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Attribution

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Access full report: https://csx.com.kh/en/education-publication/stock-investment-analysis/cfa-institute-research-challenge-report/4

CFA Institute Research Challenge Hosted by Cambodia Community of Investment Professionals TEAM D

The CFA Institute Research Challenge is a global competition that tests equity research and valuation investment report writing, and presentation skills of university students. The following report was submitted by a team of university students as part of this annual educational initiative and should not be considered a professional report.

Company's Ticker: ABC
Consumer Sector: Financial and Banking Services
Current Price: KHR 16,860 as of 08/01/21

Date: 15 January 2021
Recommendation: SELL (29% Downside)
Target Price: KHR 12,049

SELL RECOMMENDATION

ACLEDA Investment Overview

Investment Overview	
Share Outstanding in Million	433
Market Cap in USD Million	1,845
Market Cap in KHR Million	7,476,394
Adj. 12 Months Low (USD/Share)	3.95
Adj. 12 Months High (USD/Share)	5.76
Public Float (%)	1

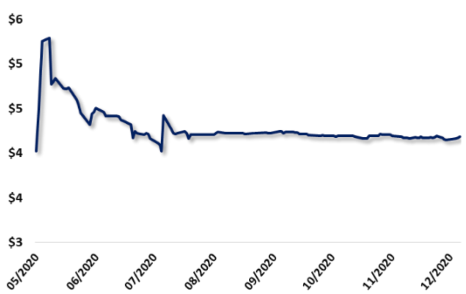
Source: CSX, Team Analysis

Valuation Method

Methods	DDM	RIM	P/E	P/BV
Target Price (KHR)	12,049	15,515	14,567	13,931
Target Price (USD)	$3.01	$3.88	$3.64	$3.48
Downside Risk	29%	8.0%	16%	21%

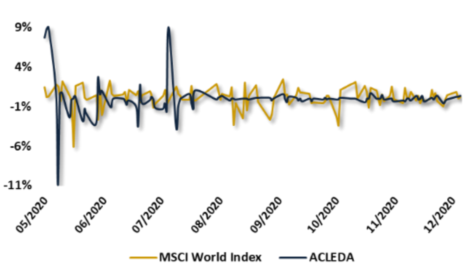
Source: Team Analysis

ACLEDA's Share Price



Source: Cambodia Stock Exchange

Relation Share Price Performance



Source: CSX and Bloomberg

Financial Highlights

Matrix	2019A	2020F	2021F	2022F
Net Interest Margin (NIM)	7.61%	6.82%	6.05%	5.49%
Yield on Interest Earning Assets	10.94%	10.84%	10.01%	9.27%
Yield on Loan Portfolio	12.68%	13.09%	11.90%	11.26%
Return on Assets (ROA)	2.05%	1.76%	1.76%	1.75%
Funding Expense Ratio	2.66%	3.23%	2.97%	3.00%
Cost-to-Income Ratio	57.53%	58.64%	56.05%	53.57%

Source: Company Data, Team Analysis

Investment Summary

We initiate ABC with a SELL rating based on one-year target price of KHR 12,049 – representing 29% downside to the last close share price of KHR 16,860 on 08 January 2021. The target price is based on dividend discount model (DDM), a widely adopted valuation method for banks. ABC is a medium-sized commercial bank in Cambodia with a focus on corporate and SME banking. ABC's extensive branch network and its strong balance sheet position supported by Cambodia's highest retail deposits will continue to give the bank competitive edge, though these no longer provide a wide economic moat. While ABC remains the market leader today, the gaps in deposits, credit, and revenue between ABC and its competitors are rapidly shrinking. Increasing competition in an already saturated banking sector has led to more aggressive local lending to attract customers and has put pressure on interest rates and yields. ABC has struggled to maintain its market share, especially in urban areas, against competitors with much stronger digital banking offerings. ABC's low risk approach of keeping away from volatile sectors such as hospitality and real estate have largely spared it from the impacts of Covid-19 but a significant portion of its portfolio remains in the low-growth agriculture sector. These factors together will continue to limit ABC's revenue growth in the coming quarters. Given its wide physical footprint, ABC's expenses are the highest among its peers despite continued cost-cutting and digitalization efforts. We see significant downside risk to ABC as increasing competition, a subdued business environment, and low growth in key ABC sectors will continue to put downward pressure on ABC's bottom line.

Investment Highlight

Intense Rivalry Resulting in Deteriorating Market Share

The Cambodian banking sector has witnessed a continued increase of commercial banks and an influx of international banks into the country. The total number of commercial as of Q2 of FY20 is 51 banks, a 42% increase compared to 36 banks in FY14. This has intensified competitive rivalry among the commercial banks. ABC's market share of deposit and credit have continued to decline over the last five years. The deposit market share has decrease from 19.9% in FY14 to 15.7% in FY19, a CAGR of -6% over the period while credit market share has decrease from 21.5% from FY14 to 15.1%, a CAGR of -8% over same period. Similarly, while ABC remains the market leader with 19% of the banking sector revenue share in FY19, this has declined from 28% just 4 years ago translating into a CAGR of -12%.

Pressure in Yields, Margins due to Lower Rates to Hurts ABC's Profitability

Continued decline in the weighted average interest rates on both KHR and USD loans is keeping margin pressure on core products, declined by 320bps to 10.5% and 170bps to 8.8%, respectively at the end of FY19. The persistent drop in loan interest will continue to pressure the banks' net interest margins (NIM) and yield on loan portfolio. ABC's NIM has consistently decline at a CAGR of -8% between FY15-FY19 while the yield on loan portfolio has decline at a CAGR of -4% over same period. This is largely attributed to aggressive lending competition among banks, the increased inflow of foreign investment, and the implementation of strategy on promoting the use of Khmer Riel. We see greater downside risk to ABC's NIM and yield on loan portfolio as similar trend is expected to continue in the near term and expect ABC's margins to remain under pressure due to decline interest rates, subdued business activity, and keep the pressure on ABC to cut costs.

Escalating expenses is a major hindrance to ABC's bottom-line expansion

Elevated operating expenses are expected to continue to hurt ABC's bottom line to some extent in the quarters ahead. Driven by ABC's digital initiatives and cost-savings effort, operating expense ratio has drop by CAGR 4.4% between FY15-FY19 to 3.65% which is still among the highest among the major peers but we expect them to continue downward trend towards the industry average. ABC's cost-to-income ratio (CIR) has been staying above the major peer's average of 51%-57% since FY19. We expect expenses are likely to remain elevated but moderate in the near term due to ABC's branch presence in all the 25 provinces, its number of employees, rebranding process, and retail lending's high operating cost nature.

Business Description

Company Background

ACLEDA Bank Plc. (ABC) was established under the structure of a non-government organization in January 1993 before being granted a Commercial Bank status on 1st December 2003. Since then, ABC has provided commercial banking and related financial services to the under-banked and underpenetrated provinces in the Kingdom of Cambodia. Currently, ABC has four subsidiaries which are ACLEDA Bank Lao, ACLEDA Securities, ACLEDA Institute of Business, and ACLEDA MFI Myanmar. In May 2020, ABC officially listed its equity securities on the Cambodia Securities Exchange (CSX).

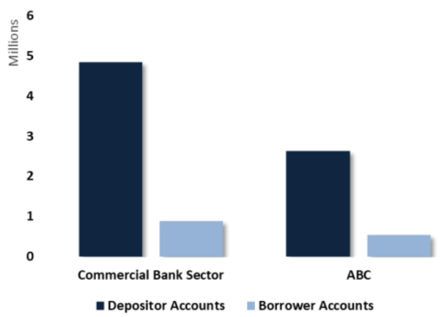
Ownership Structure

ABC is majority owned by Cambodian interests, a combined 51% equity stake is held by ACLEDA Financial Trust and ASA Plc. ACLEDA Financial Trust is created under the Cambodian Trust Law to preserve ABC's initial missions as NGO and ASA Plc represents ABC's employees' share benefit scheme. This is followed by 48% of foreign institution shareholders and a 1% public float **(Appendix A-1)**.

Dominant Player in Loan and Deposit Accounts

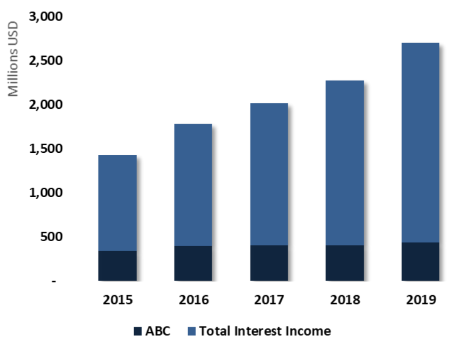
As of FY19, ABC has 2,620,778 deposit accounts and 536,891 borrow accounts which is equivalent to 54% and 61% respectively of the commercial bank sector in Cambodia **(Figure 1)**. This has resulted in ABC maintaining a market-leading position with 19% of the total interest income earned by commercial banks in Cambodia **(Figure 2)**.

Figure 1: Depositor and Borrower



Source: NBC and Company Data

Figure 2: Banking Sector Interest Income Earned



Source: NBC and Company Data

Environmental, Social, and Corporate Governance

Environmental and Social

The London Stock Exchange Group's PRI framework has been used as an assessment tool to score ABC's ESG disclosure (Appendix B-1).

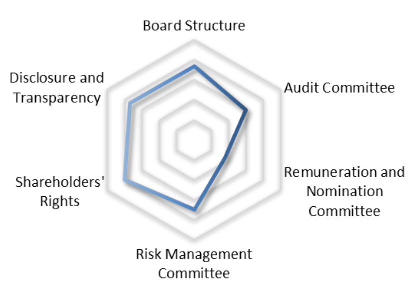
Strong Commitment in Environmental Protection

ABC's consumption of gasoline, diesel and lubricant decreases at the CAGR of approximately 3% respectively over the FY15-19 **(Appendix B-1)**. This is achieved mainly by ABC's strong commitments in implementing its environmental strategy as the bank is currently employing full time environmental officers to coordinate and monitor its environment related activities.

Investing Back into Communities against Accusation of Financial Exploitation

Even ABC has actively supported its stakeholders such as an average donation of $85,000 p.a. to various charity foundations and a recent $1 million contribution to the Cambodian government to fight against the COVID-19 outbreak and natural disaster, ABC has been frequently accused of setting up the debt traps (1). According to the RFA, over the FY09-18, Cambodia's microloans have increased from $300 million to $5 billion, where a large portion is shared among MFIs and local banks such as ABC and Sathapana Bank (2). Therefore, as ABC involves in lending to the borrowers who are unsuited for loans, allegation of debt traps will continue to plague its growth and tarnish its reputation.

Figure 3: ACLEDA Corporate Governance



Source: Team Analysis

Effort in Addressing Social Needs

Starting from FY06, in its effort to address poverty, ABC launched the "Housing Loan Scheme" that offers inexpensive credit to low-income households. Thus, as of FY20, ABC has loaned out $162 million worth of credit to 6,500 bottom class borrowers at below market interest rate, 8.5% - 11% p.a. **(Appendix B-1)**.

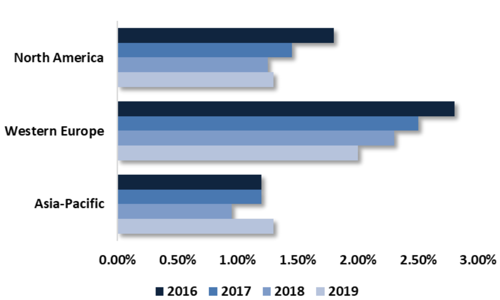
Governance

The CFA Institute Corporate Governance Manual for Investors and the NBC's Corporate Governance Code has been used to evaluate ABC's Governance **(Figure 3)**; **(Appendix B-1)**.

Warning Signs in Independence and Competence

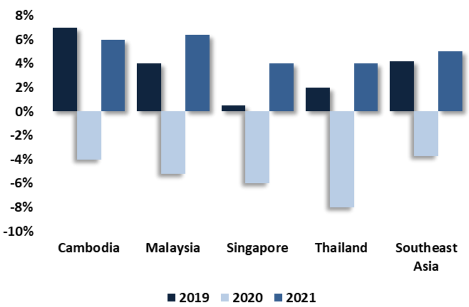
As of FY19, even all the Board's committees are chaired by independence director, the head of Remuneration and Nomination Committee has been affiliated with the firm for approximately two decades **(Appendix B-1)**.

Figure 4: Banks Non-Performing Assets across



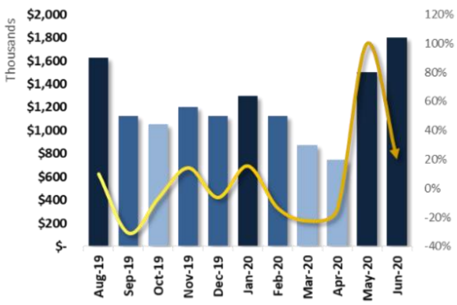
Source: World Bank

Figure 5: COVID-19 Asia-Pacific Real GDP



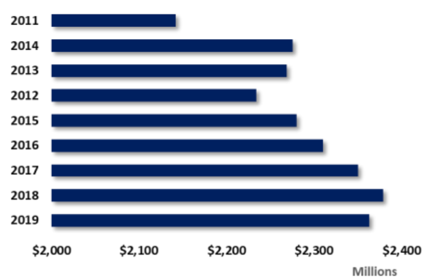
Source: World Bank

Figure 6: Cambodia Export Volume



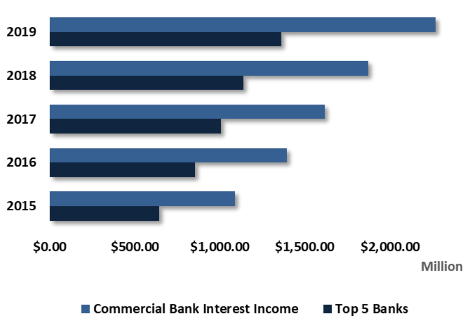
Source: National Bank of Cambodia

Figure 7: Cambodia's GDP from Agriculture



Source: Trading Economics, Team Analysis

Figure 8: Cambodia Five Major Banks Revenue



Source: NBC, Team Analysis

Furthermore, the expertise required in the Chairman of all of the 3 committees as stipulated by the National Bank of Cambodia in its Corporate Governance Code has not been complied by ABC **(Appendix B-1)**.

Concerns over Diversity and Disclosures

Despite consisting of directors from various professional fields, only one of them is female **(Appendix B-1)**. Moreover, significant disclosures with the like of Executive Compensations and the External Auditor's selection process as guided by the CFA Corporate Governance Manual are all omitted by ABC **(Appendix B-1).**

Economic Outlook

Economic Storm Created by COVID-19 Outbreak

Compared with other regions, the banking sector in Asia-Pacific has seen a stable economic state, with a strong asset quality outlook. Albeit, in FY20, due to the uncertainty attributable to the COVID-19 pandemic, the oil price shock, and market volatility, Asia-Pacific banking non-performing assets (NPAs) and consequent credit losses is forecasted to rise by $600 billion and $300 billion, respectively (3). However, bank downgrades are forecasted to be limited in 2020 due to banks' strengthened balance sheets, massive support from the authorities, and the sustained economic recovery (4). The regional GDP growth in 2020 is projected to fall to 0.5%—down from 5.9% in 2019, 5.2% points below previous forecasts, but regional growth is expected to gradually recover during the second half of 2020 and to rebound to above its trend pace, to 6.6% in 2021, as lockdowns are lifted around the world **(Figure 5)**.

Economic Headwinds Pose Downside to the Cambodian Banking Sector

According to the World Bank, Cambodia's economy is forecasted to contract by 5%, its lowest economic growth rate since 1994, which is attributable to three primary factors:

The Downward Trend in Exports: The U.S. and EU markets combined comprise about 52% of Cambodia's total merchandise exports (5). This has caused the sector to face significant risk due to its strong linkages with countries affected by COVID-19. In addition, the EU's partial withdrawal of tariff preferences under the "Everything-But-Arms" (EBA) joins force to concentrate the country exports by both products and destinations **(Figure 6)**. Thus, an estimated 12% of the total or some 130 garment and footwear factories suspend their operations either partially or fully in Q1 of 2020, laying off close to 100,000 workers (5).

The Collapsed of Tourism and Hospitality Services: Siem Reap, Cambodia's most popular tourist destination, experienced a 45.6% decline in tourist arrivals during Q1 of 2020 and a 99.6% YoY contraction in April 2020 (5). This has materially impacted the Country's total output as this sector was Cambodia's second largest growth driver with an estimated contribution of 18.7% to real GDP growth in 2019, offering more than 620,000 direct employments equivalent to 14% of the total paid employment in the country (5).

The Burst in Real Estate Bubble: The greater China Region had accounted for more than 50% of Cambodia FDI inflows, and about half of these went to the construction and real estate sector (5). This has led the two sectors to significantly contract after the COVID19 outbreak in China that resulted in the projected approved FDI for the construction sector to decrease by 40% YoY (5). In addition, Cambodian property prices fell by around 30% since the announcement of the Royal Government on a ban on mainly Chinese-run online gambling operations (6).

Rapid Decline of the Agricultural Sector

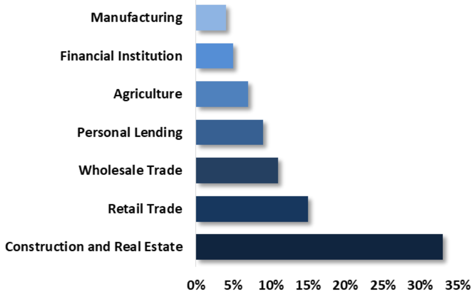
Facing with the fall in exports, tourism and hospitality, and real estate and construction, the Royal Government of Cambodia is planning to shift its focus on Agriculture, Cambodia's traditional growth driver, to sustain the country's economy (7). However, during the past several years, agricultural expansion has decelerated (5). Over the FY11-19, Agriculture, Fisheries & Fore contributions to GDP increase slightly at the CAGR of around 1% **(Figure 7)**. As a result, this sector may not materially address the impact created by Exports, Tourism, and Real Estate on Cambodia's total output.

Industry Dynamics

Fragmented Banking Industry with Small and Underperforming Banks

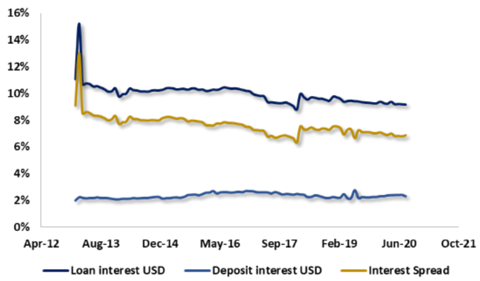
With the existence of 47 commercial banks throughout the Kingdom as of FY19, five major banks including ABC, ABA, Canadia, Sathapana and Campu, in descending order, accounted for 57% of the market revenue, while the bottom 35 commercial banks accounted for just 8% **(Figure 8)**. In addition, if exclusive of the top 5

Figure 9: Share of Loan Classified by Industries



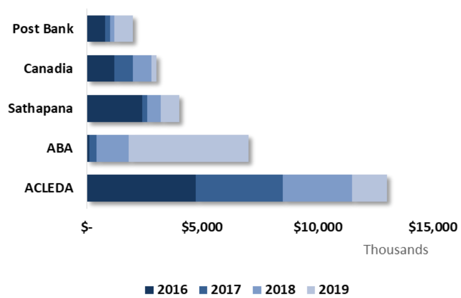
Source: National Bank of Cambodia, Team Analysis

Figure 10: Loan and Deposit Interest Trend



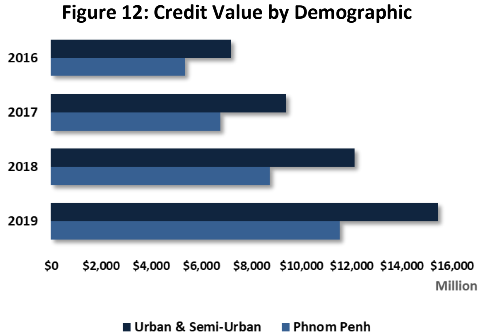
Source: National Bank of Cambodia, Team Analysis

Figure 11: Tech Spending Among Major Banks



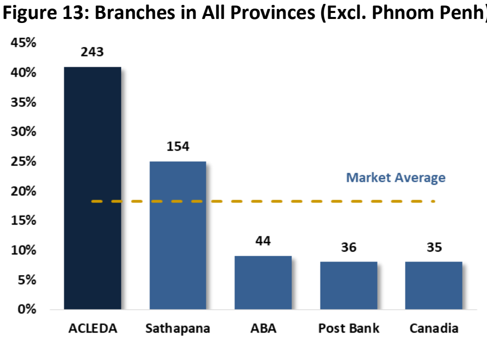
Source: Companies Data. Team Analysis

Figure 12: Credit Value by Demographic



Source: Credit Bureau Cambodia

Figure 13: Branches in All Provinces (Excl. Phnom Penh)



Source: National Bank of Cambodia, Team Analysis

players, the industry ROE fell by 330 bps from 11.7% to 8.4% with only 20% of banks able to generate acceptable returns above the industry average. Hence, the fact that 80% of Cambodian Banks are under-performing is one of the many factors that undermine the sector's efficiency and overall profitability over the long term.

High Risk of a Sharp Correction in Construction and Real Estate Sector

As of FY19, about two-fifths of Cambodia's outstanding bank credit consists of loans made to the construction, real estate and mortgage sectors which altogether stood at $7.7 billion, equivalent to 28.6% of the country's GDP in FY19 **(Figure 9)**. Therefore, even though nonperforming loans levels may not materially increase due to loan restructuring as stipulated by the local authorities (8), this has illustrated such a high exposure of the banking sector to construction and real estate that the use of property as collateral could exacerbate the risks to the banking sector, provided that a correction could be triggered by a change in foreign sentiment and investment and the COVID19.

Net Interest Margin Squeezes to Cut Earning Margin

Continued decline in the weighted average interest rates earned on loans is keeping margin pressure on core products **(Figure 10)**. On average, over FY15-19, the USD denominated weighted average interest spread decreased by 16% p.a. while KHR denominated weighted average interest spread slumped by 30%. Understandably, this is primarily attributed to aggressive lending competition among banks, the increased inflow of foreign investment to boost the country's money supply, and the implementation of strategy to promote the use of Khmer Riel by stipulating banks have at least 10% KHR-denominated loans of their total loan portfolio. Thus, banks' net interest margin has been under pressure with an expected ongoing effect in the foreseeable future.

Digitalization Intensified Competition from FinTech and Big Tech

In FY19, with 20.8 million mobile connections or 124% of the population, Cambodia's mobile banking transactions hit 42 million to reach $28 billion while internet banking peaked at 1.8 million transactions, accounting for $10 billion (9). The pattern is driven mainly by customers' rapid adoption of digital banking due to lockdowns in response to the COVID-19, changing customer mindsets, greater proliferation of smartphones and increasing demand for more self-service products through internet-based platforms. Thus, this has urged many Cambodian banks to digitize both of their products and systems where a total of more than $31 million, in terms of hardware and software, has been spent between FY16-19 **(Figure 11)**. By doing so, ABC and other large banks are expected to sustain their competitiveness regardless of the existing FinTech institutions such as PiPay and Wing since these companies mainly focus on simple transactions such as money transfers and settlement services, which has not been a major revenue source for banks.

The Dominant of Urban and Semi-Urban Population

As of FY19, around 86% of the country's population come from provinces while about seven-eighths of Cambodia's total labor force are also from rural areas as of FY17 (10). Nonetheless, over the FY16-19, although the number of borrowers, on average, consisted of 88% urban and semi-urban, the Capital City, Phnom Penh, alone shared an average of 42% p.a. of the country's credit value over the same period **(Figure 12)**. Therefore, even provincial markets have great potential that ABC is positioned to capture, the account balances are yet superior to that in the capital city.

Competitive Positioning

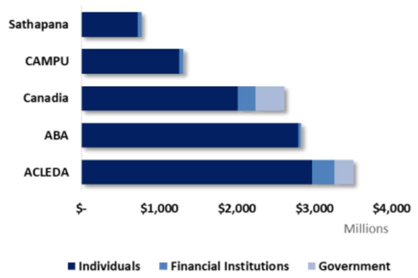
The domestic peer group selected for comparison with ABC consists of ABA Bank, Canadia Bank, Sathapana Bank, Cambodia Public Bank and Foreign Trade Bank. These six commercial banks together account for more than 50% of the total credit and deposit in the Cambodian banking sector.

Strong Presence in All Provinces and Towns

As of FY19, with its 262 physical branches, ABC has 92% of its network in rural provinces and semi-urban regions **(Figure 13)**. This has enabled ABC to reach areas where penetration of formal financing is still the lowest and, thus, offer 2 competitive advantages to ABC:

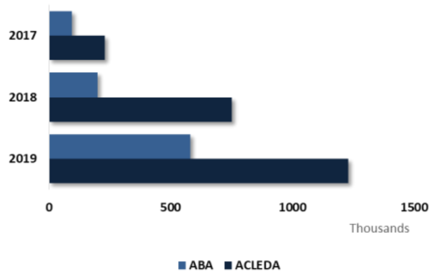
Corporate Partnership: As of FY19, ABC outcompetes its major peers in term of government and financial institution deposits. This is driven mainly by numerous partnerships with government agencies including the NSFF, the General Department of Taxation, and the Ministry of Economy & Finance for utilizing its cash

Figure 14: Deposit Type Among Banks



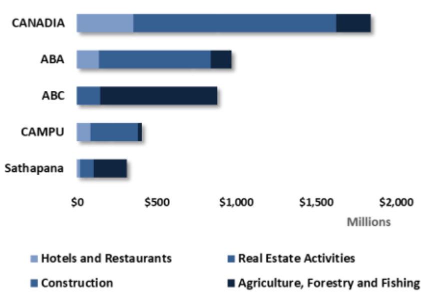
Source: National Bank of Cambodia, Team Analysis

Figure 15: Number of Active Mobile App Users



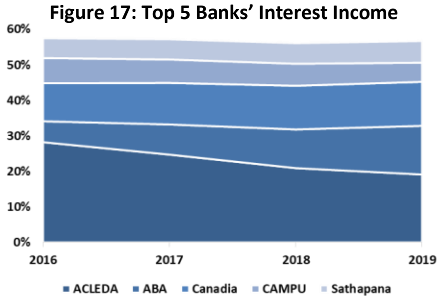
Source: Company Data, Team Analysis

Figure 16: Loan Breakdown



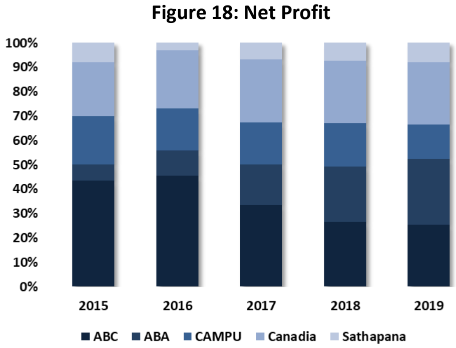
Source: National Bank of Cambodia

Figure 17: Top 5 Banks' Interest Income



Source: National Bank of Cambodia

Figure 18: Net Profit



Source: National Bank of Cambodia

management services such as government payroll direct deposits from all provinces and towns, and vehicle stamp tax collections. This allows the bank to have access to significant amount of domestic currency for its own disposal. Moreover, various financial and energy institutions with the likes of insurance and utility companies also open accounts with ABC in order to use its countrywide network for payment service and bancassurance. This enables the bank to diversify its income stream and enjoy higher deposits in current and savings accounts.

Retail Banking: ABC stands out on top in term of Individual deposits as of FY19 **(Figure 14)**. This is primarily driven by its ability to reach the country's major population in the remote areas. We expect ABC to increase its trading transactions and value with these local communities as Cambodia is forecasted to reach the upper middle-income status by 2030 (9).

Focus on Mobile App and Internet Banking Services

The "ABC's Unity ToanChet" currently has 1.23m users as individuals and 30,989 registered as corporate partners **(Figure 15)**. However, based upon our survey conducted in Phnom Penh, 91% of the 197 respondents are actively using ABA mobile banking application while more than 80% believed that ABA bank has the most innovative products **(Appendix C-3)**. Hence, this may indicate the fact that the ABC's Unity ToanChet has not been frequently used in the Capital City and only appeals users in the remote areas where transaction value is still insignificant. We expect ABC heading toward the modern digital-banking to restore users' banking experience, and, thus, improving customers' satisfaction.

Low Risk Loan Portfolio with Flat Yield

As of FY19, loans to Construction, Real Estate Activities, and Hotels and Restaurants account for approximately 4% of ABC's Total Outstanding Credit **(Figure 16)**. Nonetheless, around 20% of ABC's total loan portfolio dues from Agriculture, Forestry and Fishing sector. Even ABC takes the advantage of its strong presence to maximize agricultural loans, this sector has experienced a slow growth. As a result, this strategy joins force with the failure to capture the modern banking users in the capital has deteriorated ABC's profitability **(Figure 17 & 18)**. Although we expect ABC's asset quality to improve compared to its primary peers as the bank is less prone to concentration risk, ABC's market share is expected to remain at risk.

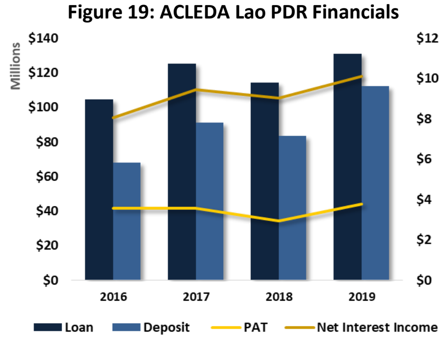
Subsidiaries' Growth Pace Remains a Blur

Over the FY16-19, ACLEDA Lao PDR and ACLEDA MFI Myanmar on average, contribute approximately 3% and 1.5% respectively to the group's earnings. Although these subsidiaries offer ABC both the strategic and resources fit which allow ABC to spread the costs related to the value chain activities among the group, only the ACLEDA MFI Myanmar has grown its credit market share **(Figure 19 & 20)**. Therefore, we do not expect these subsidiaries to offer a high growth opportunity to ABC in the next foreseeable future.

Top Ranked Credit Rating, Ahead of Sovereign Rating

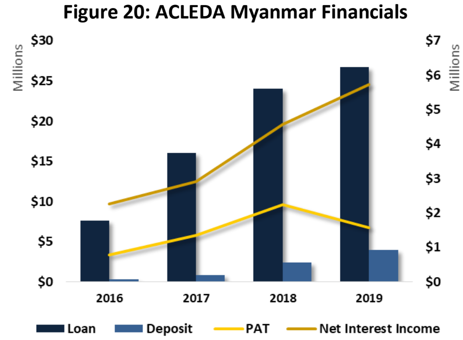
ABC is currently rated B+/Stable/B by S&P Global Rating, which is higher than Cambodia sovereign credit rating of B2 by Moody Rating and is the highest amongst Cambodian banks. Such high rating was mainly driven by superior asset quality thanks to proactive recollection policy, stable capital adequacy and ample liquidity profiles. We believe the high credit rating will benefit ABC in both the interbank borrowing market with higher approved loans potential and lower investor's required interest rate.

Figure 19: ACLEDA Lao PDR Financials



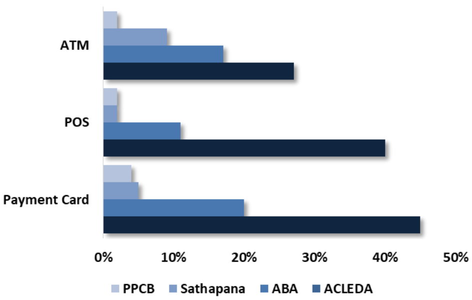
Source: Company Data, Team Analysis

Figure 20: ACLEDA Myanmar Financials



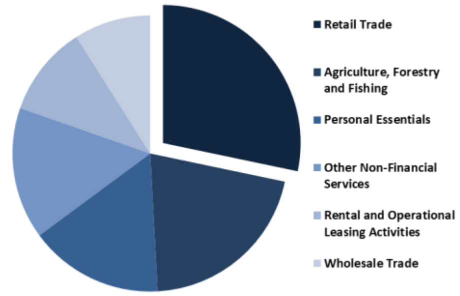
Source: Company Data, Team Analysis

Figure 21: Payment Ecosystem Market Share



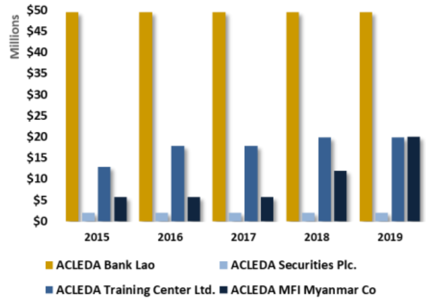
Source: National Bank of Cambodia, Team Analysis

Figure 22: ABC's Loan Breakdown



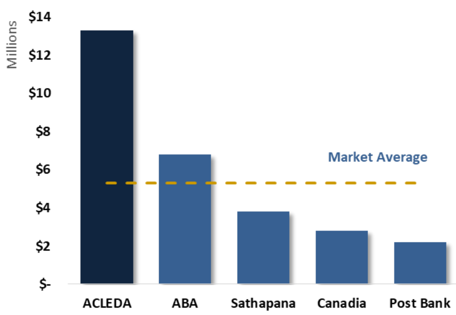
Source: National Bank of Cambodia, Team Analysis

Figure 23: ABC's Investment in Subsidiaries



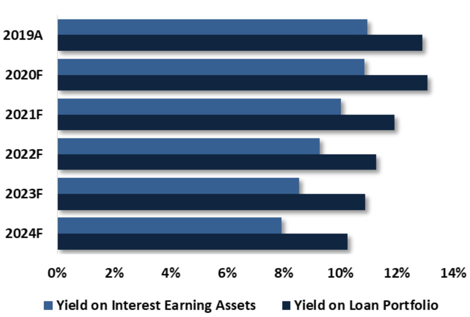
Source: Company Data

Figure 24: Total Spending on Digital Banking



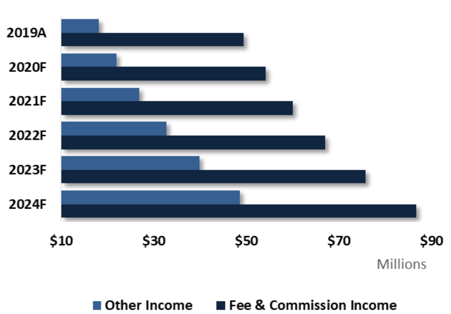
Source: Company Data, Team Analysis

Figure 25: ACLEDA Interest Yield on Loans and Assets



Source: Company Data, Team Analysis

Figure 26: ACLEDA Non-Interest Income



Source: Company Data, Team Analysis

Corporate Growth Strategy

Shifting Focus to Retail, Small and Corporate Business

ABC currently has 1.2 million active debit cards in issue accounting for 46% of the market share; 38.6% of the POS terminals; 27% of the ATM terminals; and 20% of the credit card market share **(Figure 21)**. This has enabled ABC to scale up its payment ecosystems with different merchants in the wholesale and retail sector by digitizing their payment solutions and thereby, capturing their banking business. As a result, as of FY19, ABC's lending to the wholesale and retail sector accounted for 35% of its total loan portfolio **(Figure 22).** This has provided stable economic inflows to ABC as with the expansion of the Cambodian economy over the last decade, this segment is characterized with high growth, low concentration risks and higher yields. Even though the growth in this sector is likely to remain subdued by the outbreak of COVID-19, increased domestic consumption among Cambodian consumers will likely save SMEs and retail trade from being at risk. We believe ABC to remain focus in this market segment through payment solutions as an effective acquisition tool and will bring loyalty in business owners to prefer ABC as their banking partner.

Diversification

Over the FY15-19, although investment in ACLEDA Lao PDR Financials and ACLEDA Securities Plc. remain stable, the capital injection in the ACLEDA Myanmar Financials and ACLEDA Training Center has increased at the CAGR of 36% and 12% respectively **(Figure 23)**. Therefore, with the bank's vision to move toward the "Cambodian bank of the World" (10), we expect ABC to continue penetrating both the regional and, eventually, international markets in the upcoming unforeseeable future. Even investment in these subsidiaries may not payback itself in the short run, we believe ABC to improve its efficiency and profitability through diversification of business revenue and costs in the long term.

Continued Investments in Digital Banking Channels and FinTech

Over FY16-19, ABC has spent a total of $13m to develop digital banking channels and FinTech, far above the industry average **(Figure 24)**. By doing so, it takes ABC to a new level of innovation through its modern mobile banking application, the "ABC's Unity ToanChet", and the internet based self-service products. We believe such investment will help ABC to gradually restore its market share through increasing access to SMEs and to enhance customer satisfaction by improving users' banking experience.

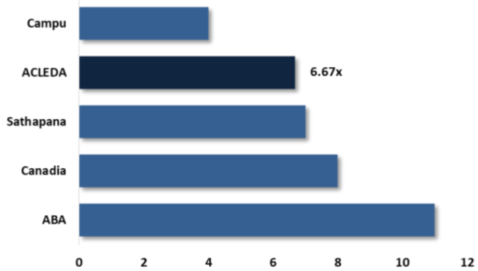
Financial Analysis

Strong Capital Base, Well-Placed to Weather Covid-19 Storm

Profitability Ratios Trending Upward After Bottoming

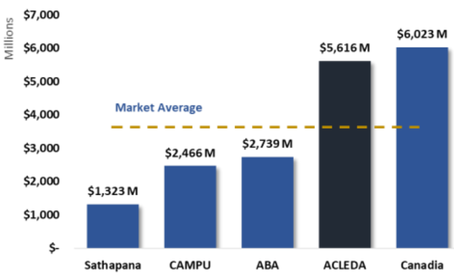
ABC's earnings rose in FY19 by 44% YoY to $120.9 million, putting an end to the steep declines of the previous three years. This expansion was largely attributed to slight increases in higher yield on loan portfolio (44bps YoY to 12.7%), yield on interest-earning assets (80bps YoY to 10.9%) and improving branch efficiency (operating expense ratio has slipped by 4.4% CAGR between FY15-19) and strengthening e-banking channels **(Appendix D-7)**. However, uptrend in expenses and lower net interest income were undermining factors. Also, higher provisions remain a major drag (Figure 30) and NIM is expected to decrease to harm the yields on core products **(Figure 25)**, ABC is projected to compensate this effect with an increase in non-interest income **(Figure 26)**.

Figure 27: Equity Multiplier Among Banks



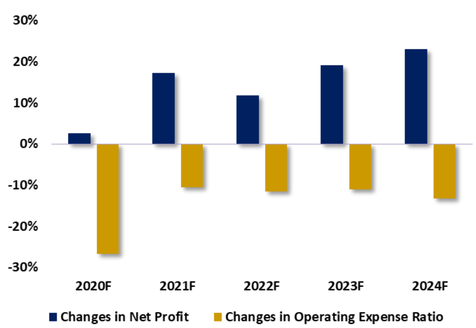
Source: Company Data, Team Analysis

Figure 28: Total Asset Among Banks



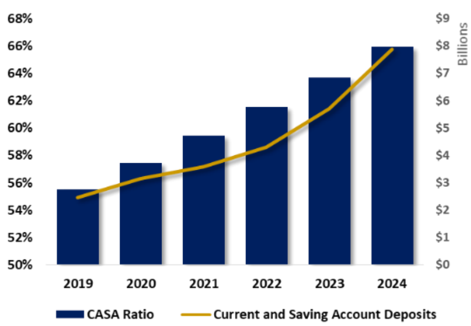
Source: Company Data, Team Analysis

Figure 29: Net Profit and Operating Expense Ratio



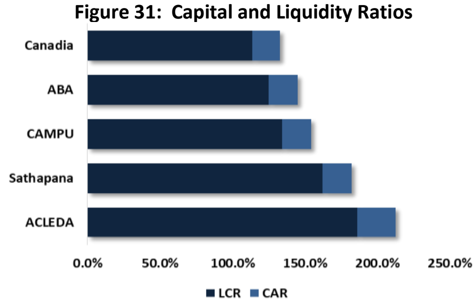
Source: Company Data, Team Analysis

Figure 30: ACLEDA's CASA



Source: Company Data, Team Analysis

Figure 31: Capital and Liquidity Ratios



Source: Company Data, Team Analysis

ABC's ROAA and ROAE also seen a rebound by 51bps and 279bps YoY in FY19 to 2% and 13.7% respectively **(Appendix D-7)**, but are still below the major banks' average of 2.68% and 18.65% respectively. These are mainly caused by three factors:

Conservative Risk Appetite: ABC's equity multiplier stands at 6.67x which is less than most of its major peers **(Figure 27)**. This means that the majority of peers' ROAE has been driving up by high financial leverage, which is not a sustainable driver of ROAE. Thus, we estimate ABC's ROAA and ROAE rebound will be maintained toward the peers' average as earnings profiles are set to improve going forward through capital-optimization initiatives such as digitalizing administrative process and improving branch efficiency.

Bigger in Size: As of FY19, ABC ranks second in term of total assets but has the most physical branches throughout the Kingdom **(Figure 28)**. Therefore, this offers both strengths and weaknesses to ABC as it is able to reach unbanked areas but simultaneously incur higher operating costs that cause ABC's profit to be inferior to that of the other banks. We expect ABC's net earnings to enhance as with the bank's improvement in its operating efficiency through economies of scale **(Figure 29)**.

The Growth in Unwanted Market: Since ABC has not switched its focus to real estate and construction sectors during their booming stage, this has resulted in the bank to subject less to the sharp correction in these two emerging markets at the expense of minimizing its earnings compare to its peers. Therefore, with SMEs remain the bank's growth direction, we expect ABC's credit to construction and real estate sectors to remain moderate. However, as Cambodia's economy is forecasted to rebound in 2021, we believe the growth in SMEs will compensate the loss in less exposure to real estate and construction.

Rising CASA Underpinned by IT Investments and Ecosystem Strategy

Since the FY15, ABC's CASA ratio has increased at a FY15-19 CAGR of 4%, reaching 55% in FY19 and clearly above the peer average **(Appendix D-7)**. Going forward, we project ABC's CASA to inch up to 65% between FY20-24 **(Figure 30)**, bolstered by increasing IT investments and its ecosystem strategy which will then help ease operating leverage, buoy NIM expansion, acquire individual clients via the payroll system of SME customers, and CSX mobile trading system.

Well-Fortified Bank with Strong Asset Quality and Solid Risk Buffer

ABC's NPL ratio came down to 1.23% in FY19 from 2.08% in FY17, a decrease of 85bps over the period. This is due largely to its strong corporate governance, risk management, overall strategy of maintaining higher exposure to well established SMEs, strict loan appraisal and approval and active collection. In the following years, we expect the bank's NPL to inch up to around 1.6% in FY20 due to loan restructuring as a result of COVID-19 but to continue downtrend thereafter as a result of shifting lending focus to well established SME and retail sectors.

Solid Capital Base with Sustainable Liquidity Profiles

ABC's capital adequacy ratio (CAR) increases by 17% YoY to stand at 26.5% at the end of FY19 above peers and far exceeds the 8% minimum required by the Basel II Committee and the 15% minimum required by the National Bank of Cambodia (NBC). The increase is achieved through ABC's focusing on collateralized lending to control risk-weighted asset level. Furthermore, ABC's common equity tier 1 (CET1) ratio stood at 14% while LCR Ratio also hit 186% in FY19 **(Figure 31)**, indicating strong capital and a good liquidity position relative to peers. We forecast ABC will maintain its CAR and LCR at around 20% and 160% between FY20-22 above the regulatory requirement due to the bank's prudent loan book growth, and healthy capitalization levels.

Valuation Summary

Based on the dividend discount model (DDM), a widely adopted valuation method for banks, we derive ABC's one-year target price at KHR 12,049 with 29% downside risk to the current KHR 16,860 as of 08/01/2021. Initiate with a SELL recommendation. Our target price implies 1.69x 2020E P/BV or 12.72x 2020E P/E. We believe the downside to ABC is a result of deteriorating market share in terms of credit and deposit, credit growth expected to come in low due to COVID-19 and a deteriorating macro environment. Net interest margin (NIM) continues to be under pressure and expected to continue as lower rates will likely hamper ABC's top-line growth and has been witnessing a persistent rise in expenses.

We choose the Dividend Discount Model (DDM) as our targeted price to compare with current share price, because of ABC dividend policy after IPO has stated that ABC will consistence pay dividend up to 50% of the net profit. As Dividend is important that will affect the shareholder opinion on share price, so DDM will be

Figure 32: Cost of Equity Assumption

Cost of Equity of ABC	
US Risk Free Rate (5 years T-bond)	0.37%
US Market beta (Regional Bank)	0.43
ABC Equity Beta (Bottom Up)	0.56
US ERP	5.23%
Cambodia CRP	8.09%
Cost of Equity	11.40%

Source: Company Data, Team Analysis

Figure 33: Terminal Growth Rate Assumption

Terminal Growth Rate		
Description	Drivers	Weight
Average GDP Growth Rate	6.70%	30%
Long Run US Average Inflation Rate	1.20%	30%
Cambodian Population Growth Forecast	1.40%	30%
Cambodian Banking Industry Growth	10%	10%
Terminal growth rate	4%	

Source: Company Data, Team Analysis

Figure 34: DDM Valuation

Dividend Discount Model (DDM)	
Terminal Growth Rate	4%
PV of Terminal Dividend (KHR Mil.)	3,943,728
Sum of PV of Forecastable Dividend (KHR Mil.)	1,222,965
Total Equity Value (KHR Mil.)	5,166,692
Number of Share (Mil.)	429
Intrinsic Value (KHR)	12,049
Current Price (KHR)	16,860
Upside Risk	-29%

Source: Company Data, Team Analysis

Figure 35: RIM Valuation

Residual Income Model (RIM)	
Terminal Growth Rate	4%
PV of Terminal Residual Income (KHR Mil.)	1,940,224
Sum of PV Residual Income (KHR Mil.)	782,688
Current Ordinary Shareholder's Equity (KHR Mil.)	3,930,181
Total Equity Value (KHR Mil.)	6,653,093
Number of Share (Mil.)	429
Intrinsic Value (KHR)	15,515
Current Price (KHR)	16,860
Upside Risk	-8%

Source: Company Data, Team Analysis

more accurate rather than other method due the amount of dividend will be reflect the time value of money by the cost of equity with taking account of the growth rate of dividend.

Dividend Discount Model

Given the unusual financial structure of a bank, it is not practical to employ free cash flow approach as debts for banks can be classified as both financing and operating Cash Flow. "Working Capital" and "Free Cash Flow" cannot be defined. EBITDA is irrelevant as well because interest is integral to revenue and expense.

Cambodian banks are constrained by capital requirements - according to the NBC and must maintain a certain "buffer" at all times to cover unexpected losses on their loans. Therefore, dividends are the more appropriate valuation measure of cash flows compared to free cash flows. Furthermore, similar to CapEx requirements, net income growth, and working capital constrain free cash flow for normal companies, the Tier 1 Capital; Tangible Common Equity; Total Capital requirements constrain dividends for banks. We forecast ABC to double its dividend payout over the next five years due to ABC's IPO document disclosure of paying dividend up to 50% of its net income each year starting from 2020. By assuming a cost of equity of 11.4% **(Figure 32)** and a terminal growth rate of 4% **(Figure 33),** we obtain target share price of KHR 12,049 **(Figure 34)** with 29% downside risk to the current KHR 16,860 as of 08/01/2021.

Residual Income Method

In order to support our SELL recommendation, we also employed RIM to complement our DDM valuation. RIM calculates the streams of annual net income net of equity charge (average common equity times cost of equity), discounted by cost of equity. RIM represents the excess return that can be generated by the bank's invested capital above the cost of capital itself. Terminal residual income value was estimated using the perpetuity growth formula.

Our RIM implies a price of KHR 15,515 by applying a cost of equity of 11.4%, terminal growth rate of 4% and after a detailed projected 5 years ending with a CAGR of 25% residual income growth **(Figure 35)**. This is when major bad debts written-off have been collected, interest rate cap might have been loosened, provision expense has been cut and stabilized, and technological outlay has manifested into profits.

Sensitivity Analysis

A sensitivity analysis was performed to flex the key drivers of ABC's intrinsic value, which are terminal growth rate and the cost of equity. We observe large portion of intrinsic value is derived through the terminal value compare to forecast value (DDM: 76/24, RIM: 29/12 - we note that 59% of value in RIM is derived through current ordinary shareholder's equity). Given terminal growth rate and the cost of equity are key drivers of our DDM and RIM valuations, they were flexed between the ranges 2.5% to 5.5% and 8.4% to 14.4% using increments of 0.5% and 1% respectively. Under the DDM, result indicates that a 1% change in the cost of equity will resulted in a -13%/+17% change in the intrinsic value which signals the share price is highly sensitivity to movements in cost of equity.

Sensitivity Analysis – Cost of Equity vs. Terminal growth (DDM)

		Cost of Equity						
		8.4%	**9.4%**	**10.4%**	**11.4%**	**12.4%**	**13.4%**	**14.4%**
Terminal growth rate	**5.5%**	30,408	22,408	17,679	14,558	12,346	10,696	9,421
	5.0%	26,283	20,123	16,251	13,593	11,657	10,185	9,029
	4.5%	23,216	18,305	15,064	12,767	11,055	9,730	8,676
	4.0%	20,846	16,823	14,063	**12,049**	10,525	9,325	8,358
	3.5%	18,960	15,593	13,207	11,429	10,054	8,960	8,069
	3.0%	17,422	14,555	12,466	10,879	9,633	8,630	7,805
	2.5%	16,146	13,667	11,820	10,392	9,255	8,330	7,563

Source: Team Analysis

Sensitivity Analysis – Cost of Equity vs. Terminal growth (RIM)

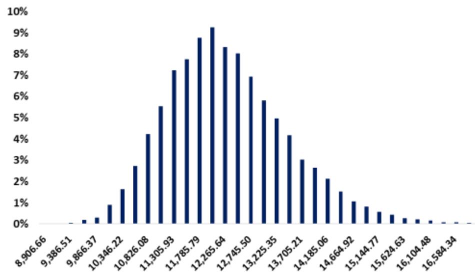
		Cost of Equity						
		5.9%	**6.9%**	**7.9%**	**8.9%**	**9.9%**	**10.9%**	**11.9%**
Terminal growth rate	**5.5%**	17,709	16,883	16,185	15,582	15,049	14,571	14,138
	5.0%	17,679	16,857	16,162	15,560	15,029	14,553	14,120
	4.5%	17,650	16,831	16,138	15,538	15,009	14,534	14,103
	4.0%	17,620	16,804	16,114	**15,515**	14,989	14,516	14,086
	3.5%	17,591	16,778	16,090	15,494	14,969	14,497	14,069
	3.0%	17,561	16,751	16,066	15,473	14,949	14,479	14,051
	2.5%	17,531	16,725	16,042	15,451	14,929	14,460	14,034

Source: Team Analysis

Monte Carlos Analysis

Since the DDM model is based upon numerous external assumptions, we have performed the Monte Carlos Stimulation to test the following 3 key variables including: the cost of equity, the terminal growth rate, and the dividend payout ratios. The Monte Carlos Simulation is carried out to examine the possible movement in ABC's share price, provided that there are fluctuations in key drivers of the target price. As a result, following by 10,000 trials, we are able to conclude that there is 54% chance that the actual price will exceed the target price of KHR 12,049 **(Figure 36)**. However, the probability of actual price reaching the current market price of KHR 16,860 is only 0.05% which strongly suggests that ABC's share price is over-value.

Figure 36: Monte Carlos Simulation

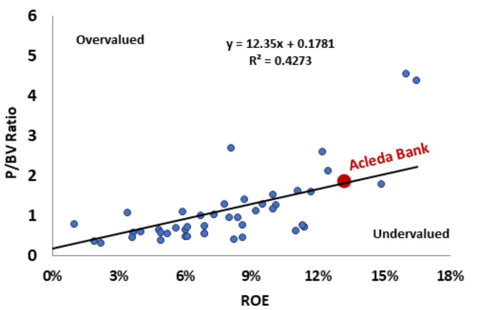


Source: Team Analysis

Relative Valuation

Our P/BV and P/E multiple valuation has concluded the 1-year target price for ABC of KHR 13,391 (21% premium) and KHR 14,567 (16% premium) respectively based on overall average P/BV of 1.52x and P/E of 12.44x for the comparable set. Furthermore, the result of regressing P/BV on ROE for the regional and international banks has supported the relative valuation that ABC is currently at a premium at the current P/BV of 1.88x, TTM ROE of 13% **(Figure 37)**. Firm value multiple EV/EBITDA is not useful because neither firm value nor operating income can be easily estimated for banks.

Figure 37: Regional & International Banks P/BV vs ROE Regression



Source: Bloomberg, Company Data, Team Analysis

P/BV multiples was used applied because book value of equity precisely reflects the true value of the firm's equity as most of the assets and liabilities of a banks are marked to market or liquid. Hence, book value equity is more likely to reflect market value and a stronger relationship between P/BV and ROE is expected, providing insight into market expectations of growth and risk.

P/E multiples was used to reflect the importance of bottom-line earnings in driving value for banks. P/E ratios are typically considered to be indicative of growth and increased income potential. If the company has a high P/E ratio relative to the overall market, and also high valuations relative to its peers in the sector, while earnings growth shows signs of deceleration, it is indicative that the stock is overvalued **(Figure 38)**.

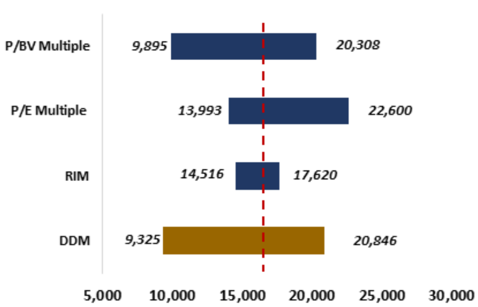
Figure 38: Relative Valuation Peers Table

Ticker	Country	MRT CAP (USD MN)	P/BV Ratio	P/E Ratio
BBNI	Indonesia	7,748	1	14.2
RHBBANK	Malaysia	4,892	0.75	12.3
MBT	Philippines	4,600	0.69	14
BBL	Thailand	7,786	1.55	10.4
OCBCBANK	Singapore	33,392	6.01	11.9
ANZ:ASE	Australia	50,372	1.08	17.9
NA:CN	Canada	18,817	1.79	11.7
601939:CH	China	192,764	0.75	6.9
Regional Average			**1.83**	**12.73**
International Average			**1.05**	**11.99**
Overall Average			**1.52**	**12.44**
ABC	Cambodia	1,825	1.88	14.74
Implied Price (KHR)			**13,931**	**14,567**
Current Price (08/01/2021)			**16,860**	**16,860**
Premium			**21%**	**16%**

Source: Bloomberg, Company Data, Team Analysis

Overall, ABC outcompetes the rest in term of equity beta which means that it is subject to less financial risk as oppose to those of the foreign giants; thanks to its equity based capital structure. Furthermore, even ABC's profitability ratios are underperformed if compare domestically, it is surprise to see that ABC's ROA and NIM comes out on top at the international stage with a slightly less than the National Bank of Canada in term of ROE. Therefore, this signals a general rule of thumb that large and multi-national institutions with significant amount of asset are likely to incur higher operating costs which will then affect their performance efficiency ratios. However, ABC ranks second from the bottom with regard to dividend yield which may indicate that the bank does not treat its shareholders well that it pays less dividend compare to the foreign peers, provided they are all at their mature stage. Moreover, ABC's non-Interest income ratio hits the trough among its international counterparts which probably shows that it is too much dependent on the price of credit and, thus, will be significantly impacted by the interest rate risk **(Figure 39)**.

Figure 39: ABC's Blue Sky and Grey Sky Analysis



Source: Team Analysis

Investment Risks

Industry Risk

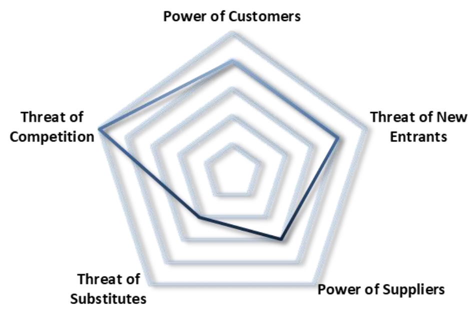
I1 | Competition (High Impact / High Probability): The increases in competition could affect ABC, however, we observe that ABC has tried to maintain its market leadership by heading toward digital banking. ABC has implemented 3 main pillars: 1) improve on digital products 2) Developing human resources 3) Strengthening its subsidiaries' performance. However, due to the low capital requirement for banks to set up as compared to even the neighboring countries, more foreign banks will be encouraged to enter the market. Moreover, Cambodia's banking sector is already overcrowded and almost all corners of the market have been taken over. Therefore, due to Cambodia's relatively small market size and established banking sector, we can determine the threat of new entrants to be high **(Appendix C-1)**.

I2 | Credit Risk (High Impact / Medium Probability): As ABC operates in the banking sector, there is a risk associated with a possible non-repayment from borrowers. Thus, poor lending practice could potentially affect ABC which will result in losses. ABC has maintained higher exposure to well established corporate institutions, strict loan appraisal and approval and active collection. Since its NPL indicates that it has lower NPL compared to its peers **(Appendix-D7)**.

Operational Risk

OP1 | Governance Risk (High Impact / Medium Probability): There is a cost associated with the failure of corporate governance. It poses a threat to the operation of bank which means a failure of taking shareholders' interest into account. Moreover, it has a huge impact on the bank if the governance mechanism is ineffective. For instance, the Independent directors have been with the company exceed the standard year allowed. ABC should have observed critically for the number of years executives serve on board to avoid the ineffectiveness of the operation.

Figure 40: Porter's Five Forces



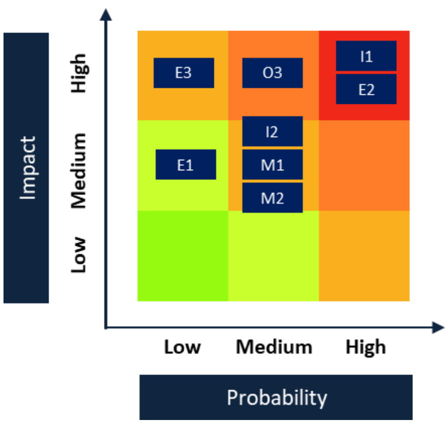
Source: Team Analysis

Market Risk

MK1 | Interest Rate Risk (Medium Impact / Medium Probability): ABC faces an adverse movement of the interest rate lending and interest rate deposit and in order to project the movement of ABC's interest rate, we performed a simulation using the ARIMA model **(Appendix D-9)**. However, we observed that ABC's interest lending rates continually decline between FY20-24 at the rate of 9%, 8%, 7% respectively, while the interest deposit rates remain relatively stable at approximately 2% **(Appendix D-9)**. ABC is conservatively using the interest rate swap to hedge the interest rate risk exposure over the year. The bank has implemented the strategy, however it is unsure whether it is effective or not, since the swap is expensive and limited.

MK2 | Exchange Rate Risk (Medium Impact / Medium Probability): Most of ABC's non-functional currency denominated assets and liabilities are in KHR which possibly expose to the exchange rate risk. The KHR net position as of our valuation date could potentially incur lose on foreign exchange which is mitigated by the bank usage of forward contract to hedge non-functional currency risk exposure through matching terms and currencies of assets and liabilities by the treasury group and review quarterly by the board.

Figure 41: Investment Risk Matrix



Source: Team Analysis

Event Risk

E1 | Legislative Risk (High Impact / High Probability): ABC is subject to the legal requirements set by the government of Cambodia and any legislation or reform put forth by the governing body will have a direct impact on the company, such as the newly passed capital gains tax law which will be implemented in the near future. The law, coupled with Cambodia lack of a double-taxation treaty, will mean that international investors are required to pay tax on capital gains once in Cambodia and again in their country of origin.

E2 | Country Risk (Medium Impact / Low Probability): ABC, with the majority of its operation in Cambodia, is a Cambodian company and an investment into ABC has to take into account the uncertainty associated with investing in the country. Cambodia, in recent years, has experienced relative political and economic stability. However, Cambodia's inability to satisfy international requirement on human rights has led to Cambodia losing out on favorable trade deal with western communities. This is reflected in the EU's decision to partially withdraw Cambodia's EBA status as of August 2020 (11) and the push by US legislators for an immediate review of Cambodia's tariff privileges. Nevertheless, the partial withdrawal of Cambodia's EBA will only affects 20% of Cambodia's exports to the EU with room for continual engagement on the necessary reforms. Any sanction by the US government will also has limiting effects as Cambodia gently decreased trade dependency on the US through increased trade volume with China, Australia and the emerging economies of the ASEAN nations.

E3 | Regulatory Risk (High Impact / Low Probability): ABC is a licensed commercial bank and it must comply with regulations set by the National Bank of Cambodia (NBC) such as minimum capital requirement and reserve requirement. These regulations are likely to increase the cost of operations and introduce compliance related obstacles which can limit growth potential. Thus, any investment in a Cambodian commercial bank is an investment of trust into the policies set forth by the NBC. ABC has dutifully followed all of the regulations put forth by the NBC and more, such as ABC's commitment of maintaining a CAR of 26.5% which exceeds the minimum required. ABC's conservative nature has significantly reduced the risk of breaching any regulation and has established the company as a leader in compliance. On the other hand, the NBC has position itself as a reliable and fair regulatory body that aligns its policy with the internationally accepted frameworks of BASEL II and III.

APPENDICES

Table of Contents

List of Abbreviations

ABBREVIATION	FULL TERM
ABC	ACLEDA Bank Plc.
MFI	Microfinance Institution
CSX	Cambodia Securities Exchange
CAGR	Compounded Annual Growth Rate
NSFF	National Social Security Fund
GDP	Gross Domestic Product
ROE	Return on Equity
CASA	Current and Savings Accounts
ROA	Return on Assets
ROAE	Return on Average Equity
NIM	Net Interest Margin
NPL	Nonperforming Loan
NBC	National Bank of Cambodia
CAR	Capital Adequacy Ratio
LCR	Liquidity Coverage Ratio
YoY	Year-over-Year
IEA	Interest-Earning Asset
IBL	Interest-Bearing Liabilities
RWA	Risk-Weighted Assets

Appendix A: Business Description

Appendix A-1: Shareholders' Ownership as at 2019

SHAREHOLDERS	OWNERSHIP (%)	SHARE CAPITAL (US$)	NUMBER OF SHARES
ACLEDA Financial Trust	26%	111,492,719	111,492,719
ASA, Plc.	25%	107,204,547	107,204,547
Sumitomo Mitsui Banking Corporation	18%	78,259,310	78,259,310
COFIBRED	12%	52,530,223	52,530,223
ORIX Corporation	12%	52,530,223	52,530,223
Triodos Microfinance Fund	3%	10,938,339	10,938,339
Triodos Fair Share Fund (is owned by Legal Owner Triodos Funds B.V.)	2%	9,354,157	9,354,157
Triodos Sustainable Finance Foundation	2%	6,508,636	6,508,636
Public Investor	1%	4,344,865	4,344,865
TOTAL	100%	$433,163,019	433,163,019

Source: Company Data

Appendix A-2: Breakdown of Subsidiaries

2008

ACLEDA Bank Lao Ltd.

ACLEDA Bank Lao Ltd., which ABC owns 99.90% percent of, began its operation in July, 2008. ACLEDA Bank Lao Ltd. provides various financial services including e-banking, credits, deposits, fund transfers, cash management, trade finance and more. It has a total of 38 branches in the Lao PDR.

2010

ACLEDA SECRUTITIES Plc.

ACLEDA Securities Plc. is a brokerage firm that provides services as a securities brokerage and bondholders representative to individual and institutional customers, investors and the public.

2013

ACLEDA MFI Myanmar Co., Ltd.

ACLEDA MFI Myanmar Co. Ltd. operates as a microfinance institution in the Republic of the Union of Myanmar and has a total of 16 branches.

2016

ACLEDA Institute of Business

AIB is a private higher education institution that provides both higher education services on department of business administration and professional training services in field of finance and banking to local and international students and graduates, participants from other organizations, and the public as well as ACLEDA Bank's staff.

Source: Company Data

Appendix B: Environmental, Social and Governance

To evaluate the quality of ABC's Environmental and Social and Governance each category is based on London Stock Exchange Group which provides the criteria. If the bank has fulfilled the description, the rating will be on the scale between 1-4. The analysis of the Environmental, Social and Governance are summarized in the following table:

The Rating:

1- The bank did not follow the criteria at all,
2- The bank did not follow the criteria,
3- The bank followed the criteria,
4- The bank fulfilled the criteria completely,

CRITERIA	DESCRIPTION	RATING	JUSTIFICATION
Board Structure			
Independence	The board must maintain a level of independence, act in the best interest of shareholder, and be able to separate from and oversee management.	3.5	Of the 10 members on the board, 80% are non-executive directors and independent non-executive directors.
Directorship	The board must maintain an acceptable number on the Board of Directors to effectively make decision.	3	There are 10 members on the board, as stipulated in the articles of incorporation. The number of members are acceptable compare to peer companies, although the even numbers could pose an obstacle in reaching a majority decision.
Diversity	The board must consist of members from various, but complementary professional background, while representing race and gender diversity.	3	70% of the members are foreigners (Non-Cambodian) with presence of a female member. They come from different background and had held position in different company board and committee.
Committee	The board must establish Audit, Risk Management, and Remuneration and Nomination Committee as required by law.	3.5	The board has established Audit, Risk Management, and Remuneration and Nomination Committee. The board also reserves the rights to establish further committees as they saw fit.
Competency	The board must maintain a level of competency where members are expected to hold in-depth and relevant experiences related to the company's field.	3.5	The board members satisfactorily hold in-depth and relevant experiences related to the company's field. Members comes from well-known background and had successfully pursued higher education.
	Average Score	3.2	
Board of Directors			
Independence	The Board of Directors must maintain a level of independence in acting for the best interest of all investors' benefit. This is based on the BOD's ability to separate from and control the company's management.	2.5	Of the 10 members of the Board of Directors, 80% are non-executive directors and independent non-executive directors. One director has sit on the board for 20 years.
Directorship	Acceptable number on members of Board of Directors to effectively makes decision.	3	There are 10 members, as stipulated on the company's articles of incorporation. The amount of directors is acceptable in being able to challenge one another in decision making, although the even numbers could pose an obstacle in reaching a majority decision.
Diversity	Members on the Board of Directors comes from different background and represents race and gender diversity.	2.5	3 members of the BOD are Cambodian while the rest are foreigners. This shows a diverse board, although there is a lack of representation from Laos and Myanmar. Only 1 member of the BOD is female, and rest are males.
Committee	Established Audit, Risk Management, and Remuneration and Nomination Committee as required by law.	4	The company has established Audit, Risk Management, and Remuneration and Nomination Committee. The BOD also reserves the right in established further committee as they saw fit.
	Average Score	3.0	
Audit Committee			
Independence	The Audit Committee shall be chaired by an Independent Director [NBC].	4	The Board Audit Committee is chaired by Mr. Ian S. Lydall who is an independent director.

Competence	The Audit Committee shall include at least an independent person with expertise in Finance & Accounting, and an Independent person with expertise in Legal Issues and Banking [NBC].	3	The Board Audit Committee consists of three independent directors and a non-executive director who has an expertise in Audit, Economics, Corporate Finance, and Business Administration respectively.
Integrity of Financial Information	The Audit Committee shall ensure the information provided to the public and NBC is clear, accurate & reliable. [NBC].	3.5	The Committee met 13 times during the fiscal year 2019 to Reviewed, approved the financial audited statements of 2018 and monitored management's process of IFRS implementation and development.
Selection of Auditor	Company should allow shareholders to ratify the selection of the auditor [CFA].	1	The Entity does not disclose its process with regard to the selection of External Auditor.
	Average Score	3	
Remuneration and Nomination Committee			
Independence	The Audit Committee shall be chaired by an Independent Director [NBC].	4	The Board Audit Committee is chaired by Mr. Ian S. Lydall who is an independent director
Competence	The Audit Committee shall include at least an independent person with expertise in Finance & Accounting, and an Independent person with expertise in Legal Issues and Banking [NBC].	3	The Board Audit Committee consists of three independent directors and a non-executive director who has an expertise in Audit, Economics, Corporate Finance, and Business Administration respectively.
Integrity of Financial Information	The Audit Committee shall ensure the information provided to the public and NBC is clear, accurate & reliable. [NBC].	4	The Committee met 13 times during the fiscal year 2019 to Reviewed, approved the financial audited statements of 2018 and monitored management's process of IFRS implementation and development
Selection of Auditor	Company should allow shareholders to ratify the selection of the auditor [CFA].	1	The entity does not disclose its process with regard to the selection of external auditor.
	Average Score	3	
Risk Management Committee			
Competence	The Risk Management Committee shall be chaired a person with expertise in finance and risk management [NBC].	2	Mr. Cornelius Obert graduated with a degree in Economics and Management with areas of responsibility included Corporate Business, Treasury Activities, Precious Metal Business and Trade Finance.
Independent	The Risk Management Committee shall be chaired a person who is independent from day-to-day operation [NBC].	4	The Risk Management Committee is chaired by Independent Director.
Responsibilities	The Risk Management Committee shall be responsible for monitoring the implementation or risk management policies [NBC].	4	The Risk Management Committee has a direct control over the Compliance Division.
Members	The Risk Management Committee shall be composed of at least 3 members and chaired by the Independence Director [SECC].	4	The Risk Management Committee is chaired by Independent Director.
	Average Score	3.5	
Shareholders' Rights			
Voting Rights	A shareholder reserves the rights to vote upon the bases of 'one share, one vote' equal to other shareholders.	4	The company policy acknowledge that all voting will conduct under a 'one share, one vote' bases.
Dividend Rights	A shareholder must have their rights maintain in receiving per-share dividend equal to the value of other shareholders.	4	The company has protected shareholders' right in receiving a fair per-share dividend and had gave out dividends consistently every year.
Meeting Rights	A shareholder reserves the rights in receiving meetings with the Board equal to other shareholders.	4	All shareholders are treated equally by the company, while general shareholders meeting is conducted under equal and fair conditions.

Information Rights	A shareholder reserves the rights in receiving relevant information equal to other shareholders.	4	The company has maintained all relevant information on the official website and shareholders can request for information directly for as long as the information are not considered non-disclosed.
Minority Shareholders Rights	The rights and interests of minority shareholders must be protected as equal to other shareholders.	4	Minority shareholders reserves the rights to seek information, voice an opinion and redress. While the board has ensured a smooth interaction with all shareholders under fair conditions.
	Average Score	4	
Disclosure and Transparency			
Disclosure of Information	The company must disclose all relevant information including financial results, operating objectives and major shareholders' ownership.	4	The company has disclosed all relevant information that the public can have access to.
Governance Structure	The company must disclose the governance structure with backgrounds on the board and key executives.	3.5	The company has disclosed the governance structure backgrounds on the board and executive management.
Political Affiliation	The company must disclose all political affiliation and monetary contribution.	4	The company has disclosed all political affiliation and monetary contribution.
Quality of Audit	The company's information must be prepared, audited, disclosed in accordance with high accounting standards with annual audit being conducted by an independent external auditor.	4	The company's information has been audited in accordance with high accounting standards by an independent external auditor and are disclosed annually for the public to access.
Format of Disclosure	The company must disclose information in an easy to interpret way in order to avoid ambiguity and complication.	3	The company has disclosed all information on the official website where people can find, although this could be improved upon further due to limit understanding capability of the public.
	Average Score	3.7	

London Stock Exchange Group's ESG Assessment	Yes	No
Does your company disclose data on its carbon emissions in line with the criteria?	Y	
Does your company disclose data on its energy use in line with the criteria?	Y	
Does your company disclose data on its charitable donations in line with the criteria?	Y	
Does your company disclose data on its staff turnover rates in line with the criteria?	Y	
Does your company disclose data on its share of temporary staff in line with the criteria?	Y	
Does your company disclose data on its employee training hours in line with the criteria?		N
Does your company disclose data on its political contributions in line with the criteria?		N
Does your company disclose data on its independent directors in line with the criteria?	Y	
Does your company disclose data on its female directors in line with the criteria?	Y	
Does your company disclose data on its corruption fines in line with the criteria?	Y	
Does your company disclose data on its ESG fines in line with the criteria?		N

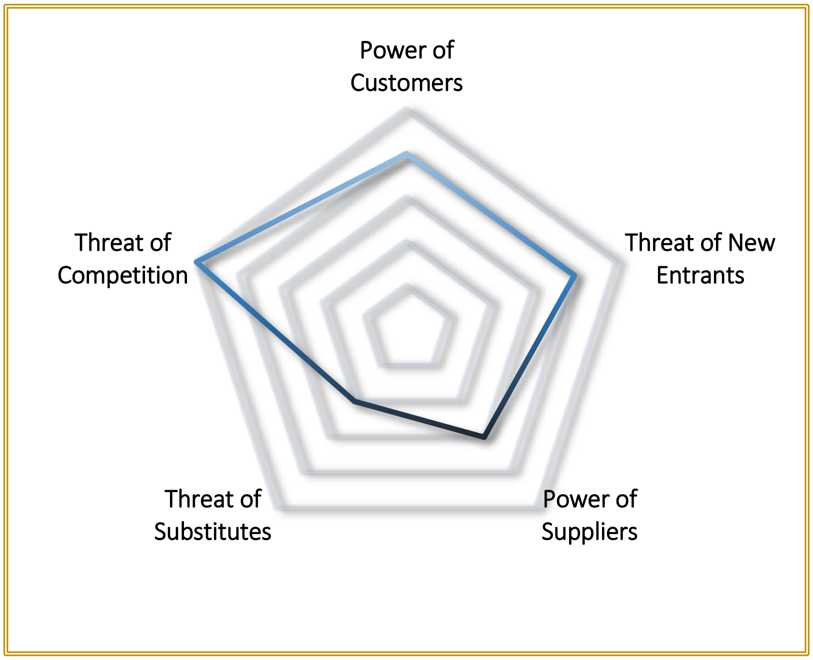
The London Stock Exchange has also provided an assessment tool to estimate ESG Disclosure score and compare the bank performance with the peers. ABC has followed certain criteria, thus having a score of 64% which is above the industry average score of 49%.

Appendix C: Industry and Competitive Positioning

Appendix C-1: Porter's Five Forces

BARGAINING POWER OF CUSTOMERS-HIGH

Individual customers, as well as corporate clients, has high bargaining power in driving down interest rates as well as impacting the bank's deposit. With many providers offering similar banking features, ABC pushing forth a noncompetitive products or services can lead to a loss of sizable accounts which can substantially affect the bank's profitability. Although ABC has an extensive reach due to its unmatched physical presence, especially in rural areas, a mass exodus to competing banks will pose a large threat to the bank's stability. As ABC continues to lose market share, the bargaining power of customers is deemed to be HIGH.



Legend:					
0 No Threat	1 Very Low	2 Moderate	3 Moderate	4 High	5 Very High

THREAT OF NEW ENTRANTS-HIGH

As of 2019, the minimum capital requirements for investment grade banks, commercial banks and for specialized banks are $50 million, $75 million and $15 million, respectively. On the one hand, due to the low capital requirement for banks to set up as compared to even the neighboring countries, more foreign banks will be encouraged to enter the market. On the other hand, while the capital require can be determined as relatively low there are extra cost to take into account in setting up branches to match the scale and coverage that ABC offers. On top of that, Cambodia's banking sector is already overcrowded and almost all corners of the market have been taken over. Therefore, due to Cambodia's relatively small market size and established banking sector, we can determine the threat of new entrants to be HIGH.

BARGAINING POWER OF SUPPLIERS-MODERATE

According to the National Institute of Statistics, Total Labor Force in Cambodia in 2017 was 8,779,000 people in which around 76% were from rural areas (November, 2018). Therefore, due to the geographical constraints and with the massive networks ABC has, lenders may have to deposit their income with the Bank. Due to the bank's partnerships with various company such as Forte Insurance, Prudential Life Assurance, Wing Limited Specialized Bank, and Lyhour Pay Pro, customers may prefer ABC instead of other financial institutions in order to access the wide range of complementary services and products that ABC houses. We deem the power of suppliers to be MODERATE.

THREAT OF SUBSTITUTES-LOW

Banks in Cambodia still offer limited and very basic products where the majority of commercial banks only focus on loans, deposits and cash transfer services. Due to this narrow focus, there is not any notable substitution to the products that the banking industry in Cambodia offer. In addition, the government does not offer treasury bills and the bond markets are not as active, meaning there are few options of investments of similar risks for depositors. Although banks ought to look out for FinTech institutions such as PiPay and Wing, the majority of banks' operations will not be affected by a substitute product and we can determine the threat of substitutes to be LOW.

RIVALRY AMONG EXISTING COMPETITORS-VERY HIGH

The banking industry in Cambodia is a very fragmented one, with around 400 financial institutions, most of them acquiring a small percentage of the market. Although there are key players, there is no one market leader and these key players offer products and services with little differentiation, thus reducing switching costs. We see the competitive rivalry among existing competitors as HIGH.

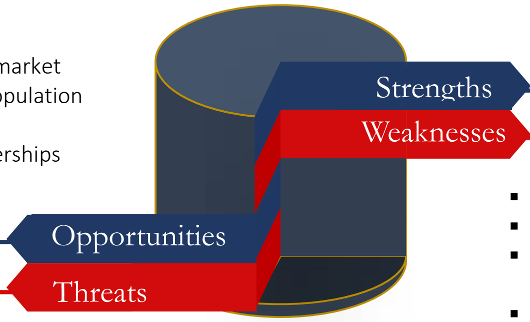
Source: Team Analysis

Appendix C-2: SWOT Analysis

Helpful Harmful

- High brand awareness
- Extensive branch network
- Independent from volatile sectors such as hospitality and real estate

- Growth of subsidiaries in foreign market
- Penetration into under-banked population
- Obtain more customers through government and corporate partnerships



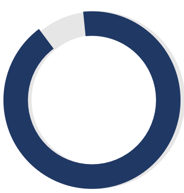
- Slower growth due to poor profitability
- Too slow to adapt to change
- Late to capture the digital payment segment
- Brand lacks appeal toward younger demographic

- Disruptive new competitors
- Low growth in key sectors
- Loss of market share
- Declining economic conditions
- Incremental loss of market share

Appendix C-3: Consumer Survey

We conducted a survey to obtain first hand insights from consumers about their perceptions about banks in Cambodia as part of our competitive analysis. Most of the respondents are from Phnom Penh and thus may be over-represented, in other words, disadvantageous for ABC as their strength is in their extensive network throughout the country especially in the rural areas.

According to the responses:



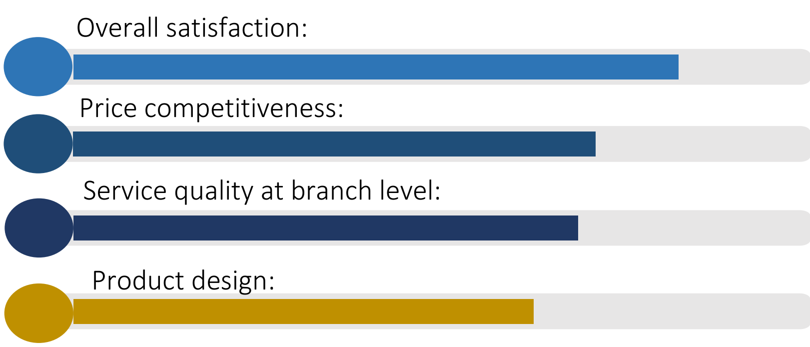
96% has bank accounts at two different banks

17% actively uses ABC

42.1% has an account with ABC

0.4% names ABC as the most innovative

Level of satisfaction with ABC:



Highlighted comments about ABC:

"Has been around for a long time."

"It is everywhere."

Appendix D: Financials

Appendix D-1: Statement of Profit or Loss

(KHR'Million)	2015A	2016A	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Interest income	1,436,360	1,662,944	1,717,120	1,834,612	1,959,318	2,243,358	2,323,411	2,508,461	2,998,199	3,740,241
Interest expense	-396,737	-503,425	-604,102	-619,799	-635,648	-922,098	-995,961	-1,129,328	-1,418,566	-1,839,634
Net interest income	**1,039,624**	**1,159,519**	**1,113,019**	**1,214,813**	**1,323,670**	**1,321,260**	**1,327,450**	**1,379,133**	**1,579,633**	**1,900,607**
Fee and commission income	165,610	213,410	237,626	173,290	197,473	216,729	239,994	268,352	303,256	346,675
Fee and commission expense	-8,227	-19,122	-11,574	-697	-4,039	-4,245	-4,501	-4,819	-5,214	-5,708
Net fee and commission income	**157,383**	**194,288**	**226,052**	**172,593**	**193,433**	**212,484**	**235,493**	**263,533**	**298,042**	**340,968**
Allowances for impairment losses on loans and advances, deposits and placements with other banks and other receivables	-38,993	-55,125	-138,269	-2,069	-94,862	-220,734	-122,994	-143,405	-186,186	-250,280
Allowance for impairment losses on off-balance sheet commitments	0	0	-7,326	-759	357	357	357	357	357	357
Net impairment losses	-38,993	-55,125	-145,594	-2,828	-94,506	-220,378	-122,637	-143,048	-185,830	-249,924
Net income after allowance for impairment	**1,158,014**	**1,298,682**	**1,193,476**	**1,384,579**	**1,422,598**	**1,313,367**	**1,440,306**	**1,499,618**	**1,691,845**	**1,991,651**
Other incomes	32,791	43,660	42,800	57,699	72,327	88,143	107,417	130,905	159,530	194,414
General and administrative expenses	-653,811	-702,949	-766,481	-832,162	-872,851	-770,182	-807,257	-803,317	-866,197	-974,583
Profit before income tax	**536,995**	**639,393**	**469,795**	**610,115**	**622,074**	**631,327**	**740,465**	**827,205**	**985,178**	**1,211,482**
Income tax expense	-109,882	-125,205	-96,259	-127,491	-132,350	-129,357	-151,719	-169,492	-201,860	-248,229
Profit for the year	**427,112**	**514,188**	**373,536**	**482,624**	**489,724**	**501,970**	**588,746**	**657,714**	**783,318**	**963,253**

Source: Team Analysis

Appendix D-2: Statement of Profit or Loss Forecast Assumptions

We make use of both explicit and implicit assumptions in our rationale. Explicit assumptions come from disclosed financial information. For undisclosed information, we do not try to make detailed assumptions or project heavily from historical data, because banking is a cyclical sector. Instead, to compensate for lack of information, we employ implicit assumptions by relative comparison. We compare company data with industry data, both domestic and regional, as well as macro projections by credit-worthy research agencies.

LINE ITEM	ASSUMPTIONS
Interest Income	Interest Income = expected AVG lending rate * expected gross loan • Expected gross loan is determined by the linear regression model (see Appendix -4 for more details) • Expected AVG lending rate is based on ARIMA (see Appendix -5 for more details)
Fee and Commission Income	From FY15-19, fee and commission income, on average, increased at 10.08%. We expect this momentum will continue in our forecastable periods because • ABC's dominance in payment cards and ATM and the trend towards cashless society as per described in the SWOT Analysis • The boost in the payment ecosystem as result of developing mobile banking application. Thus, increase in cross-selling businesses. • The development of the country's financial sector gives rise to an opportunity to add more non-banking services into ABC's current activity lines.
Fee and Commission Expense	From FY15-19, fee and commission expense, on average, increased at 4.25%. However, we expect an opposite trend during our forecastable period (i.e. -4.25% P.a.) because: • Referral services may no longer be the driver of the bank's loans and deposits because of its well-established business networks, its relationship maintenance with existing clients, and its brand goodwill • The trend toward digital banking where loanees are able to apply for loan online

Provision for Loans	We expect the provision for gross loan (NPL) to double in FY20 before turning back to its present state because: • World Bank projects the NPA in Asia Pacific, which also include Cambodia, to increase, and Cambodia's GDP growth is going to hit its slowest since 1994. • The impact of systematic risk (COVID-19, EBA withdrawal, PRAKAS to restructure loan agreements) in 2020 • ADB projects Cambodia GDP to rebound • The fading of the above systematic risk, especially COVID-19 after FY20
General Expense	Based upon the financial analysis for both ABC and selected peers, we can see that ABC's AROE is below the industry benchmark for 2 reasons: • ABC uses more equity than its peers • ABC has more physical branches. Therefore, it has higher general expenses leading to minimized profit. We assume ABC to direct its AROE to the industry benchmark by 2 possible ways: • Postpone its use of equity as the main source of finance • Minimize its general expenses to reach the target net profit that would achieve the industry AROE We assume that there is an equal chance of existence to the above 2 assumptions: • By holding average equity constant, ABC must reduce its general expense by 8.85% to reach the industry AROE of 16.5%. • However, since there is only a 50% possibility for this to occur, we expect general expense to decreased by 4.42% during our forecastable period.

Source: Team Analysis

Appendix D-3: Statement of Financial Position

(KHR'Million)	2015A	2016A	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
ASSETS										
Cash on hand	957,911	1,155,456	1,298,882	1,638,800	1,717,723	5,834,000	5,757,971	5,917,660	6,224,758	7,082,606
Deposits and placements with other banks	3,343,435	5,005,409	6,043,927	1,357,026	2,395,002	2,454,501	2,751,864	3,208,537	4,165,726	5,599,766
Financial investments	514,334	350,496	485,469	2,490,756	2,149,461	2,202,859	2,469,736	2,879,590	3,738,646	5,025,664
Loans and advances, net	10,156,943	11,470,695	12,455,012	14,442,133	15,672,534	18,241,366	20,451,315	23,845,217	30,958,858	41,616,360
Other assets	164,953	209,874	200,113	90,256	71,434	73,209	82,078	95,699	124,248	167,020
Statutory deposits	1,000	1,240	1,240	2,172,030	2,393,395	2,192,441	2,660,991	3,351,125	4,666,755	6,424,564
Property and equipment	508,666	508,625	538,246	553,930	534,476	557,278	532,741	529,008	574,312	647,985
Intangible assets	43,812	47,805	45,781	44,993	36,671	37,327	38,054	38,860	39,756	40,752
Right-of-use assets	46,457	81,279	102,221	0	132,721	165,058	188,207	222,913	288,652	388,460
Deferred tax assets, net	622	620	620	46,674	60,368	28,797	33,775	37,731	92,074	113,224
TOTAL ASSETS	15,738,133	18,831,498	21,171,511	22,836,599	25,163,784	31,786,836	34,966,732	40,126,340	50,873,784	67,106,401
LIABILITIES										
Deposits and placements of other banks and financial institutions	1,277,938	1,459,029	857,681	1,158,644	1,162,089	1,343,692	1,482,595	1,711,517	2,200,105	2,928,203
Deposits from customers	9,639,406	11,161,326	12,584,176	14,368,738	16,637,096	20,580,719	22,708,231	26,214,525	33,698,010	44,849,959
Other liabilities	314,085	0	7,326	259,644	239,654	449,671	528,140	648,991	888,038	1,258,115
Borrowings	1,717,684	325,460	347,575	3,175,266	2,302,260	4,207,843	4,814,026	5,762,265	7,680,361	10,599,017
Subordinated debts	368,550	2,487,051	3,659,049	311,270	567,658	1,037,509	1,186,973	1,420,776	1,893,713	2,613,353
Current income tax liabilities	107,094	441,648	438,758	55,493	124,122	144,954	161,538	188,345	244,533	328,713
Lease liabilities	0	144,111	96,773	0	125,982	160,061	194,053	246,147	347,672	508,442
Employee benefits	108,171	145,267	191,924	80,834	74,743	65,951	69,126	68,789	74,173	83,454
TOTAL LIABILITIES	13,532,927	16,163,891	18,183,261	19,409,889	21,233,603	27,990,400	31,144,682	36,261,354	47,026,606	63,169,255
EQUITY										
Share capital	1,076,191	1,242,443	1,447,446	1,588,010	1,747,434	1,747,434	1,747,434	1,747,434	1,747,434	1,747,434
Reserves	690,016	898,265	1,152,579	1,529,227	1,708,085	1,708,085	1,708,085	1,708,085	1,708,085	1,708,085
Retained earnings	425,524	512,243	370,130	309,472	474,662	340,917	366,530	409,467	391,659	481,627
TOTAL EQUITY	2,191,731	2,652,950	2,970,156	3,426,710	3,930,181	3,796,436	3,822,050	3,864,986	3,847,178	3,937,146
Minority interest	13,475	14,658	18,094	0	0	0	0	0	0	0
TOTAL LIABILITIES AND EQUITY	15,738,133	18,831,498	21,171,511	22,836,599	25,163,784	31,786,836	34,966,732	40,126,340	50,873,784	67,106,401

Source: Team Analysis

Appendix D-4: Statement of Financial Position Forecast Assumptions

LINE ITEM	ASSUMPTIONS
Deposits from Customers	We expect deposit from customer to increase by 1% YoY Basis because: • When the bank continuously improves its mobile banking application, this will attract new understand new users mean more deposit • The evolvement of Cambodia Trading Exchange means more investors will deposit their money in the trading account to trade.
Statutory Deposit	We expect statutory deposit to decrease around 10% in FY20 and then increased by 1% on a YoY basis before turning back to its current state in FY24 because: • NBC may try to increase the money supply during the COVID-19 • NBC's intention to promote KHR in the Kingdom may mean to encourage banks to disburse more domestic currency
Loans and Advances, Net	As per credit forecast based upon the linear regression model, we have determined the total credit in the Kingdom of Cambodia during our forecastable periods. We assume ABC is able to cut the pie of our forecasted total credit based upon the following drivers: • Investment in intangible asset will drive the market share • Increase in fee & commission income means Increase in market share • Increase in deposit means increase in market share
Other Assets	We expect the growth in financial investments, other assets, deposits and placement with other banks, and other income to remain stable because these financial statement captions are immaterial to ABC's competitive position. Therefore, the bank may save its scarce resources for other much fruitful investments.
Property, Plants and Equipment	We assume ABC is going to replace its depreciated PPE with the right of use asset (lease) . We assume ABC is going to direct all the PPE replacement cost to invest in intangible asset.

Source: Team Analysis

Appendix D-5: Interest Earning Asset

IEA	2015A	2016A	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Gross Loan:										
Small Loan	4,951,057	5,435,006	5,956,172	7,001,960	8,184,105	8,877,048	9,906,589	11,636,469	15,232,196	20,549,626
Staff Housing Loan	118,224	140,037	138,146	136,142	135,209	192,096	209,976	236,477	301,230	407,723
Public Housing Loan	591,866	701,070	691,601	681,571	611,705	946,466	1,030,846	1,155,389	1,463,664	1,969,591
Staff Loan	284,108	316,554	445,576	550,391	690,099	629,923	729,654	891,341	1,171,956	1,574,376
Overdraft Loan	129,043	154,887	189,334	242,110	195,322	256,264	291,494	344,455	444,558	578,066
Home Improvement Loan	156,982	169,770	284,034	404,736	304,963	365,002	425,822	526,307	681,817	867,387
Personal & Others Loan	233,034	311,866	310,698	400,670	487,964	486,238	557,772	652,772	865,877	1,166,630
Credit Card Loan	50,406	54,451	70,673	70,174	68,832	89,326	99,453	116,865	147,697	197,946
Trade Loan	32,550	35,731	39,157	46,033	50,784	57,655	64,185	75,181	98,084	131,782
Revolving Loan	287,521	523,215	426,977	257,985	157,830	492,490	544,512	547,726	645,654	893,337
Medium Loan	3,535,255	3,880,814	4,252,947	4,787,730	4,922,000	6,069,594	6,714,005	7,805,638	10,092,311	13,530,176
Total Gross Loans	10,370,045	11,723,402	12,805,315	14,579,502	15,808,814	18,462,101	20,574,309	23,988,622	31,145,044	41,866,640
Financial investments	954,035	1,978,561	2,864,627	2,490,140	2,148,835	2,202,859	2,469,736	2,879,590	3,738,646	5,025,664
Deposits and placements with other banks:										
Banks outside Cambodia	497,196	329,156	460,751	105,402	485,380	280,322	314,283	366,439	475,757	639,535
Banks inside Cambodia	17,138	21,340	24,719	2,468	6,436	8,829	9,899	11,541	14,984	20,143
Total IEA	11,838,414	14,052,458	16,155,411	17,177,512	18,449,466	20,954,111	23,368,227	27,246,192	35,374,430	47,551,981
Average IEA	11,246,493	12,945,436	15,103,934	16,666,461	17,813,489	19,701,788	22,161,169	25,307,209	31,310,311	41,463,206
Risk-weighted Assets	9,828,041	11,846,470	12,913,453	14,460,209	15,434,344	16,356,075	18,397,809	20,944,630	26,090,032	34,479,364
RWA % of IEA	**83%**	**84%**	**80%**	**84%**	**84%**	**83%**	**83%**	**83%**	**83%**	**83%**
Interest income earned:										
Gross Loans	1,432,242	1,651,479	1,686,020	1,806,314	1,928,597	2,208,183	2,286,981	2,469,130	2,951,189	3,681,596
Financial Investments	3,115	10,202	28,301	17,754	22,622	25,901	26,826	28,962	34,617	43,184
Deposits and placements with other banks:										
Banks outside Cambodia	516	983	2,213	8,236	7,677	8,789	9,103	9,828	11,747	14,654
Banks inside Cambodia	488	280	586	436	422	484	501	541	647	807
Total interest earned	1,436,360	1,662,944	1,717,120	1,834,612	1,959,318	2,243,358	2,323,411	2,508,461	2,998,199	63,740,241
Average yield earned on:										
Total gross loan	13.81%	14.09%	13.17%	12.39%	12.20%	11.96%	11.12%	10.29%	9.48%	8.79%
Financial Investments	0.33%	0.52%	0.99%	0.71%	1.05%	1.18%	1.09%	1.01%	0.93%	0.86%
Deposits and placements with other banks:										
Banks outside Cambodia	0.10%	0.30%	0.48%	7.81%	1.58%	3.14%	2.90%	2.68%	2.47%	2.29%
Banks inside Cambodia	2.84%	1.31%	2.37%	17.68%	6.56%	5.48%	5.06%	4.69%	4.31%	4.00%
Total IEA	12.77%	12.85%	11.37%	11.01%	11.00%	11.39%	10.48%	9.91%	9.58%	9.02%

Source: Company Data, Team Analysis

Appendix D-6: Interest Bearing Liabilities

IBL	2015A	2016A	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Deposits and placements of other banks	**1,277,938**	**1,459,029**	**857,681**	**1,158,644**	**1,162,089**	**1,343,692**	**1,482,595**	**1,711,517**	**2,200,105**	**2,928,203**
Current accounts	110,752	272,902	352,392	466,191	421,492	483,729	533,734	616,146	792,038	1,054,153
Savings deposits	442,549	577,896	161,583	258,506	194,540	228,428	252,041	290,958	374,018	497,795
Fixed deposits	724,637	608,231	343,706	433,947	546,057	631,535	696,820	804,413	1,034,049	1,376,256
Deposit from customers	**9,639,406**	**11,161,326**	**12,584,176**	**14,368,738**	**16,637,096**	**20,580,719**	**22,708,231**	**26,214,525**	**33,698,010**	**44,849,959**
Current accounts	969,507	1,088,868	1,348,096	1,613,494	2,062,073	2,675,493	2,952,070	3,407,888	4,380,741	5,830,495
Savings deposits	3,839,504	4,279,105	5,077,874	6,352,655	7,199,851	8,849,709	9,764,540	11,272,246	14,490,144	19,285,482
Fixed deposits	4,830,394	5,793,352	6,158,206	6,402,589	7,375,172	9,055,516	9,991,622	11,534,391	14,827,125	19,733,982
Borrowings	1,717,684	2,487,051	3,659,049	3,175,266	2,302,260	4,207,843	4,814,026	5,762,265	7,680,361	10,599,017
Subordinated debts	368,550	441,648	438,758	311,270	567,658	1,037,509	1,186,973	1,420,776	1,893,713	2,613,353
Total IBL	13,003,577	15,549,053	17,539,663	19,013,918	20,669,102	27,169,763	30,191,826	35,109,083	45,472,190	60,990,531
Average IBL	12353399	14,276,315	16,544,358	18,276,791	19,841,510	23,919,433	28,680,794	32,650,454	40,290,636	53,231,360
% to total IBL										
Deposits and placements of other banks	9.8%	9.4%	4.9%	6.1%	5.6%	4.9%	4.9%	4.9%	4.8%	4.8%
Deposit from customers	74%	72%	72%	76%	80%	75%	75%	75%	74%	73%
Borrowings	13%	16%	21%	17%	11%	15%	16%	16%	17%	17%
Subordinated debts	3%	3%	3%	2%	3%	4%	4%	4%	4%	5%
Total interest bearing liabilities	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Interest expense paid on:										
Deposits and placements of other banks										
Fixed deposits	2,525	18,459	20,364	19,192	30,351	34,555	37,323	42,321	53,160	68,939
Savings deposits	252.92	290	326	304	154	391	422	479	601	780
Current accounts	7	10	12	1	0	7	7	8	10	13
Deposits from customers:						0	0	0	0	0
Fixed deposits	249,972	287,511	317,178	298,917	332,641	470,464	508,150	576,195	723,767	938,601
Savings deposits	25,039	24,814	27,888	26,056	23,755	38,597	41,689	47,271	59,378	77,003
Current accounts	705.09	894	1,152	996	195	1,174	1,268	1,438	1,806	2,343
Subordinated debts	35,884	35,585	37,254	33,032	30,498	50,083	54,095	61,339	77,048	99,919
Borrowings	79,225	131,110	194,261	240,810	209,580	319,602	345,203	391,429	491,680	637,624
Provident fund	3,127	4,752	5,668	491	-	4,691	5,067	5,745	7,217	9,359
Interest expenses on lease	-	-	-	-	8,473	-	-	-	-	-
Interest paid on total IBL	396,737	503,425	604,102	619,799	635,648	922,098	995,961	1,129,328	1,418,566	1,839,634
Average interest rate paid on:										
CASA	0.54%	0.48%	0.45%	0.34%	0.26%	0.35%	0.34%	0.33%	0.32%	0.32%
Term deposit	5.17%	4.96%	5.15%	4.67%	4.51%	5.20%	5.09%	5.00%	4.88%	4.76%
Deposits and placements of other banks	0.24%	1.58%	4.09%	2.82%	4.12%	4.06%	3.98%	3.91%	3.82%	3.72%
Subordinated debts	9.74%	8.06%	8.49%	10.61%	5.37%	4.83%	4.56%	4.32%	4.07%	3.82%
Borrowings	4.61%	5.27%	5.31%	7.58%	9.10%	7.60%	7.17%	6.79%	6.40%	6.02%
Other liabilities	0.03%	0.03%	0.03%	0.00%	0.04%	0.02%	0.02%	0.02%	0.02%	0.02%
Total IBL	3.21%	3.53%	3.65%	3.39%	3.20%	3.86%	3.47%	3.46%	3.52%	3.46%

Source: Company Data, Team Analysis

Appendix D-7: Key Financial Ratios

KEY RATIOS	HISTORICAL 2017A	2018A	2019A	PROJECTED 2020F	2021F	2022F	2023F	2024F
Capital Ratios								
Equity to Asset Ratio	14.11%	14.29%	15.62%	12%	11%	10%	8%	6%
Debt to Equity Ratio	6.08%	6%	5.4%	7.4%	8.1%	9.4%	12%	12.7%
Operating Efficiency								
Funding Expense Ratio	7.62%	6.76%	7.61%	6.82%	6.05%	5.49%	5.08%	4.62%
Operating Expense Ratio	11%	10.1%	10.9%	10.8%	10%	9.3%	8.5%	7.9%
Cost-to-Income	57.2%	60.6%	57.5%	50.2%	51.6%	48.9%	46.1%	43.5%
Gross Loans to Deposits	95.26%	94.57%	88.82%	84%	85%	86%	87%	88%
Profitability Ratios								
Yield on Loan Portfolio	13.7%	12.2%	12.7%	13%	12%	11%	11%	10%
Net Interest Margin (NIM)	6.11%	5.48%	7.61%	6.82%	6.05%	5.49%	5.08%	4.62%
Yield on Interest-Earning Assets	9.43%	8.54%	10.94%	10.84%	10.01%	9.27%	8.54%	7.92%
Return on Assets (ROA)	1.87%	1.54%	2.05%	1.8%	1.8%	1.7%	1.7%	1.6%
Return on Equity (ROE)	13.2%	10.9%	13.7%	13.0%	15.5%	17.1%	20.1%	24.2%
Dividend Payout Ratio	13.83%	10.88%	6.97%	35%	35%	40%	40%	40%
Asset Quality Ratios								
CASA Ratio	52.62%	55.96%	55.12%	57.44%	59.45%	61.53%	63.68%	65.91%

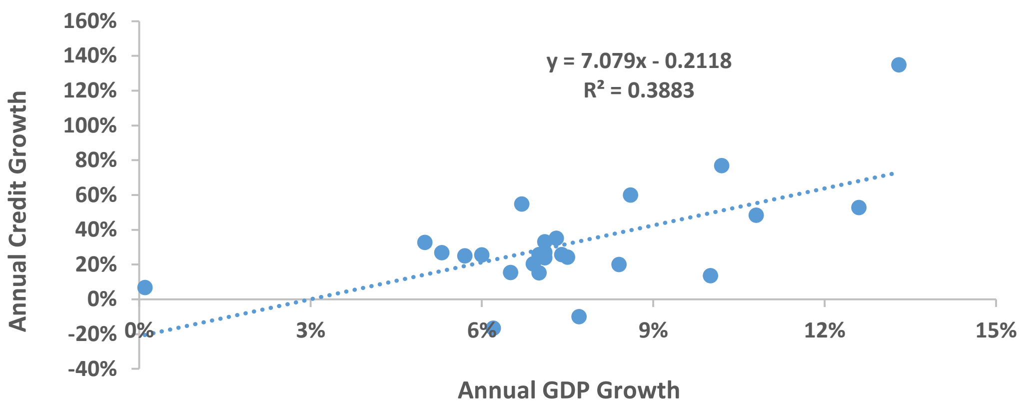
Source: Company Data, Team Analysis

Appendix D-6: Loan Forecast Regression Analysis

Gross loan was forecasted based on a linear regression model between annual GDP growth and credit growth. Based on the model, the credit growth rate was projected using GDP growth rate forecasted based ADB and World Bank estimates.

$$\boxed{Y_i = \alpha + \beta x + \mu_i}$$

Y_i = annual credit growth
x = annual GDP growth
u_i = error term
α = estimated constant
β = estimated coefficients



REGRESSION STATISTICS	
Multiple R	0.623155863
R Square	0.388323229
Adjusted R Square	0.361728587
Standard Error	0.235938156
Observations	25

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.812822248	0.812822248	14.60155871	0.0008761
Residual	23	1.280336714	0.055666814		
Total	24	2.093158962			
	Coefficients	*Standard Error*	*t Stat*	*ouP-value*	*Lower 95%*
Intercept	-0.211777555	0.146736478	-1.443250904	0.162432588	-0.515325087
GDP	7.079007398	1.852562022	3.821198596	0.0008761	3.246690872

To calculate the loan:

1. First, we use the estimations from the model to calculate the credit growth using the forecasted GDP growth.
2. Then calculate the total credit increase by multiplying previous year credit increase by the growth rate.
3. Finally, to calculate the share of the credit growth to ABC, we multiply the total credit increase by ABC's credit market share.

YEAR	FORECASTED GDP	ESTIMATED CREDIT GROWTH RATE	TOTAL CREDIT INCREASE
2020F	-4.00%	-49.5%	11,140,481
2021F	5.90%	20.6%	13,434,126
2022F	11.70%	61.6%	21,715,813
2023F	10.47%	52.9%	33,212,045
2024F	9.47%	45.9%	48,443,236

LOAN FORECAST						
	2019A	2020F	2021F	2022F	2023F	2024F
Regression Credit Growth %	27%	-49.5%	20.6%	61.6%	52.9%	45.9%
Credit Growth	22,057,644	10,984,335	13,245,832	21,411,441	32,746,541	47,764,251
Total Credit Cambodia	104,793,026	115,777,360	129,023,193	150,434,634	183,181,176	230,945,426
ABC Market Share in Cambodia (Credit)	15.1%	14.5%	14.0%	13.5%	14.0%	14.5%
ABC Total Gross loan	15,808,814	16,787,717	18,063,247	20,308,676	25,645,365	33,487,087
Yearly Growth (YoY)		6.19%	7.60%	12.43%	26.28%	30.58%

Source: Company Data, Team Analysis

Appendix D-7: Interest Lending and Interest Deposit Rates Using ARIMA Model

We performed ARIMA model, short for Autoregressive Integrated Moving Average Model on EViews to predict interest lending and interest deposit rates from 2020-2025. Using ARIMA model, you can forecast a time series using the series past values. An ARIMA model is characterized by 3 terms: p, d, q where: p is the order of the AR term, q is the order of the MA term. d is the number of differencing required to make the time series stationary

Thus, our sample size is the monthly data from 2013m1 to 2020m8. The first difference was applied to make the data stationary. A linear regression model is constructed including the specified number and type of terms. The forecasting equations are as following:

Interest lending rate: $dliu_t = c + \beta_1 liu_{t-1} + \theta_1 \varepsilon_{t-1} + \theta_2 \varepsilon_{t-1} + \propto \varepsilon_t + \varepsilon_t$ (1)

Interest deposit rate: $diu_t = c + \beta_1 diu_{t-1} + \beta_2 diu_{t-1} + \beta_3 diu_{t-1} + \beta_4 diu_{t-1} + \theta_1 \varepsilon_{t-1} + \propto \varepsilon_t + \varepsilon_t$ (2)

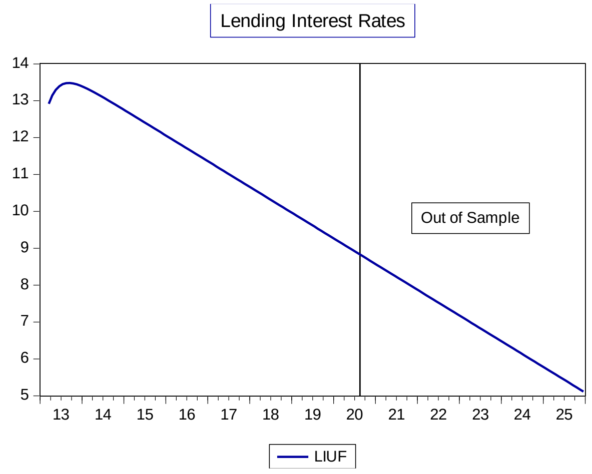
- t: time
- β, θ, α : parameters estimated using the BFGs method denoted as AR(1), AR(2)…MA(1), and MA(2) in the equation output
- ε: residual/error term

To determine the optimal lag length, the information criteria used is Akaike Information Criteria (AIC).

Dependent Variable D(LIU)
Method: ARMA Maximum Likelihood (BFGS)
Included observations: 91
Convergence achieved after 24 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-static	Prob.
C	-0.05811	0.048111	-1.207839	0.2304
AR(1)	0.738554	0.086836	8.505188	0
MA(1)	-1.655963	0.164493	-10.06706	0
MA(2)	0.901129	0.164346	5.48314	0
SIGMASQ	0.233174	0.036473	6.393127	0

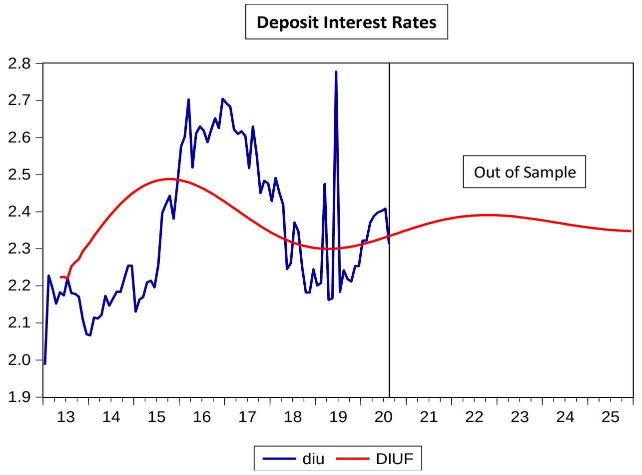
R-squared	0.474064	Mean dependent var	-0.020912
Adjusted R-squared	0.449601	S.D. dependent var	0.669534
S.E. of regression	0.496719	Akaike info criterion	1.52392
Sum squared resid	21.21879	Schwarz criterion	1.661879
Log likelihood	-64.33837	Hannan-Quinn criter.	1.579578
F-statistic	19.37946	Durbin-Watson stat	1.34128
Prob(F-statistic)	0		
Inverted AR Roots	0.74		
Inverted MA Roots	.83-.46i	.83+.46i	



Dependent Variable DIU
Method: ARMA Maximum Likelihood (BFGS)
Included observations: 92
Convergence achieved after 79 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-static	Prob.
C	2.361307	0.041714	56.607	0
AR(1)	1.297432	0.102995	12.59702	0
AR(2)	-0.132024	0.201342	-0.655723	0.5138
AR(3)	0.271848	0.153513	1.770848	0.0802
AR(4)	-0.449565	0.060293	-7.456377	0
MA(1)	-0.999998	875.2442	-0.001143	0.9991
SIGMASQ	0.008278	0.233141	0.035504	0.9718

R-squared	0.771425	Mean dependent var	2.346091	
Adjusted R-squared	0.75529	S.D. dependent var	0.191342	
S.E. of regression	0.094653	Akaike info criterion	-1.759278	
Sum squared resid	0.761535	Schwarz criterion	-1.567402	
Log likelihood	87.92677	Hannan-Quinn criter.	-1.681835	
F-statistic	47.81148	Durbin-Watson stat	2.008751	
Prob(F-statistic)	0			
Inverted AR Roots	.98+.07i		.98-.07i	-.33+.60i
Inverted MA Roots	1			



(1): $dliu_t = -0.05811 + 0.738554 liu_{t-1} - 1.655963 \varepsilon_{t-1} + 0.901129 \varepsilon_{t-1} + 0.233174 \varepsilon_t + \varepsilon_t$

(2): $diu_t = 2.361307 + 1.297432 diu_{t-1} - 0.132024 diu_{t-1} + 0.271848 diu_{t-1} - 0.449565 diu_{t-1} - 0.999998 \varepsilon_{t-1} + 0.008278 \varepsilon_t + \varepsilon_t$

Out-sample data are predicted using the model is converted from monthly interest rates into annual interest rates using the formula:

$$r_A = \left(1 + \left(\frac{r_m}{0.12}\right)\right)^{12} - 1$$

r: interest rate
A: annual
m: monthly

USD	2020F	2021F	2022F	2023F	2024F	2025F
Interest Lending Rate	9.4536%	8.5407%	7.7914%	7.0468%	6.3069%	5.5717%
Interest Deposit Rate	2.3837%	2.3937%	2.4152%	2.4111%	2.3929%	2.3770%

We observed that the interest lending rates continually decline while the interest deposit rates remain relatively stable.

Appendix E: Valuation

Appendix E-1: Dividend Discount Model

PRESENT VALUE OF DIVIDEND (KHR'Million)		2020F	2021F	2022F	2023F	2024F
Dividend		227,278	299,888	335,018	391,659	481,627
Discount Factor	11%	0.898	0.806	0.723	0.649	0.583
Present Value		**204,015**	**241,641**	**242,318**	**254,291**	**280,698**

We choose the Dividend Discount Model (DDM) as our targeted price to compare with current share price, because of ABC's dividend policy which has stated that ABC is committed to paying up to 50% of their income post IPO. As dividend is important and greatly affect the shareholder's opinion on company's share price, we believe that DDM will be more reasonable and justifiable in the case of ABC compared to other valuation model. In a DDM, we sum the present value of the dividends and add that to the present value of the terminal value.

Therefore, we projected a bank's regulatory capital, its asset growth, and its net income, and use those metrics to project its dividends - then, discount, and sum up the dividends and discount and add the NPV of its terminal value.

DIVIDEND DISCOUNT MODEL	
Estimate Growth	4%
Terminal Year	3,943,728
Total Present Value	5,166,692
Number of Share	429
Intrinsic Value	12,049
Current Price	16,860
Downside Risk	-29%

Source: Team Analysis

Appendix E-2: Residual Income Model

RESIDUAL INCOME MODEL		2020F	2021F	2022F	2023F	2024F
Beginning BV per share (Bt-1)		9,165	9,960	10,815	11,770	12,683
Net income per share (EPS)		1,325	1,554	1,736	1,827	2,246
Dividend payout		40%	45%	45%	50%	50%
Less dividend (D)		530	699	781	913	1,123
Change in Retained Profit		795	855	955	913	1,123
Beginning BV per share (Bt-1)		9,165	9,926	10,818	12,683	13,806
Ending BV per share (Bt-1+EPS-D)		9,960	10,815	11,770	12,835	14,183
Net income per share (EPS)		1,325	1,554	1,736	1,827	2,246
Less per share equity charge (rBt-1)		1,045	1,136	1,190	1,295	1,395
Residual income (EPS - Equity charge)		280	418	546	532	851
Discount factor	11.4%	0.898	0.806	0.723	0.649	0.583
Present Value		**251**	**337**	**395**	**345**	**496**

RESIDUAL INCOME MODEL	
Terminal growth	4.00%
Terminal Year	4,525
Intrinsic value	**15,515**
Current Price	**16,860**
Downside risk	**-8.0%**

Source: Team Analysis

Appendix E-3: Cost of Debt

Based on ABC stand-alone credit profile (SACP) which is BB, we get a spread of 3.50%. Following Damodaran cost of debt formula, we add the spread to the US risk free rate of 0.37% and Cambodia default spread of 6.46%. After taking account of tax, the cost of debt is 8%.

COST OF DEBT OF ABC	
Current Rating (Based on S&P Global Rating)	BB
Default Spread (Based on Synthetic Rating)	3.50%
US Risk Free Rate (5 year T-bond)	0.37%
Cambodia Default Spread	6.46%
Cost of Debt	10.33%
Cost of Debt After Tax	**8%**

SYNTHETIC CREDIT RATING AND SPREAD		
Interest Coverage Ratio	Rating	Spread
> 12.5	AAA	0.75%
9.5 - 12.5	AA	1.00%
7.5 - 9.5	A+	1.50%
6 - 7.5	A	1.80%
4.5 - 6	A-	2.00%
3.5 - 4.5	BBB	2.25%
3 - 3.5	BB	3.50%
2.5 - 3	B+	4.75%
2 - 2.5	B	6.50%
1.5 - 2	B-	8.00%
1.25 - 1.5	CCC	10.00%
0.8 - 1.25	CC	11.50%
0.5 - 0.8	C	12.70%
< 0.5	D	14.00%

FIND MARKET VALUE OF DEBT						
(KHR'Million)		1	2	3	4	5
Interest Payment		240,079	240,079	240,079	240,079	240,079
Principal Repayment						2,869,918
Discount Factor	8%	0.924	0.853	0.788	0.728	0.672
Present Value of Debt		**221,753**	**204,826**	**189,191**	**174,750**	**2,090,930**

Source: Bloomberg, Team Analysis

Appendix E-4: Cost of Equity

To calculate ACLEDA equity beta, we need to find the market value of debt. Interest payment is found by multiplying the cost of debt by the amount from the borrowing and subordinated debt while the market value of equity is taken from the Cambodia Securities Exchange. Thus, ABC equity beta using the formula: βe= βa x (Ve+Vd x (1-Tax))/Ve or 0.43x(7,476,394+(2,770,285x(1-20%))/7,476,394=0.56.

Base on the Damodaran cost of equity formula, we get the cost of equity of 0.37%+0.56*5.23%+ 8.09% = 11.4%.

MARKET VALUE (KHR'MILLION)	
Market Value of Equity	7,476,394
Market Value of Debt	2,881,451

COST OF EQUITY OF ABC	
US Risk Free Rate (5 year T-bond)	0.37%
US Market Beta (Regional Bank)	0.43
ACLEDA Bank Equity Beta (Bottom up)	0.56
US ERP	5.23%
Cambodia CRP	8.09%
Cost of Equity	**11.4%**

Source: Damodaran, Team Analysis

Appendix E-5: Terminal Growth Rate

We based the calculation of the terminal growth rate for ABC at 4% on the average GDP growth rate in Cambodia, long-run US inflation rate, Cambodian population growth forecast and Cambodian banking industry growth.

Terminal Growth Rate		
		Weighting
Average GDP Growth Rate	6.7%	30%
Long Run US Average Inflation rate	1.2%	30%
Cambodian Population Growth Forecast	1.4%	30%
Cambodian Banking Industry Growth	10%	10%
Terminal growth rate	4%	

Source: Bloomberg, Team Analysis

Appendix E-6: Sensitivity Analysis

DDM		COST OF EQUITY						
		8.4%	*9.4%*	*10.4%*	*11.4%*	*11.4%*	*12.4%*	*13.4%*
Terminal Growth	*5.5%*	30,408	22,408	17,679	14,558	12,346	10,696	9,421
	5.0%	26,283	20,123	16,251	13,593	11,657	10,185	9,029
	4.5%	23,216	18,305	15,064	12,767	11,055	9,730	8,676
	4.0%	20,846	16,823	14,063	12,049	10,525	9,325	8,358
	3.5%	18,960	15,593	13,207	11,429	10,054	8,960	8,069
	3.0%	17,422	14,555	12,466	10,879	9,633	8,630	7,805
	2.5%	16,146	13,667	11,820	10,392	9,255	8,330	7,563

RIM		COST OF EQUITY						
		8.4%	*9.4%*	*10.4%*	*11.4%*	*11.4%*	*12.4%*	*13.4%*
Terminal Growth	*5.5%*	17,709	16,883	16,185	15,582	15,049	14,571	14,138
	5.0%	17,679	16,857	16,162	15,560	15,029	14,553	14,120
	4.5%	17,650	16,831	16,138	15,538	15,009	14,534	14,103
	4.0%	17,620	16,804	16,114	15,516	14,989	14,516	14,086
	3.5%	17,591	16,778	16,090	15,494	14,969	14,497	14,069
	3.0%	17,561	16,751	16,066	15,473	14,949	14,479	14,051
	2.5%	17,531	16,725	16,042	15,451	14,929	14,460	14,034

Source: Team Analysis

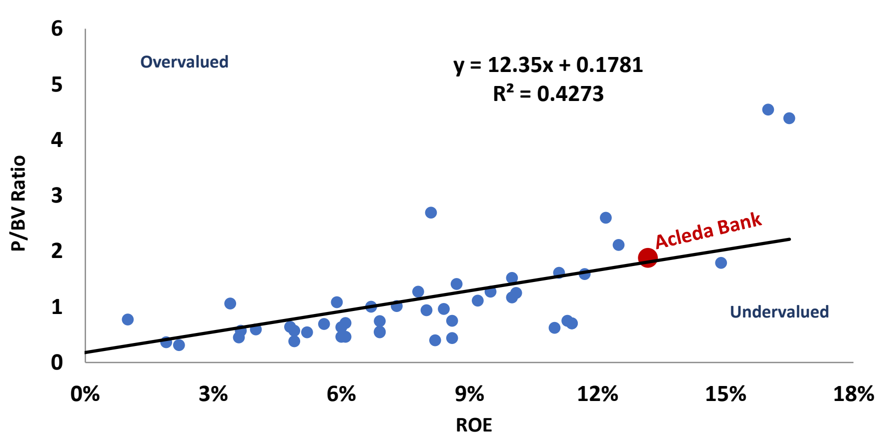
Appendix E-7: Relative Valuation

We conducted a linear regression analysis to on the P/BV multiples against its corresponding profitability metric, ROE. Where ROE is the return on equity, g is the sustainable growth rate and Ke is the required rate of return on equity. The regression sample was generated through regional and international foreign Commercial Banks including ICBC, HSBC, ANZ Bank, Maybank, National Bank of Canada, KB Financial group, Shinhan Financial Group, Siam Commercial Bank, Bangkok Banks, Hong Leong Bank, CIMB, and RHB Bank among others. Data was obtained through Bloomberg Terminal and the selection of these banks for the comparison with Acleda Bank Plc was on two grounds which are those who maintain subsidiaries in Cambodia and those who are the potential competitors of ABC's overseas subsidiaries.

$$\frac{Po}{BVo} = \frac{ROE - g}{Ke - g}$$

REGRESSION STATISTICS	
Multiple R	0.653656889
R Square	0.427267329
Adjusted R Square	0.415578907
Standard Error	0.683666522
Observations	51

ANOVA						
	df	*SS*	*MS*	*F*	*Significance F*	
Regression	1	17.0856866	17.08569	36.55475	1.99E-07	
Residual	49	22.9025958	0.4674			
Total	50	39.9882824				
	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	0.178149998	0.17438509	1.02159	0.311993	-0.17229	0.52859
GDP	12.34952685	2.04257689	6.046052	1.99E-07	8.244815	16.45424



Appendix E-8: Relative Valuation Peers Comparison Table

Banks	Country	MRT CAP (USD MN)	P/BV Ratio (x)	P/E Ratio (x)	ROA	ROE	Beta	Dividend Yield	Non Interest Ratio	NIM	NPL Ratio
Bank Negara Indonesia	Indonesia	7,748	1.00	14.2	0.9%	6.7%	1.45	3.5%	27%	4.6%	2.3%
Hong Leong Bank	Malaysia	8,945	1.27	13.9	1.2%	9.5%	1.12	2.1%	37%	1.8%	0.6%
CIMB	Malaysia	8,753	1.52	13.5	0.5%	4.8%	1.10	3.3%	38%	2.1%	3.1%
RHB Bank	Malaysia	4,892	0.75	12.3	0.9%	8.6%	1.06	3.7%	46%	1.6%	2.0%
Maybank	Malaysia	22,332	1.11	9.1	0.9%	9.2%	0.88	4.8%	53%	1.6%	2.7%
Bank of the Philippine Islands	Philippines	8,278	1.41	16.7	1.1%	8.7%	0.99	2.0%	29%	3.9%	1.7%
Metropolitan Bank and Trust Company	Philippines	4,600	0.69	14	0.7%	5.6%	0.94	2.0%	22%	4.5%	1.3%
Bangkok Bank	Thailand	7,786	1.55	10.4	0.6%	5.2%	1.10	4.1%	45%	2.2%	3.4%
Krung Thai Bank	Thailand	5,169	1.50	7.6	0.7%	6.1%	1.01	6.7%	32%	3.1%	4.3%
TMB Bank	Thailand	3,683	3.00	9.9	0.8%	6.9%	1.28	0.9%	28%	3.4%	2.4%
OCBC Bank	Singapore	33,392	6.01	11.9	0.7%	8.0%	1.03	4.4%	31%	1.8%	1.5%
Bank for Investment and Development of Vietnam	Vietnam	7,136	2.11	19.3	0.6%	12.5%	1.22	1.7%	34%	2.5%	1.5%
Regional average			**1.83**	**12.73**	**0.8%**	**7.7%**	**1.10**	**3.3%**	**35%**	**2.8%**	**2.2%**
ANZ Bank	Australia	50,372	1.08	17.9	0.4%	5.9%	1.18	2.6%	19%	1.8%	0.3%
National Bank of Canada	Canada	18,817	1.79	11.7	0.7%	14.9%	1.15	4.0%	46%	2.1%	0.5%
China Construction Bank	China	192,764	0.75	6.9	0.9%	11.3%	0.75	4.8%	28%	2.3%	1.4%
Deutsche Bank	Germany	22,810	0.35	0.0	-0.1%	-2.5%	1.18	0.0%	48%	1.7%	1.7%
ICICI Bank	India	47,882	2.69	34.5	0.7%	8.1%	1.48	0.0%	61%	3.3%	6.1%
Sumitomo Mitsui Financial Group	Japan	41,545	0.38	8.0	0.2%	4.9%	1.10	6.0%	59%	1.0%	0.8%
United Overseas Bank	Singapore	28,611	0.96	12	0.8%	8.4%	1.11	4.1%	34%	1.8%	1.5%
Shinhan Financial Group	South Korea	15,726	0.4	4.9	0.6%	8.2%	1.07	5.5%	53%	1.9%	0.3%
International average			1.05	11.99	0.5%	7.4%	1.13	3.4%	44%	2.0%	1.6%
Overall average			1.52	12.44	0.7%	7.6%	1.11	3.3%	39%	2.4%	2.0%
Acleda Bank Plc	Cambodia	1,825	1.88	14.40							
Implied Price			13,894	14,561							
Current price (08/01/2021)			16,860	16,860							
Premium/ Overpriced			21%	16%							

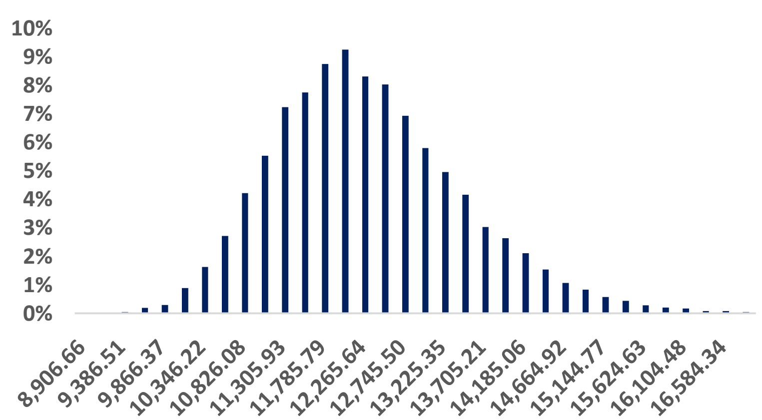
Source: Bloomberg, Company Data, Team Analysis

Appendix E-9: Monte Carlo Simulation

KEY VARIABLES	MEAN	STANDARD DEVIATION	SIMULATION
Discount Factor	11.4%	0.50%	12.14%
Terminal growth	4%	0.50%	3.99%
Dividend payout (1st)	40%	0.50%	39.68%
Dividend payout (2nd)	45%	0.50%	44.94%
Dividend payout (3rd)	50%	0.50%	50.54%

Mean	12,186.80
Median	12,065.31
Standard Deviation	1,144.36
Max	21,142.96
Min	9,146.59
Coefficient of Variation	10.65
Target Price	12,048.68
Market Price	16,860.00
Probability	54.80%

Source: Team Analysis



Interpretation

With 10,000 trial, there is only 0.05% that the target price will reach the current market price of KHR 16,860.

Appendix F: References

[1]Bopha, P. (08 September,2020). *Cambodia's Debt Trap: Taking Out New Loans to Pay Back Old Loans.* Retrieved from https://www.voacambodia.com/a/cambodia-s-debt-trap-taking-out-new-loans-to-pay-back-old-loans/5074618.html

[2]Radio Free Asia. (12 December, 2020). *Cambodian Bank Demands 'Action' Against NGOs Who Say Workers Need Debt Relief.* Retrieved from https://www.rfa.org/english/news/cambodia/bank-07022020141015.html#:~:text=12%2C%202019.&text=Cambodia's%20ACLEDA%20Bank%20accused%20three,jobs%20during%20the%20coronavirus%20pandemic

[5]World Bank. (May, 2020). *Cambodia Economic Update, Cambodia in the time of Covid-19.* Retrieved from http://pubdocs.worldbank.org/en/357291590674539831/pdf/CEU-Report-May2020-Final.pdf

[6]David, H. (27 February,2020). *Chinese exodus pinpricks Cambodia property bubble.* Retrieved from https://asiatimes.com/2020/02/chinese-exodus-pinpricks-cambodia-property-bubble/

[7]Chan, S. (9 April, 2020). *Agriculture needs to grow, says Premier.* Retrieved from https://www.khmertimeskh.com/711072/agriculture-needs-to-grow-says-premier/

[8]Niem, C. (11 May, 2020). *Loan restructuring sought.* Retrieved from https://www.phnompenhpost.com/national/loan-restructuring-sought

[9]National Institute of Statistics. (November,2018). *Cambodia Socio-Economic Survey 2017.* Retrieved from https://nis.gov.kh/nis/CSES/Final%20Report%20CSES%202017.pdf

[10]World Bank. (14 october, 2020). *Country Cambodia Overview.* Retrieved from https://www.worldbank.org/en/country/cambodia/overview

[11]European Commission. (2020). *Cambodia loses duty-free access to the EU market over human rights concerns.* https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1469?fbclid=IwAR1MNAbmb8U4b9q4qcxoJ-TsKHCZbSOP4Dc8FI3grmMS1LMSkQ3DPdrlAx4

ACLEDA Bank Annual Reports. (2015-2019). Retrieved from https://www.acledabank.com.kh/kh/eng/fi_auditedreport

Canadia Bank Annual Reports. (2015-2019). Retrieved from https://www.canadiabank.com.kh/about

Cambodian Public Bank. (2015-2019). Retrieved from Cambodian Public Bank. (2017). Retrieved from https://www.cpbebank.com/About-Us/Financial-Information/Past-Financials

Sathapana Bank plc. (2015-2019). Retrieved from https://www.sathapana.com.kh/about-sathapana/auditedfinancialreport/audited-financial-report/

Foreign Trade Bank of Cambodia. (2015-2019). Retrieved from https://ftbbank.com/en/about-ftb/

ACLEDA Disclosure Documents. (2020). Retrieved from https://www.acledabank.com.kh/kh/eng/listing

ACLEDA Environmental and Social Sustainability Reports. (2020). Retrieved from https://www.acledabank.com.kh/kh/eng/bp_sustainabilityreport?fbclid=IwAR2annCNdJX94Id0DSrvHusosZfah5UKEIZ1SMxC7JgL-oSuUgwNONwSeZw

National Bank of Cambodia. (2011). *Laws and Regulations Applicable to Banks and Financial Institutions.* Retrieved from https://www.nbc.org.kh/download_files/legislation/banking_code_2011.pdf

London Stock Exchange Group. (2019). *ESG Disclosure Score.* Retrieved from https://www2.lseg.com/sustainablefinance/ESGdisclosure-assessment

Cambodia Securities Exchange (CSX) http://csx.com.kh/jsp/data/lstcom_view.jsp?MNCD=5010&issueCode=KH1000100003

National Bank of Cambodia. (2019). *Annual supervision Report 2019.* Retrieved from https://www.nbc.org.kh/download_files/supervision/sup_an_rep_eng/Annual_Report_2019_English_Final.pdf

S&P Global. (April, 2020). *For Asia-Pacific Banks, COVID-19 Crisis Could Add US$300 Billion To Credit Costs.* Retrieved from https://www.spglobal.com/ratings/en/research/articles/200406-for-asia-pacific-banks-COVID-19-crisis-could-add-us-300-billion-to-credit-costs-11359063

World Bank. (June, 2020). *The outlook for East Asia and Pacific in eight charts.* Retrieved from https://blogs.worldbank.org/eastasiapacific/outlook-east-asia-and-pacific-eight-charts-coronavirus-COVID19

S&P Global. (June, 2020). *Global Banking Country-By-Country Outlook Midyear 2020.* Retrieved from https://www.spglobal.com/_assets/images/ratings/pdf/global-banking-country-by-country-outlook-midyear-2020.pdf

National Bank of Cambodia. (2020). *Economic and Monetary Statistics 2020.* Retrieved from https://www.nbc.org.kh/download_files/publication/eco_mon_sta_eng/Review%20320%20Jun-2020-En.pdf

Bunthoeun, C. (25 March, 2020). *Riel Money in Digital Era.* Retrieved from https://www.khmertimeskh.com/705458/riel-money-in-the-digital-era/#:~:text=The%20total%20size%20of%20the,accounting%20for%20112.5%20trillion%20riel.

ACLEDA Securities Plc. (October, 2020). *Weekly Business News.* Retrieved from http://www.acledasecurities.com.kh/as/assets/investment_research/Investment_Research_Weekly_News-October%2028,%202020.pdf

Business2Business. (7 April, 2020). *SME Bank of Cambodia: SME Co-Financing Scheme.* Retrieved from https://www.b2b-cambodia.com/news/sme-bank-of-cambodia-sme-co-financing-scheme/