2016. There is currently no actual data available to confirm this estimate

The outstanding loans in the microfinance market are projected to reach approximately 4,295.4 billion Baht by 2022, with a CAGR of 5.1% between 2015 and 2021. In addition to microfinance products, the microfinance market includes loans of less than 200,000 Baht provided to micro and small enterprises, as well as Nano-Finance, Pico-Finance, and personal loans from non-banks. The market is anticipated to expand at a healthy rate in 2022 as micro enterprises demand liquidity to support their businesses in light of the strengthening economy.

4.2.4 Nano-Finance

The Nano-Finance project was initiated primarily to promote financial access for micro and small businesses that continue to face obstacles, such as collateral restrictions and a lack of credit history, that limit their access even with microfinance loans. Additionally, CBs are less inclined to offer microfinance due to the fact that their operating expenses exceed their return on micro enterprise loans, and non-banks can only offer personal loans with a maximum interest rate of 25%[9]. As a result, the BOT has regulated Nano-Finance to allow other businesses (which are not FIs under the supervision of the BOT or Ministry of Finance) to operate Nano-Finance. Nano-Finance is a flexible, collateral-free credit method designed to fulfill the financial demands of micro and small enterprises. Each borrower may borrow up to 100,000 Baht at an annual interest rate of up to 33% without providing collateral. A business operator seeking a Nano-Finance licence must have a minimum of 50 million Baht in registered capital, a debt-to-equity ratio of no more than seven times, and a maximum loan ceiling of 400 million Baht.

Table 12: Nano-Finance

CBs	2015	2016	2017	2018	2019	2020	2021	9M 2021	9M 2022	CAGR '15 – '21	% Growth
Number of Accounts	7,464	55,454	191,155	2,038,841	1,172,889	774,316	1,300,367	1,115,683	1,761,410	136.3%	57.9%
Outstanding Loans (THB Billion)	0.2	1.4	4.8	35.6	19.3	17.4	23.5	21.2	31.0	132.1%	46.1%
Oustanding Loans Y-O-Y Growth rate (%)	n.a.	837%	233%	646%	-46%	-10%	34%	28%	46%	n/a	n/a
Number of Nano Finance Providers	8	24	25	32	40	45	48	46	52	35%	13%

Source: FPO, Ministry of Finance

[a]Data as of the end of September 2022

By the end of 3Q2022, there were approximately 52 Nano-Finance operators. Key players in this market landscape including Non-Bank operators, especially those who are gearing toward the digital lending market, are Ayudhya Capital Services, Kasikorn LINE (LINE BK), Seamoney (Capital), Monix, Ascend Nano, and GFIN.

[9] Due to COVID-19 impacts, on 31st July 2020, the BOT revised the effective rate for personal loan (unsecured loan) to be 25%

Table 13: Top 20 Companies with Nano-Finance Licence Ranked by Total Assets

	C	D	N	T	P	Companies	Registered Capital (Million THB)	Total Revenue (Million THB)	Net Profit (Loss) (Million THB)	Total Assets (Million THB)
1			■	■	■	MUANGTHAI CAPITAL PCL[a]	2,120	14,334	4,744	98,529
2			■		■	NGERN TID LOR PCL LIMITED	9,240	12,232	3,169	66,525
3	■	■	■	■	■	AYUDHYA CAPITAL SERVICES CO.,LTD.	5,925	12,550	5,262	56,403
4			■	■	■	RATCHTHANI LEASING PCL	5,663	4,026	1,679	48,988
5			■	■	■	KASIKORN LINE COMPANY LIMITED	7,200	1,981	(1,955)	14,397
6			■		■	FAST MONEY COMPANY LIMITED	1,000	1,628	269	11,266
7			■	■	■	HENG LEASING AND CAPITAL PCL	3,810	1,539	354	9,702
8			■	■	■	SAKSIAM LEASING PCL	2,096	1,848	608	9,515
9			■	■	■	AIRA & AIFUL PCL	4,000	1,233	302	6,565
10			■	■	■	NGERNTURBO COMPANY LIMITED	1,000	1,036	96	6,042
11		■	■		■	SEAMONEY (CAPITAL) CO., LTD.	996	467	(95)	5,054
12			■		■	THAI ACE CAPITAL COMPANY LIMITED	803	694	462	4,750
13			■	■	■	MIDA LEASING PCL	665	566	107	4,148
14			■		■	MONIX CO., LTD.	688	563	16	4,097
15			■	■	■	NIM LEASING COMPANY LIMITED	1,500	746	129	3,147
16		■	■		■	ASCEND NANO COMPANY LIMITED	1,400	90	(153)	2,991
17			■	■	■	SIAM GENERAL FACTORING PCL	1,638	414	57	2,596
18		■	■		■	GFIN SERVICES (T) COMPANY LIMITED	493	753	57	1,973
19			■	■	■	G CAPITAL PCL	196	195	(59)	1,867
20			■	■	■	SIAM CITY LEASING AND FACTORING PCL	623	244	5	1,757

C = Credit Card

D = Digital Loan

N = Nano-Finance

T = Personal Loan – Title Loan

P = Personal Loan – Unsecured Loan

[a]Based on separated financial statement

Source: Department of Business Development, Ministry of Commerce, based on the financial statement for the year 2021

4.2.5 Pico-Finance

Pico-Finance was initiated by the Ministry of Finance to continue addressing the loan shark issue and to encourage illegal lenders to register with formal lending systems. Pico-Finance businesses are required to have a minimum registered capital of 5 million Baht and to limit their operations to the province where their headquarters are located, unlike Nano-Finance, which can operate nationwide. Pico-Finance business operators may lend for general purposes and are limited to loans of 50,000 Baht per borrower at a maximum annual interest rate of 36% without collateral and 33% with collateral such as loan guarantors, land mortgages, or business collaterals, subject to the consideration of business operators. Later, the Ministry of Finance approved Pico-Plus, which permits pico-finance operators to double the lending limit to 100,000 Baht per borrower, but only if they have a minimum of 10 million Baht in registered capital. The maximum annual interest rate for loans more than 50,000 Baht has been set at 28%, while the maximum annual interest rate for loans up to 50,000 Baht has remained fixed at 36%.

Table 14: Pico-Finance

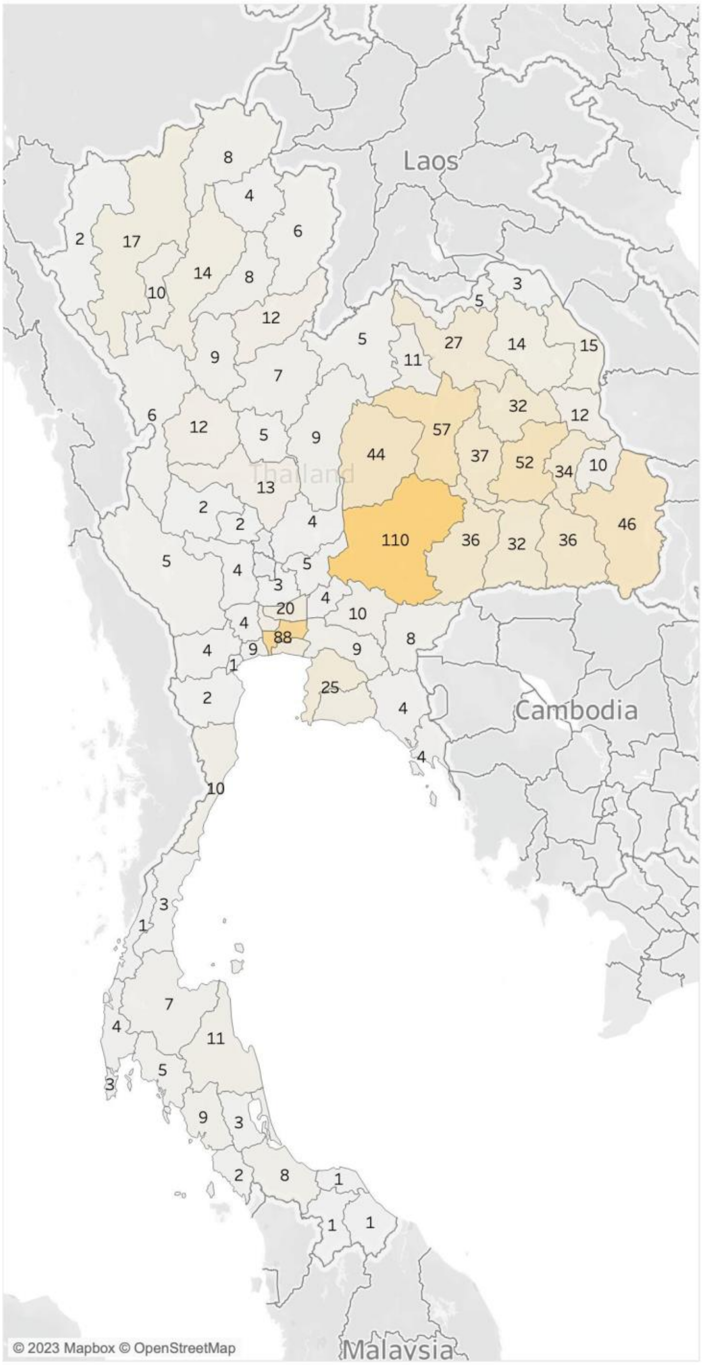
Pico-Finance	2017	2018	2019	2020	2021	3Q2021	3Q2022	CAGR '17 – '21	% Growth
Number of accounts, total	8,561	56,558	195,086	413,622	1,476,237	1,135,016	2,476,904	262%	118%
Outstanding unsecured loan (No. of account)	4,213	26,284	97,246	232,449	1,167,126	867,103	2,088,232	308%	141%
Outstanding secured loan (No. Of account)	4,348	30,274	97,840	181,173	309,111	267,913	388,672	190%	45%
Outstanding loan (THB billion)	0.1	0.6	2.7	3.8	5.4	4.6	6.5	196%	39%
Outstanding loan – YOY growth rate (%)	n.a.	698%	355%	44%	40%	26%	39%	n/a	n/a
Accumulated loan value (THB Billion)	0	2	5	10	19	16	27	262%	66%
Unsecured loan (% to total accumulated loan value)	38%	40%	45%	50%	55%	54%	59%	n/a	n/a
Secured loan (% to total accumulated loan value)	62%	60%	55%	50%	45%	46%	41%	n/a	n/a

Source: FPO, Ministry of Finance

[a]Data as of the end of June 2022

By the end of 2022, there will be a total of 1,097 Pico Finance operators among which more than half (57%) are based in the North Eastern region. The top three provinces with the most Pico-Finance operators are Nakhon Ratchasima (110 operators), Khon Kaen (57 operators), and Roi Et (52 operators). The majority of Pico-Finance operators in the Northeastern region operate a single branch or fewer than ten branches in each province. Simple Cash, with branches in multiple provinces, and Ngoentoryod, with branches in Surin, Burirum, Ubolrachathani, and Korat, are key players in the Northeastern region. Unlike Pico-Finance operators in the Northern region, many businesses have multiple locations in each province. Money Sermsook, JS Money, Ngernthamjai, Sinthanee Chiangrai Pico, Nanleasing, Rattanakit Pico Phayao, Sabuy Sabuy Leasing are key players in the Northern region.

Number of Pico Finance Operators



Region	Province	
North Eastern	Nakhon Ratchasima	110
	Khon Kaen	57
	Roi Et	52
	Ubon Ratchathani	46
	Chaiyaphum	44
	Maha Sarakham	37
	Buriram	36
	Si Sa Ket	36
	Yasothon	34
	Kalasin	32
	Surin	32
	Udon Thani	27
	Nakhon Phanom	15
	Sakon Nakhon	14
	Mukdahan	12
	Nong Bua Lamphu	11
	Amnat Charoen	10
	Loei	5
	Nong Khai	5
	Bueng Kan	3
	Chai Nat	2
	Total	620
Greater Bangkok	Bangkok	88
	Samut Prakan	23
	Pathum Thani	20
	Nonthaburi	12
	Total	143
North	Chiang Mai	17
	Lampang	14
	Nakhon Sawan	13
	Uttaradit	12
	Lamphun	10
	Phetchabun	9
	Sukhothai	9
	Chiang Rai	8
	Phaer	8
	Phitsanulok	7
	Nan	6
	Phayao	4
	Mae Hong Son	2
	Uthai Thani	2
	Total	121
South	Nakhon Si Thamma..	11
	Prachuap Khiri Khan	10
	Trang	9
	Songkhla	8
	Surat Thani	7
	Tak	6
	Krabi	5
	Phangnga	4
	Chumphon	3
	Phatthalung	3
	Phuket	3
	Phetchaburi	2
	Satun	2
	Narathiwat	1
	Pattani	1
	Ranong	1
	Yala	1
	Total	77
Central	Kamphaeng Phet	12
	Prachin Buri	10
	Samut Sakhon	9
	Kanchanaburi	5
	Phichit	5
	Saraburi	5
	Lop Buri	4
	Nakhon Nayok	4
	Nakhon Pathom	4
	Ratchaburi	4
	Suphan Buri	4
	Ayutthaya	3
	Samut Songkhram	1
	Total	70
Eastern	Chonburi	25
	Rayong	16
	Chachoengsao	9
	Sa Kaeo	8
	Chanthaburi	4
	Trat	4
	Total	66
Grand Total		1,097

Source: Bureau of Financial Inclusion Policy and Development

4.3 Market Landscape – Consumer Lending

Table 15: Loan to household

Loan to household	2015	2016	2017	2018	2019	2020	2021	3Q2023	CAGR '15 – '21
Loan to household - personal consumption, total (THB Billion)	8,368	8,732	9,146	9,775	10,360	10,785	11,156	11,405	4.9%
_Personal consumption - housing loan (THB Billion)	3,625	3,866	4,076	4,332	4,534	4,791	5,031	5,168	5.6%
_Personal consumption - auto loan (THB Billion)	1,397	1,372	1,436	1,609	1,735	1,793	1,814	1,806	4.5%
_Personal consumption - education (THB Billion)	378	415	408	408	380	300	248	224	-6.8%
_Personal consumption - others (THB Billion)	2,968	3,080	3,226	3,426	3,712	3,901	4,063	4,207	5.4%
__Others: of which credit card and personal loan under BOT supervision (THB Billion)	657	698	744	798	1,035	1,027	1,165	1,263	10.0%
Loan to household - occupational purpose (THB Billion)	2,152	2,231	2,297	2,382	2,416	2,516	2,644	2,702	3.5%
Other loan to household (THB Billion)	634	620	658	672	713	727	776	796	3.4%
Total loan to household (THB Billion)	11,154	11,584	12,101	12,829	13,489	14,029	14,577	14,903	4.6%
Loan to household per GDP (%)	81.2	79.4	78.1	78.4	79.9	89.7	90.1	86.8	

Source: Bank of Thailand

[a]Data as of the end of September 2022

Note: data are collected from all commercial banks, SFIs, Financing companies, Credit Foncier, saving cooperatives, non-banks including credit cares, personal loans, leasing companies, insurance companies, asset management companies, pawn shops and other financial institutions

4.3.1 Personal Loan

A personal loan is one of the financial products that micro and small enterprises can obtain. The loans are used for general purposes or for business as well as occupational purposes. Under the BOT supervision, personal loans can be sub-categorised as follows;

1. **Unsecured loan**: Lending without assets or property as collateral with a maximum effective rate of 25% per year;
    a. **Personal loans for general purposes** with the maximum loan value does not exceed five times of borrower's monthly average salary or cashflow value of more than 30,000 Baht per month or 1.5 times for borrowers with a monthly average salary or cashflow below 30,000 Baht per month.
    b. **Personal loans for business or occupational purposes**. This type of loan does not have a maximum loan amount, but business operators are obliged to evaluate borrowers' ability to repay and ensure that loans would be used for business or occupational purposes.
2. **Auto title loan**: Lending based on the submission of the vehicle registration book as the repayment guarantee (title loan) with a maximum effective rate of 24% per year. Auto title loan was regulated in 2019. All auto title lenders must be operated through either Pico-Finance or personal loan licenses.

Table 16: Personal Loan

Personal Loan	2019	2020	2021	3Q2021	3Q2022	CAGR '19 – '21[b]	% Growth[c]
Personal loan, total (THB Billion)	580	580	708	669	812	10.5%	21.4%
_Share of personal loan, total by CBs (%)	44%	39%	44%	44%	44%	n/a	n/a
_Share of personal loan, total by Non-Banks (%)	56%	61%	56%	56%	56%	n/a	n/a
Personal loan – unsecured loan, total (THB Billion)	456	430	527	500	586	7.5%	17.1%
_Share of unsecured loan, by CBs (%)	48%	45%	53%	52%	55%	n/a	n/a

_Share of unsecured loan, by Non-Banks (%)	52%	55%	47%	48%	45%	n/a	n/a
Personal loan – auto title loan, total (THB Billion)	124	150	181	169	227	20.8%	34.2%
_Share of auto title loan, by CBs (%)	27%	21%	17%	18%	16%	n/a	n/a
_Share of auto title loan, by Non-Banks (%)	73%	79%	83%	83%	82%	n/aa	n/a

Source: Bank of Thailand

[a]Data as of the end of 3Q 2022

[b]CAGR between 2019 to 2021

[c]Growth is between 3Q2021 and 3Q2022

4.3.2 Personal loan – Unsecured loan

Unsecured personal loan, such as revolving loan with no need for collateral, has been growing at a fast pace, especially for the year 2021, with the increase of 22% compared to the previous year because of a greater household demand for liquidity to support daily spending needs amid the economic doldrums. In 2022, the loan is expected to expand further given the uneven economic recovery, where individual borrowers with lower incomes need higher liquidity for daily spending.

On the supply side, the market is highly competitive, with almost all CBs pushing for the personal loan product as part of their growth strategy. By the end of September 2022, CBs accounted for approximately 55% of outstanding loans. KTB has the largest personal loan portfolio of approximately 557 billion Baht. The majority of KTB's borrowers are government or state enterprises' employees. For retail customers, BAY, with their subsidiary and affiliates is the market leader, followed by SCB, Kbank, and TTB.

For Non-Banks, the market is highly fragmented, with 97 companies obtaining a personal loan – unsecured loan licenses from the BOT account for approximately 46% of outstanding unsecured personal loans. Key players from the Non-Bank include Muangthai Capital (MTC), Krungthai Card (KTC), AEON Thana Sinsap (AEONTS), Ngern Tid Lor (TIDLOR), Ayudhya Capital Services (AYCAP) and Easy Buy (EASY). These non-bank players usually operate in other financial services, such as credit cards or auto title loans as their key financial products and expanded into the unsecured personal loan market.Thus, the share of their unsecured personal loan portfolio is usually slightly over or lower than 30% of their total loan portfolio.

Table 17: Top 20 Non-bank companies with personal loan – unsecured loan licence ranked by total assets

	C	D	N	T	P	Companies	Registered Capital (Million THB)	Total Revenue (Million THB)	Net Profit (Loss) (Million THB)	Total Assets (Million THB)
1						MUANGTHAI CAPITAL PCL[a]	2,120	14,334	4,744	98,529
2						KRUNGTHAI CARD PCL	2,578	16,309	6,251	88,177
3						AEON THANA SINSAP (THAILAND) PCL	250	12,186	3,811	81,251
4						NGERN TID LOR PCL*	9,240	12,232	3,169	66,525
5						AYUDHYA CAPITAL SERVICES CO., LTD.*	5,925	12,550	5,262	56,403
6						EASY BUY PCL	6,000	14,672	4,351	54,816
7						ASIA SERMKIJ LEASING PCL	2,639	3,463	1,045	51,327
8						AYUDHYA CARD CO., LTD.	5,906	7,143	2,528	49,166
9						RATCHTHANI LEASING PCL	5,663	4,026	1,679	48,988
10						AYUDHYA CAPITAL AUTO LEASE PCL*	28,845	6,759	2,228	44,600

11						JMT NETWORK SERVICES PCL	766	2,685	1,400	25,965
12						CITICORP LEASING (THAILAND) CO., LTD.	2,124	3,597	444	23,643
13						GENERAL CARD SERVICES LTD.*	2,458	3,446	631	22,637
14						LOTUS'S MONEY SERVICES LIMITED*	2,080	3,366	1,099	16,347
15						KASIKORN LINE CO., LTD.	7,200	1,981	(1,955)	14,397
16						PARA SUMI-THAI LEASING CO., LTD.	161	3,973	516	11,768
17						SG CAPITAL PCL	3,270	1,579	593	11,430
18						FAST MONEY CO., LTD.	1,000	1,628	269	11,266
19						T LEASING CO., LTD.	2,400	1,396	176	10,340
20						HENG LEASING AND CAPITAL PCL	3,810	1,539	354	9,702

C = Credit Card

D = Digital Loan

N = Nano-Finance

T = Personal Loan – Title Loan

P = Personal Loan – Unsecured Loan

Source: Department of Business Development, Ministry of Commerce based on financial statement for the year 2021

[a]Muangthai Capital PCL data is based on separated financial statement

*BAY's subsidiaries or affliates

For the year 2023, unsecured personal loans are anticipated to maintain their double-digit growth at approximately 15% to 20%. The growth will be driven primarily by CBs thatshift their strategy towards digital lending market development. Many CBs have outlined a rigid strategy to expand their portfolio of unsecured personal loans by emphasizing digital lending, particularly through mobile applications, as they have been building a sizable base of mobile app users. In contrast to Non-Banks, most of their clients are low-income earners, resulting in a lower risk-reward ratio. It is probable that Non-Banks will modify their business growth model to emphasize secured loans, particularly auto title loans and vehicle hire purchases.

As the BOT is implementing measures to decrease the ratio of household debt to GDP by addressing bad debt in the household sector, specifically focusing on unsecured loan products such as credit cards and personal loans, this may interrupt growth in the unsecured personal loan market. To achieve this, the BOT plans to circulate a letter to commercial banks and non-banks in 1Q2023 requesting collaboration to stop heavy marketing campaigns for unsecured loans, which can encourage unnecessary borrowing. Additionally, the BOT may review criteria for unsecured loan applications, including the minimum income requirements for borrowers[10].

4.3.3 Digital Personal Loan

On September 15th , 2020, the BOT created a new type of personal loan – the digital personal loan – with the intention of facilitating access to credit from official financial institutions for borrowers without a regular income or collateral. The maximum loan amount for digital personal loans is 20,000 Baht, and the maximum loan repayment period is six months. The maximum interest rate allowed is 25% per year. In their evaluation of the borrower's ability or willingness to repay the loan, business operators can utilize alternative data, such as the borrower's utilities and mobile phone bill payment

[10] Source: Bangkok Bank, Central bank tackling rise in unsecured loans, 4th October 2022. Link: https://bit.ly/3wajmrO

histories, incomes, and spending on e-commerce platforms. Due to the COVID-19 impact, the BOT temporarily relaxed the regulation regarding the retail debtors on digital personal loans to increase the credit limit from 20,000 Baht to 40,000 Baht and extended the maturity from no than six months to no more than 12 months, which was ended at the end of the year 2022.

As of October 2022, there are nine companies that are granted digital personal loan licences. Two of them are the leading CBs namely KBank and SCB. Non-Bank operators include KTC and AEONTS, which are public companies, and Non-Bank private companies include AYCAP (a subsidiary of BAY), Seamoney (Capital), Ascend Nano, GFin Services (T) (Grab Financial Service), and SCB Abacus.

Table 18: List of Companies with Digital Personal Loan Licence from BOT

	CB	C	D	N	T	P	Companies	Registered Capital (Million THB)	Total Revenue (Million THB)	Net Profit (Loss) (Million THB)	Total Assets (Million THB)
1							KASIKORNBANK PCL	30,247	153,220	32,893	3,437,504
2							THE SIAM COMMERCIAL BANK PCL	70,000	159,758	34,479	3,300,014
3							KRUNGTHAI CARD PCL	2,578	16,309	6,251	88,177
4							AEON THANA SINSAP (THAILAND) PCL	250	12,186	3,811	81,251
5							AYUDHYA CAPITAL SERVICES CO., LTD.	5,925	12,550	5,262	56,403
6							SEAMONEY (CAPITAL) CO., LTD.	996	467	(95)	5,054
7							ASCEND NANO COMPANY LIMITED	1,400	90	(153)	2,991
8							GFIN SERVICES (T) COMPANY LIMITED	493	753	57	1,973
9							SCB ABACUS COMPANY LIMITED	546	12	(239)	1,626

CB = Commercial Bank
C = Credit Card
D = Digital Loan
N = Nano-Finance
T = Personal Loan – Title Loan
P = Personal Loan – Unsecured Loan
Source: Department of Business Development, Ministry of Commerce based on financial statement for the year 2021

On March 2020, the BOT announced that Seamoney (Capital) is the first Non-Bank to obtain a digital personal loan licence. Seamoney (Capital) then launched its loan products on the Shopee platform. In the future, more players are expected to launch digital personal loans. Heng Leasing and Capital PCL (Heng) announced the plan to launch a digital personal loan service in November 2022, with a focus on offering digital loans to its existing customers[11]. KTC, a non-bank business under Krungthai Bank (KTB), plans to offer personal loans via KTB's Pao Tang mobile application in 2023[12].

As of July 2022, the digital personal outstanding loans stood at approximately 5.9 billion Baht, representing 1.8 million loan accounts. Loan approvals average at 400 million Baht per month with a credit line of 5,000 – 6,000 Baht per borrower[13].

[11] Source: Bangkok Post, Heng set to offer digital personal loan service, 22nd February 2022. Link: https://bit.ly/3VzcBLqLink: https://bit.ly/3VzcBLq

[12] Source: Bangkok Post, KTC to offer personal loans on apps, 5th January 2023. Link: https://bit.ly/3QL0IjILink: https://bit.ly/3QL0IjI

[13] *Source: Bangkok Post, Lenders queue up for chance to offer digital loan service, 22nd August 2022. Link: https://bit.ly/3yJrGR2Link: https://bit.ly/3yJrGR2*

The digital personal outstanding loans are estimated at approximately 8.5 billion Baht for the year 2022 and to increase by approximately 30% for the year 2023 as more digital personal loans will be available in the market.

As the market shifted toward digital lending, CBs pushed into the unsecured personal market in partnership with digital platform businesses. KBank and SCB are the leading CBs that have been developing their digital competitiveness in the consumer lending market.

In 2017, the fintech spin-off from SCB, SCB Abacus, was established and raised USD 12 million in an oversubscribed Series A funding round. SCB Abacus offers the digital lending application “MoneyThunder” to offer loans to microenterprises that are underserved and unbanked retail segments. SCB Abacus has recently cooperated with Robinhood, the SCB Group’s food delivery platform to offer unsecured personal loans and Nano-Finance to Robinhood’s riders and restaurants in the platform through its mobile app. SCB Abacus aims to target approximately 2.5 million people in Thailand within the year 2024[14]. SCB also has a joint venture with Abakus Group, a Chinese fintech unicorn, to establish the company MONIX to launch the mobile application “FINNIX” as the digital lending application to offer unsecured personal loans and Nano-Finance via its mobile app. After a year, the application was launched wtih more than 3.5 million downloads and lending over 6 billion Thai Baht for the year 2021.

In 2018, KBank formed a joint venture with Line Financial Asia, a subsidiary of Line Corporation, to establish "Kasikorn Line" (LINE BK). Since then, Kasikorn Line has offered unsecured personal loans and Nano-Finance to more than 500,000 users via the LINE application, of which half are freelancers, and approximately 80% of them live outside Greater Bangkok. By the end of 2022, LINE BK is projected to have a total outstanding loan balance of 20 billion Baht[15].

Recently, LH Bank also announced a partnership with Ascend Nano, the personal loan operator for Ascend Money Co., Ltd and TrueMoney Wallet operator to expand its customer base for digital lending[16]. Krungsri Consumer also partnered with Grab Financial Group to launch "Grab First Personal Loan," which targets Grab application users with a maximum loan amount of 100,000 Baht at an effective annual interest rate of 25% and a 12-month repayment term. User data will be utilised as a part of the credit analysis, and customers will have a direct access to the loan via the Grab App's "Payment" section, which is linked to the UCHOOSE application by Krungsri Consumer[17].

For Non-Bank, the leading digital lending company is Seamoney (Capital), a subsidiary of Shopee's parent company, SEA Group. Since 2015, Seamoney (Capital) has been registered to operate in Thailand. Through the Shopee app, Seamoney (Capital) provides digital personal loans, "SEasyCash," with a maximum loan amount of 40,000 Baht at a maximum interest

[14] *Source: Thumbs Up, SCB Abacus จับมือ Robinhood ปล่อยกู้ให้ไรเดอร์ รับวงเงินภายใน 15 นาที, 10th August 2022. Link: https://bit.ly/3gcqcrPLink: https://bit.ly/3gcqcrP*

[15] *Source: Bangkok Post, Easy loans for all, 8th August 2022, Link: https://bit.ly/3W9UJpGhttps://bit.ly/3W9UJpG*

[16] *Source: LH Bank, LH Bank เดินเกมรุกตลาดสินเชื่อบุคคลผ่านช่องทางดิจิทัล, 31st May 2022. Link: https://bit.ly/3sgMkV7Link: https://bit.ly/3sgMkV7*

[17] *Source: Mitihoon, กรุงศรี และ แกร็บ ต่อยอดความสำเร็จ ส่งผลิตภัณฑ์สินเชื่อ “สินเชื่อส่วนบุคคลแกร็บเฟิร์ส” บุกตลาดรายย่อย เจาะกลุ่มผู้ใช้บริการ, 27th July 2022 Link: https://bit.ly/3My3sP8https://bit.ly/3My3sP8*

rate of 25% per year, and Nano-Finance, "SEasyCash Nano," with a maximum loan amount of 100,000 Baht at a maximum interest rate of 33% per year.

In addition, digital lending is also the growth strategy adopted by other Non-Bank players. In 2022, AEONTS planed to expand its customer base through digital loans. It will use other data e.g. utility bill payment behaviour, for credit approvals. In the first phase, the ticket size will be approximately 8,000 Baht, targeting 10,000 clients.

The competition for unsecured personal loans is also going to be more intense, especially via digital lending. A new entrant that sees an opportunity in this market is the leading SFI, especially for the microenterprise segment, GSB. GSB announced its business plan to enter the personal loan market by 2023 via a new subsidiary to be set up for personal loans in the non-bank sector.The target customers mainly are low-income earners with otherwise limited access to sources of funds with the intention of targeting retail customers and micro enterprises, particularly those who are unbanked, with a competitive interest rate to be less than the effective rate of 25% for loan ticket sizes between 10,000 and 40,000 Baht. While waiting for the licence, GSB will roll out a new product designed for those on low incomes who currently struggle to secure loans for a loan of between 10,000 and 30,000 Baht at an interest rate of 1.25% per month for the maximum repayment period of two years via its mobile application "MyMo" for digital lending. MyMo app has roughly thirteen million users[18].

4.3.4 Auto Title Loan

Since the BOT governed the auto title loan in 2019, the outstanding loan showed an impressive growth with a CAGR rate of 20.8% per annum between the year 2019 to 2021. By the end of 3Q2022, the auto title outstanding loan stood at 227 billion Baht, of which approximately 84% are outstanding loans from Non-Bank and approximately 16% contributed by CBs.

Table 19 : Personal Loan – Auto Title Loan

Personal Loan	2019	2020	2021	3Q2021ᵃ	3Q2022ᵃ	CAGR '19' – '21	% Growthᶜ
Personal loan – auto title loan, total (THB Billion)	124	150	181	169	227	20.8%	34.2%
_Share of auto title loan, by CBs (%)	27%	21%	17%	18%	16%	n/a	n/a
_Share of auto title loan, by Non-Banks (%)	73%	79%	83%	82%	84%	n/a	n/a

Source: Bank of Thailand

[a]Data as of the end of 3Q2021

[b]CAGR between 2019 to 2021

[c]Growth between 3Q2021 to 3Q2022

Among Non-Bank players, there are approximately 75 companies with a personal loan for auto title loan licence. However, the market is highly concentrated with the three largest operators in the market, namely Muangthai Capital (MTC), Ngern Tid Lor (TIDLOR), and Srisawad (SAWAD), having a combined market share of more than 70%. An auto title loan is

[18] Source: BTimes, ธนาคารออมสิน เล็งเปิดบริษัทลูกสินเชื่อส่วนบุคคลในปี 66 ให้ดอกเบี้ยต่ำกว่าตลาด 5%, 10th October 2022. Link: https://bit.ly/3VrNx9gLink: https://bit.ly/3VrNx9g

anticipated to have a strong loan growth for the year 2022, mainly due to the liquidity needed to support the recovering economic activities.

Table 20: Top 10 Non-Bank with Auto Title Loan from BOT based on Total Assets

	C	D	N	T	P	Companies	Registered Capital (Million THB)	Total Revenue (Million THB)	Net Profit (Loss) (Million THB)	Total Assets (Million THB)
1						KASIKORN LEASING CO., LTD	900	6,144	2,039	122,720
2						MUANGTHAI CAPITAL PCL	2,120	14,334	4,744	98,529
3						NGERN TID LOR PCL	9,240	12,232	3,169	66,525
4						ASIA SERMKIJ LEASING PCL	2,639	3,463	1,045	51,327
5						RATCHTHANI LEASING PCL	5,663	4,026	1,679	48,988
6						AYUDHYA CAPITAL AUTO LEASE PCL	28,845	6,759	2,228	44,600
7						FAST MONEY CO., LTD	1,000	1,628	269	11,266
8						T LEASING CO., LTD	2,400	1,396	176	10,340
9						HENG LEASING AND CAPITAL PCL	3,810	1,539	354	9,702
10						SAKSIAM LEASING PCL	2,096	1,848	608	9,515

C = Credit Card

D = Digital Loan

N = Nano-Finance

T = Personal Loan – Title Loan

P = Personal Loan – Unsecured Loan

Source: Department of Business Development, Ministry of Commerce based on financial statement for the year 2021

Micro and small enterprises could also obtain loans through auto title loans. Customers of Car4Cash, the leading auto title loan product from BAY, have identified the top three reasons for opting for auto title loans, one of which is for business purposes. According to its customer profile of new customers, approximately 30% are business owners, with loan amounts ranging from 20,000 to 12,000,000 Baht. Similar to other financial products, digital is the new channel to stimulate growth; Krungsri Auto's new loan volume increased by 74% through its digital channel, which is supported by door-to-door service delivery for asset evaluation and contract signing.

4.3.5 Credit Card

The credit card spending volume has returned to the pre-pandemic level. As of September 2022, the credit card volume was registered at 1.92 trillion Baht, which is 11% higher than the credit card volume in 2019 prior to the COVID-19 impact and the lockdown measures instituted. Thailand has approximately 25 million credit cards with outstanding credit worth approximately 456 billion Baht. In terms of credit outstanding, the credit card market continued to expand at the rate of 5.5% over the year between 2015 to 2021 and increased by 12.5% in 3Q2022 as compared to the same period last year.

CBs accounted for approximately 60% of the total outstanding credit, while Non-Banks shared the remaining 40%. The market share held by Krungsri Consumer and its subsidiaries and affiliates from Non-Bank is approximately 15%. KBank's credit outstanding at the end of 2021 was 102 billion Baht (approximately 22% of the total outstanding credit), while KTB's credit outstanding was approximately 60 billion Thai Baht (approximately 13% of the total outstanding credit).

Table 21: Credit Card Outstanding

Credit Card	2015	2016	2017	2018	2019	2020	2021	3Q2021*	3Q2022*	CAGR '15 – '21	% Growth[b]
Credit Card - outstanding credit, total (THB Billion)	333	360	394	419	457	450	458	405	456	5.5%	12.5%
Credit outstanding - CBs (THB Billion)	205	218	236	253	279	273	279	244	272	5.3%	11.7%
Credit outstanding - Non-Bank (THB Billion)	129	142	158	165	178	177	179	161	184	5.6%	13.7%
Share of outstanding credit by CBs (%)	61%	61%	60%	61%	61%	61%	61%	60%	60%	n/a	n/a
Share of outstanding credit by Non-Bank (%)	39%	39%	40%	39%	39%	39%	39%	40%	40%	n/a	n/a

Source: Bank of Thailand

[a]Data as of the end of 3Q2022

[b]Growth between 3Q2021 and 3Q2022

There are ten non-bank licencees for credit card businesses, the majority of which are subsidiaries or affiliates of banks. CARD X is the most recent company to enter the credit card market. CARD X is a subsidiary of SCB whose mission is to develop new products for underserved and unbanked customers using Artificial Intelligence, a digital platform, and emerging technologies, as well as a partner ecosystem. CARD X intends to target micro and small enterprises, as well as the 'Buy Now Pay Later' (BNPL) business model for retail consumers, with over 100,000 retail shops/micro enterprises nationwide. By the end of 2025, CARD X expects its customer base to exceed 10 million users.

Table 22: List of Non-Bank with Credit Card Licence from BOT

	C	D	N	T	P	Companies	Registered Capital (Million THB)	Total Revenue (Million THB)	Net Profit (Loss) (Million THB)	Total Assets (Million THB)
1						KRUNGTHAI CARD PCL**	2,578	16,309	6,251	88,177
2						AEON THANA SINSAP (THAILAND) PCL	250	12,186	3,811	81,251
3						AYUDHYA CAPITAL SERVICES CO.,LTD*	5,925	12,550	5,262	56,403
4						EASY BUY PCL	6,000	14,672	4,351	54,816
5						AYUHYA CARD CO., LTD.*	5,906	7,143	2,528	49,166
6						GENERAL CARD SERVICES LTD.*	2,458	3,446	631	22,637
7						LOTUS'S MONEY SERVICES LIMITED*	2,080	3,366	1,099	16,347
8						AMERICAN EXPRESS (THAI) CO., LTD.	500	1,336	95	3,261
9						CAPITAL OK CO.,LTD.	413	13	52	485
10						CARD X CO., LTD.***	250	-	(0)	0

C = Credit Card

D = Digital Loan

N = Nano-Finance

T = Personal Loan – Title Loan

P = Personal Loan – Unsecured Loan

Source: Department of Business Development, Ministry of Commerce based on financial statement for the year 2021

*BAY's subsidiaries or affiliates

**KTB's affiliate company

***SCB's subsidiary company

For the year 2022, credit card loans continued to grow in line with an increase in credit card usage, together with the previous year's low base of credit card spending during the lockdown. The outstanding credit card loans are anticipated to maintain their growth momentum at approximately 5% to 7% for the years 2023 and 2024. The factors that support the growth include the increased popularity of electronic payment methods and the rapid expansion of e-commerce businesses, as well as the revival of the tourism industry. This leads to an improvement in domestic card usage following the easing of COVID-19 restrictions. However, the credit card market still faces negative factors, such as the increase in household debt and government regulations aimed at slowing the growth of household debt ratios.

4.3.6 Mortgages/ Housing Loan

The outstanding balance of mortgages/housing loans constantly increases at the rate of 6.5% per annum between the year 2015 to 2021. The outstanding loan at the end of 3Q2021 was significant, with an increase of 4.4% compared to the previous year, as many borrowers sought to take payment holidays and/ or extend their overall repayment terms. As a result of the COVID-19 pandemic and its disruption to commercial activity in key sectors of the Thai economy during 2020 and, to a lesser extent, 2021, this is primarily being done to alleviate the pressure on many individuals' and families' personal and household finances.

Table 23: Mortgages/ Housing Outstanding Loan

Mortgages Loan (THB Billion)	2015	2016	2017	2018	2019	2020	2021	3Q 2021	3Q 2022	CAGR '15 – '21	% Growth
Mortgage/ housing loan, total[b]	3,022	3,251	3,449	3,706	3,919	4,173	4,410	4,347	4,537	6.5%	4.4%
Mortgage/ housing loan by CBs	1,846	1,974	2,082	2,245	2,366	2,505	2,615	2,597	2,664	6.0%	2.6%
Mortgage/ housing loan by SFIs[c]	1,173	1,275	1,364	1,460	1,551	1,667	1,794	1,749	1,872	7.3%	7.1%
Mortgage/ housing loan by Insurance companies	2.02	1.82	1.63	1.48	1.18	0.72	0.69	0.69	0.60	-16.4%	-13.0%
Mortgage/ housing loan by other Fis	0.68	0.84	0.79	0.69	0.51	0.43	0.35	0.38	0.45	-10.5%	17.0%

Source: Bank of Thailand

To boost the property sector, on October 2021, the BOT also eased the Loan-To-Value (LTV) ratio for mortgage lending to allow home buyers to borrow loans of up to 100%[19], aiming to help maintain the market momentum and help the economy recover from the impact of the COVID-19 pandemic. The temporary relaxation was effective until the end of 2022.

Table 24: Mortgages/ Housing Loan by All CBs

Mortgages/Housing Loan	2015	2016	2017	2018	2019	2020	2021	3Q 2021	3Q 2022	CAGR '15 – '21	% Growth
Outstanding mortgage loans (post-finance loans) (THB Billion)	1,846	1,974	2,082	2,245	2,366	2,505	2,615	2,597	2,664	6.0%	2.6%
Amount of new mortgage loans (THB Billion)	87	85	94	123	103	111	98	91	118	2.0%	29.8%
To purchase new and second-hand residential properties (THB Billion)	80	78	83	104	86	95	83	57	94	0.6%	63.4%
Refinance (THB Billion)	6	7	11	19	17	15	14	14.022	25	15.2%	75.1%
Average LTV ratio (excluding top-up loans)											
Overall	86.8	87.3	88.4	88.6	88.0	90.4	91.5	91.28	92.7	n/a	n/a

[19] Previously the BOT limited the LTV ratio to be 90% for a first home with a minimum price of 10 million Thai Baht, 80-90% for a second home and 70% for a third home

Refinance	60.0	63.3	62.6	65.6	59.7	64.1	62.8	63.11	63.6	n/a	n/a
Average LTV ratio (including top-up loans)[b]											
Overall	89.3	89.5	91.4	90.9	88.8	90.6	91.7	91.5	93.0	n/a	n/a
Refinance	72.1	72.6	70.4	72.7	71.7	70.5	70.0	72.9	73.6	n/a	n/a

Source: Bank of Thailand

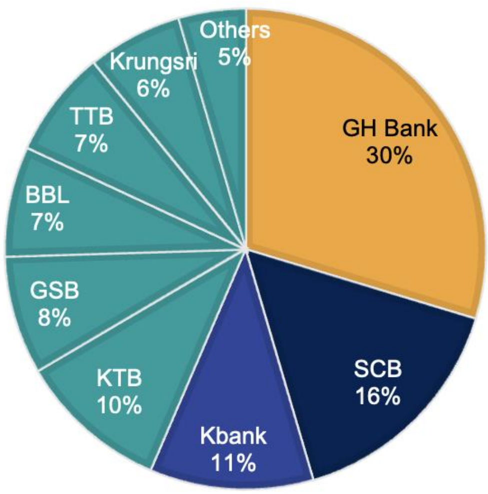
[a]Data as of the end of June 2022

[b]Top-up loans are loans related to mortgages but provided for any other purposes than house purchasing. Currently, loans for non-life insurance and mortgage reducing term assurances (MRTA), as well as business loans, are not included in top-up loans.

With the easing of the LTV ratio and the increase in interest rates, the number of new mortgage loans has returned to the same level as before the COVID-19 pandemic, at 1,181 billion Thai Baht in 3Q2022. 3Q Refinancing accounts for almost 20% of all new mortgage loans. Refinance market increased significantly in 2022. Following the BOT's recent policy interest rate hike, prime lending rates are likely to grow progressively in 2023, causing the borrowers to secure refinance contracts to mainly low-interest rates.

GH Bank is the largest bank, with a market share of almost 30% of the total outstanding loan, followed by SCB, Kbank, and KTB. The mortgage loan and refinance markets are growing increasingly competitive and heated. SFIs and CBs have created new products to accommodate the shift in the market environment; nonetheless, the primary competitive advantage of these products remains their low and competitive interest rates for the first three years.

Chart 18: Estimated Market Share – Mortgage/ Housing Loan – FY 2021



Source: Estimation based on data collected for annual report for retail outstanding loan for mortgage/ housing loan

Despite the recovery of the mortgage outstanding loan in 2022, the outlook for 2023 and 2024 is challenging with the growth rate between 1% to 2% due to various negative factors impacting home buying power. These include the ongoing Russia-Ukraine conflict, the expanding crisis in Europe, and the effects of rising energy costs, oil prices, currency fluctuations, and interest rates on material and labor costs, as well as the ongoing impact of COVID-19. These factors are causing concern for potential investors in the mortgage loan market.

4.3.7 Home for Cash Market

Home for cash is defined as a secured or collateralized consumer lending product. The product is not considered a mortgage or house loan and often has a lower LTV and a shorter payment term. The majority of CBs and SFIs offers the Home for Cash program to borrowers seeking a substantial loan amount for commercial purposes or to pay off high-interest obligations, including credit card and personal loans. The following tems are some of the Home for Cash products available in the market:

Table 25: Home4Cash Loan Term and Interest Rate

Financial Institutions	Interest Rate		Maximum Loan Amount		Payment Period
	First 3 years	4th Year onward	% to collateral	Max. Amount	
BBL Poonphon	MRR - 0.5%	MRR - 0.55%	80%	10 mn	3-10 years
BBL San Phan	MRR+1%	MRR+1%	n/a	2-55 mn	3-10 years
KBank (Salary Man)	7.97%	MRR + 2.00%	90%	20 mn	30 years
KBank (Land collateral)	8.97%	MRR + 3.00%	90%	20 mn	30 years
KBank (Business owner)	7.97%	MRR + 2.00%	90%	20 mn	30 years
SCB	9.395%	MRR+3.40%	n/a	20 mn	30 years
TTB (MRTA)	5.60%	MRR - 0.63%	90%	10 mn	30 years
TTB (No MRTA)	6.60%	MRR + 0.37%	90%	10 mn	30 years
GSB	4.810%	MRR-0.50%	90%	10 mn	30 years
KKP (MRTA)	5.15%	MLR - 1%	90%	10 mn	20 years
KKP (No MRTA)	5.75%	MLR	90%	10 mn	20 years
CIMB Thai (MRTA)	5.14%	MRR - 2.00%	95%	n/a	3-15 years
CIMB Thai (No MRTA)	5.44%	MRR - 2.00%	95%	n/a	3-15 years
TCRB H4C MRTA	MRR-3.85%+0.15%	MRR-3.85%+0.15%	90%	10 mn	30 years
TCRB H4C No MRTA	MRR-3.35%+0.65%	MRR-3.35%+0.65%	90%	10 mn	30 years
TCRB H4C MRTA - Self employee	MRR+1.19%	MRR+1.19%	90%	10 mn	30 years
TCRB H4C No MRTA - Self employee	MRR+1.69%	MRR+1.69%	90%	10 mn	30 years
TISCO	5.50%	7.875%	80%	n/a	15 years

Source: Collected from financial institutions' website – as of 10 October 2022

The home for cash market is estimated to have an outstanding loan at approximately 290-320 billion Baht. Similar to the refinance market, the Home for cash market is anticipated to rise significantly with increased consumer demands for liquidity to expand their business and new investment as the economy continues to pick up from the pandemic. The home for cash market is likely to grow at a double-digit in 2022 (approximately 20%-30%). CBs and SFIs continue to offer competitive interest rates to grow their portfolio. TMBThanachart Bank (TTB) planned to increase their mortgage/ housing loan by 33% for the year 2022, of which refinance and home for cash products are going to be the main growth drivers. Home for cash currently accounted for approximately 6% of TTB's total mortgage/ housing loan. The bank aims to increase home for cash to 15% within the next five years[20].

[20] Source: Manager Online, ทีทีบีวางกลยุทธ์รุกสินเชื่อบ้าน เปิดตัวบัตรกดเงินสด "ดึงกลุ่มรีไฟแนนซ์-บ้านแลกเงิน", 17th August 2022. Linked: https://bit.ly/3yNeISI

4.4 Non-Performing Loan (NPL)

The COVID-19 pandemic has had a significant impact on Thailand's NPL. The economic disruption caused by the pandemic has resulted in an increase in NPLs in certain sectors, particularly loans to SMEs, which have been hard hit by the crisis. To address the impact of COVID-19 on NPLs, the Thai government has implemented a variety of measures, including financial assistance to businesses and individuals affected by the pandemic and loan repayment period extensions for borrowers. The government has also issued a regulation guideline to support the operation of Asset Management Company to purchase and restructure NPLs from banks, easing the burden on banks and improving the quality of their loan portfolios.

On 28th February 2020, the BOT issued a set of measures to help debtors who were affected by the COVID-19 impact. These measures, implemented from 1st January 2020 to 31st December 2021, were aimed at providing assistance to all types of debtors in a timely manner; for example, Phase 1-3 measures helped the retail debtors and SME debtors including soft loan, emergency loan, cash handout programs including half-half co-payment scheme, win-win financial aid scheme and etc. to stabilize the financial markets. However, as the COVID-19 impact continued to be widespread, the BOT issued the measures on 3rd September 2021 for pre-emptive action against NPLs through interest reduction and an extended payment period. This is to avoid being classified as Troubled Debt Restructuring (TDR) and to be classified as ordinary loans. The measures also include loan restructuring for NPLs to becomeordinary loans when loans are restructured, with three consecutive installments paid off (from 12 installments). SFIs can also immediately classify non-NPL debtors (normal debtors or Special Mention debtors[21]) as normal debtors, provided that the result of the SFI's analysis shows that the debtors can perform obligations under a debt restructuring agreement. This kind of debt restructuring will also be deemed preemptive and will not be deemed as TDR.

As a result of the BOT relief measures, NPLs from FIs remained low by the end of 3Q2022. NPL for overall CB registered at 2.76%, which decreased slightly as compared to the end of 2021, mainly due to debt restructuring and banks' loan portfolio management. SME loans from CBs have a higher NPL Ratio of 7.38%. Pico-Finance has the highest proportion of loans overdue more than three months at 18.94%, while the Nano-Finance accounted for 6.9%. For the special mention loans, total loans from CBs registered at 6.7%, while special mention loans from SMEs are significantly higher at 14.9%.

On consumer lending, NPL from unsecured personal loans increased significantly in 3Q2022 to 4.4% from 3.6% at the end of 2021. An unsecured personal loan also has a relatively high NPL level (4.4%) as compared to NPL from a credit card (2.0%) for the auto title loan.

Table 26: Non-Performing Loan

Non-Performing Loan (% to oustanding loan)	2019	2020	2021	3Q2022
CBs, total	3.0%	3.1%	3.0%	2.76%

[21] Special Mention Loan means outstanding of special mention loan according to the classification criteria of the Bank of Thailand (Overdue 1 – 3 months).

SME Loans by CBs	**4.6%**	**7.0%**	**7.5%**	**7.38%**
Credit Card - CBs	2.2%	1.8%	1.8%	2.00%
Credit Card - Non-Bank	1.4%	2.0%	1.7%	1.90%
Credit Card - Total	**1.9%**	**1.9%**	**1.8%**	2.00%
Personal Loan - Unsecured Loan	**3.8%**	**4.1%**	**3.6%**	4.40%
by CBs	4.6%	3.6%	3.3%	5.00%
by Non-Bank	2.5%	3.3%	2.8%	3.70%
Personal Loan - Title Loan	**1.2%**	**1.9%**	**1.6%**	1.8%
by CBs	1.8%	2.5%	2.4%	1.80%
by Non-Bank	1.0%	1.7%	1.5%	1.80%
Personal Loan - Total	**3.0%**	**3.0%**	**2.7%**	3.70%
by CBs	4%	3%	3%	4.70%
by Non-Bank	2%	3%	2%	2.90%
Pico Finance	**12.7%**	**17.0%**	**17.7%**	18.94%
Nano Finance	**7.7%**	**6.1%**	**6.2%**	6.9%

Source: Bank of Thailand and FPO, MOC

4.5 Loan Loss Reserve

Due to the COVID-19 situation, the BOT implemented temporary relaxation of loan classification and loan loss provision for loans under the restructuring process. The temporary relaxation allows borrowers under pre-emptive debt restructuring to be immediately classified as normal borrowers. NPL borrowers who can make repayments in accordance with the debt restructuring agreement for three consecutive months can be classified as normal borrowers (from previously having to make repayment for 12 consecutive months), and borrowers obtaining additional working capital can be immediately classified as normal borrowers. The BOT also temporarily allows non-provision for credit lines for borrowers which are not yet activated. In addition, the BOT extended the period of the FIDF fee reduction until the end of 2022.

By the end of 3Q2022, CBs have a loan loss provision ratio of 1.71. The Thai banking system remained robust with high levels of the capital fund, loan loss provision, and liquidity, which served as a key mechanism to accommodate loans to support the economic recovery. Banks continued to assist borrowers and manage their loan portfolios in order to preserve the quality of their overall assets. Meanwhile, the profitability of the banking system increased compared to the same period last year, primarily due to higher net interest income from loan expansion and lower provisioning expenses.

Table 27: All CBs' Loan Classification and Allowance for Expected Credit Loss

Loan Classification (THB Billion)	2015	2016	2017	2018	2019	2020	2021	3Q 2022[a]	CAGR '15 – '21
Loans (Gross) – All CBs	13,218	13,627	14,730	15,115	15,629	16,814	17,860	18,191	5.1%
Normal Loan	12,567	12,884	13,925	14,305	14,728	15,179	16,191	16,551	4.3%
Special Mention Loan	314	358	375	366	436	1,112	1,138	1,136	23.9%
Non-Performing Loan	338	386	429	444	465	523	531	503	7.8%
Allowance for expected credit loss (THB Billion)	431	512	583	647	680	756	842	857	11.8%
Loan Loss Provision Ratio	1.28	1.33	1.36	1.46	1.46	1.45	1.59	1.71	n/a

Source: Bank of Thailand

[a]Data as of the end of September 2022

4.6 Customer/ Borrower Behaviours and Attitude

4.6.1 Unbanked/ Underserved Potential

Prior to COVID-19's arrival in early 2020, the majority of Thai households were already burdened by high levels of debt. For many years, the average Thai worker has been forced to rely on loans in order to make ends meet. Recent economic difficulties, such as a sharp increase in inflation, have only aggravated their debt burden. By 3Q2022, loans to household per GDP stood at 86.8%, dropped from the peak at the end of 2021 at 90%.

In terms of financial liquidity to cover their expenses, the grassrootss population is the most affected. Based on GSB Research conducted in 2021 with more than 2,200 samples of adults over the age of 18 with a monthly income of less than 15,000 Thai Baht, the majority (70%) of those impacted by COVID-19, which resulted in lower incomes. Approximately 34% of the survey participants reported that they engage in debt, out of which 77% are a loan from formal financial institues and approximately 23% are loan from informal business operators in terms of values.

Table 28: Source of Loan (Multiple Answers - % to Total Respondents)

Formal Financial Institutions (% of Respondents)	2019	2020	2021
Non-Bank	31.6%	36.5%	40.9%
CBs	32.4%	36.1%	32.8%
Special Financial Institutions	26.4%	20.5%	23.8%
Village fund	10.9%	5.5%	3.2%
Saving co-operative or credit union	8.3%	4.8%	3.4%
Informal Business Operators			
Loan shark operators	39.5%	51.1%	49.7%
Friends/ relatives	42.0%	42.5%	42.0%
Saving group (share)	26.4%	10.5%	5.5%
Shops	-	-	5.5%

Source: GSB Research

GSB Research also estimated that approximately 11.11 million people or half (or approximately 54%) of the total estimated grassroots population[22] rely on informal business operators especially loan shark operatorsapproximately. On the other hand, approximately 46% of the grassroots population, or approximately 9.47 million people, borrowed from formal financial institutions at the interest rate charged between 5.95% to 8.80% per year. Among those that borrow from informal business operators, approximately 37% of them pay interest at an extremely high rate of 60% to 240% per year, while 43% pay interest between 15% to 33%. As there is no requirement for collateral or a guarantor, and the loan process is quick and simple, these are the primary factors that attract borrowers to informal business loans.

Approximately 18.4% of grassroot people from the survey also reported having repayment problems. 32.3% of the respondents from the survey also reported that they would need to go for a loan for the amount of approximately 47,000 Thai Baht for the next six months. The top three reasons on how they are going to use the fund are (1) for daily expenditure

[22] Grassroot population is the term evolved from "Rakya" word which means grassroots. It is the term that refers to low-income population.

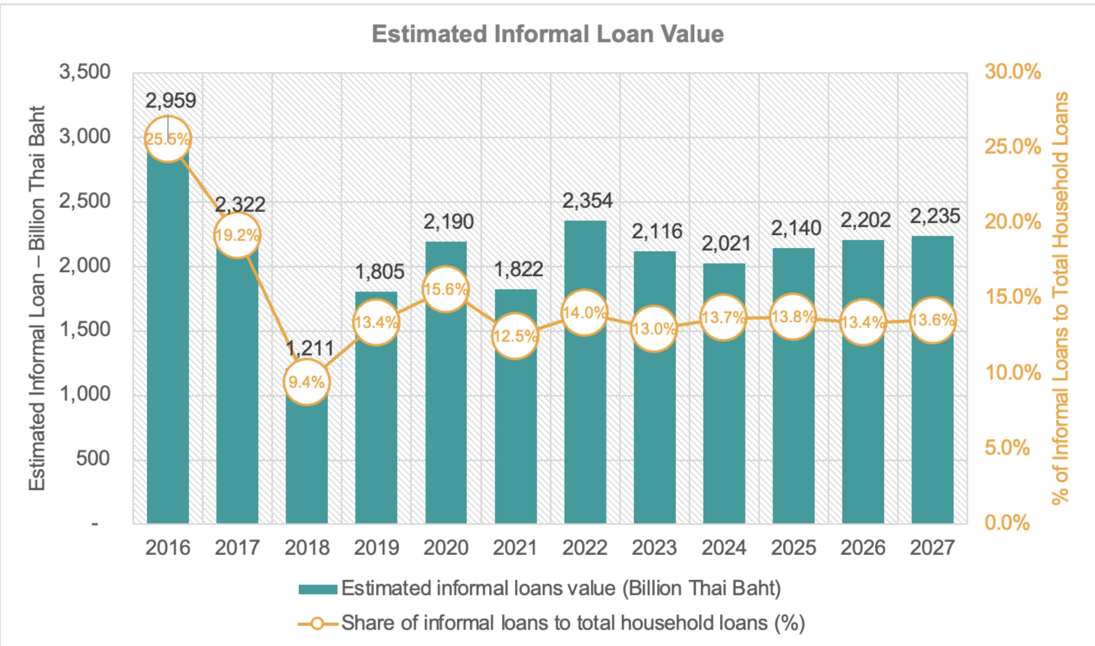
– 44.1% (2) for working capital/ cash flow for their businesses – 33.9% and (3) for an emergency fund – 9.7%, other reasons also include for investment in a new shop/ business -7.9% and 4.5% reported to use the fund to pay loan to informal business operators.

GSB Research also reported that by 2H2021, 43.6% of respondents used a personal loan, Nano-Finance, or Pico-Finance, down from 54.4% in the prior survey conducted in 1H2021. The survey also shows a significant increase in the use of auto title loans (from 8% to 26%) and revolving cash cards (from 8.8% to 13.2% over the same period). High usage of auto title loans is also attributable to the fact that the majority of grassroot people own vehicles, particularly motorcycles, whereas only approximately 13% of them reported owning land, and 90% of them reported that their land is free from a loan repayment programme and not engaging a consignment agreement (Kaifak).

4.6.2 Estimated Informal Loan Value

Approximately 11.11 million people are expected to rely on informal loans in Thailand. The estimated market value for these loans in 2022 is potentially as high as 2,354 billion Baht, or approximately 14% of total household loans in the country. As the economy recovers, particularly in the tourism industry, the demand for informal loans is estimated to increase significantly in 2022 as businesses need working capital to restart operations.

Chart 19: Estimated Informal Loan Value



Source: Estimated by Ipsos Strategy3

Important note: The estimation value of informal loans provided in this report is based on desk research data and should be used as a high-level approximation only.

Given the highly competitive market in consumer lending, opportunities in the informal lending segment especially extremely high-interest rates as well as IT infrastructure development that FIs have been investing heavily to gain competitiveness in digital banking, the consumer lending market is likely to expand as formal financial institutions continue to gain greater insights into underserved/ unbanked borrowers to evaluate their repayment ability.

4.6.3 Digital Banking

Thai banks have benefited from the central bank launching PromptPay infrastructure, facilitating consumers and businesses to make financial transactions via online banking services such as QR codes. The volume of transactions as well as their value, have been growing steadily. Mobile banking volume transactions increased dramatically from 1,314 billion transactions in 2017 to 16,041 billion transactions in 2021.

Table 29: Use of Mobile Banking and Internet Banking[1]

	2017	2018	2019	2020	2021	3Q2021	3Q2022	CAGR '17 – '21	% Growth
Internet Banking									
No. of agreements[2]	20,469,790	23,861,834	29,404,466	34,946,211	38,941,665	38,157,299	39,596,683	17.4%	3.8%
Volume of transactions ('000 Transactions)	207,091	284,771	458,381	429,449	580,822	329,929	410,062	29.4%	24.3%
Value of transactions (Billions of Baht)	20,339	23,530	23,626	22,838	27,174	15,542	21,126	7.5%	35.9%
Mobile Banking									
No. of agreements[2]	32,143,467	46,004,931	60,084,145	68,697,059	84,291,262	80,343,968	94,156,654	27.3%	17.2%
Volume of transactions ('000 Transactions)	1,314,856	2,896,001	5,299,032	9,588,722	16,041,378	8,781,465	14,299,738	86.9%	62.8%
Value of transactions (Billions of Baht)	9,550	17,602	27,628	40,200	57,263	31,788	44,189	56.5%	39.0%

Source: Bank of Thailand

Remark:

1/ Include Inhouse and interbank funds transfer, purchasing goods and services and cash withdrawal.

2/ The number of agreements that customers have been applied for the service.

The survey "VMware Digital Frontiers 3.0 Study" found Thai consumers are more appreciative of the value of digital products and services as of 2020, with 80% of respondents stating digital engagement with financial organisations has freed up their time to focus on other priorities. Thailand leads all other Southeast Asian countries surveyed, namely the Philippines (62%), Malaysia (60%), Indonesia (57%), and Singapore (55%)[23]. The recent findings, according to McKinsey's new Personal Financial Services 2021 survey, which covers approximately 20,000 urban banked respondents in 15 Asia-Pacific markets, indicate that the share of Thai customers using digital banking tools at least once every month jumped from 36% in 2017 to 90% in 2021.

LINE BK is one of the examples that indicates the well-received reception of digital banking among Thai consumers. Since launching in October 2020, LINE BK has exceeded expectations in terms of transaction volume, loan applications, and the number of new users. As many as 50,000 new savings accounts are opened on a single day, and the total amount of

[23] Source: Bangkok Post, New digital banking era is nigh, 20th September 2021. Link: https://bit.ly/3TpZOt0

financial transactions on the platform over the first four months has surpassed 21 billion Thai Baht. LINE BK had issued personal loans with an outstanding balance of over 5 billion Thai Baht, and during peak periods, LINE BK saw more than 40,000 loan applications in a single day —30% of which had never received a loan before. Those numbers clearly demonstrate how Thailand has a strong need for an all-in-one, fully digital financial services app.

In addition to LINE BK, other key players with a prominent strategy to develop the digital lending market also include CBs as well as non-bank and other online platform operators, including Shopee and Grab Financial Group. Key lending products available via digital lending are as follows;

Table 30: Digital Loan Products via Mobile Application

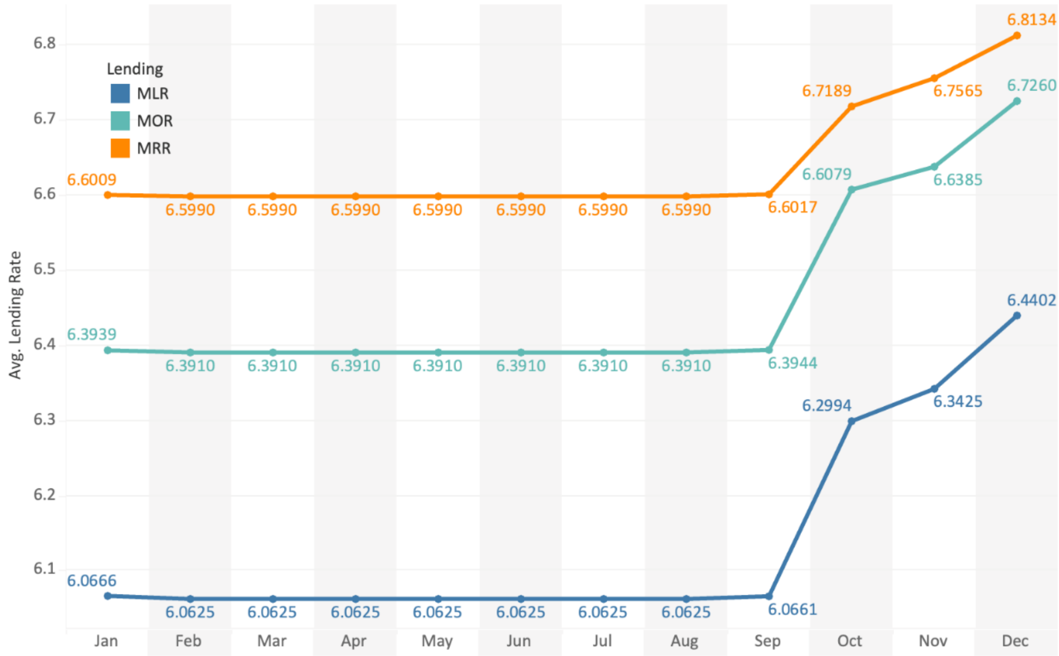
Mobile Application	Loan Amount	Interest Rate	Payment Period	Min. Monthly Income
Xpress Loan (K-Plus) by KBank	5 times of income	17% to 25%	60 Months	THB 7,500/ month
Krungsri iFIN (KMA) by Krunsri Bank	Maximum 2 million or 5 times of income	16.99% to 25%	60 Months	THB 15,000/ month
Speedy Loan (SCB Easy) by SCB	Maximum 5 million or 5 times of income	15.99% to 25%	72 Months	THB 15,000/ month
กรุงไทยใจป้ำ (KRUNGTHAI NEXT) by KTB	Maximum 1 million or 5 times of income for individuals Maximium THB 500,000 or 5 times of net income for commercial shops/ micro enterprises	Individual – 20% Microenterprise – 22%	60 Months	THB 15,000 /month
TTB Cash2Go (TTB Touch) by TTB	Maximum 1.5 million or 5 times of income	17% to 25%	60 Months	THB 20,000/ month
LINE BK (วงเงินให้ยืม)	1.5X or 5X of monthly income	18% to 25%	60 Months	THB 7,000/ month
LINE BK (วงเงินให้ยืมนาโน)	100,000 Thai Baht	33%	n/a	THB 5,000/ month
Shopee - SEasyCash	40,000 Thai Baht	25%	n/a	n/a
Shopee – SeasyCash Nano	100,000 Thai Baht	33%	n/a	n/a
MoneyThunder	100,000 Thai Baht	9.99 - 33%	36 Months	n/a
Grab First Personal Loan	100,000 Thai Baht	33%	12 Months	THB 12,000/ month of monthly salary or THB 240,000 /month for cashflow

Source: Collected from financial institutions' website – as of 15 October 2022

4.7 Loan Interest Rate Trend

As the BOT raised its key interest rates in four meetings since August 2022 by a total of 75 basic points to 1.25% in November 2022, CBs also raised interest rates following the BOT policy interest rate hike, while borrowers could face a normalisation of loan rates for the year 2023.

Chart 20: Average Lending Interest Rate of Selected CBs for the Year 2022



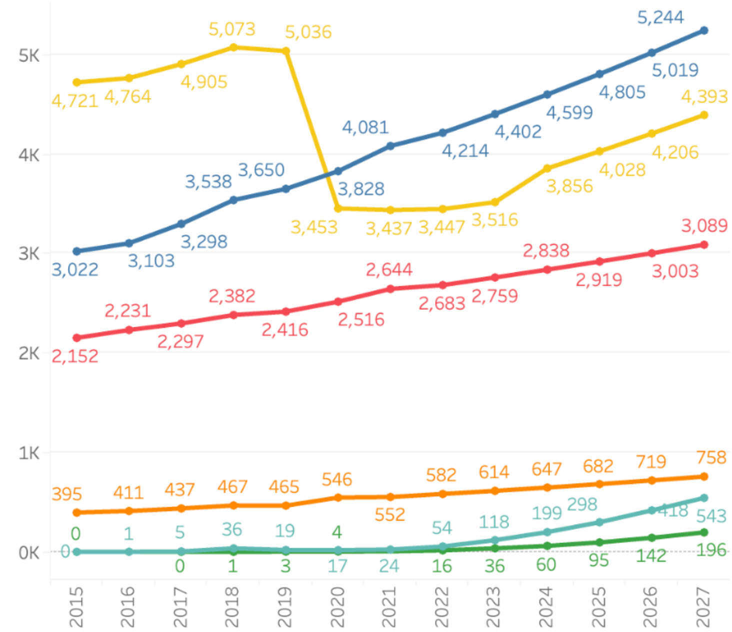
Source: Bank of Thailand, average lending interest rate of key commercial banks in Thailand including Bangkok Bank, Kasikorn Bank, Krung Thai Bank, Siam Commercial Bank, Bank of Ayudhya, TMB Thanachart Bank (TMB Bank and Thanachart Bank), Tisco Bank, Kiatnakin Bank, Land and House Bank and, Thai Credit Retail Bank as of December 19, 2022

Going forward, the lending interest rate will continue to rise in 2023 in line with the Monetary Policy Committee (MPC)'s policy normalization, and since CBs also must pay the full fee for the FIDF of 0.46% of deposits from 1st Jan 2023, up from the level of 0.23% under relaxed measures because of the impact of COVID-19. Thus, the financing cost will rise by 0.4% to 0.6% whilethe cost is expected to be passed on to the consumer via lending rates in 2023.

4.8 Market Forecast MSME Lending and Consumer Lending

It is projected that lending to micro enterprises and small enterprises, as well as lending to consumers, will maintain their upwards momentum over the next five years as the Thai economy gradually improves. The competitiveness among small and medium size commercial banks and large banks that started to shift their focus to target micro enterprises and small enterprises by using personal loans and digital loan products to expand their market is the primary driver of these enterprises' lendings market, which is expected to gradually recover to a level that is close to the level that existed before the pandemic. It is anticipated that the growth of nano-finance, in particular, will continue to be in the double digits. This is due to the fact that commercial banks have turned their nano-finance offerings into digital loan offerings, which makes the service more convenient for customers.

Chart 21: Forecasted Outstanding loan for MSMEs and Consumer Lending



	CAGR '22 - '27
Estimated Microfinance	4.47%
SME loans - Commercial Banks	4.97%
Loan to household for occupational purpose	2.86%
Estimated SME loans - SFIs	5.40%
Nano Finance	58.45%
Pico Finance	65.50%

Important Note:

Microfinance is defined as loan concept for business or professional purposes for an amount not more than 200,000 Baht. Estimated microfinance outstanding loan includes;

- SMEs loans below 200,000 Baht from CBs and SFIs
- Loans to household for occupational purpose
- Nano Finance
- Pico Finance

Source: Ipsos Strategy3

Important note: The forecaste technique used is smoothing exponential.

4.9 Competitive Market Assessment – Lending Market

4.9.1 MSMEs Lending Products

There are several types of lending products available for MSMEs in Thailand:

- Working capital loans: These are short-term loans that provide MSMEs with the funds required for day-to-day expenses, such as payroll and inventory.
- Term loans: These are medium to long-term loans that can be used for a variety of purposes, such as purchasing equipment or expanding a business.
- Revolving loans: These are loans that can be drawn down and repaid multiple times, making them suitable for businesses that have fluctuating cash flow needs.
- Equipment financing: These are loans specifically designed to help SMEs purchase equipment or machinery.
- Trade financing: These are loans that provide SMEs with the funds they need to import or export goods.
- Property financing: These are loans that can be used to purchase or improve the commercial property.

Based on the BOT's data, there are over 300 MSMEs lending products available in the Thai market. GSB has the highest number of MSMEs lending products, offering a total of 103 products in the market as it has sub-segmented its products into multiple niche segments, followed by KTB at 62 products. Kbank at 38 products, and TCRB, at approximately 29 products.

A total of approximately 76 loan products have been identified as suitable for micro enterprises, offering loan values of 200,000 Thai Baht or less. These products are predominantly offered by CBs including TCRB, Kbank, and SCB. Notably, a selection of these products is as follows:

Table 31: Micro Enterprises Lending Products

s/n	Service Providers	Products	Interest Rate (Per Year)	Collateral	Loan Amount Limit
1	TCRB	Certification of Bills of Exchange	As agreed with the Bank	Yes	200,000-100,000,000 Baht
2	TCRB	Aval /Letter of Guarantee	As agreed with the Bank	Yes	200,000-100,000,000 Baht
3	TCRB	Term loan	As agreed with the Bank	Yes	200,000-100,000,000 Baht
4	TCRB	Overdraft	As agreed with the Bank	Yes	200,000-100,000,000 Baht
5	TCRB	Khahai Secured	MRR-0.19%	Yes	200,000-35,000,000 Baht
6	TCRB	Khahai Semi-secured	MRR+0.35%-3.55%	Yes	200,000-30,000,000 Baht
7	TCRB	Khahai Clean	MRR+6.30%	No	200,000-10,000,000 Baht
8	TCRB	Khahai - Overdraft	MOR+1.38%-7.84%	Yes/No	200,000-10,000,000 Baht
9	TCRB	Micro finance loan (Micro credit for small businesses)	28% p.a.	No	Up to 200,000 Baht
10	TCRB	Nano finance loan (Nano credit for small businesses)	33% p.a.	No	Up to 100,000 Baht
11	UOB	UOB BizMerchant	Initial MRR+5%, Maximum MRR+8%	No	70,000–1,000,000 Baht
12	SCB	Manee Thanjai Loan for Business	Initial MRR+9.00%	No	10,000–300,000 Baht
13	SCB	New business loans (using collateral)	Initial MRR+2.00%	Yes	100,000–10,000,000 Baht
14	SCB	My Business My Cash Loan (Using Collateral)	Initial MRR+1.40%	Yes	100,000–20,000,000 Baht
15	SCB	Single Account Juristic Person Business Loan without collateral	Initial MRR+6.00%	No	100,000–5,000,000 Baht
16	SCB	Refinance Business Loans (using collateral)	Initial MRR-0.50%	Yes	100,000–50,000,000 Baht
17	SCB	Business credit growth (using collateral)	Initial MRR+0.50%	Yes	100,000–50,000,000 Baht
18	SCB	Loans for medical professionals	Initial MRR-1.25%	Yes	100,000–50,000,000 Baht
19	Kbank	Business Loan for online stores, Shoppee (Thailand) Co., Ltd.	Maximum 25%	No	10,000–1,000,000 Baht
20	Kbank	Low-interest loans to revitalize Thai tourism (GSB Soft Loan Travel) (Only for customer groups)	Year 1-2 : 2% per year Year 3-7 : Minium MRR+3% or equivalent	As agreed with the bank	10,000–100,000,000 Baht
21	Kbank	Rehabilitation loan by offering collateral (Only for customer groups)	Year 1-2 : 2% per year Year 3-5 : Not more than 7% per year Year 6-7 : as per the Bank's annoucement	As agreed with the bank	10,000–150,000,000 Baht
22	Kbank	Rehabilitation loan with TCG as a guarantee (Only for customer groups) (Only for customer groups)	Year 1-2 : 2% per year Year 3-5 : Not more than 7% per year Year 6-7 : as per the Bank's annoucement	TGC	10,000 – 150,000,000 Baht
23	Kbank	KCL loan project questionnaire (4 industries) (Only for customer groups)	n/a	No	10,000–300,000 Baht
24	Kbank	Sponsor Partner Loan (Type 2) (Only for customer groups)	1. MRR+3% or equivalent 2. MRR+5% or equivalent	TGC 100%	10,000–5,000,000 Baht
25	Kbank	K-SME Medical Credit (Type 2)	Minimum MRR or equivalent	As agreed with the bank	100,000–12,000,000 Baht
26	Kbank	K-SME Medical Credit (Type 3)	Without TGC – minimum MRR+1% or equivalent With TGC – minimum MRR+1.25% or equivalent	As agreed with the bank	100,000–12,000,000 Baht
27	Kbank	K-SME Medical Credit (Only for customer groups)	Minium MRR+2% or equivalent	TGC 100%	100,000–4,000,000 Baht
28	Kbank	Business Loan for online stores, Lazada (Thailand) Co., Ltd. (Only for customer groups)	Maximum 25%	No	2,000–1,000,000 Baht
29	Kbank	Purchase loan long-term installments for business (Only for customer groups)	Maximum 25%	No	20,000–1,000,000 Baht

30	Kbank	Purchase loan revolving for business (Only for customer groups)	Maximum MRR+13.00%	No	30,000–1,000,000 Baht

Source: Collected data from financial statements and annual reports

4.9.2 Distribution Channel

MSMEs have a variety of options for obtaining lending products, including banks, alternative lenders, and online platforms.

- **Banks:** MSMEs can obtain loans from CBs as well as SFIs. Banks generally offer a wide range of lending products available, including working capital loans, term loans, and equipment financing.
- **Alternative lenders:** MSMEs can also obtain financing from alternative lenders, especially from loan sharks, via informal lending. These lenders may offer more flexible terms and faster approval times than traditional banks, but they may also have higher interest rates or require a higher level of revenue or specific industry experience.
- **Digital personal loan platforms:** There are also a number of online platforms in Thailand that connect MSMEs with potential lenders, including LINE BK, Shopee, and recently MyMo, the mobile app from GSB that offers lending products to commercial shop owners and micro enterprises.

4.9.3 Competitor Benchmarking

Lending Business Growth

BBL has the largest size of total loans to customers portfolio, followed by KBank, SCB, BAY, KTB, TTB, and other financial institutions. The majority of CBs are continuing to expand their loan portfolios, particularly LH Bank, KKP, and TCRB, which all grew by double digits in 3Q2022. LH Bank has shifted its focus to mid-cap customers by establishing regional centers and offering differentiated Trade Finance and cross-border services. In addition to this, LH Bank is aggressively growing its small business lending by leveraging on BOT's soft loan program. LH Bank has also announced that it will launch nine hubs to penetrate SME markets in the upcountry of Thailand. These hubs will be located in Chonburi, Samut Sakon, Chiang Mai, Phitsanulok, Nakorn Ratchasima, Khon Kaen, Ubon Ratchasima, Surat Thani, and Phuket.

Table 32: Total Loans to Customers by Key CBs and Non-Banks

Total Loans to Customers (THB Billion)	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	3Q2022	CAGR '17-'21	CAGR' 19-'21	Growth %[a]
Key Commercial Banks									
BBL	2,004	2,083	2,061	2,368	2,588	2,797	6.6%	12.1%	10.8%
KTB	1,865	1,949	2,090	2,335	2,629	2,612	9.0%	12.2%	2.0%
KBANK	1,803	1,914	2,002	2,245	2,422	2,480	7.7%	10.0%	0.8%
SCB	2,035	2,141	2,114	2,255	2,302	2,345	3.1%	4.4%	2.9%
BAY	1,550	1,672	1,818	1,833	1,890	1,965	5.1%	2.0%	6.0%
TTB	611	687	1,392	1,393	1,372	1,394	22.4%	-0.7%	2.5%
KKP	212	228	237	265	307	366	9.7%	13.8%	25.7%
UOB	351	383	415	432	485	323	8.5%	8.1%	5.7%
CIMBT	218	235	226	227	212	224	-0.7%	-3.1%	3.5%
TISCO	271	261	243	225	203	213	-7.0%	-8.6%	4.3%
LH Bank	154	159	156	161	179	198	3.8%	7.1%	14.6%
TCRB	39	45	51	69	98	118	25.9%	38.9%	27.6%
Average Growth for Selected key CBs (Exclude TCRB)							7.1%	7.0%	5.0%

Non-Banks									
MTC	35	47	59	71	92	115	27.5%	24.9%	35.1%
KTC	73	78	86	94	92	96	5.8%	3.4%	11.4%
TIDLOR	34	43	50	53	63	78	16.8%	12.2%	34.1%
SAWAD	26	34	43	45	39	61	11.3%	-4.8%	4646.3%
EASYBUY	51	54	57	58	57	58	2.7%	0.0%	1.1%
HENG	-	-	12	11	11	14	n/a	-4.3%	28.6%
SAK	5	7	7	6	9	10	18.1%	13.4%	25.2%
SGF	2	2	2	3	3	2	16.1%	22.5%	22.4%
GCAP	2	2	3	3	2	1	1.6%	-18.4%	-22.8%
AEONTS	66	76	83	91	88	95	7.5%	3.0%	5.3%
						Average Gowth for Selected Non-Banks	11.6%	6.5%	20.3%

Source: Collected data from financial statements and annual reports

Growth from 3Q2021 to 3Q2022

The Competitive Advantage for Lending Businesses

Bangkok Bank (BBL), Krungthai Bank (KTB), and Kasikornbank (KBank) are three major players in the Thai banking market, with each having its own competitive advantages in the lending business. BBL boasts a large corporate customer base, experienced and knowledgeable staff, and a wide network of branches. KTB has strong government support, a large digital customer base, and a large branch network. KBank is dominant in digital payment, innovative lending solutions, and has a strong digital customer base. These key competitive advantages have helped each bank maintain its position as a competitive and reliable financial institution in the Thai market.

Bangkok Bank (BBL): Key Competitive Advantages for Lending Businesses

The Thai banking market has become increasingly competitive in recent years, with new entrants offering innovative products and services. This has made it more challenging for Bangkok Bank to maintain its position as a leading player in the market. However, for the lending businesses, BBL has its stronghold for corporate lending due to its strong reputation and brand recognition in the local market, a wide network of branches and ATMs, and a comprehensive range of financial products and services. Additionally, the bank continues to invest in technology and digital banking services, which helps it remain competitive. Overall, while it may have lost some ground, Bangkok Bank remains a major player in the Thai banking market and continues to be a competitive and reliable financial institution.

Key competitive advantages for lending businesses for BBL are as follows:

- Large customer base, especially for corporate accounts. Corporate accountes for approximately 43% of BBL's loan portfolio, reflecting its strong reputation in the market. Bangkok Bank has a strong reputation as a trusted and reliable financial institution in Thailand, with a long history of serving customers in the country. This has helped the bank establish a strong brand that is well-recognized and respected by customers, which has helped it attract and retain a large customer base.
- Experienced and knowledgeable staff: BBL employs a large and experienced staff of financial professionals, especially to serve corporate customers. Based at their Head Office, BBL employed specialists in 25 divisions

classified by industry and customer groups, such as energy, petrochemical, automotive, telecommunications, construction, services, and agribusinesses.

- A wide network of branches in Thailand with a total of approximately 923 branches and 8,165 ATMs nationwide. This makes it easy for customers to access banking services and manage their finances, regardless of where they are located in the country.

Krungthai Bank (KTB): Key Competitive Advantages for Lending Businesses

Krungthai Bank (KTB) is a state enterprise listed on the Stock Exchange of Thailand. At the end of September 2022, KTB was the second-largest CB in terms of lending. KTB is obligated to continue supporting government projects as its major shareholder is a government entity. KTB continues to gain benefits from the Government's initiatives to digitalize the banking industry. During the pandemic, KTB adopted several digital platforms to support government projects, including the Pao Tang and Tung Ngern mobile apps aimed at retailers and small merchants. This also enables the bank to cross-sell its products and expand its loan portfolio to untapped segments. Currently, KTB has a customer base of 40 million digital users who access its services through digital platforms, making it potentially the largest of its kind in Thailand. This customer base consists of 13 million users of the Krungthai NEXT platform, 33 million users of the Pao Tang app, and 1.5 million users of the Tung Ngern app. It is worth mentioning that some customers utilize multiple applications, resulting in overlap among the user figures[24].

Key competitive advantages for lending businesses for KTB are as follows:

- Strong government support: KTB is obligated to support government projects, which provides a stable source of funding for the bank and helps to diversify its loan portfolio.
- Large digital customer base: Krungthai Bank has a customer base of 40 million digital users, making it one of the largest of its kind in Thailand. This large customer base provides the bank with a strong foundation for cross-selling its products and expanding its loan portfolio to new segments.
- A large branch network. KTB has about 1,000 branches nationwide.

Kasikornbank (Kbank): Key Competitive Advantages for Lending Businesses

Kbank announced its market strategies including (1) dominating digital payment and (2) reimaging commercial and consumer lending. KBank is the leader in SME loans with an expansion strategy to offer various products matched to customers' needs with risk-based offerings through "Self-Apply" via digital channels by utilizing data analytics to expand credit opportunities. By the end of 2022, KBank has totaled 21.3 million digital users, a 9.3% increase compared to the previous year. The bank continues to penetrate into unbanked and underbanked market segments via partnership, including LINE BK as social media banking, working with a major retail group to give upcountry mom-and-pop store

[24] Source: Equity research company report, Krungthai Bank, FSS International Investment Advisory, 6 January 2022 (Link)

operators easier access to loans without collateral, as well as providing loans to the stores' customers and adopting new system and processes for simpler and faster loan consideration.

Key competitive advantages for lending businesses for KBank are as follows:

- Dominance in digital payment: KBank's focus on dominating digital payment gives it a competitive advantage in the lending business as it makes loan applications and services easier and more accessible for customers.
- Innovative lending solutions: KBank's strategy to reimagine commercial and consumer lending by offering various products matched to customers' needs with risk-based offerings through digital channels, utilizing data analytics, and expanding credit opportunities makes it a competitive lender in the market.
- Strong digital customer base: KBank has a strong digital customer base, with a total of 21.3 million digital users as of the end of 2022, a 9.3% increase from the previous year. This gives the bank a foundation for expanding its loan portfolio and reaching new segments.

The Competitive Advantages of Small and Medium Banks for the SME Lending market

While large commercial banks have historically dominated the SME lending market in Thailand, small and medium-sized banks have been able to carve out a niche for themselves by focusing on the SME sector. These banks often have a deeper understanding of the SME market and are better able to respond to the unique financing needs of SMEs. In addition, small and medium-sized banks tend to be more flexible in their lending practices, allowing them to tailor financing solutions to meet the specific needs of their clients. This flexibility can be a key competitive advantage, as it allows these banks to offer more customized and responsive service to SMEs than larger banks that may have more rigid lending policies.

Thai Credit Retail Bank (TCRB) is a medium-sized bank with a long-standing focus on the SME segment, providing a wide range of financing products and services tailored to the needs of SMEs. As a bank that has been serving the SME market for an extended period, TCRB has developed the experience and expertise necessary for an effective evaluatation of the risk associated with lending to SMEs, giving it a competitive advantage in the market. With a strong focus on the SME sector, TCRB is well-positioned to navigate the current challenges facing the sector and capture the opportunities associated with the SME lending market's recovery.

Overall, while small and medium-sized banks face significant challenges in competing with larger banks in the SME lending market, they also have unique advantages that can help them succeed. By leveraging on their deep understanding of the SME market, offering more flexible and responsive lending practices, and leveraging on technology to enhance the customer experience, small and medium-sized banks such as TCRB can differentiate themselves and capture opportunities in the growing SME lending market in Thailand.

The Competitive Advantages of Non-Banks

For non-banks, the top three key players are Muangthai Capital (MTC), Krungthai Card (KTC), and Ngern Tid Lor (TIDLOR). Each of these companies has its own unique competitive advantages that have allowed them to become leaders in the market. MTC is the largest listed non-bank personal and auto title loan service provider in Thailand, with a wide network of branches and a diverse range of financial products. KTC is a market leader in the credit card industry, with a strong presence in the personal loan and auto-title loan businesses. TIDLOR is a provider of auto title loans and insurance brokerage services, leveraging on its digital technology development to offer innovative financial services with relatively lower risks. These companies are driving growth and success in the lending industry in Thailand.

Muangthai Capital (MTC): Key Competitive Advantages for Lending Businesses

MTC is the largest listed non-bank personal and auto title loan service provider in Thailand, with 6,547 branches nationwide and the aim to expand into 7,200 branches by the year 2023. MTC aims to expand its business by expanding a new customer base with demand through branch operations nationwide and offering a wide range of financial products, including vehicle title loans - car, tractor, and motorcycle. The company has the highest market share in Thailand. It also offers personal loans, nano loans, hire purchase loans, and land title loans.

Key competitive advantages for lending businesses for MTC are as follows:

- Wide network of branches nationwide: MTC has the largest network of branches in Thailand, with 6,547 branches nationwide, and plans to expand to 7,200 branches by 2023, giving the company a wide reach for attracting new customers and expanding its customer base.
- One of the leading brands in the auto title loan market: MTC is one of the leading companies in the auto title loan market in Thailand. This gives the company a significant advantage in attracting customers looking for vehicle title loans, including cars, tractors, and motorcycles.
- Diverse range of financial products: MTC offers a wide range of financial products, including personal loans, nano loans, hire purchase loans, and land title loans, providing customers with multiple options for their financial needs. This diversity in offerings can attract a wider range of customers and provide a competitive advantage over other lending institutions that may have a more limited product portfolio.

Krungthai Card (KTC): Key Competitive Advantages for Lending Businesses

KTC is a market leader in the credit card industry, contributing to 66.7% of its total outstanding loans by the end of 2022. Additionally, KTC also holds a strong presence in the personal loan (32%) and auto-title loan (2.3%) businesses. The company boasts solid asset quality, with its credit card business having a low NPL rate of 1.1% by the end of 2022 due to a customer base primarily made up of middle-class income earners.

Recently, KTC has announced two new initiatives aimed at driving growth. The first, "MAAI By KTC," is a full-service loyalty platform in the form of a mobile app that leverages on the company's expertise in reward point systems and marketing. The second, "KTC P BERM," is an auto-title loan offered through Krungthai Bank and KTB Leasing networks nationwide. This service will primarily be marketed through online channels and will offer a range of products tailored to meet the needs of the market, including the "P BERM" cash card - the first vehicle title loan offered in the form of a cash card that allows for instant, all-in-one swipe-transfer-withdraw-pay in installments.

Key competitive advantages for lending businesses for KTC are as follows:

- Strong partnership with KTB: KTC has the benefit of partnering with Krungthai Bank (KTB), allowing it to leverage on KTB's extensive network and resources to further expand its business. This partnership will play a key role in the company's ongoing growth and success in the lending industry.
- Strong presence in the credit card business: KTC holds a large portion of its total outstanding loans in the credit card business, which is the retail banking that requires a strong marketing campaign to keep its growth momentum. KTC has proven expertise in mange reward point systems and retail marketing.

Ngern Tid Lor (TIDLOR): Key Competitive Advantages for Lending Businesses

TIDLOR is a provider of auto title loans and insurance brokerage services with a nationwide network of 1,574 branches and over 60,000 touchpoints, including Krungsri branches, agents, used truck dealers, telesales, and ATMs. To minimize the impact of price wars on auto title loans and increase its loan portfolio, TIDLOR has implemented a customer retention strategy. The TIDLOR Card, a revolving cash card, is one of their flagship products, allowing title loan customers to withdraw cash up to their available credit limit from any ATM nationwide, making it easier for customers to access money without the need for an application process or a trip to a branch. TIDLOR's competitive advantage lies in its digital technology development, which allows the company to offer innovative financial services with relatively lower risks through the utilization of customer data.

Key competitive advantages for lending businesses for TIDLOR are as follows:

- Nationwide network with over 60,000 touchpoints, including branches, agents, used truck dealers, telesales, and ATMs, providing broad access to customers
- Customer retention strategy to minimize the impact of price wars and significantly increase loan portfolio
- Innovative financial services enabled by digital technology development, leveraging on customer data to offer services with relatively lower risk

Profit After Tax Growth

Most commercial banks, as well as non-banks, continued to keep their profit after tax momentum on its 9M2022 despite the uncertain economic growth from the global economic outlook. KTB has the highest growth rate in its 9M2022 as compared to the same period last year, up to 53.7% resulting from the quality loan growth, especially in corporate and retail lending, and the benefits arising from a hike in policy interest rate. KKP also experienced a jump in profit after tax as a result of its growth across all segments which also focus on selected quality segments, especially from hire purchase, housing, and corporate segment.

Table 33: Profit After Tax by Key CBs and Non-Banks

Profit aAter Tax (THB Million)	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	9M2021	9M2022	CAGR'17-'21	CAGR'19-'21	Growth %[a]
Key Commercial Banks										
SCB	43,205	40,095	40,251	26,994	35,599	27,582	30,132	-4.7%	-6.0%	9.2%
KBANK	34,338	38,459	38,727	29,487	38,053	28,152	32,579	2.6%	-0.9%	15.7%
KTB	22,440	28,491	29,284	16,732	21,588	16,644	25,589	-1.0%	-14.1%	53.7%
BAY (Krungsri Bank)	23,209	24,813	32,749	23,040	33,794	27,409	23,322	9.8%	1.6%	-14.9%
BBL	33,009	35,330	35,816	17,181	26,507	20,189	21,736	-5.3%	-14.0%	7.7%
TTB	8,687	11,601	7,222	10,112	10,474	7,675	10,348	4.8%	20.4%	34.8%
KKP	5,737	6,042	5,988	5,123	6,318	4,295	6,172	2.4%	2.7%	43.7%
TISCO FG	6,117	7.043	7,273	6,063	6,784	4,990	5,418	2.6%	-3.4%	8.6%
UOB	3,525	4,326	4,564	1,650	4,641	n/a	n/a	7.1%	0.8%	n/a
TCRB	531	771	710	1,373	1,935	1,432	1,965	38.1%	65.0%	37.2%
LHFG	2,603	3,108	3,215	2,057	1,384	1,757	1,234	-14.6%	-34.4%	-29.8%
Average Growth for Selected Key CBs (Exclude TCRB)								0.31%	-5.0%	12.9%
Non-Banks										
KTC	3,304	5,140	5,524	5,333	5,879	4,631	5,414	15.5%	3.2%	16.9%
MTC	2,501	3,713	4,237	5,214	4,945	3,845	3,961	18.6%	8.0%	3.0%
EASYBUY	3,979	4,757	5,202	4,793	4,354	2,945	3,466	2.3%	-8.5%	17.7%
SAWAD	2,667	2,768	3,756	4,508	4,722	3,579	3,263	15.4%	12.1%	-8.8%
AEONTS	2,966	3,506	3,975	3,690	3,553	2,643	3,122	4.6%	-5.5%	18.1%
TIDLOR	1,247	1,306	2,202	2,416	3,169	2,374	2,823	26.3%	20.0%	18.9%
SAK	290	399	346	562	607	422	503	20.3%	32.5%	19.1%
HENG	38	152	189	318	354	222	253	74.6%	36.9%	14.2%
SGF	33	187	56	41	57	50	40	15.0%	0.9%	-19.1%
GCAP	27	55	53	4	(59)	(39)	(6)	n/a	n/a	-84.6%
KTC	3,304	5,140	5,524	5,333	5,879	4,631	5,414	15.5%	3.2%	16.9%
Average Growth for Selected Non-Banks								12.8%	3.9%	10.5%

Source: Collected data from SETSMART, financial statements and annual reports

[a]Growth from 9M2021 to 9M2022

Table 34: Key Financial Benchmarking – Commercial Banks (9M2022)

Key Commercial Banks	KBANK	SCB	BBL	KTB	BAY	TTB	TISCO	KKP	LHFG	TCRB
Key Financial Indicators										
Total Assets (Million Baht)	4,229,795	3,440,920	4,437,759	3,691,704	2,590,135	1,823,533	255,938	526,758	276,217	132,364
Net interest income (Million Baht)	96,851	78,526	71,769	65,798	61,800	37,791	9,389	13,555	4,509	8,152
Fees and service income (Million Baht)	36,148	36,306	30,350	20,998	17,976	10,293	4,054	5,302	728	408
Operating Income (Million Baht)	174,569	116,163	102,009	90,738	86,574	48,012	13,461	19,392	5,970	8,257
Net interest margin	3.26%	3.23%	2.28%	2.51%	3.44%	2.89%	5.10%	4.0%	2.39%	8.8%
Cost of Funds	0.59%	0.70%	0.96%	0.72%	0.96%	0.90%	1.07%	1.10%	N/A	1.4%
Cost income ratio	43.0%	42.6%	49.0%	43.1%	43.4%	44.7%	47.4%	39.8%	44%	39%*
Credit Cost (Bps)	159	132	120	86	132	131	N/A	171	101	239
Total other operating expenses (Million Baht	53,711	49,019	49,947	39,074	37,610	21,696	6,377	8,717	2,624	3,208
Profit before tax (Million Baht)	41,012	40,393	27,329	34,858	29,267	12,765	6,741	7,708	1,433	2,469
Loan to Deposit Ratio	93%	93%	88%	100%	115%	101%	117%	109%	107%	111.7%
Loan Loss Reserve / Coverage Ratio	148.7%	163.8%	240.1%	176.4%	175%	135%	248%	160%	207%	145.6%
Gross NPL Ratio	3.07%	3.34%	3.5%	3.3%	2.4%	2.7%	2.08%	3.2%	2.51%	4.3%
Return on Asset (calculated)	1.0%	1.2%	0.7%	0.9%	1.2%	0.8%	2.9%	1.7%	0.6%	2.1%
Return on Equity (calculated)**	8.8%	9.2%	5.8%	9.5%	9.7%	6.5%	17.8%	16.1%	4.4%	22.7%
Average ROE of selected key commercial banks (exclude TCRB) = 9.8%										
Tier 1 ratio	17.2	17.4	15.2	16.6	13.0	16.0	17.6	12.8	13.8	13.4
Total CAR ratio	19.2	18.5	18.5	20.6	17.6	20.0	21.5	16.2	15.9	14.4
CET 1 ratio	16.2	17.4	14.4	15.6	15.7	15.1	17.6	12.8	13.8	12.1
Tier 2 ratio	1.98	1.10	3.31	N/A	4.63	N/A	N/A	N/A	N/A	1.1

Source of information

Financial statements, Management Discussion and Analysis (MD&A) and Investor presentations

Calculated by Ipsos Strategy3

Average of 1Q2022, 2Q2022 and 3Q2022

* TCRB's 9M22 cost to income ratio includes adjustment for bad debt recovery and loss on sale of loans. TCRB's unadjusted 9M22 cost to income ratio is 38.9%.

**Annualized ROE = [Net Profit (9M2022) / Average Shareholders' Equity (9M2022 and FY2021)]/9*12

Table 35: Key Financial Benchmarking – Non-Banks (9M2022)

Non-Banks	MTC	AEONTS	KTC	TIDLOR	SAWAD	EASYBUY	HENG	SAK	SGF	GCAP
Key Financial Indicators										
Total Assets (Million Baht)	123,220	96,164	93,962	79,114	64,011	55,535	11,377	11,268	2,746	1,563
Net interest income (Million Baht)	11,858	12,888	7,329	8,144	5,366	9,616	1,183	553	299	90
Fees and service income (Million Baht)	540	683	5,759	1,874	N/A	N/A	142	7.4	N/A	N/A
Operating income (Million Baht)	14,401	14,269	14,102	10,886	5,950	9,838	1,475	1,689	1,637	155.1
Net interest margin	15.2%	18.4%	12.4%	15.9%	13.7%	22.3%	12.5%	7.7%	11.6%	7.2%
Cost of Funds	3.2%	2.7%	2.4%	2.5%	3.0%	1.4%	3.7%	3.1%	7.5%	7.8%
Average Cost of Funds of Non-Bank Lenders = 3.7%										
Cost income ratio	47.1%	39.4%	34.4%	55.7%	46.1%	25.8%	55.7%	52.3%	49.1%	80.2%
Credit Cost (Bps)	203	760	460	182	(23)	302	330	155	714	179
Operating Cost (Million Baht)	5,917	6,057	5,840	5,584	3,751	2,770	731	811	462	75.4
Profit before tax (Million Baht)	4,985	4,041	6,771	3,517	4,312.6	4,438	317	628	36.6	(7.5)
Coverage Ratio	102%	196%	449%	254%	51%	127%	77%	105%	128%	47%
Gross NPL Ratio	2.3%	11.0%	2.0%	1.5%	2.6%	6.6%	3.0%	2.6%	3.2%	4.8%
Debt to Equity Ratio	3.4%	3.3%	2.1%	2.2%	1.3%	6.6%	1.3%	1.2%	0.5%	2.1%
Return on Asset (calculated)	4.8%	4.5%	7.9%	5.2%	7.6%	8.4%	3.2%	6.4%	2.0%	-0.5%
Return on Equity (calculated)*	20.0%	20.0%	25.4%	16.0%	17.7%	14.3%	6.9%	13.3%	3.0%	-1.8%
Average ROE of selected NON-Banks = 13.5%										

Source of information

Financial statements, Management Discussion and Analysis (MD&A) and Investor presentations

Calculated by Ipsos Strategy3

Average of 1Q2022, 2Q2022 and 3Q2022

*Annualized ROE = [Net Profit (9M2022) / Average Shareholders' Equity (9M2022 and FY2021)]/9*12

Part 5: Bank Depository

5.1 Regulation Oversight

The bank depository market in Thailand is regulated by the BOT, the country's central bank. The BOT sets rules and regulations for bank depositories, and provides oversight and supervision to ensure compliance with these rules. The main objective of bank depository regulations in Thailand is to protect the investors' interests and ensure the financial system's stability and integrity.

The BOT has issued a number of regulations that apply to bank depositories in Thailand. These regulations cover a range of topics, including capital requirements, risk management, and reporting and disclosure. Bank depositories are also subject to other laws and regulations that apply to the financial sector in Thailand, including the Securities and Exchange Act and the Anti-Money Laundering Act.

5.1.1 Deposit Protection Agency (DPA)

The Deposit Protection Agency (DPA) is a government agency in Thailand that protects depositors in case of a bank failure. The DPA is a statutory body established under the Bank of Thailand Act of 1999 and is responsible for implementing the country's deposit insurance scheme. The DPA's main function is to provide compensation to depositors in the event that a bank fails and is unable to return their deposits. Contributions from banks fund the DPA, and it maintains a pool of funds that can be used to pay compensation to depositors.

The DPA covers deposits in banks and other financial institutions licensed by the Bank of Thailand. This includes commercial banks and specialized financial institutions. The DPA does not cover deposits in non-bank financial institutions, such as finance companies and credit cooperatives.

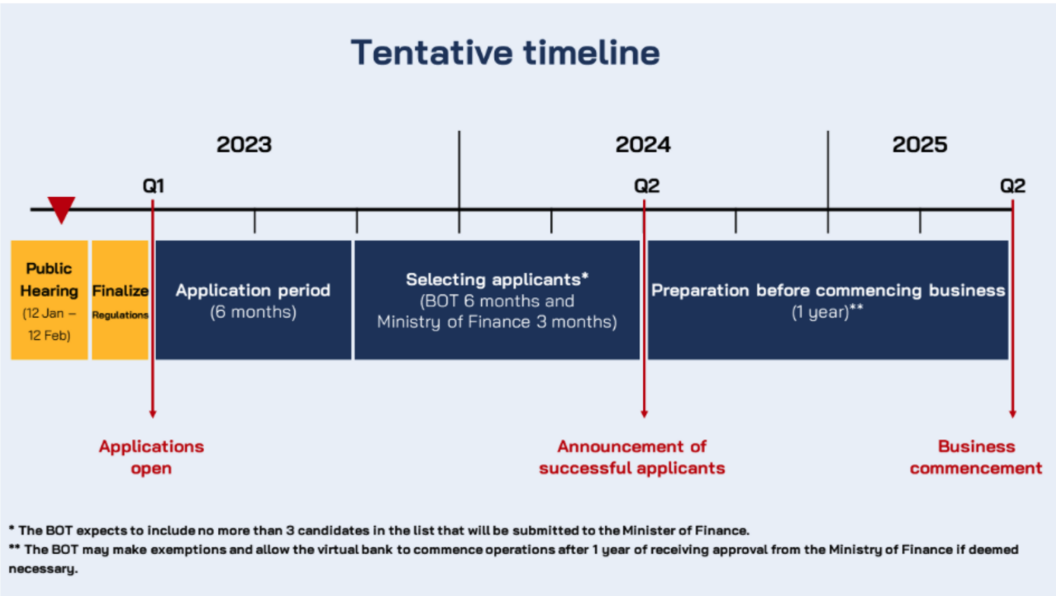
The DPA's compensation scheme is designed to protect depositors from losses in the event of a bank failure. The maximum amount of compensation that a depositor can receive from the DPA is limited to 1 million Baht per depositor per bank.

5.1.2 Virtual Bank

In January 2023, the BOT released a consultation paper for the virtual bank licensing framework as part of its investigation into the creation of virtual banks as new financial service providers. The BOT outlined the main differences between traditional banks that offer mobile and internet banking services and virtual banks, stating that virtual banks are banks without physical branches and primarily provide a full range of services through digital channels. As a result, licence applicants must have technology, digital services, and data analytics expetise. Mobile and internet banking are just one service channel offered by traditional banks, while virtual banks can serve under-served and un-served customer segments, retail borrowers, and small and medium-sized enterprises. Additionally, virtual banks can use alternative data and technology to evaluate risks when lending to customers.

The BOT anticipates that introducing virtual banks will increase competition in the financial sector. The initial plan is to submit up to three names of qualified applicants to the Finance Ministry. Additional licences may be granted if it is determined that having more players would serve the BOT's objectives in developing the virtual banking industry. Additionally, virtual banks are open to qualified foreign investors who are allowed to own no more than 25% of a virtual bank, according to the Financial Institution Business Act of 2008. However, the BOT has the discretion to increase the foreign shareholding limit to a maximum of 49% on a case-by-case basis. Newly established virtual banks shall have a paid-in capital of at least 5 billion Baht on the day of business commencement. The level of paid-in capital shall gradually increase to at least 10 billion Baht before the virtual banks complete the restricted phase during the first 3-5 years and operate in a full-functioning manner.

The public hearing and regulation process are expected to be completed by the end of 1Q2023. After that, the application period will be open for six months. The selection of applicants will be announced in 2Q2024. The selected virtual banks will have one year to prepare before commencing business, which is expected to be in 2Q2025.



Source: Bank of Thailand

5.2 Market Landscape – Bank Deposits

5.2.1 Overall Market Landscape

The commercial bank depository market in Thailand is highly competitive, especially after the hike in the policy interest rate on 30th November 2022 by 25 basis points to 1.25% as the BOT tries to tamp down inflation and keep pace with interest rate rises in other markets to shore up the Baht. The top 6 largest commercial banks in Thailand focus on their strategy to grow its digital banking customer base with the offer of an easy-to-use and attractive interest rate for their digital depository products. On the other hand, small and medium-sized commercial banks offer high-interest rates for time deposits to attract capital to bolster their lending business, similar to the SFIs that have aggressively launched new high-interest depository products to grow their deposit accounts.

5.2.2 Market Size by CBs, Depositors, and Account Type

Thailand has a total of approximately 16.8 trillion Thai Baht on deposits from commercial banks, of which 13.9 trillion Thai Baht come from individual and business accounts. Total deposits for businesses accounts stood at 5.1 trillion Thai Baht by the end of October 2022, which grew by 5.3% as compared to the previous year or at a CAGR of 6% between the year 2015 to 2021. The growth pattern is similar to the individual account with approximately 8.8 trillion Thai Baht in deposits with an increase of 4.2% compared to the previous year. Growth in deposits amount attributed mainly to savings accounts. Overall, saving accounts shared approximately 68.6% of total deposit amounts of businesses and individual accounts and grew by a CAGR of 9.8% per year between 2015 to 2021.

Table 36: Total Deposition Amount by Type of Account

Deposits	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Oct-22	CAGR'15-'21	Change %[a]
Number of Account ('000 Accounts)										
Demand deposit	2,415	2,375	2,429	2,525	2,585	2,629	2,617	2,675	1.3%	2.3%
Savings	76,945	79,271	83,613	88,593	90,395	95,524	103,064	109,643	5.0%	8.1%
Time <= 3 month	4,110	4,138	4,117	4,035	3,956	3,942	4,009	3,913	-0.4%	-2.9%
Time > 3 – 6 month	1,003	1,036	983	988	952	932	846	863	-2.8%	1.1%
Time > 6 month – 1 Year	2,503	2,425	2,440	2,522	2,608	2,612	2,568	2,480	0.4%	-4.2%
Time > 1 – 2 Year	1,165	1,045	960	897	925	721	518	477	-12.6%	-8.8%
Time > 2 Year	461	359	305	324	295	268	213	205	-12.1%	-5.3%
Total Deposits	88,602	90,648	94,847	99,883	101,716	106,627	113,834	120,257	4.3%	7.1%
Deposit Amount (THB Billion)										
Demand deposit	641	615	686	660	708	820	987	1,036	7.4%	5.3%
Savings	6,388	6,856	7,431	7,879	8,073	10,039	11,096	11,593	9.6%	5.7%
Time <= 3 month	1,103	1,161	1,181	1,177	1,152	1,051	1,004	1,141	-1.6%	8.7%
Time > 3 – 6 month	907	942	731	742	578	598	669	728	-4.9%	17.4%
Time > 6 month – 1 Year	1,951	2,008	2,112	2,107	2,317	2,215	1,956	1,722	0.0%	-16.2%
Time > 1 – 2 Year	778	563	625	719	1,115	635	325	439	-13.6%	44.0%
Time > 2 Year	378	288	296	308	203	183	160	167	-13.3%	3.8%
Total Deposits	12,146	12,433	13,062	13,592	14,145	15,542	16,198	16,825	4.9%	4.3%

Source: Bank of Thailand

Note: Data includes all type of depositors i.e. Government, State Enterprises and Government Agencies, Funds, Businesses, Individuals, local Financial Institutions, Non-profit Organizations, Banks and other Financial Institutions Oversea and Non-residents.

[a]Growth between October 2021 and October 2022

Table 37: Individuals and Businesses Deposits from all CBs

Deposits	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Oct-22	Proportion %	CAGR'15-'21	Change %[a]
Businesses											
Total Deposits	**3,435**	**3,644**	**3,822**	**4,040**	**4,215**	**4,615**	**4,880**	**5,101**	**100%**	**6.0%**	**5.3%**
Demand deposit	351	353	396	408	450	528	628	693	13.6%	10.2%	14.3%
Saving deposit	1,802	1,928	2,055	2,184	2,306	2,804	3,062	3,154	61.8%	9.2%	5.4%
Time deposit	1,282	1,363	1,371	1,448	1,459	1,283	1,190	1,253	24.6%	-1.2%	0.6%
Individuals											
Total Deposits	**6,456**	**6,666**	**6,908**	**7,235**	**7,461**	**8,291**	**8,624**	**8,847**	100.0%	**4.9%**	**4.2%**
Demand deposit	69	72	72	68	63	68	73	72	0.8%	1.1%	-1.7%
Saving deposit	3,497	3,866	4,126	4,381	4,392	5,572	6,244	6,408	72.4%	10.1%	4.9%
Time deposit	2,890	2,728	2,710	2,786	3,006	2,651	2,306	2,368	26.8%	-3.7%	2.4%
Businesses and Individuals											
Total Deposits	**9,891**	**10,310**	**10,730**	**11,274**	**11,676**	**12,906**	**13,503**	**13,948**	100.0%	**5.3%**	**4.6%**
Demand deposit	419	425	468	476	513	596	702	765	5.5%	9.0%	12.6%
Saving deposit	5,300	5,794	6,181	6,564	6,698	8,377	9,306	9,562	68.6%	9.8%	5.1%
Time deposit	4,173	4,091	4,081	4,234	4,465	3,933	3,496	3,621	26.0%	-2.9%	1.8%

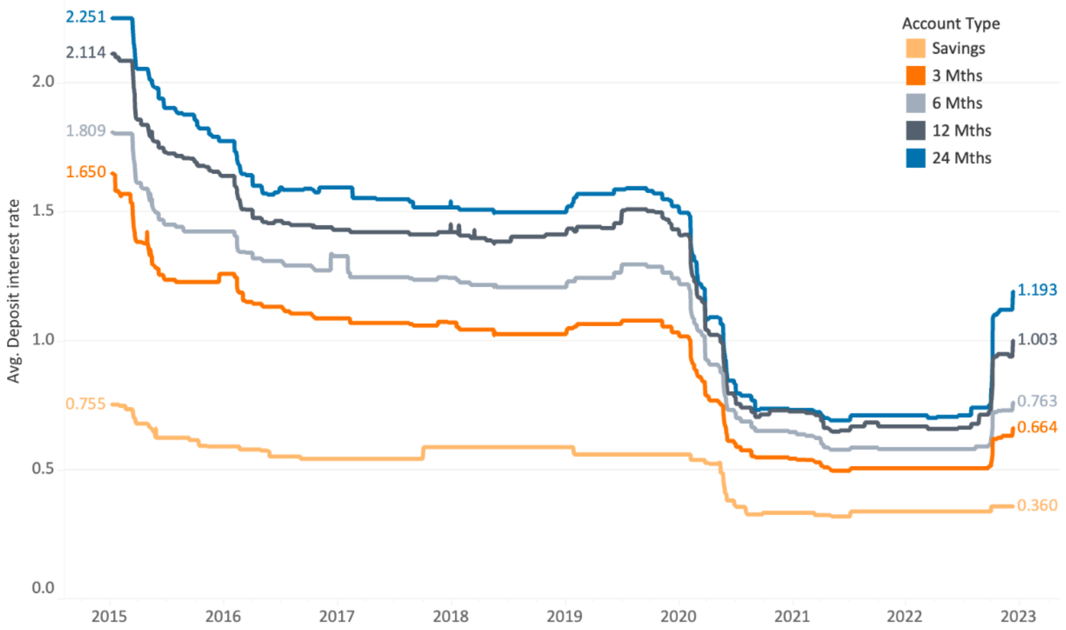
Source: Bank of Thailand

[a]Growth between October 2021 and October 2022

5.2.3 Deposit Interest Rate Trends

Following the policy interest rate hike, commercial banks' deposit rates began to raise deposit rate. By the end of 2022, the average deposit interest rate for selected commercial banks' saving accounts is 0.360% while the three months average deposit rate is 0.664%, the six months average deposit rate is 0.763%, the 12 months average deposit rate is 1.003%, and the 24 months deposit rate is 1.193%.

Chart 22: Average Deposit Interest Rate of Selected CBs



Source: Bank of Thailand, average deposit interest rate of key commercial banks in Thailand including Bangkok Bank, Kasikorn Bank, Krung Thai Bank, Siam Commercial Bank, Bank of Ayudhya, TMB Thanachart Bank (TMB Bank and Thanachart Bank), Tisco Bank, Kiatnakin Bank, Land and House Bank and, Thai Credit Retail Bank as of December 9, 2022

Forthe year 2023, the policy interest rate is anticipated to continue to increase as the Thai economic recovery gradually improves. The BOT forecasted the economy to grow at 3.7% in 2023 and continue its recovery momentum in 2024, with the GDP to grow by approximately 3.9%. The tourism sector is expected to remain a key driver of Thailand's growth as the number of foreign tourists continues to rise. The BOT also predicted that average headline inflation would come to 6.3% in 2022, peaking in the third quarter, before falling to within the target range of 3.0% in 2023 and 2.1% in 2024.

5.2.4 Average Deposit Amount per Account and Trend

Approximately 88.2% of the country's depositors have lower than 50,000 Thai Baht in their accounts or, on average, approximately 4,036 Baht. The majority of accounts with deposit amounts lower than 50,000 Baht are also saving deposits which yield returns lower than time-fixed deposit accounts. The majority of the deposit amounts (approximately 44.7%) belong to 0.1% of depositor accounts. In general, Thai savings is characterized by high concentration in deposits among the wealthy and low savings and deposit amounts in accounts that offer low returns.

Table 38: Average Deposition Amount Classified by Sizes and Maturity by the End of October 2022

Deposit	Demand Deposit	Savings Deposit	Time Deposit	Total Deposit	% Propotion
No. of Accounts					
<= 50,000 Baht	2,429,591	97,714,698	5,928,866	106,073,155	88.2%
> 50,000-100,000 Baht	52,665	3,620,195	435,940	4,108,800	3.4%
> 100,000-200,000 Baht	44,952	2,878,090	418,085	3,341,127	2.8%
> 200,000-500,000 Baht	49,832	2,656,710	452,983	3,159,525	2.6%
> 500,000-1,000,000 Baht	29,751	1,303,441	278,281	1,611,473	1.3%
> 1-10 million Baht	55,832	1,365,584	372,839	1,794,255	1.5%

> 10 million Baht	12,821	104,747	51,162	168,730	0.1%
Total	**2,675,444**	**109,643,465**	**7,938,156**	**120,257,065**	**100.0%**
Deposit Amount (Million Thai Baht)					
<= 50,000 Baht	7,559	386,835	33,684	428,078	2.5%
> 50,000-100,000 Baht	3,791	255,734	30,765	290,291	1.7%
> 100,000-200,000 Baht	6,407	399,984	56,340	462,731	2.8%
> 200,000-500,000 Baht	16,032	832,654	145,546	994,230	5.9%
> 500,000-1,000,000 Baht	21,222	916,240	204,820	1,142,281	6.8%
> 1-10 million Baht	174,400	3,222,330	1,009,766	4,406,497	26.2%
> 10 million Baht	692,559	4,584,117	2,242,227	7,518,905	44.7%
Total	**1,036,423**	**11,592,539**	**4,196,131**	**16,825,093**	**100.0%**
Average amount per account (Thai Baht)					
<= 50,000 Baht	3,111	3,959	5,681	4,036	
> 50,000-100,000 Baht	71,983	70,641	70,572	70,651	
> 100,000-200,000 Baht	142,530	138,976	134,757	138,495	
> 200,000-500,000 Baht	321,721	313,415	321,306	314,677	
> 500,000-1,000,000 Baht	713,321	702,939	736,019	708,843	
> 1-10 million Baht	3,123,657	2,359,672	2,708,316	2,455,892	
> 10 million Baht	54,017,549	43,763,707	43,826,023	44,561,755	
Total	387,384	105,729	528,603	139,909	

Source: Bank of Thailand

Note: Data includes all type of depositors i.e. Government, State Enterprises and Government Agencies, Funds, Businesses, Individuals, local Financial Institutions, Non-profit Organizations, Banks and other Financial Institutions Oversea and Non- residents.

[a]Growth between October 2021 and October 2022

5.2.5 Depositors' Behaviors Toward Digitalization and Product Selection

The behavior of Thai people in retail banking and deposits can vary depending on a number of factors, such as age, income level, and overall financial situation. However, some common trends have emerged in recent years.

One obvious trend that has been observed is an increase in the use of online and mobile banking services. Based on the recent Visa Consumer Payment Attitudes, 81% of Thai consumers are aware of the concept of digital banking – online or mobile services. The respondents also cited convenience as their top motivation in adopting digital banking (61%), followed by not having to wait in line at banks (60%) and finding it a faster way of banking (57%). In addition, the top five services that Thai consumers are looking to receive from digital banks are deposits and withdrawals (72%), paying bills (70%), transferring money to family and friends (69%), payment at retail locations (67%) and investment (58%)[25]. As smartphones and other digital technologies have become more affordable and widely available in Thailand, more and more people are turning to these services to manage their finances and make deposits. This has been particularly true among younger people and those in urban areas, who tend to be more tech-savvy and have greater access to high-speed internet.

In response to the customer behaviour change toward digital banking, retail banks introduced innovative deposit products offereing higher interest rates than traditional savings deposit accounts that allow customers to conduct financial transactions via mobile banking. Intense competition among retail banks has encouraged financial service providers to

[25] Source: Nation (2022), Visa Consumer Payment Attitudes Study (Link)

lure depositors with different features and conditions in addition to attractive interest rates. Therefore, consumers have more choices in finding an e-savings account.

Table 39: Digital deposit products via Mobile Application

Mobile Application	Average Interest Rate	Condition
Chill D Savings by CIMB Thai	Not over THB 10,000 (A) – 0.50% Over THB 10,000 up to THB 50,000 (B) – 2.00% Over THB 50,000 up to THB 100,000 (C) – 1.00% Over THB 100,000 (D) – 0.20%	• No minimum deposit
Kept by Krungsri	Kept Savings – 0.10% Grow Savings – 1.5% for 1st to 24th Month Fun Savings – 0.10% + Bonus 0.90% (when achieving 10 deposits in amonth) Together Savings – 0.5%	• Deposit management under three accounts: Kept, Grow, Fun. The three will automatically function for maximum efficiency under the one wallet, two savings jars system. A new feature added, Together Savings that allow depositors to invite friends to join for savings. • No minimum deposit and 5 million Baht as a maximum
K-eSavingsAccount via MAKE by Kbank	Not over THB 10,000 – 1.50% Over THB 100,000 – 0.50%	• Charge 50 Baht/month for accounts with no movement for 12 consecutive months and having account balances lower or equal to 2,000 Baht
EZ Savings Account by SCB	1-1,000,000 Baht – 1.5% More than 1,000,000 – 0.5%	• Open an account with a minimum of 500 Baht, no maximum amount for deposit • Charge 50 Baht/ month for accounts with no movement for 12 consecutive months and having account balances lower or equal to 2,000 Baht
Krungthai NEXT Savings	1-1,000,000 Baht – 1.5% More than 1,000,000 – 0.5%	• No minimum deposit • Charge 50 Baht/ month for accounts with no movement for 12 consecutive months and having account balances lower or equal to 2,000 Baht
KKP SAVVY via KKP Mobile	Not over THB 10,000 – 0.50% Over THB 10,000 up to THB 1,000,000 – 1.50% Over THB 1,000,000 up to THB 2,000,000 – 1.60% Over THB 2,000,000 - 0.50%	• No minimum deposit • Charge 50 Baht/ month for accounts with no movement for 12 consecutive months and having account balances lower or equal to 1,000 Baht
LINE BK – Special Rate Account Power by Kbank	6 months – 1.0% 12 months – 1.5%	• Deposit between 100 Baht to 500,00 Baht • Special rate account is eligible to only those who achieve savings target • No fees to keep the account between 11 September 2022 to 10 September 2024

Source: Collected data from sales sheet of retail banks' website – as of 15 December 2022

Among retail banks with digital savings deposits, CIMB Thai Bank offers the highest interest rate for up to 2% for depositors with savings of more than 10,000 Baht but not exceeding 50,000 Baht. Kept by Krungsri is another digital savings product offered by BAY with features and conditions designed to encourage good savings habits. Other retail banks that offer e-savings account via mobile application include Kasikornbank, BAY, and SCB, which offer special interest rates of 0.5% to 1.5% of their e-savings account only.

Kiatnakin Phatra Bank (KKP) also offers an attractive interest rate for digital savings deposits of up to 1.60%, applicable for 1 to 2 million Baht deposits. Meanwhile, Line BK, a new fintech platform that is a collaboration between KBank and Line Corporation, introduced Line Special Rate Account offer to compete in the e-savings market with an attractive deposit interest rate of 1.5% for 12 months savings accounts.

In addition to digital deposit products, another trend observed is a growing preference for fixed-term deposits, which offer higher interest rates than regular savings accounts. This is likely due in part to the low-interest rates that have been in place for many years, making it difficult for people to earn decent returns on their savings. Fixed-term deposits allow people to lock in a higher interest rate for a set period of time, which can be a more attractive option for those who want to grow their savings.

5.3 Competitive Market Assessment – Bank Depository

5.3.1 Key Players and Competitive Advantage

The level of competition in the bank deposit market in Thailand is influenced by a range of factors, including the size and reputation of the banks, the range and quality of their products and services, and the level of convenience and accessibility they offer to customers. Two important factors that have contributed to the competitiveness of the bank deposit market in Thailand are its number of branch coverage nationwide. Larger CBs usually have a wide range of customer base which is the foundation of another competitive advantage could quickly build up digital banking users. Many banks now offer customers the ability to open and manage deposit accounts through mobile apps, which has made it easier for consumers to compare and choose the best deposit products for their needs.

Over 80% of deposit amounts are parked with the top 6 CBs, which are Bangkok Bank (BBL), Krung Thai Bank (KTB), Kasikornbank (KBank), Siam Commercial Bank (SCB), Bank of Ayduhya (BAY or Krungsri Bank) and TMBThanachart Bank (TTB). These top banks operate a total of 4,646 branches nationwide, excluding service points (which accounted for approximately 92% of all banks' branches and service points in Thailand). Despite the fact that Thailand's digital banking has been widely popular, the branch networks are still offering a competitive edge, especially for the upcountry market landscape. These top CBs also shared other competitive advantages including a strong brand reputation, a strong focus on digital banking, and a wide range of deposit products.

Table 40: Key Players – Average Deposit Amount Per Branch

Selected Commerical Banks	Number of Branches as of 3Q2022	Deposit Amount (as of 3Q 2022) – THB Million	Average Deposit Amount per Branch – THB Million
Bangkok Bank (BBL)	923	3,165,479	3,430
Kasikornbank (KBank)	831	2,659,896	3,201
Krung Thai Bank (KTB)	953	2,601,631	2,730
Siam Commercial Bank (SCB)	722	2,561,741	3,548
Bank of Ayudhya (BAY)	628	1,713,701	2,729
TMBThanachart Bank (TTB)	589	1,373,624	2,332
United Overseas Bank (UOB)	144	476,040	3,306
Kiatnakin Bank (KKP)	62	336,610	5,429
CIMB Thai Bank (CIMBT)	53	214,268	4,043
Land and Houses Bank (LH Bank)	74	210,360	2,843
Tisco Bank (Tisco Bank)	53	183,960	3,471
Thai Credit Retail Bank (TCRB)[a]	25	105,487	4,219
All selected Commercial banks	5,057	15,602,797	3,085

[a]TCRB has 2 types of branches (1) Deposit branch (25 branches) and (2) Lending branch (496 branches).

Exclude Standard Charter Bank (Thai) and ICBC Thai as their target niche customer segments and do not prioritzse micro enterprises as part of their main strategy

Source: Bank of Thailand and annual report of each commercial banks

5.3.2 Market Shares – Bank Depository

In terms of commercial bank depository, BBL has the highest market share of approximately 16.6% (as of end of 2021), followed by KTB (16.3%), KBank (16.1%), SCB (15.4%), BAY/Krungsri Bank (11.0%), TTB (8.4%) and others.

Table 41: Bank Depository (Billion Thai Baht)

CBs	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Sep-21	Sep-22	Market Share	CAGR'17-'21	Change %[a]
BBL	2,310.74	2,326.47	2,370.79	2,810.86	3,156.94	3,124.28	3,165.48	20.5%	8.1%	1.3%
KTB	2,070.88	2,039.60	2,155.86	2,463.23	2,614.75	2,582.23	2,601.63	17.0%	6.0%	0.8%
KBANK	1,878.67	1,995.00	2,072.05	2,345.00	2,598.63	2,531.29	2,659.90	16.9%	8.4%	5.1%
SCB	2,092.46	2,159.63	2,159.43	2,420.46	2,467.50	2,410.17	2,561.74	16.0%	4.2%	6.3%
BAY	1,319.23	1,426.35	1,566.88	1,834.51	1,779.14	1,782.94	1,713.70	11.6%	7.8%	-3.9%
TTB	643.42	649.68	1,398.11	1,373.41	1,339.20	1,325.19	1,373.62	8.7%	20.1%	3.7%
UOB	370.17	405.18	456.31	491.45	520.75	572.06	476.04	3.4%	8.9%	-16.8%
KKP	132.88	181.69	172.17	251.53	288.38	260.76	336.61	1.9%	21.4%	29.1%
LH Bank	143.73	168.16	164.98	182.72	192.50	180.02	210.36	1.3%	7.6%	16.9%
CIMBT	177.40	185.10	199.03	193.96	182.17	199.72	214.27	1.2%	0.7%	7.3%
TISCO	180.80	193.11	216.08	203.47	166.54	168.81	183.96	1.1%	-2.0%	9.0%
TCRB	37.88	42.04	47.19	64.51	88.51	84.41	105.49	0.6%	23.6%	25.0%

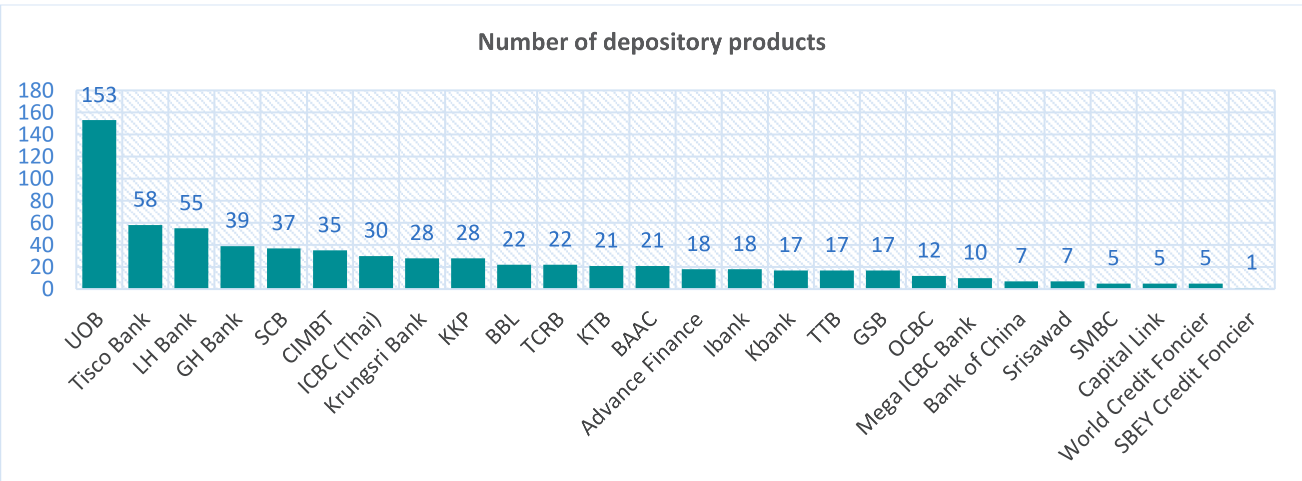
Source: Bank of Thailand

[a]Growth between September 2021 and September 2022

5.3.3 Key Products – Bank Depository

Based on the data as of 19 December 2022, there are a total of approximately 688 deposit products available from commercial banks in Thailand. UOB has the highest number of depository products (153 products), followed by Tisco Bank (58 products), LH Bank (55 products),and GH Bank (39 products), while the top 6 CBs ranked by depository amount usually have a range of 17 – 37 depository products.

Chart 23: Number of Depository Products



Source: Bank of Thailand as of December 19th, 2022

On average, large commercial banks' deposit interest rate offers are not as competitive as small and medium-sized banks. Tisco Bank, KKP, LH Bank, and TCRB are more competitive in terms of offering high deposit interest rates, especially for fixed deposit accounts.

Table 42: Deposit Rates Commercial Banks as of 9 December 2022

Selected Commercial Banks	Savings	Fixed Deposit			
		3 mths	6 mths	12 mths	24 mths
Bangkok Bank	0.4500	0.5500	0.6500	0.8000	1.0000
Krung Thai Bank	0.2500	0.4700	0.5500	0.7000	1.2000
Kasikornbank	0.2500	0.5700 - 0.6200	0.6500 - 0.7000	0.9500 - 1.0000	1.1500 - 1.2500
Siam Commercial Bank	0.2500	0.6200	0.7000	1.0000	1.3000
Bank of Ayudhya	0.2500	0.4500	0.5500	0.7000	0.8500
TMBThanachart Bank	0.1250	0.5500	0.7000	0.9000	1.2000
United Overseas Bank	0.1000-0.3500	0.4500-0.6000	0.2000-0.6000	0.2000-0.8000	0.2000-1.1000
CIMB THAI Bank	0.2000	0.4000	0.4000	0.5000	0.6000
TISCO Bank	0.2500-2.0000	0.9500-1.0000	0.9500-1.0000	1.1000	1.2500
Kiatnakin Phatra Bank	0.2500	0.5000-0.6500	0.7000-0.8500	1.0000-1.1500	1.1000-1.2500
Land and Houses Bank	0.2500	0.9000	1.0000	1.1500	1.2000
The Thai Credit Retail Bank	0.4000	0.9500	1.0500	1.3500-1.9000	1.5500
Min - Max of Commercial Banks registered in Thailand	0.1000-2.0000	0.4000-1.0000	0.2000-1.0500	0.2000-1.9000	0.2000-1.5500

Source: Bank of Thailand

With the recent hike in interest rates, many commercial banks launched new depository products with a high-interest rate as the key offering value in order to gain more liquidity to support the lending businesses, especially for Specialized Financial Institutions. Recently, the GSB offered a 4.5% depository interest rate for the 13th month of special depository accounts for both individuals and businesses with a yearly average interest rate of 1.35% per year (0.75% interest for the 1-6 months, 1.00% interest for the 7-12 months and 4.5% interest for the 13th month)[26].This newly launched product is in addition to its latest high depository interest rate for on-demand deposits for 12 years of savings that offer up to 3.67% depository interest rate per year. GHB also launched the new high-interest rate depository products that offer an average of 2.125% interest rate for a 3-years savings deposit.

Top commercial banks also launched new deposit products, especially in digital banking. TTB increased the depository interest rate for its TTB Me Save by 0.60% to 1.70% per year. BAY raised the depository interest rate for time deposits of 14 months by 0.25% to 1.25% per year, effectively since 6th December 2022. BAY's depository strategy also focuses on promoting its digital banking that offers interest rates as high as 1.50% on its Kept application. The trend to promote digital depository banking is also prevalent for the KKP that will focus on promoting its digital depository products that offer interest rates in a range of 1.60% to 2.00% (KKP Savvy 1.60%, KKP Start Saving 2% and, Dime Save).

5.3.4 Distribution Channel – Bank Depository

By the end of October 2022, there is a total of 5,779 branches and service points of Thailand's CBs . Between 2015 and 2021, the number of bank branches in Thailand decreased at a CAGR of 2.5% as commercial banks expanded their services through digital banking services. Traditional bank branches have been impacted by digital banking. With the

[26] Manager Online, ออมสินส่งเงินฝากเผื่อเรียกพิเศษ 13 เดือนมัดใจนักออม ชูดอกเบี้ยสูงสุด 4.5% ไม่เสียภาษี, 12 December - Link

growing availability of online and mobile banking services, many Thai customers can now conduct a variety of financial transactions without having to visit a physical bank branch.

As a result, the role of Thai bank branches has shifted, and they are now frequently used for customer service and advice rather than transactions. Many bank branches now provide specialized services like financial planning, investment advice, and wealth management in addition to more traditional services such as loan applications and account opening. However, it is important to note that bank branches continue to be an important part of Thailand's financial system and are widely used by many customers, particularly in rural areas. While the number of bank branches and service locations has reduced, per-branch deposit value has increased. By the end of October 2022, the average deposit per branch is approximately 2,952 million Thai Baht which is an increase of 11% compared to the previous year or an increased of an average of 7.6% per annum between the years 2015 to 2021.

Table 43: Average Deposit Value per Branch

Deposits	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	Oct-22	CAGR'15-'21	Change %[a]
Total Deposits (THB Billion)	12,146	12,433	13,062	13,592	14,145	15,542	16,198	16,825	4.9%	4.3%
Total Branches and Service Points	7,061	7,016	6,784	6,945	6,851	6,513	6,070	5,779	-2.5%	-6.0%
Average Deposit Value per Branch (THB Million)	1,703	1,760	1,911	1,940	2,048	2,362	2,643	2,952	7.6%	11.0%

Source: Bank of Thailand

[a]Growth between October 2021 and October 2022

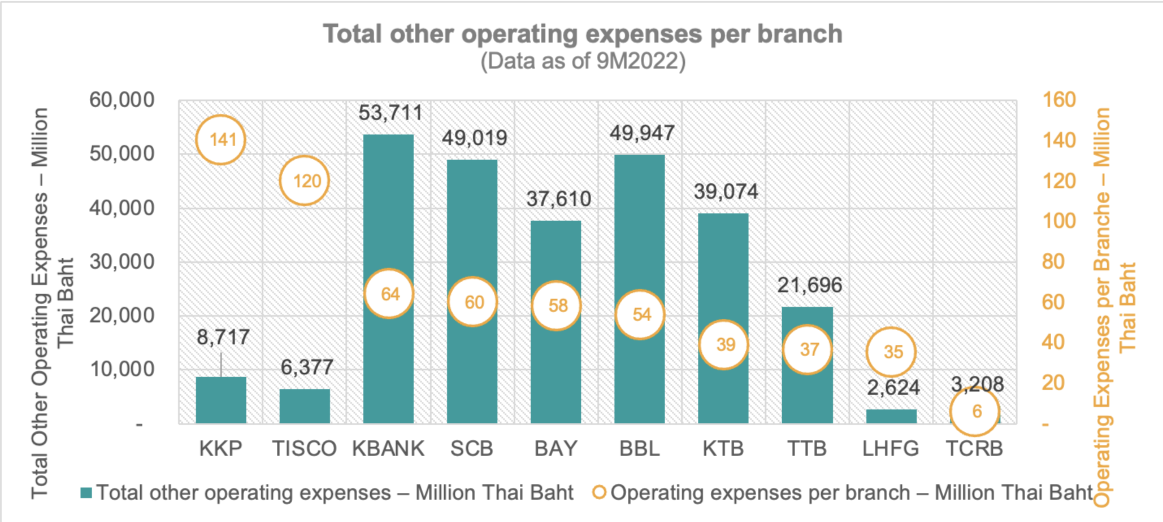
5.3.5 Key Drivers and Challenges – Bank Depository

One of the primary drivers for the bank depository market is the further interest rate hikes in 2023 and 2024 which are expected to be gradual as the economy is still in its early stage of recovery and supply-driven inflation is easing. Based on the forecast of the Kasikorn Research Center, the growth in total deposits for the year 2022 are expected to be approximately 3.5% to 3.7%, and for the year 2024, the total deposit amount is anticipated to grow by 4.0% to 5.5% as the MPC is likely to continue to hike the rate in the year 2023.

As the market for bank depository gradually increases, the competition is also becoming more intense. The top 6 CBs compete mainly through the digital banking customer base, while small and medium-sized banks offer high-interest rates to attract depositors, which is going to reflect their higher cost of capital. The challenge remains to be the ability of commercial banks to pass its cost to raise the loan interest rate and keep their competitiveness in their lending business.

Despite the attractive high interest rate offered by small and medium-sized banks such as TCRB, their low cost branch network could mitigate the impact of higher cost. TCRB operates its branches at a significantly lower cost per branch than other commercial banks. The bank collects deposits through a small number of deposit branches only, and the rest of their operating branches, including nano credit kiosks, are for lending, which requires less space and manpower, and are often located in areas with lower rental fees. This enables TCRB to keep its operating costs per branch significantly lower than those of other commercial banks.

Chart 24: Total Other Operating Expenses per Branch



Source: Total other operating expenses are collected from individual company's financial statement as of 9M2022, number of branches as per data reported to the BOT for the period of September 2022. Average operating expenses per branch is calculated by Ipsos Strategy3.

5.3.6 Barriers to Entry

There are several barriers to entry for banks in Thailand, which can make it difficult for new entrants to enter the market and compete with established players. Some of the main barriers to entry for banks in Thailand are as follows:

- Regulatory requirements: Banks in Thailand are subject to strict regulatory requirements, including capital adequacy ratios, risk management practices, and reporting obligations. These requirements can be complex and costly to comply with, which can be a barrier to entry for new entrants.
- Customer loyalty: Many customers in Thailand are loyal to their current banks and may be hesitant to switch to a new provider, especially for depository products. This can make it difficult for new banks to attract customers and build a sufficient customer base.
- Economies of scale: Established banks in Thailand often have large customer bases, which allows them to benefit from economies of scale. This can make it difficult for new banks to compete on price and can be a barrier to entry.
- Access to funding: Established banks in Thailand often have strong relationships with funding sources, such as wholesale funding markets, making it easier for them to secure funding. This can be a barrier to entry for new banks, who may struggle to access funding on competitive terms.

The competition for lending products is strong for existing commercial banks in the Thai market. Most CBs' strategies include retaining existing customers that prevent them from switching from one bank to another for their loan needs, particularly among MSMEs with a good credit track record. Some potential switching barriers for loans may include the following topics;

- **Complex application process**: Applying for a loan from a new bank can be time-consuming and requires extensive documentation,discouraging customers from switching banks for their loan needs.
- **Strong relationship with current bank:** Customers may have long-standing relationships with their current bank and may be hesitant to switch to a new one, even if it offers better loan terms.
- **Data availability to access ability-to-pay**: Digital banking can generate a wealth of data on customers and their loan activity. This data can inform decision-making and risk assessment, potentially leading to more informed and accurate lending decisions.

For bank depository, switching barriers are relatively lower than loans, simply because opening a new bank deposit account is generally less complex and time-consuming than applying for a loan, and deposits are generally considered lower-risk products than loans.

Part 6: Insurance Market

6.1 Regulation Oversight

The Thai insurance industry is governed by the Office of Insurance Commission (OIC), which supervises all insurance, reinsurance, and associated commercial operations conducted by insurers and reinsurers and reports to the Ministry of Finance. The Thai insurance sector is organized primarily into two categories: (i) life insurance and (ii) non-life insurance.

Life insurances include all kinds of income compensation for death, permanent disability, or elderly, which the insurance company pays to the insured or the designated beneficiary in accordance with the terms of the insurance policy. There are various types of life insurance, each with its coverage and benefits. There are now both standard and specialized life insurance policies: (i) Term Life Insurance; (ii) Whole Life Insurance; (iii) Endowment / Savings Insurance; and (iv) Annuity Insurance are the four categories of standard life insurance contracts while two categories of special life insurance are investment-linked life insurance and elderly-specific insurance.

Non-life insurances refer to all other types of insurance besides life-insurance in which the insurer undertakes to indemnify the insured for a certain amount of loss or damage caused by any risk. There are four categories of non-life insurances: (i) fire insurance, (ii) automobile accident insurance, (iii) marine and transport insurance, and (iv) other insurance.

In general, insurers are only permitted to conduct business specified in their business licences. An insurer can only engage in one type of insurance business, either life or non-life, but not both.

6.1.1 Insurance Intermediaries

Life and non-life insurance companies can offer insurance products via agents and insurance brokers, including private companies, public companies, and financial institutions, as well as telemarketing and online channels. Insurance brokers that earn commission from life and non-life insurance must obtain a licence from OIC.

Based on BOT Notification No 17-2551, commercial banks can conduct insurance broker businesses for life and non-life insurance products. With the insurance broker licence, commercial banks and insurance companies can engage in bancassurance partnerships for a distribution of insurance products. Currently, there is no regulatory restriction for an insurer to appoint a commercial bank as its distributor.

The commission rate of life insurance intermediaries in Thailand is regulated by the "Wage or Commission Rates for Life Insurance Agents and Brokers B.E.2551" law. According to the law, at year one, insurance intermediaries' commission shall not exceed 40% of the first year's premium, not less than 40% of the year one's wage or commission rate for the second year, and not less than 25% of the year one's wage or commission for the third year. The commission rate for the fourth year and beyond depends on what is considered appropriate by the relevant authorities. Wage or commission rates are paid for life insurance agents and brokers by an insurance company for policy riders whose contract term is less than one year.

For non-life insurance, commissions insurance intermediaries are usually capped at 18% of the premiums received. The commission rate varies for different types of non-life insurance products as follows;

For fire insurance, the commission is capped as follows:

- Year 1 to 3: 23%
- Year 4 to 9: 20%
- Year 10 to 14: 17%
- Year 15 to 19: 15%
- Year 20 to 25: 13%
- Year 26 to 30: Up to 12%.

The marine insurance commission is limited to a maximum of 13% of the premium. For auto insurance, the commission is 18% for voluntary coverage and 12% for mandatory coverage. Other types of non-life insurance typically have a commission cap of 18%.

6.1.2 COVID-19 Impact on the Insurance Market

Due to high competition in the non-life insurance market, together with the adverse effects of the COVID-19 situation in 2020 and 2021, many non-life insurers faced financial difficulties mainly due to a significant number of claims under COVID-19 insurance policies, especially lump-sum COVID-19 policies. The lump-sum COVID-19 policies promised to pay a fixed amount of compensation if the insured contracted COVID-19. This resulted in moral hazard, as some insured persons willingly contracted COVID-19 to benefit from the policy. At the height of the pandemic in Thailand, insurers faced financial distress and were unable to pay out claims and sought to cancel the policies. However, to protect the interests of policyholders, the OIC issued an order removing the insurers' right to terminate all COVID-19 policies.As a result, the licences of four non-life insurers were revoked.

6.1.3 Recent Regulatory Development

As part of the fourth Insurance Development Plan (No. 4), one of OIC's primary objectives is to enable digital transformation in the insurance industry. In 2020, the OIC issued notifications to temporarily allow face-to-face and bancassurance channels to offer insurance products digitally (excluding unit-linked insurance products and other complex life products). In 2021, the OIC also issued the "Insurance Regulatory Sandbox" regulation and the "Notification re: Criteria, Procedures, and Guidance for Participation in the Product Innovation and Customized Sandbox." This sandbox is intended to encourage product innovation in the insurance industry, particularly in terms of coverage, offering, services, and premium calculation factors. The sandbox is open to insurance companies and brokers.

6.2 Market Landscape – Insurance

Thailand's insurance market is evolving with high growth potential. Thailand’s overall insurance penetration rate is relatively lower than advanced markets in Asia, while the country is considered one of the most rapidly aging societies in the world. Thailand’s insurance premiums account for approximately 5.4% of the GDP, while it is 10.9% for Singapore, 11.5% for South Korea, and 7.1% for Japan. In 2020, insurance premiums amounted to 412 U.S. dollars per capita in Thailand which is approximately only 6% of the insurance density for Singapore or 11% for South Korea, and 14% for Japan. Compared to neighbouring countries of emerging markets, Thailand’s insurance penetration rate is slightly higher than Malaysia’s (5.0%) and significantly higher than Indonesia’s (1.6%).

Table 44: Insurance Penetration Rate and Density of Selected Countries in Asia for the Year 2020

Market	Penetration (% to GDP)			Density (US Dollar per Inhabitant)			Market Size (USD Billion) by Total Premiums in 2020
	All	Life Insurance	Non-Life Insurance	All	Life Insurance	Non-Life Insurance	
Indonesia	1.6	1.2	0.4	65	47	17	13
Japan	7.1	5.3	1.8	2,890	2,163	727	362
South Korea	11.5	6.2	5.3	3,631	1,957	1,674	n/a
Malaysia	5.0	3.5	1.5	508	358	150	14
Singapore	10.9	9.0	2.0	6,440	5,277	1,163	35
Thailand	5.4	3.8	1.6	412	290	122	20

Source: Insurance activity indicators, OECD Insurance Statistics (database). Thailand data is sourced from Office of Insurance Commission

The Thailand insurance market is getting increasingly sophisticated, with a wide range of evolving customer needs, especially for life insurance products. By the end of June 2022, approximately 40.2% of the population will be covered by life insurance at a per capita premium of 9,247 Thai Baht. As of the end of 2021, just 27 million life insurance policies were in effect, compared to a total population of 69 million. Consequently, market penetration is 39.6%. Approximately forty insurance policies are in effect for every hundred Thai citizens. Due to the fact that one individual may carry many policies, the actual market penetration rate may be lower, indicating that Thailand has a substantial untapped market for life insurance products.

Table 45: Thailand Insurance Penetration and Density Rate

	2018	2019	2020	2021	2022[a]
Overall Insurance Industry					
Insurance Penetration (% to GDP)	5.3	5.4	5.4	5.4	4.95
Density rate (% to Population)	39.7	39.9	43.3	39.6	40.1
Insurance Density (THB)	12,981	12,840	12,879	13,247	9,635
Life Insurance					
Insurance Penetration (% to GDP)	3.84	3.84	3.82	3.79	3.40
Density Rate (% to Population)	39.7	39.9	43.3	39.6	40.1
Insurance Density (THB)	9,478	9,173	9,062	9,277	6,616
Non-Life Insurance					
Insurance Penetration (% to GDP)	1.4	1.5	1.6	1.6	1.6
Density rate (% to Population)					
Insurance Density (THB)	3,504	3,667	3,817	3,971	3,021

Source: Office of Insurance Commission

[a]Data as of the end of September 2022

6.2.1 Overall Insurance Premiums

Thailand's direct insurance premiums increased at a CAGR rate of 2.5% between the year 2015 to 2021. Life insurance accounted for approximately 71% of the total direct premium for the year 2021, with the growth rate registered at 2.2% per annum over the same period, while non-life insurance accounted for 29% with a CAGR of 3.2%.

Table 46: Total Direct Premium

Insurance Premium	2015	2016	2017	2018	2019	2020	2021	2022f	CAGR '17 – '21
Life Insurance (THB Billion)	537	568	613	628	613	595	612	601	2.2%
Non-Life Insurance (THB Billion)	210	212	219	233	245	243	254	268	3.2%
Total (THB Billion)	**748**	**780**	**823**	**848**	**849**	**839**	**866**	**870**	**2.5%**
Growth rate % - Life Insurance	8.3%	5.6%	7.9%	2.5%	-2.3%	-2.9%	2.7%	-1.7%	n/a
Growth rate % - Non-Life Insurance	2.1%	0.7%	3.3%	6.5%	5.3%	-1.0%	4.6%	5.5%	n/a
Growth rate % - Total Direct Premium	6.5%	4.2%	5.5%	3.1%	0.1%	-1.2%	3.3%	0.4%	n/a

Source: Office of Insurance Commission (OIC)

6.2.2 Life Insurance

In 2021, Thailand's life insurance industry grew by 2.7% from 2020, with total collected premiums of 613.8 billion Thai Baht with over 26 million outstanding policies. The life insurance market growth has been driven primarily by the rising public awareness of long-term health issues and increased medical bills. The COVID situation also attracted more consumers to life insurance policies with health policy riders.

Life Insurance by Type of Policies

The unit-linked policy has been the most attractive product over the past five years, with average direct premium increases by a CAGR of 45.6% annually. Its number of policies grew by a CAGR of 27.9% between 2016 and 2021. Due to the nature of unit-linked products, insured individuals of all ages can benefit from them in terms of investment and risk management. During the same period, annuity policies' direct premiums grew by a CAGR of 12.7%, which is significant because the product also offers tax deduction benefits. Rider policies also maintained a healthy growth rate by a CAGR of 9.5% for health riders, 7.1% for accident riders, and 8.4% for other riders during the period 2016 to 2021, even though the direct premium for ordinary main policies fell by a CAGR of 1.7% per year during the same period.

Table 47: Life Insurance – Number of Policies by Product ('000 policies)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (3Q)	2022 (3Q)	% Proportion FY 2022 (3Q)	CAGR '16 - '21	Change %[a]
Oridinary - Total	20,577	20,802	20,944	21,224	23,006	20,949	20,902	20,682	78%	0.4%	-1.1%
_Ordinary - Wholelife	*7,976*	*8,129*	*8,289*	*8,472*	*8,950*	*8,864*	*8,760*	*8,906*	*34%*	*2.1%*	*1.7%*
_Ordinary - Endowment	*11,059*	*11,084*	*11,130*	*11,046*	*12,493*	*10,503*	*10,577*	*10,195*	*38%*	*-1.0%*	*-3.6%*
_Ordinary - Term	*1,542*	*1,589*	*1,524*	*1,674*	*1,528*	*1,543*	*1,527*	*1,540*	*6%*	*0.0%*	*0.9%*
_ Ordinary - Others	*0*	*0*	*0*	*32*	*35*	*39*	*38*	*41*	*0%*	*139.6%*	*6.2%*
Industrial - Main	1,478	1,375	1,271	1,156	1,058	925	945	874	3%	-8.9%	-7.5%
Group - Main	194	1,523	1,650	1,833	2,125	1,938	1,910	2,564	10%	58.5%	34.2%
Annuity - Main	119	137	161	190	245	239	228	249	1%	14.9%	9.1%
Unit Link - Main	109	169	258	285	341	372	351	419	2%	27.9%	19.5%
Universal Life - Main	87	85	78	70	94	115	113	116	0%	5.7%	2.5%
PA - Main	2,056	1,962	1,898	1,813	1,777	1,648	1,674	1,624	6%	-4.3%	-3.0%
Life insurance - Total	**24,620**	**26,053**	**26,259**	**26,571**	**28,646**	**26,185**	**26,124**	**26,528**	**100%**	**1.2%**	**1.5%**

Source: Office of Insurance Commission (OIC)

[a]Growth between 3Q2021 and 3Q2022

Table 48: Life Insurance: Total Direct Premium by Product (THB Billion)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (9M)	2022 (9M)	% Proportion FY 2022 (9M)	CAGR '16 - '21	Change %[a]
Accident - Rider	14.2	12.3	13.2	14.1	16.7	20.1	14.6	15.5	4%	7.1%	6.3%
Health - Rider	59.2	62.7	69.2	75.3	85.6	93.2	63.1	68.6	16%	9.5%	8.8%
Other - Rider	5.8	7.5	7.9	9.2	11.4	8.7	6.1	6.4	2%	8.4%	3.6%
Ordinary - Main	413.5	427.7	423.5	407.8	394.0	378.9	264.1	257.9	61%	-1.7%	-2.4%
Industrial - Main	6.7	6.5	6.1	5.8	5.4	4.9	3.7	3.4	1%	-5.9%	-8.4%
Group - Main	39.0	42.7	44.1	43.3	40.7	40.1	29.9	31.7	8%	0.5%	6.1%
Annuity - Main	7.8	9.9	10.6	11.8	13.8	14.2	6.4	7.0	2%	12.7%	9.3%
Unit Link - Main	7.0	15.3	36.0	24.5	25.3	46.1	32.2	26.2	6%	45.6%	-18.6%
Universal Life - Main	2.1	1.9	1.7	1.6	2.1	3.1	2.1	1.9	0%	8.0%	-7.3%
PA - Main	5.1	4.9	4.7	4.7	4.9	4.6	3.2	3.2	1%	-2.0%	-0.4%
Life Insurance - Total	**560.5**	**591.4**	**617.1**	**598.1**	**599.8**	**613.8**	425.3	421.8	100%	1.8%	-0.8%

Source: Office of Insurance Commission (OIC)

[a]Growth between 9M2021 and 9M2022

The total direct premium for life insurance in Thailand is expected to keep its growth momentum to increase at approximately 2.6% per year between the year 2021 to 2027. Growth will be driven primarily by economic recovery for post-COVID-19, increasing awareness of the importance of insurance, government support for tax incentives, the trend toward an aging population, and innovations in distribution channels, especially InsurTech, that make it easier for a consumer to purchase life insurance products.

Life Insurance by Channel

Based on the values of direct premiums, life insurance policies' main sales channels are agents (51%) and bancassurance (40%). Sales via bancassurance generate higher value than other channels, with 17% of the total policies from the channel generating approximately 40% of the total direct premium. Most leading life insurers have partnered with commercial banks for the bancassurance channel. In general, bancassurance partnerships are generally divided into (a) exclusive arrangements, (b) preferred partner arrangements; and (c) conventional arrangements (i.e., the bank will distribute the insurance products of the insurer without preferential treatment). Banks are required to hold an insurance brokerage licence to carry on the insurance brokerage business.

The majority of top-tier life insurers have launched mobile applications or formed partnerships with corporate brokers to sell products online. Between 2016 and 2021, the direct premium via brokers increased by a CAGR of 9.4%, while the number of policies increased by a CAGR of 12.2%. During the initial eight months of 2022, direct premiums through broker channels increased by 10.6%, while the number of policies increased by 24.4%.

Table 49: Life Insurance - Number of Policies by Channel ('000 policies)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (8M)	2022 (8M)	% Proportion FY 2022 (8M)	CAGR '16 - '21	Change %[a]
Agent	9,311	51,710	45,736	42,813	31,209	20,034	13,155	13,072	73%	16.6%	-0.6%
Broker	104	755	439	616	399	188	120	149	1%	12.6%	24.1%
Bancassurance	1,904	26,875	12,073	12,034	8,651	4,625	3,060	3,097	17%	19.4%	1.2%
Direct Mail	1	7	7	48	25	0	0	0	0%	-21.9%	-24.5%
Tele Maketing	1,506	4,053	3,402	3,587	2,746	1,821	1,219	1,255	7%	3.9%	3.0%
Walkin	-	-	-	-	152	284	203	154	1%	N/A	-24.3%
Worksite	-	-	-	-	16	35	23	22	0%	N/A	-5.8%
Internet	-	-	-	-	21	108	55	61	0%	N/A	11.5%
Others	65	434	568	526	255	3	2	1	0%	-45.1%	-43.1%
Total	12,890	83,833	62,226	59,624	43,474	27,100	17,837	17,811	100%	16.0%	-0.1%

Source: Office of Insurance Commission (OIC)

[a]Growth between 8M2021 and 8M2022

Table 50: Life Insurance – Direct Premium by Channel (Billion Thai Baht)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (8M)	2022 (8M)	% Proportion FY 2022 (8M)	CAGR '16 - '21	Change %[a]
Agent	287.1	306.5	305.5	316.5	316.4	319.5	190.8	196.2	51%	2.2%	2.8%
Broker	14.7	16.5	18.8	28.0	24.7	23.0	16.5	18.2	5%	9.4%	10.6%
Bancassurance	243.9	268.5	278.4	246.1	230.3	244.5	160.6	153.2	40%	0.1%	-4.6%
Direct Mail	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0%	-8.6%	-15.7%
Tele Maketing	14.5	13.9	13.2	13.9	14.3	14.5	9.6	9.5	2%	0.0%	-0.9%
Walkin	-	-	-	-	0.9	1.7	1.2	0.9	0%	N/A	-29.0%
Worksite	-	-	-	-	1.6	6.2	5.0	3.7	1%	N/A	-27.0%
Internet	-	-	-	-	0.8	1.1	0.3	0.4	0%	N/A	15.6%
Others	7.4	7.1	11.9	8.9	6.4	1.2	1.0	1.0	0%	-30.3%	-0.9%
Total	567.6	612.6	627.9	613.3	595.5	611.7	385.1	383.1	100%	1.5%	-0.5%

Source: Office of Insurance Commission (OIC)

[a]Growth between 8M2021 and 8M2022

Moving forward, insurance agents and bancassurance will continue to be the primary distribution channels, part of efforts by commercial banks to integrate their insurance offerings with digital mobile banking in order to make it simpler for customers to buy life insurance products. In contrast, the agent channel continues to further develop its role as a financial advisor, offering insurance products for risk management and as financial instruments to hedge against inflation.

6.2.3 Non-Life Insurance

Outbreaks of COVID-19 have afflicted the non-life insurance sector. Due to COVID-19 payouts, four non-life insurance businesses (out of sixteen that offered COVID-19 policies) ceased operations. As consumers flocked to COVID-19 insurance, the number of health policies issued by non-life insurers multiplied by six in 2020 and grew by an additional 34% in 2021. As Thailand suffered many COVID-19 outbreaks, notably the delta wave in April 2020 and omicron at the beginning of 2021, insurers faced enormous losses from COVID-19-covered claims. The failure of the four non-life insurers consequently undermines consumer confidence in the insurance industry. By the end of 3Q2022, the number of policies dropped by 18%, while overall direct premium grew at a declining rate of 3.7% compared to the end of 3Q2021.

Non-Life Insurance by Type of Policies

More than half of the total direct premium for general insurance was accounted for by auto insurance policies (48.7% for voluntary auto and 7.2% for compulsory auto), followed by accident policies (12.1%), Industrial All Risks and Property policies (7.2%), and others. As the Thai economy recovers, the general insurance market is expected to continue to grow. As a result of the revitalization of the tourism industry, the GDP of Thailand grew by 4.5% in the 3Q2022. According to the Federation of Thai Industries, in the first ten months of 2022, Thailand sold 698,305 vehicles, a 17% increase over the same time in the previous year.

Table 51: Non-Life Insurance - Number of Policies by Product ('000 policies)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (3Q)	2022 (3Q)	% Proportion FY 2022 (3Q)	CAGR '16 - '21	Change %[a]
Fire	3,351	3,341	3,666	3,109	3,202	3,302	2,772	2,400	4.9%	-0.3%	-13.4%
Hull	3	5	4	4	4	5	4	3	0.0%	8.3%	-17.7%
Cargo	821	886	920	886	984	977	739	677	1.4%	3.5%	-8.4%

Compulsory auto	29,400	30,957	32,559	33,721	33,721	33,225	24,775	25,777	52.8%	2.5%	4.0%
Voluntary auto	8,626	9,063	10,025	10,496	11,069	10,969	8,095	8,371	17.1%	4.9%	3.4%
IAR & Property	930	1,147	1,384	1,914	1,251	1,223	947	973	2.0%	5.6%	2.7%
Liability	47	48	67	141	93	105	77	79	0.2%	17.2%	2.5%
Accident	8,291	9,200	8,409	8,730	9,534	9,712	9,387	6,224	12.7%	3.2%	-33.7%
Health	550	742	917	1,103	7,861	10,530	10,121	1,529	3.1%	80.5%	-84.9%
Travel	2,267	2,584	3,017	3,367	1,304	772	480	1,254	2.6%	-19.4%	161.5%
Bail bond	17	18	19	21	19	18	13	12	0.0%	1.0%	-10.4%
Others	1,443	1,453	1,431	1,930	2,238	2,442	2,168	1,565	3.2%	11.1%	-27.8%
Total Non-Life Insurance	55,746	59,444	62,419	65,422	71,280	73,279	59,578	48,864	100.0%	5.6%	-18.0%

Source: Office of Insurance Commission (OIC)

[a]Growth between 3Q2021 and 3Q2022

Table 52: Non-Life Insurance – Direct Premium by Product (Billion Thai Baht)

Life Insurance by Product	2016	2017	2018	2019	2020	2021	2021 (9M)	2022 (9M)	% Proportion FY 2022 (9M)	CAGR '16 - '21	Change %[a]
Fire	10.2	9.9	10.1	10.1	10.2	10.4	7.9	7.6	3.8%	0.2%	-4.2%
Hull	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.2%	2.3%	8.4%
Cargo	4.9	4.9	5.1	5.1	4.8	5.9	4.4	5.0	2.5%	3.8%	12.5%
Compulsory auto	16.7	17.1	18.0	18.5	18.7	18.6	13.9	14.3	7.2%	2.2%	3.3%
Voluntary auto	105.5	110.2	118.1	125.5	127.4	128.8	92.6	97.4	48.7%	4.1%	5.2%
IAR & Property	23.8	24.3	24.1	24.2	26.7	29.1	19.0	22.3	11.2%	4.1%	17.1%
Liability	2.3	2.4	2.6	2.7	2.8	3.0	2.4	2.8	1.4%	5.9%	19.2%
Accident	26.8	28.2	29.3	30.6	30.9	31.2	24.5	24.2	12.1%	3.1%	-1.5%
Health	7.7	8.4	9.4	11.0	15.8	18.7	15.0	11.8	5.9%	19.5%	-21.2%
Travel	1.6	1.9	2.1	2.3	0.9	1.1	0.6	1.7	0.9%	-7.0%	182.4%
Bail bond	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0%	-0.5%	-13.5%
Others	11.8	11.8	12.6	13.5	14.0	15.3	12.0	12.3	6.1%	5.4%	2.1%
Total Non-Life Insurance	211.8	219.6	232.0	244.1	252.7	262.7	192.8	199.8	100.0%	4.4%	3.7%

Source: Office of Insurance Commission (OIC)

[a]Growth between 9M2021 and 9M2022

The total direct premium for non-life insurance in Thailand is expected to continue to expand at approximately 3.9% per year between the years 2021 to 2027. Growth will be driven primarily by the expansion of the domestic automotive industry, especially by the Electric Vehicle, the tourism industry's recovery, and the increasing awareness of health insurance products.

Non-Life Insurance by Channel

Corporate broker is the main channel for non-life insurance products, accounting for 72.1% in terms of total direct premiums and 67% of the total number of policies. Other key channels include bancassurance and agent. Corporate brokers are likely to continue to dominate the general insurance market. Its CAGR between 2016 and 2021 registered at 9.3% for direct premiums, significantly higher than the CAGR of 3.7% over the same period. Corporate brokers utilize several channels to reach out to consumers, including telemarketing, agents as well as a digital platform.

Table 53: Non-Life Insurance - Number of Policies by Channel ('000 policies)

Non-Life Insurance by Channel	2016	2017	2018	2019	2020	2021	% Proportion FY 2022 (3Q)	CAGR '16 - '21	Change %[a]
Agent	11,564	10,200	9,690	10,022	13,215	9,779	14%	-3.3%	-26%
Broker	32,400	36,341	38,443	40,614	40,493	48,159	67%	8.2%	19%
Bancassurance	7,553	7,238	7,741	8,019	9,696	8,875	12%	3.3%	-8%

Direct Mail	0	-	-	-	-	0	0%	-13.1%	n/a
Tele Maketing	6,585	2,685	2,862	2,982	544	184	0%	-51.1%	-66%
Walkin	2,386	2,780	3,598	3,182	3,375	3,304	5%	6.7%	-2%
Worksite	2,350	1,955	1,361	1,408	158	297	0%	-33.9%	88%
Internet	112	187	222	294	629	825	1%	49.0%	31%
Others	19	0	0	0	225	244	0%	66.2%	8%
Total Non-Life Insurance	62,970	61,386	63,917	66,521	68,335	71,667	100%	2.6%	5%

Source: Office of Insurance Commission (OIC)

[a]Growth between 2020 and 2021

Table 54: Non-Life Insurance – Direct Premium by Channel (THB Billion)

Life Insurance by Channel	2016	2017	2018	2019	2020	2021	% Proportion FY 2022 (9M)	CAGR '16 - '21	Change %[a]
Agent	34.7	31.7	30.9	33.8	17.7	16.8	6.6%	-13.6%	-5.6%
Broker	117.6	126.8	136.1	144.4	169.9	183.4	72.1%	9.3%	7.9%
Bancassurance	27.7	28.8	31.5	31.0	25.3	26.2	10.3%	-1.1%	3.7%
Direct Mail	-	-	-	-	-	-	0.0%	n/a	n/a
Tele Maketing	9.2	7.5	8.0	8.5	2.1	1.3	0.5%	-32.7%	-39.8%
Walkin	9.8	10.9	14.2	14.3	22.2	20.5	8.1%	15.9%	-7.6%
Worksite	12.6	13.0	12.1	13.0	3.9	4.6	1.8%	-18.3%	18.1%
Internet	0.2	0.2	0.2	0.3	0.5	0.7	0.3%	33.4%	26.9%
Others	0.1	0.0	0.0	(0.0)	1.4	0.9	0.3%	55.3%	-39.5%
Total Non-Life Insurance	211.9	218.9	233.1	245.5	243.1	254.3	100.0%	3.7%	4.6%

Source: Office of Insurance Commission (OIC)

[a]Growth between 2020 and 2021

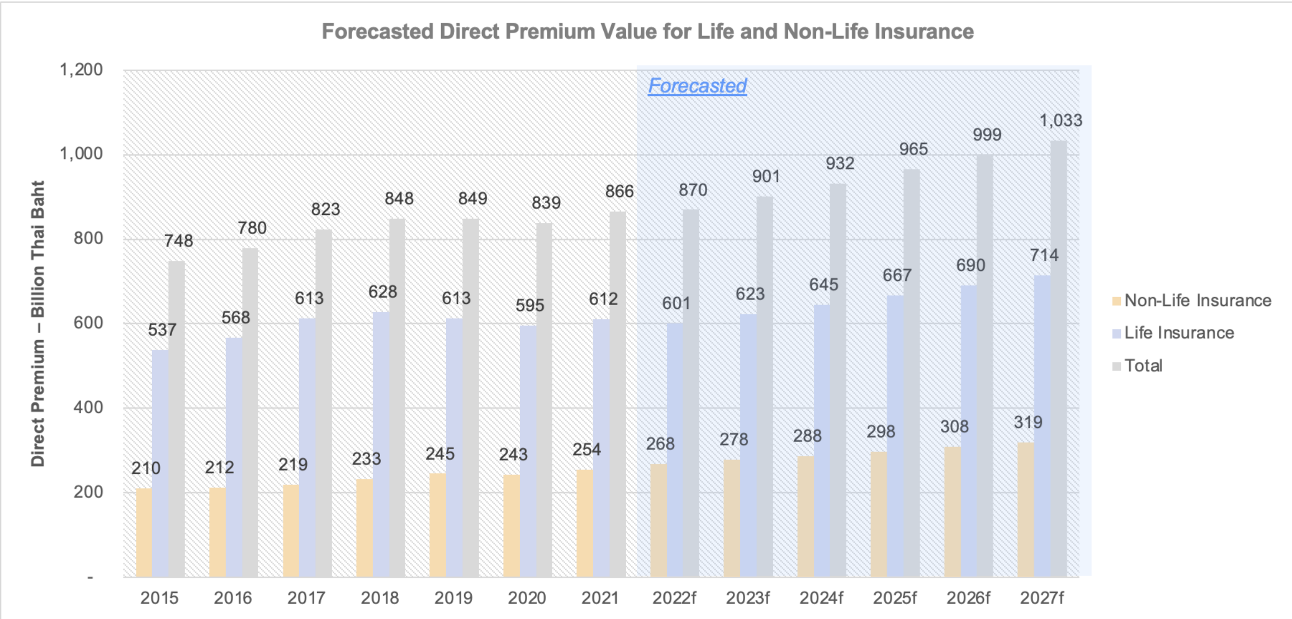
6.2.4 Market Forecast for Life and Non-Life Insurance

The overall insurance market, including life and non-life insurance in Thailand, grew at a CAGR of 2.5%, from 748 billion Thai Baht in 2015 to 866 billion Thai Baht in 2021, in terms of direct premium. The Thai insurance market is expected to keep its growth momentum for the next five years, with a CAGR growth rate of 3.5% between the year 2022 and 2027. Key market growth drivers include the following:

- Economic growth: As the economy of Thailand continues to grow, more people may be able to afford life insurance toprovide financial security for their families in the event of their death.
- Increasing awareness: As more people in Thailand become aware of the benefits of life insurance, The COVID-19 pandemic has helped to raise awareness about the importance of insurance products, which has led to an increase in demand for health and medical insurance
- Government policies: In Thailand, certain types of insurance products are eligible for tax exemptions, which can provide benefits to policyholders, including life insurance and health rider premium of the actual amount paid up to THB 100,000 maximum, life insurance premium of the pension plan(s) for income for annual tax deduction benefit of 15% of total taxable income but not over THB 200,000 maximum.
- Aging population: Thailand is entering an aging society. The demand for life insurance will likely increase due to the need for financial security for older citizens and their families.

- **Development of online and mobile platforms** for insurance purchases and services, which can be seen from key players' investment into digital transformation or focusing on new technology development, including InsurTech or mobile applications, in order to help agents to be more effective as well as build a new sale online channel to expand their reach to consumers.

Chart 25: Forecasted Direct Premium Value for Life and Non-Life Insurance

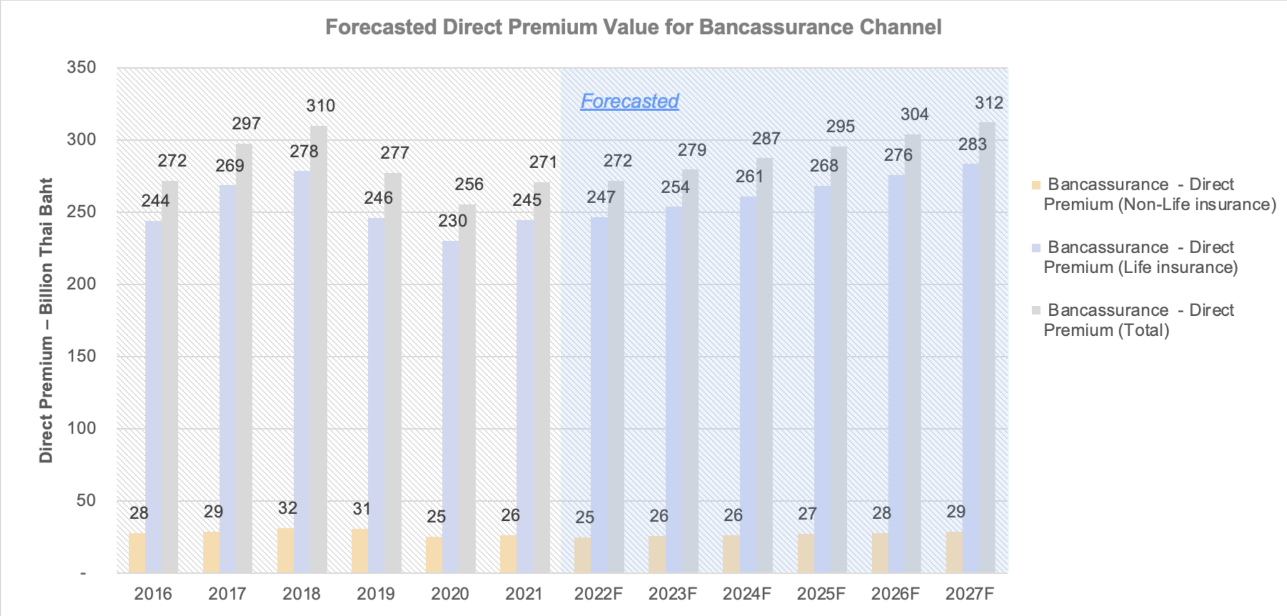


Source: Office of Insurance Commission (OIC) and forecasted by Ipsos Strategy3

Important note: Forecaste by using smoothing exponential technique

On average, the bancassurance channel accounted for approximately 39% of the total direct premium for both life and non-life insurance products. This indicates that the bancassurance channel is a significant contributor to the insurance market in Thailand. Approximately 90% of direct premium generated through the bancassurance channel is from life insurance products. In contrast, only 10% of direct premium generated through the bancassurance channel is from non-life insurance products.

Chart 26: Forecasted Direct Premium Value for Bancassurance Channel



Source: Office of Insurance Commission (OIC) and forecasted by Ipsos Strategy3

Important note: Forecaste by using smoothing exponential technique

The bancassurance channel in Thailand grew at a CAGR of 0.06% from 271 billion Thai Baht in 2016 to 270 billion Thai Baht in 2021 in direct premiums. The Thai bancassurance market is expected to increase slightly overtime for the next five years with a CAGR growth rate of 2.5% between the year 2022 and 2027, driven by following key drivers:

- **Cross-selling opportunities:** Banks are able to cross-sell insurance products to their existing customers, and as CBs continue to expand their customer base via digital banking, insurance products are becoming more accessible and convenient for a consumer to purchase.
- **Digital channel:** The OIC's regulations on digital face-to-face measures during the COVID-19 pandemic have opened up a new channel for bancassurance to reach the younger generation. By allowing bancassurance to offer insurance products digitally through channels such as voice, video, and images, this allows bancassurance to tap into the market of individuals who are comfortable with online shopping and may not frequently visit bank branches in person.
- **Partnership with insurance companies:** CBs continue to collaborate with insurance companies to offer new innovative insurance products to their customers. With the CBs' access to customer data, bancassurance channel is gaining a competitive advantage in new product development.

6.3 Competitor Benchmarking – Insurance

6.3.1 Key Players and Competitive Advantage

In Thailand, there are 22 life insurers and 55 general insurance companies. For the bancassurance channel, the general-insurance business is relatively small because most banks are more active in life insurance. The Thailand's life insurance market is highly concentrated, with AIA, Thai Life, FWD, and Muangthai Life accounting for more than half of the entire market share by gross premium written or a combined 64.6% market share. AIA dominates the market with a 23.2% share, followed by Thai Life (15.6%), FWD (13.2%), and Muanthai Life (12.2%). Krungthai AXA, Bangkok Life, and Allianz Ayudhya Life are the other major firms with over five percent market share.

Table 55: Life Insurance Market Share – Gross Premium Written (Million Thai Baht)

Life Insurance	2020	2021	2021 (9M)	2022 (9M)	Market Share[a]	Growth %[b]
AIA	134,456	133,943	95,206	92,412	23.2%	-2.9%
Thai Life Insurance (TLI)	91,269	90,451	60,529	61,880	15.6%	2.2%
FWD	76,346	76,104	58,846	59,678	13.2%	1.4%
Muangthai Life (MTL)	75,327	72,986	53,990	50,769	12.6%	-6.0%
Krungthai AXA (AXA)	53,104	46,840	33,822	30,056	8.1%	-11.1%
Bangkok Life Assurance (BLA)	34,744	35,717	26,990	27,722	6.2%	2.7%
Allianz Ayudhya Life (AZAY)	31,463	31,633	22,481	23,899	5.5%	6.3%
Prudential (PLT)	22,134	23,467	19,704	16,571	4.1%	-15.9%
Ocean Life (OLIC)	14,336	14,458	10,383	10,799	2.5%	4.0%
Southeast Life (SELIC)	8,345	10,891	8,526	6,641	1.9%	-22.1%
Generali (GT)	7,081	8,562	6,353	7,230	1.5%	13.8%
Tokiomarine Life (TMLTH)	9,261	8,552	6,375	7,060	1.5%	10.7%
Chubb (CHUBB)	6,168	6,606	4,579	5,168	1.1%	12.9%
Samsung Life (SSLI)	4,406	4,988	3,436	3,493	0.9%	1.6%
TIP Life (DLA)	5,332	4,839	2,500	4,324	0.8%	72.9%
Philip Life (PLA)	3,532	3,322	2,383	1,582	0.6%	-33.6%
THREL	2,339	2,913	2,292	2,267	0.5%	-1.1%
Rabbit Life (RBL)	1,333	796	n/a	n/a	0.1%	n/a
Saha Life (SAHA)	497	492	371	422	0.1%	13.8%
MBK Life	462	462	316	329	0.1%	4.0%
KWI	340	372	230	385	0.1%	67.5%
BUILife	114	51	41	22	0.0%	-45.2%

Source: Collected gross premium written value from financial statements from each insurance company

[a]Market share is based on the gross premium written for the year 2021

[b]Growth between 2021 (9M) and 2022 (9M)

Competitive Advantages on Bancassurance

Insurance products are expected to significantly contribute to the commercial banks' business, especially in non-interest fee-based income growth. Key competitive advantages on growing fee-based income from insurance products are mainly relating branch network and mobile banking users as well as Bancassurance partnership.

Branch Network and Mobile Banking Users

Commercial banks usually utilize branches network as their key channels for insurance sales, while the digital platform also supports growth acceleration, especially via the fast-rising digital banking use. Thailand has approximately 5,737 commercial bank branches and service points. KTB has the largest number of branches and service points (999 branches), followed by BBL (910 branches), KBank (830 branches), SCB (810 branches), BAY (640 branches), TTB (583 branches), TCRB (522 branches), UOB (147 branches) and others.

Bancassurance Partnership

Bancassurance is another popular way for insurers to sell their products. The big four banks in Thailand have already signed partnership agreements with insurers to offer insurance products. Key bancassurance partnership are as follows.

- Bangkok Bank (BBL) partnered with AIA via a 15-year distribution agreement. The partnership took effect in 2018. In addition, BBL also partnered with Bangkok Life Assurance (BLA).
- SCB established a bancassurance partnership with Prudential to offer insurance solutions for SCB's wealth segment customers. SCB also holds a long-term distribution agreement with FWD after it sold SCB Life Assurance to the FWD group.
- KBank exclusively partnered with Muang Thai Life for a 10-year partnership in 2022.
- KTB established a joint venture with AXA group in 2007 for the Krungthai-AXA Life Insurance.
- TTB (via TMB) established an exclusive bancassurance partnership with Prudential Thailand for a 15-year agreement started in 2021.
- BAY has an exclusive partnership with Thai Life Insurance (TLI) for selling products at its upcountry branches (A 5-year exclusive partnership ending by the end of 2025). TLI also has an exclusive partnership for selling non-endowment products with CIMB Thai and a non-exclusive partnership with TCRB and Tisco Bank. TLI also has an exclusive distribution agreement with GH Bank and a non-exclusive partnership for distribution with IBank and BAAC.
- KKP entered into a bancassurance agreement with Generali Life Assurance for exclusive rights to distribute life insurance products for 15 years since 2015.

Table 56: Bancassurance Channel Premium (MTD) – September 2022 (Million Thai Baht)

Total Premium	Ordinary - Main	Group - Main	Pension	Universal Life	Unit-Linked	Takaful	PA Standalone	Riders	Total	% Share
FWD	4,496	408	62	-	561	-	8	439	5,974	25.4%
MTL	3,758	280	35	-	156	75	-	376	4,681	19.9%
BLA	2,734	108	13	-	-	-	2	3	2,860	12.2%
PLT	1,431	311	85	-	302	-	0	395	2,523	10.7%
TLI	1,611	218	11	1	5	7	-	112	1,966	8.4%
KTAL	650	281	45	0	146	-	-	169	1,293	5.5%
AIA	547	282	27	-	149	-	-	152	1,157	4.9%
SELIC	731	210	21	-	-	-	-	42	1,003	4.3%
AZAY	808	49	13	-	-	-	0	23	893	3.8%
DLA	236	390	7	-	-	-	-	28	661	2.8%
GT	95	159	1	-	135	-	-	0	390	1.7%
OLIC	2	66	0	-	-	-	-	0	68	0.3%
CHUBB	0	-	4	-	-	-	-	0	4	0.0%
TLife	3	-	-	-	-	-	-	0	4	0.0%
TMLTH	1	-	-	-	-	-	0	0	1	0.0%
PLA	-	-	-	-	-	0	-	0	0	0.0%
Total	17,104	2,761	324	2	1,454	82	10	1,739	23,477	100.0%

% Share	72.9%	11.8%	1.4%	0.0%	6.2%	0.4%	0.0%	7.4%	100.0%	

Source: The Thai Life Assurance Association

6.3.2 Bancassurance Insurance Products

Insurance products distributed via the bancassurance channel are generally easy to comprehend. For life insurance, most insurance policies via the channel offer the primary benefit of tax deduction purpose as typical bancassurance deals are limited to individual life products and often focus on savings product. As customer demand for financial products and risk management continues to evolve, the bancassurance channel offers a variety of products for both life insurance and general insurance. Key products offered via the bancassurance channel can be classified as follows:

- **Insurance policies for savings and tax benefits.** Most common life insurance products are offered via the bancassurance channel available to target the mass customer segment. This product type is also often available via a mobile banking application. For example, KPlus+ (by Kbank) offers “One Plus 10/1” which is a savings insurance policy insured by MTL, and SCB Easy (by SCB) offers “Easy E-Save 10/5) insured by FWD.
- **Health and Critical Illness (CI) policies.** Large insurers offer a variety of health and critical illness coverage policies to target a wide range of customer segments.
- **Unit-linked insurance policies.** Unit-linked insurance products that target high-income and affluent customers are gaining popularity. The single premium or unit-linked policies sold through bancassurance are mostly investment-related. In contrast, the unit-linked plans sold through agents are typically centered on protection with health riders or customer-preferred options. As the life insurer with the largest share of the bancassurance market, FWD has recently partnered with SCB to launch "FWD Utmost," which includes the purchase of Unit-Linked insurance plans and offers superior health and lifestyle benefits to wealthy customers who purchase the product through SCB channels nationwide.
- **Accident and travel insurance.** Various insurance policies are available to be purchased over the counter and via the mobile application.
- **Other general insurances.**Mortgage Reducing Term Assurance (MRTA), and Fire Insurance are commonly offered as an option for loan customers.

6.3.3 Key Drivers and Challenges

Insurance sales via the bancassurance channel are expected to remain modest and slowly recover to the pre-pandemic level. As the pandemic affected sales through bancassurance and agent channels, as customers avoid face-to-face meetings, the digital channel is the new growth area. Going forward, key market drivers for life and non-life insurance, especially via the bancassurance channel, are as follows;

- **COVID-19 accelerated demand for insurance protection and a rise in healthcare expenditures.** Consumers’ behaviour during the epidemic and their attitudes about insurance policies, have shifted as COVID-19 made people anxious and heightened their need for insurance as risk management for their lives. The importance of insurance products, particularly those linked to health plans, has been brought to the attention of Thai customers in recent years. Demand for health insurance policies is expected to continue to increase.

- **The post-COVID-19 recovery and an expected GDP acceleration.** The Thai economy is expected to recover slowly as the travel industry continues to recover.
- **Aging society drives the demand for investment-linked insurance policies.** The fact that Thailand will soon become an aging society is one of the driving forces behind the growth of unit-linked insurance policies, as there are indicators that a significant proportion of senior individuals will not have adequate assets to support themselves in retirement. Consequently, people, particularly working-age people, now prioritize financial planning.
- **Insurance products' availability via the digital channel** is expected to slowly shift the competitive landscape. Commercial banks with large mobile banking users gain advantages as customers become more comfortable buying insurance policies online. SCB and KBank are key players that offer a variety of insurance products via the mobile app “SCB Easy” and “KPlus+ ”. Recently on November 2022, BBL also launched the insurance product “Be Together Smart Care” via mobile banking. The development to offer insurance policies via the online channel is also in progress for customers in the micro-SMEs segment. For general insurance, UOB offers UOB SME Smart Choice, specifically targeting entrepreneurs, and micro-SMEs available to purchase online via their website.

The Thai insurance business faces a number of obstacles throughout the pandemic and its aftermath, despite the market's strong development potential. Key industry stakeholders, including insurers, corporate brokers, and bancassurance partners, confront the following challenges:

- **People's purchasing power was eroded by rising household debt.** Due to prolonged COVID-19 outbreaks and sluggish economic growth, Thai people are facing the highest level of debt in 16 years. Thailand's household debt totaled 14.9 trillion Baht in 3Q2022, or 86.8% of GDP. This represents a modest decline from 1Q2021 when household debt remained at 90.8% of GDP.
- **New product design amid rapid change in the market.** An increase in interest rates as a policy response to rising inflation poses several challenges to insurers. In general, higher interest rates should allow insurers to experience greater profits in the short term. However, the challenge insurers will face is finding the balance between retaining additional earnings and increasing the competitiveness of products.
- **Digital transformation to maintain competitive advantage.** Insurers, as well as distributor partnerships, are gearing toward digital transformation to maintain their competitiveness in the market. General insurers in Thailand, including Thai Vivat Insurance, Dhipaya Insurance, and Viriyah Insurance, continue to develop their Direct-to-Customers digital channel to offer new products such as personalized auto insurance. As Thai customers are becoming familiar with buying insurance online and insurers can offer insurance products at competitive prices, the digital channel is expected to increase significantly in the future.

6.3.4 Bancassurance Channel – Barrier to Entry

From the regulatory point of view, banks are required to hold insurance brokerage licences to carry on the insurance brokerage business. An insurer is not restricted from appointing a bank as its exclusive distributor. However, engaging in a bancassurance channel is often expensive, and various terms and conditions would be considered, especially exclusivity, amount of compensation, and amount of insurance products to be offered, as well as market shares of the parties, including whether the parties are considered having a dominant position. Most of the leading life insurers in Thailand already engage in long-term bancassurance partnerships. For the non-life insurance market, the sales channel is heavily dominated by selling via an agent and corporate broker. The price is also highly competitive as general insurance are short-term plans.

Part 7: Sale with Right of Redemption (Thai: Kai Fak Business)

7.1 Kai Fak Business Overview

A sale of the right of redemption contract is used as loan collateral instead of a mortgage because it is a simpler legal process for the lender if the borrower fails to repay. The Thai Civil and Commercial Code (CCC) governs this type of loan collateral. The legal provisions relating to Kai Fak were revised under a new law, the Protecting Citizens When Entering into Khai Fak Agreement of Land for Agricultural or Residential Use Act B.E. 2562. This is to control the Kai Fak Agreement for the land for agricultural and residential use and to protect the borrower/ seller, who usually has limited bargaining power with the lender/ buyer.

Under the new act, the Kai Fak transaction must be conducted under a written contract. It must be reviewed by the public prosecutor or the land office prior to registering for transfer of ownership of land at the land office. The registration fee for Kai Fak to be paid to the land office is 2%, while the fee for Mortgage is 0.01% of the registered sale price or government-assessed value, whichever is the higher.

7.2 Mortgage Versus Kai Fak

A Kai Fak contract, also known as a sale with the right of redemption, is one in which ownership of the property (movable or immovable) sold is passed to the buyer with the agreement that the borrower/ seller has the right to redeem that property.

7.2.1 Period of Redemption or Buyback

The Kai Fak period is limited to ten years for immovable property (and three years for movable assets), as opposed to the mortgage, which is not tied to a registered period. The Kai Fak has the characteristic of having to register a period of time during which the borrower/ seller has the opportunity to repay the loan. If the borrower/ seller fails to make timely payments, the property will be transferred to the lender /buyer. After the Kai Fak period has expired, the property's ownership cannot be redeemed unless both parties agree to extend the Kai Fak period. The maximum period is included in the period of extension of redemption if any. There is no minimum period of redemption for the said properties, but in the case of Land for Agriculture or Housing, the minimum period of redemption is one year.

7.2.2 Payment Default

A mortgage is a debt instrument or a contract, while Kai Fak is not a financial debt. Kai Fak is a right to redeem the sold land or property, and there is a transfer of ownership to the buyer/lender, while mortgage is a term loan for registering a debt without a change of ownership. Under Kai Fak, If the borrower/ seller does not buy back the land or property or make timely payments, the ownership of the land or property will be automatically transferred to the lender/ buyer and can no longer be redeemed. The lender/ buyer doesn't need to set legal procedures to own Kai Fak's land or property. Unlike a Mortgage, the borrower has ownership of the property. The lender needs to go through lengthy enforcement procedures, including court orders and public auctions for debt repayment.

7.2.3 Redemption Price, Loan Value, and Interest Rate

In general, the redemption price of Kai Fak land or property is greater than the loan-to-value under a mortgage. The borrower/ seller typically receives a redemption price of 40-70% of the appraisal value of the land or property, whereas a mortgage offers a loan value of 10-30% of the same. If the redemption price is not fixed, the Kai Fak's land or property may be redeemed by reimbursing the sale price, which must not exceed the redemption price, plus 15% per annum interest, including the annual profit, which is capped at the same level as Home for Cash, which is higher than Mortgage.

7.3 Market Trends

7.3.1 Refinance and Kai Fak's Residential Property

The Kai Fak market is expected to grow significantly as one of the SFIs enters the market. GSB is preparing to set up a non-bank subsidiary to provide loans based on land collateral to MSMEs. The new business expects to have capital of 1 billion Baht to provide loans to MSMEs that place land plots as collateral, charging an interest rate of 5.99%.

Table 57: Residential Property – Refinance and Kai Fak

Refinance and Kai Fak	2018	2019	2020	2021	9M2021	9M2022	% Share FY 9M2022	CAGR '18 - '21	Change %[a]
Kai Fak - THB Million	18,900	15,122	14,135	13,848	10,209	11,748	11%	-9.8%	15.1%
Refinance - THB Million	101,479	104,249	77,531	87,479	64,535	96,341	89%	-4.8%	49.3%

Source: Real Estate Information Center
[a]Growth between 9M2021 and 9M2022

7.3.2 Target Customers

As Kai Fak is not a financial debt, the borrower/ seller is not required to get a credit check to enter into the Kai Fak's agreement. Most of Kai Fak's customers are farmers who own land or micro-enterprises and small enterprises that need cash flow to fund their business. Therefore, most of Kai Fak customers are looking for convenient quick liquidity, which requires little effort to go through a credit check or credit assessment.

In the past, Kai Fak was an informal lending activity that was often participated by the agricultural landholder. However, as the financial market continues to evolve, lenders are now offering various options for financing and lending, especially for commerce shop owners or micro-enterprises and small enterprises that are looking for quick cash liquidity.

7.3.3 Market Trends

The advent of the GSB into the landscape of Kai Fak is going to cause a shift in consumers' perceptions of Kai Fak and will also provide consumers with an easier access point from which to gain an understanding of Kai Fak's businesses. Although Kai Fak's business expanded by 15.1% in 2022 compared to the same period the previous year, the transaction volume remained low at approximately 11.7 billion, which is only 11% of the market for refinancing.

The Kai Fak platform can be considered as a new competitive landscape that provides participants with an alluring incentive to participate. The market is still relatively undeveloped because there are no dominant players. This could be where commercial banks or other financial institutions might want to focus their efforts to expand their businesses. However, risk must be managed, and given that land and housing are both illiquid assets, financial institutions that have an understanding of and familiarity with the communities in which they operate in this market may have an advantage when it comes to expanding their businesses in this market.

Part 8: Gold Trading Market

The gold trading market in Thailand is a significant aspect of the country's economy. In recent years, the Thai government has implemented policies to support the development of the gold market, including the establishment of the Gold Exchange of Thailand (GET) and the Thai Gold Trading Association (TGTA). The GET is a regulated marketplace for trading gold, focusing on providing transparency and liquidity to the market. The GET allows members to trade gold bullion and gold futures and provides an electronic platform for spot trading. The GET is a member of the World Gold Council and is regulated by the Securities and Exchange Commission of Thailand (SEC).

The TGTA is an organization that represents the interests of the gold industry in Thailand. It promotes the gold market's development and provides its members education and training. The TGTA also works closely with the GET to support the growth of the gold trading market in Thailand. In addition to the GET and the TGTA, there are a number of other organizations and institutions that play a role in the gold market in Thailand.

Gold businesses are overseen by four regulators, which are (1) SEC for gold future products, (2) Customs Department of the Finance Ministry for gold export-import, (3) BOT for dollar-dominated gold trade, and (4) Commerce Ministry for gold shops and domestic gold trade.

Domestic gold buyers are classified into two types: gold collectors willing to buy physical gold to collect as individual reserves for a long time, sometimes decades or even generations, and gold speculators who trade in the short term for profit. Gold is also considered an emergency fund among gold collectors requiring liquidity cashflow. Domestic gold buyers can sell back their physical gold to gold shops or pledge as collateral at pawn shops.

Pawn shops are a common sight in Thailand, and they play an important role in the country's financial system. Pawn shops provide short-term loans to individuals who pledge collateral, typically jewelry or other valuable items. Gold is a common collateral for pawnshop loans in Thailand due to its high value and liquidity.

In Thailand, pawn shops are regulated by the Pawnshop Act. This law sets out the rules and regulations for pawn shops, including the maximum interest rates that can be charged and the requirements for record-keeping and reporting. Pawn shops must register with the Ministry of Commerce and are subject to regular inspections by government authorities. The pawn shop industry in Thailand has grown significantly in recent years, with an increasing number of people turning to pawn shops for short-term loans. Pawn shops offer a convenient and accessible source of credit for many Thais, particularly those who may not have access to traditional forms of lending.

8.1. Gold Spot Price

Thai gold prices have climbed on a CAGR of approximately 6-7% per annum between the year 2015 to 2022, mainly due to an increase in the global gold price, reflecting gold’s status as a safe haven investment during times of geopolitical and economic uncertainty, weakening Baht and a hike in inflation.Especially in 2022, the average gold spot price increased by almost 10% as compared to the previous year.

Table 58: Average Gold Spot Price

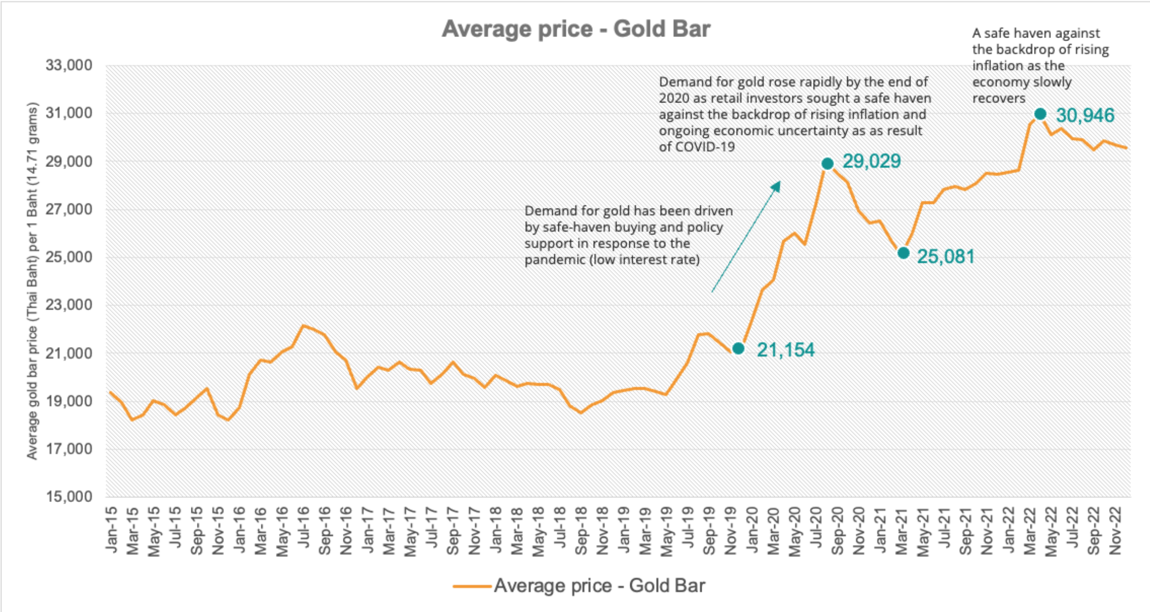
Gold Spot Price	2015	2016	2017	2018	2019	2020	2021	2022	CAGR '18 - '21	Change %[a]
Gold Jewelry										
Buying Price (Thai Baht)	18,463	20,423	19,764	18,999	20,001	25,606	26,677	29,242	6.8%	9.6%
Fees (Thai Baht)	772	919	962	948	967	1,089	1,089	1,136	5.7%	4.3%
Selling Price (Thai Baht)	19,234	21,342	20,727	19,947	20,968	26,695	27,766	30,377	6.7%	9.4%
Gold Bar										
Buying Price (Thai Baht)	18,734	20,775	20,127	19,347	20,368	26,076	27,166	29,777	6.8%	9.6%
Selling Price (Thai Baht)	18,834	20,875	20,227	19,447	20,468	26,195	27,266	29,877	6.8%	9.6%

US$ per ounce	1,160	1,250	1,259	1,270	1,393	1,772	1,800	1,803	6.5%	0.2%
Baht / US$	34.31	35.31	33.95	32.34	31.06	31.3	32.01	35.08	0.3%	9.6%

Source: Gold Trader Association

[a]Growth between 2021 and 2022

Chart 27: Average gold bar price



Source: Gold Trader Association

Average price of gold bar is between buying price and selling price on monthly average

For the year 2023, as the global economic recession is anticipated, gold has been viewed as a safe haven asset. It is often seen as a hedge against economic downturns and market volatility. During economic uncertainty, investors may flock to gold to protect their wealth and maintain the value of their assets. This increased demand for gold can drive up its price. However, as the US Federal Reserve hike interest rate to bring inflation down, the opportunity cost of holding gold may increase, as investors may be able to earn higher returns by investing in other assets. This can lead to a decline in the demand for gold and a decrease in its price.