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ACLEDA: A New Major IPO In Cambodia

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ABSTRACT

The term IPO or Initial Public Offering means the company is "going public", the non-listed company is going to "sell their stock or share" to the public. The public can be individuals or institutional investors. Acleda has decided to join the Cambodia Securities Exchange[1] main listed companies such Phnom Penh Water Supply Authority (PWSA), Grand Twins International (GTI), Phnom Penh Special Economic Zone (PPSP), Phnom Penh Autonomous Port (PPAP) and Sihanoukville Autonomous Port (PAS). It is expected to be listed and traded on the Cambodian local stock exchange (CSX) in May 2020.

ACLEDA is one of the leading commercial banks in Cambodia. The strong growth in the Cambodian economy, fueled by favorable demographics and productivity growth will support the bank's expansion in the medium term. But why is ACLEDA going public? And what would be the valuation of the dominating bank in the country? Nowadays, most of the valuation is based on the "secret" combination of "DCF" Model (Discounted Cash Flow) rather than "Dividend Discount Model" (DDM), and the utilization of the market multiples.

Our study is one of the first contributions to the ACLEDA IPO Valuation literature. The authors will discuss and look at various research methodologies and research methods that are commonly used by researchers in the field of valuation. The chapter starts by providing a comprehensive introduction of Acleda Bank. The next section compares and differentiates the two comparative and financial approaches, followed by the last section on the comparative outcome with recommendations. The secondary data sources have been used in this research, and the actual data collection and data analysis method is described along the sections. This real case study research combines grounded theory finance research analysis based on archival data through the Internet, and multiple company visit/roadshows and discussions with the Cambodian licensed underwriters.

Executive Summary

- ACLEDA is one of the leading commercial banks in Cambodia. The strong growth in the Cambodian economy, fueled by favorable demographics and productivity growth, will support the bank's expansion in the medium term. In our view, the current coronavirus crisis is likely to result in two sub-par years in 2020 and 2021 before the positive trends reassert themselves.
- Financial analysis relies on accounting inputs that are well defined and codified. However the usage of these inputs for valuation draws heavily on subjective choices and assessment of the appropriate models and metrics. Furthermore, banks have specificities that set them apart from typical industrial firms in a valuation exercise.
- We choose two models based on discounted cash flows to equity that we consider vastly superior to market-based approaches such as price/earnings and price/book multiples. Market-based approaches are used only a posteriori for regional comparisons, mostly as a reality check.
- We find a valuation range for ACLEDA of KHR17,274 to KHR20,511 (US$4.32 to US$5.13) on a fundamental basis. The mid-point of this range is KHR18,893 (US$4.72), which is substantially higher (17%) than the upcoming IPO price of KHR16,200 (US$4.05).
- This does not guarantee a successful IPO though. Investors' sentiment, the global economic situation and the Covid-19 crisis can all have a negative impact on the performance of the post-IPO share prices, at least in the short-term.
- Comparisons with a peer group of regional banks confirm that ACLEDA is priced at a higher level

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than them. In our view, this could be justified by the more attractive opportunities expected to be available to ACLEDA in Cambodia. It could also mean that ACLEDA is priced in relation to the Cambodian stock market rather than in the context of the regional bourses.

1. ACLEDA Bank

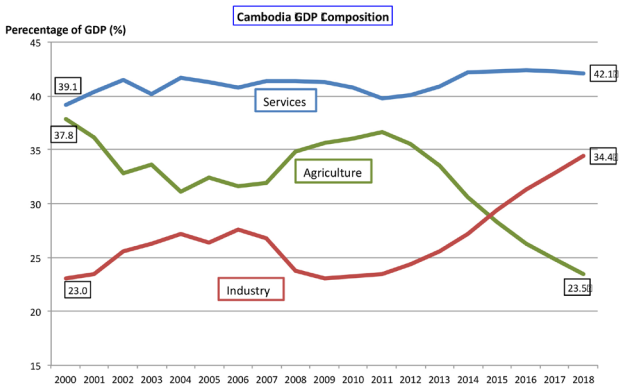
ACLEDA Bank (henceforth ACLEDA) is the leading commercial bank in Cambodia. Founded in 1992 as an NGO, it became an MFI (micro-finance institution) in 1996 and a commercial bank in 2003. ACLEDA is set to list on the Cambodia Securities Exchange (CSX) next month. Its success and the growth of its activities are ultimately tied to the strength of the Cambodian economy over the coming years.

1.1 The economic background

The Cambodian economy underwent a dramatic transformation over the past twenty years. With a GDP growth of 11.2% per annum between 2000 and 2019 (at current prices, source: ADB), Cambodia has been one of the best performers globally. The population increased at 1.3% p.a. over the same period, resulting in a GDP per capita annual growth of 9.8%.

One of the engines of this spectacular expansion has been the structural change in the economy in which the high-productivity "Industry" sector rose at the expense of the lower-productivity "Agriculture" sector (Figure 1).

Figure 1

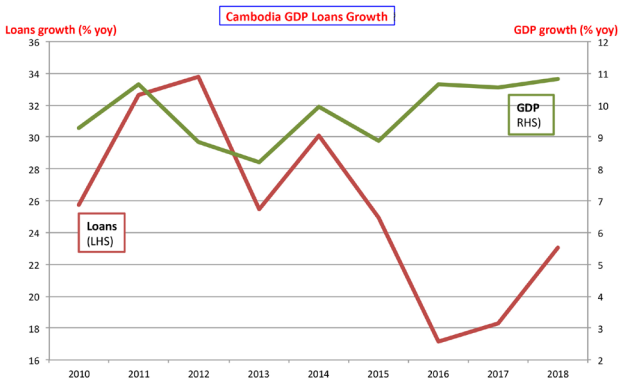


(Source: ADB Cambodia Key Indicator 2019)

We expect these long run trends to continue, which, together with the favorable demographics (a young and growing population), underpins a strong economy with GDP growth around 6% p.a. over our forecasting horizon. In the short run, the Covid-19 crisis and the coming slump in business activities will certainly have a negative impact in the years 2020 and 2021. However, in our background assumption, we expect a gradual catch-up and a return to trend in the subsequent years.

Economic activity, in turn, is a clear driver of the demand for loans in the banking system. While the directions are similar, the growth in loans in the economy is a multiple of the growth in economic activity. Between 2009 and 2018, loans in the Cambodian banking system grew at 25.6% p.a. while the Cambodian GDP grew at 9.8% p.a. (Figure 2).

Figure 2



(Sources: NBC, ADB Cambodia Key indicators 2019)

Note that we are well aware that the relationship flows both ways. A well-functioning banking system's ability to supply loans to the economy is an essential fuel for GDP growth. Moreover, GDP growth forecasts are much more prevalent and easy to come by.

1.2 A leadership position

ACLEDA is today the largest commercial bank in Cambodia. It currently holds the number one position in terms of loans, and the number two position in deposits and net profit (Source: NBC 2018).

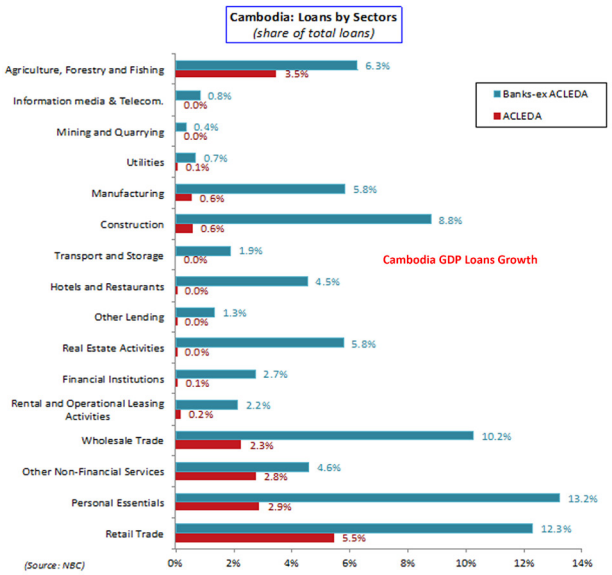
We compare ACLEDA with the rest of the commercial banks using National Bank of Cambodia (NBC) data. Since ACLEDA has a large impact due to its size, we subtract its numbers from the NBC data to create a "Commercial Banks ex-ACLEDA" average. This allows for more revealing comparisons with the other banks, we believe.

ACLEDAs' loan portfolio is more weighted towards "Agriculture" where the bank makes 3.5% of the credits to the sector vs. all the other commercial banks that contribute 6.3% of the loans to the sector. Conversely, ACLEDA is under-represented in "Manufacturing". It would be comparatively less

impacted than its competitors in case of a withdrawal of the "Everything But Arms" (EBA) scheme by the European Union that would particularly hurt the garment industry.

ACLEDA is also under-weight in "Real Estate" and "Construction" that tend to be more dependent on investment flows from China for example. The minimal exposure to "Hotels and Restaurants" would also reduce the negative impact for the bank from a decline in tourism activities induced by the Covid-19 crisis.

Figure 3



Lending rates (Interest Income/Average Loans) at ACLEDA have been relatively stable and consistently higher than that of the other commercial banks (Figure 4). Funding costs (Interest Expense/Average Interest-bearing Liabilities) increased over the period 2009-2018 (Figure 5) which explains why Net Interest Margins (Net Interest Income/Average Interest-earning Assets) declined from about 9.0% in 2010 to 5.3% in 2018 (Figure 6).

Figure 4

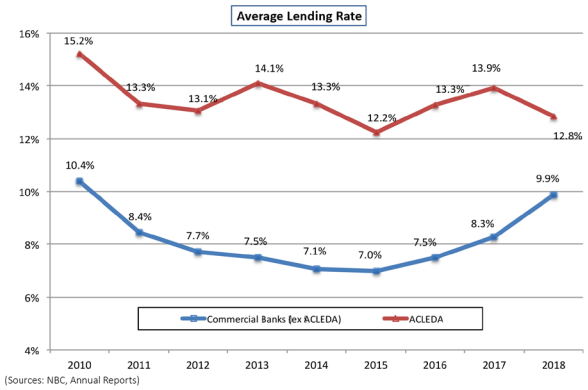


Figure 5

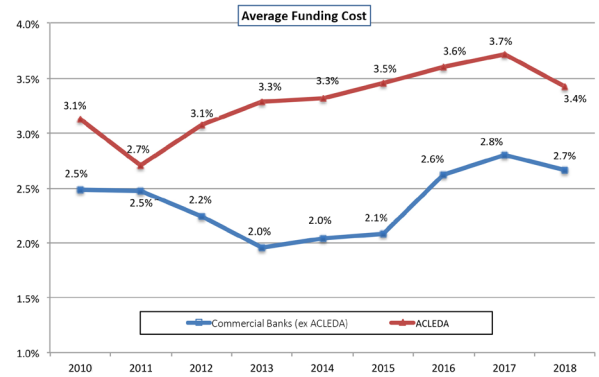
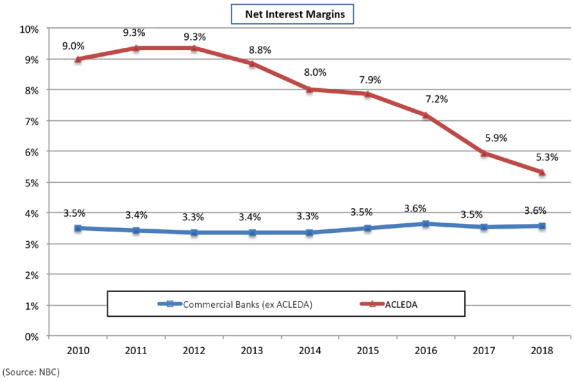


Figure 6



ACLEDA has four main sources of funding (2019), the mix of which explains its overall funding costs:

Table 1: Funding Sources	Share of total	Interest rate range
Deposits from customers	80%	0%- 8%
Borrowings	11%	0%- 15%
Debts to other banks and financial institutions	6%	2%- 13%
Subordinated debts	3%	7%- 8.5%

(Sources: Annual Report, Yuanta Securities)

We did not have discussions with ACLEDA's management so it is impossible to gauge the strategic intent in terms of deposits gathering or the ability of the bank to bring funding costs down.

It is neither within the scope of this report nor the capability of this analyst to make recommendations about the profitability of ACLEDA. We will only use these trends as basic inputs to our valuation work.

2. LITERATURE REFERENCING

The valuation of IPOs occupies an important place in finance, "valuation lies at the heart of much of what we do in finance" (Damadoran, 2006)[2] and perhaps this research may provide some tools for the students and the professionals-to-be, the tools and opportunity to experiment with a set of corporate

valuation methodologies[3] . The valuation of IPOs has started to gain popularity and significant interest in the 1990s, and in the late 1990s the public's interest has shifted into the "new economy." In the 2000s the stock market experienced one more time unprecedented gains, powered by the technology stocks (internet bubble) before the internet burst. During this period, both old and new economies generated significant innovations, much of it are related to the information technology revolution, leading to significant improvements in productivity and economic growth (Baily and Lawrence, 2001), and but also in equity valuation, which gets popular thanks to those of superstar technology and internet firms especially, which reached unprecedented price levels (Ofek and Richardson, 2003).

These enormous price surges caused several commentators to raise questions about whether traditional valuation methods remain valid in the new economy (McCarthy, 1999) as some reports emphasize the increasing and worrying gap between profitability and valuation, as profitability is not the key to value in a company anymore. In late 1990s such gaps were common in the context of IPOs. Gove's remarks that valuations are just as sometimes "often based on gut feel", and "it's as if everybody just settles on a number that they are comfortable with." (Gove, 2000).

In this study, we examine whether this affect the valuation of the biggest IPO in Cambodia, Acleda, and to what extent there are such gaps in the valuation process. We also investigate valuation approaches differences between financial and comparative ones[4] (Aswath Damodaran, 2012).

Going public means (for Acleda) to raise cash, and being publicly listed or traded can me motivated by multiples reasons: the need to raise long term capital in order to have enough funding to develop and expand the company, the proceeds can also be used to finance the working capital and to invest in new capital expenditures[5] (capex). The proceeds can be used to create significant growth opportunities[6] (David P. Stowell, 2010).

Acleda may also reconsider their capital structure[7]. The capital structure is basically composed on long term debt and equity. If the gearing ratio is too high, they can reduce down their debt ratio by raising their level of equity, thus, they can reduce their financial leverage (more equity and less debt). However, in their famous academic paper on corporate finance written in 1958, Professors Merton Miller and Franco Modigliani, who were later, awarded the Nobel Prize for their research efforts[8], concluded that the capital structure did not affect a firm's value (Harold Bierman jr., 2012).

The reputation of the bank will definitely be enhanced as it is very difficult to get listed. There are a lot of regulations and restrictions. "Going public is the dream of many owners of private companies and it constitutes a major event in the life cycle of the firm. Listing has its advantages, among them being an enhanced company reputation and profile"[9] (Mario Levis, Silvio Vismara, 2013), on the other hand, the firm will be exposed to greater scrutiny and needs to prepare for disclosures.

Trading in the open markets means liquidity. The listing will make it possible to implement the ESOP or "employee stock ownership plan"[10], and this will also help to attract and keep top talents in the bank which has more 15,000 employees. They can also allocate shares options for the management and as incentives.

They can also improve liquidity and marketability of their shares, when getting listed. For the larger ones, they can gain access to international markets like Nagaworld[11] which is listed in Hong Kong stock exchange (2006).

Being listed on a major stock exchange carries a considerable amount of prestige. Only large private companies with strong fundamentals could qualify for an IPO overseas, and will cope with the relative small size of the Cambodian securities market (lack of liquidity and scale compared to Hong Kong or Singapore).

The IPO opens to the horizon for potential merger and acquisitions transactions (MandA)[12]. As long as there is market demand, a public company can always issue more stock. Thus, mergers and acquisitions are easier to do because stock can be issued as part of the currency for a deal. For instance the buyer can swap their shares into the acquired/merged company shares (share swap)[13] and take the control. A publicly traded company can be acquired through either (1) a merger; (2) an acquisition of stock directly from the target, it involves the legal combination of two companies based on either a stock swap or cash payment to the target (David P. Stowell, 2010).

The first section will be focused on ACLEDA BANK within the economic context of Cambodia, and will be followed by the second section will elaborate on the methodologies used in the report and analyses

the advantages and the limits of each. Valuation is as much art as science. The practitioners will definitely have a look for value of the company from both comparative approach as well as the financial approach.

The third section is about the financial approach, and the focus is on the fair value of the company which is a function of estimates of future cash flows, risk and growth, which may or may not necessarily coincide with historical performance. However, historical measures can often help predict (or confirm other estimates of) future cash flows, risk, and growth. Any prediction of the future will depend on the quality of the inputs. But question remains on what would be "appropriate" cost of equity versus cost of capital? And once we have the current market value weights for debt and equity for use in the cost of capital, we have a follow-up judgment to make in terms of whether these weights will change or remain stable (Aswath Damodaran, 2009)

The fourth section is about the comparative approach. In comparative approach, the value of the company can be determined by comparing the company with its similar peers that operate under similar industry, operation, size, and activities. Most used frequently used are the classic peers' multiples comparison. We will look at the outcome and the limits of this methodology.

The conclusion will focus on the comparison of both approaches and the outcomes. The comparative approach versus financial approach will help to decode and to choose in between of the two models (based on discounted cash flows to equity) and the market-based approaches (using as price/earnings and price/book multiples). And the research to answer if the Market-based approaches which are used only a posteriori for regional comparisons, mostly as a reality check, would be superior to the financial modeling.

As a final disclaimer, this report and its mostly positive conclusions do not guarantee a successful IPO and a share price increase though. The investors' sentiment, the global economic situation and the covid-19 crisis can all have a negative impact on the performance of the post-IPO share prices, at least in the short-term. However we reckon that the success will be "very important" or even "absolutely critical" for current listed companies and for the future IPOs.

3. VALUATION METHODOLOGY

3.1 The specifics of bank valuation

The academic literature recognizes the special situation of banks with respect to their business and the implications for valuation. Gross (2006), p.18: "Typically, a bank generates profits from the interest spread on the resources it holds in trust for its clients while paying them interest on the assets, and from transaction fees on financial services."

3.1.1 The nature of debt

As such, one of the main differences with industrial companies is that banking services are not physical goods that can be stored. Hence, banks must keep sufficient capacity (capital, staff, ATMs…) ready to be deployed when needed. This has substantial implications for banks' balance sheet and income statement[14], in terms of both structure and size.

Another important difference is the function of debt. For industrial companies, debt is a financing means separate from operations. By contrast, for banks, debt is a part of the operating business. It is a raw material "to be molded into other financial products which can then be sold at a higher price and yield a profit."[15]

Finally, the very nature of debt makes it impossible to separate the operational and financial cash flows of banks[16]. The notions of Enterprise Value (EV), EBIT and EBITDA, so useful for industrial companies, lose most of their meaning in the case of banks. Hence it is much more logical and theoretically sound to focus on the equity of banks. This dictates our choice of Discounted Equity Cash Flow valuation models.

2.1.2 The regulation of banks

Because of their critical role in a modern economy and because their size makes them a systemic risk, banks all over the world are regulated. The trend has grown stronger since the financial crisis of 2008. Cambodia is no exception where banks must maintain certain levels of capital buffer (capital adequacy ratio) and liquidity (solvency ratio). This ensures depositors are protected from losses to some extent. Also banks are constrained in the type of investments and the rate of growth they can achieve in their operations. On the other hand, regulations can also act as a barrier for new entrants.

These operational and strategic constraints weigh heavily on the assumptions underpinning our valuation exercise. Indeed, they even impact the

choice and significance of the valuation model and parameters.

3.2 Valuation models discussion

3.2.1 Discounted Free Cash Flow model

The standard valuation models and the most theoretically sound are based on the proposition that the value of an asset is the present value of the cash flows it generates over its lifetime. For a firm, the concept of economic entity is the most appropriate as it considers the business as a whole without consideration of its financing decisions and capital structure.

From Fama and Miller (1972):

$$V = \sum_{t=1}^{\infty} \frac{X(t) - I(t)}{(1+r)^t}$$

where: V is the entity value or firm value

X(t) is the net operating cash flow

I(t) is capital investment

r is the required market return

The summation of infinite cash flows must be simplified in order to be of practical use. Copeland, Koller and Murrin (1995), p.135, propose to make the problem tractable by "separating the value of the business into two time periods, during and after an explicit forecast period." Hence:

Value = Present value of cash flows during the explicit forecast period + Present value of the cash flows after the explicit forecast period

If further we define Free Cash Flow as FCF(t) = X(t) – I(t), we can derive the firm value (V) formula as:

$$V = \frac{FCF1}{(1+k)} + \frac{FCF2}{(1+k)^2} + \frac{FCF3}{(1+k)^3} + \frac{FCF4}{(1+k)^4} + \cdots + \frac{FCFn}{(1+k)^n} + \frac{TV}{(1+k)^n}$$

where: TV = Terminal Value

k = discount rate

n= appropriate forecasting horizon

However, as discussed in the previous section, applying this general formula to banks is problematic. Interest income and expense are excluded from the FCF definition as used for industrial firms. But for banks, interest income and expense are at the core of the banking business and, arguably, the most important driver of earnings and value. Because for banks the financing and operating decisions cannot be separated, we follow the standard recommendation and use the free cash flows to equity (FCFE) (=Equity DCF) that we discount at the cost of equity[17] .

In mathematical form:

$$V = \frac{FCFE1}{(1+k)} + \frac{FCFE2}{(1+k)^2} + \frac{FCFE3}{(1+k)^3} + \frac{FCFE4}{(1+k)^4} + \cdots + \frac{FCFEn}{(1+k)^n} + \frac{TV}{(1+k)^n}$$

where k is the cost of equity, the appropriate discount rate for equity holders.

3.2.2 Residual Income model

Another model also called "Economic Profit Model" is interesting too as it affords insights to the sources of economic value creation. Simply put, the value created by a company must take into account the result in a given period but also the opportunity cost of the capital employed in the business[18]. The opportunity cost can also be thought of as a capital charge. Again, in the case of banks, the focus on the equity side is completely appropriate. Hence from the general definition:

Economic Profit = Net Operating Profit after Tax – Capital charge

We derive the following definition for equity where Economic Profit is also called "Residual Income":

Residual Income = Net Profit after Tax – Equity x Cost of Equity

In this framework, the equity value V is equal to the initial invested equity plus the present value of projected Economic Profit or Residual Income (RI)[19] .

In mathematical form:

$$V = Equity_0 + \frac{RI1}{(1+k)} + \frac{RI2}{(1+k)^2} + \frac{RI3}{(1+k)^3} + \frac{RI4}{(1+k)^4} + \cdots + \frac{RIn}{(1+k)^n} + \frac{TV}{(1+k)^n}$$

In theory, the two models, Discounted Free Cash Flow to Equity and Residual Income should give the same valuation, if applied properly with the same set of assumptions (constant growth in FCFE, constant return on invested equity capital). In our valuation work, the results are different because we use more detailed forecasts, foregoing the constant growth and constant return assumptions. Moreover, using Equity (accounting) as a proxy for Economic Equity (although acceptable in practice) can lead to further discrepancies in valuation. The academic literature also acknowledges this empirical outcome[20].

3.2.3 Market-based approaches

These approaches are the least satisfactory from a theoretical standpoint. The shortcomings of PER (price/earnings ratio) and, to a lesser extent, of PBR (price/book ratio) have been documented extensively.

- PER: accounting earnings can be easily manipulated with provisions and off-balance sheet items in order to smooth reported profits. Also, the focus is on profitability and returns with no consideration of risk. Finally, even when using prospective or forecast earnings, the valuation horizon is too short. Artificially boosting reported earnings and valuation in the short term might actually result in shareholder value destruction in the long term.
- PBR: compares the market value of equity and the accounting value of equity. The positive difference reflects the future shareholder value creation expected by the market. PBR is also more meaningful as it correlates with return on equity (ROE), a measure of efficiency in the utilization of capital.

These market-based approaches can be useful because they are simple multiples that are easy to compute. They also provide a rough estimation of value for negotiations and can work as gauges of changes in market sentiment.

However, deriving the correct multiples for PER and PBR is not straightforward. Using historical averages might result in missing important prospective changes. Using peers in the same sector can be reasonable but the whole sector might be under or over-valued. Comparing with regional peers solve some of these issues. We will mostly use such market-based approaches as a reality check for our fundamental valuation and in regional comparisons.

3.3 Modeling specifications

The Discounted Free Cash Flow to Equity model and the Residual Income model require three important inputs whose choice and underlying assumptions have a substantial impact on valuation.

3.3.1 Forecast horizon

The standard practice for industrial companies is to use a two-step method with the first step being a detailed forecasting over 5 or 10 years time frame, and a second step when it is assumed that cash flows or earnings will grow at a constant rate or even at rate of zero.

For banks, a short time frame like 5 years can yield more accurate forecasts. But it can be misleading as short-term trends –positive or negative- might be extrapolated wrongly. Also, a short forecast horizon gives a disproportionate weight to the continuing value[21] (the 2nd step with constant growth). Using a longer forecast horizon like 10 years allows for a more balanced weighting between the 1st step (detailed growth forecast) and the 2nd step. However, as banks are more impacted by macroeconomic factors than industrial companies are, a 10-year forecast horizon is more subject to wide fluctuations and uncertainty. Who can claim to be able to predict economic conditions with a reasonable accuracy over 10 years?

Nevertheless, we decided on a 10-year forecast horizon with year 1 being 2019 and year 10 being 2028. Since Cambodia is a fast growing economy and ACLEDA is benefitting from this trend, a short forecast horizon would unfairly underestimate the long-term potential growth of the bank. We also believe that the current Covid-19 virus crisis is resulting in unusually sharp fluctuations that would throw off our valuation exercise. A longer forecast horizon allows us to return to a more normalized trend.

3.3.2 Terminal value

In the two-step models, the last step assumes the last free cash flow grows at a constant rate "g" in perpetuity. The formula for the terminal value is:

$$TV = \frac{FCF(T+1)}{k-g}$$

where: TV = Terminal Value

k = discount rate

g = rate of growth in free cash flow in perpetuity

with: FCF = FCFE for the Discounted Free Cash Flow model,

FCF = RI for the Residual Income model

The case where g is positive assumes the bank maintains a competitive advantage in perpetuity, and would result in a higher valuation for ACLEDA. However, this is unlikely in a free market where competition ought to erode any advantage over time. For our analysis, we assume g = 0, which might seem conservative given the strong competitive advantage ACLEDA enjoys within the commercial banking industry in Cambodia.

Note that for FCF(T+1) we use the last year FCF(T) and we assume that the bank earns its cost of equity but not more. Another possible choice that is more conservative and results in a lower valuation, would be to use the average FCF for the years 1 to 10 as FCF(T+1)[22].

3.3.3 Cost of equity

The usual procedure is to use the Capital Asset Pricing Model (CAPM) to estimate the cost of equity. Fama (1976) after one of the most in-depth analysis in the academic literature, presents the relationship between expected return (cost of equity) and risk as follows:

$$R_i = R_f + \beta \times (R_m - R_f)$$

where: R_i = expected return on asset i

R_f = risk-free investment rate

R_m = expected return on the market

β = risk factor of asset i

In the case of Cambodia applying the formula is not possible. There is not enough stock market data to calculate Rm, the expected return on the Cambodian stock market. This is due to the necessity to have a sufficiently large numbers of observations and to use monthly returns[23]. In addition, the small number of listed companies (five) renders the concept of "market return" nearly meaningless. Finally, in Cambodia there is no government bond market from which to derive a sensible risk-free rate. The corporate bond market consists of four bond issues but they trade infrequently and their liquidity is low so they cannot be used to estimate an appropriate risk-free rate either.

Alternatively, Damodaran (2020) proposes a coherent and practical method:

- The risk-free rate is the yield on the 10-year US Treasury Bonds
- β is calculated from an extensive analysis of Emerging Markets banks[24]
- (R_m - R_f): the equity risk premium (ERP) is calculated from the credit default spread

Given the volatility and paucity of available data in Emerging Markets, a practical procedure is recommended[25] with the following formula for the Equity Risk Premium in Emerging Markets countries:

ERP = Base ERP for Mature Equity Market + Country Risk Premium

For the Country Risk Premium, the procedure consists in using the Moody's B2 rating for Cambodia. This implies a default spread of 4.6% (January 2020). This is multiplied by an adjustment factor of 1.18% to account for the volatility of equity market vs. the bond market. So the bond country risk premium for Cambodia is 5.43%. To which an equity risk premium (base ERP for mature equity market) of 5.2% is added. Putting it all together, the ERP for Cambodia is (5.2% +5.43% =) 10.63%.

The risk-free rate on the 10-year US Treasury Bonds used is 1.92%. This is consistent with the long-term horizon of our valuation exercise.

In his analysis of Emerging Markets cost of capital, Damodaran estimates the β of "money center banks" at 0.66 and that of "regional banks" at 0.73. For ACLEDA we use a β of 0.70. This makes sense intuitively as a bank like ACLEDA is a bit of a hybrid: large in Cambodia but smaller and more risky in the regional context.

Numerically, the expected return or cost of equity k for ACLEDA is:

k = 1.9% + 0.7 x (5.2% + 10.6%)

k = 13.0%

Cost of equity for ACLEDA: 13%

We note that the cost of equity found by Damodaran for Emerging Markets regional banks is 7.0% and 6.5% for money center banks. The average cost of equity for Damodaran's Emerging Markets universe is 9.3%. Admittedly, Cambodia is among the riskiest markets in this universe, however the cost of equity we found for ACLEDA (13%) is at a premium of 85% vs. EM regional banks average and at a premium of 40% vs. the global EM average. This seems to adequately price the riskiness of ACLEDA vis-à-vis its peers and the EM universe.

ACLEDA is rated by Standard and Poor's "B+", the highest rating in the country[26] .

4. VALUATION OF ACLEDA BANK

Having explained our methodology and justified our choice of valuation models and specifications, we now move to the implementation. The starting point for both models is the forecast of earnings over our valuation horizon.

4.1 Earnings forecasts

The objective is to forecast Net Profit that is then used to derive FCFE (free cash low to equity) and RI (residual income). The detailed forecasts can be found in Annex 1. We explain below the assumptions underpinning our results.

4.1.1 Interest income

The main drivers are the average amount of loans and other interest-earning assets and the lending rates on these loans and assets. Average loans had been growing at 22.6% CAGR for the period 2009-18, however, this is somewhat misleading as the trend growth was much lower in the years 2017 and 2018 (+10.8% yoy and +11.3% yoy respectively). In 2019, the slowdown continued: +10.5% yoy.

The Covid-19 crisis is likely to result in lower GDP growth in Cambodia. The ADB projects a negative impact in GDP growth of -1.4% in its best-case scenario, -1.9% in the base case scenario, and -3.5% in the worst-case scenario[27]. Table 2 presents the economic forecasts for Cambodia, the ADB Covid-19 scenarios and the possible GDP growth outcomes.

Table 2: Cambodia GDP growth forecasts and Covid-19 impact

	2019	2020 initially	ADB 2020 with Covid-19 impact			2021
			Best case	Base case	Worst case	
			-1.4%	-1.9%	-3.5%	
IMF	7.0%	6.8%	5.4%	4.9%	3.3%	6.7%
ADB	7.1%			2.3%		5.7%
World Bank	7.0%	6.8%	5.4%	4.9%	3.3%	6.8%

(Sources: ADB, IMF, World Bank)

Notice how under the latest ADB forecast there is a sharp rebound in GDP growth in 2021 but this is not a V-shaped recovery as the level of growth does not catch up with the previous forecasts. For average loans growth, we are forecasting 5.2% yoy in 2020, 7.6% yoy in 2021 and 11.5% in 2022. For the rest of the forecasting horizon, CAGR of 10% is assumed in our model. Other interest-earning assets are assumed to follow approximately the same trends.

Lending rates are largely driven by the same economic trends. Anecdotally, the Royal Government and the National Bank of Cambodia have been urging banks to "accommodate" borrowers that are under stress from the Covid-19 crisis with extensions, rate reductions, and restructuring. As such we expect a decline in lending rates that follows the direction of loan volumes. This makes sense since in a competitive market banks would have to reduce lending rates in response to a decline in loan demand.

We are assuming lending rates of 11%, 11.5% and 12.0% respectively in 2020, 2021 and 2022, well below the historical 15.8% CAGR 2009-18. For the rest of the modeling horizon, we assume a lending rate of 13%.

4.1.2 Interest expense

The main drivers are the average amount of deposits and other interest-bearing liabilities and the cost of funding on these. Average deposits have grown at 19.7% CAGR for the period 2009-18. Again, the growth for average deposits in 2017 and 2018 has been lower at 14.3% yoy and 13.3% yoy respectively. Other interest-earning assets followed the same general trend.

Our assumptions for average deposits call for growth of 6.1% yoy, 5.5% yoy and 11.5% yoy respectively for 2020, 2021 and 2022. For the rest of the modeling horizon, we assume a CAGR of 10%. We hypothesize again that other interest-bearing liabilities follow roughly the same trend.

The cost of funding depends largely on the mix of the funds themselves (demand deposits, time deposits, etc.) as well as, in the case of ACLEDA, subordinated debts and other borrowings. Such funds are typically more expensive than customer deposits are. We believe it would be sensible for ACLEDA to manage their mix of funding so as to minimize their funding costs but as mentioned earlier, we do not know the strategic intent or the ability of the bank to do so. We assume funding costs of 2.5%, 3.0% and 3.0% respectively for 2020, 2021 and 2022.

Note that this is substantially lower than the cost of funding we estimated for 2018 (3.4%) and 2019 (3.2%). Essentially, we anticipate that given the weaker demand for loans, the bank would be able to reduce its rates on deposits as it is less aggressive in trying to attract funds. Furthermore, in times of crisis, we suspect customers would tend to favor larger banks such as ACLEDA with a strong balance sheet and a superior solvency ratio. This would allow ACLEDA to price its deposits slightly below its smaller and less solid rivals.

Putting it all together, Net Interest Margins (Net Interest Income/Average Interest-earning Assets) are anticipated to decline from 5.6% in 2018 and 5.7% in 2019 to 5.1% and 5.4% respectively in 2020 and 2021 before rebounding to 5.8% in 2022. For the rest of the modeling horizon we assume flattish NIM, which could be considered as somewhat conservative but we must also factor in an increase in competition as large, deep-pocketed foreign banks enter the comparatively lucrative Cambodian market. This would most certainly put a downward pressure on the profitability of the whole banking sector.

4.1.3 Fees and commissions

We assume that fees and commissions income and expense will follow the same trend as interest income and interest expense. Hence, they remain roughly constant in terms of percentage of interest income and interest expense over the modeling horizon.

4.1.4 Operating expenses

They consist of Personnel, General and Administrative, Depreciation and Amortization charges.

For Personnel and General and Administrative (GandA) expenses, we simply calculate the average cost per staff, implicitly assuming that the number of employees drives all expenses such as utilities, rents, marketing, sundries, etc. In 2018, Personnel expenses was US$10,200/staff and GandA expenses was US$4,200/staff, growing by 5.0% and 4.2% respectively CAGR for the period 2009-18.

In 2019, the growth slowed down to 4.8% yoy and -0.4% yoy. We assume a sharp decline in the growth rate of expenses/staff to 1% yoy in 2020 and a gradual recovery from 2022 towards 3%, about the rate of inflation in Cambodia. The number of employees is expected to remain flat from 2020 onwards as ACLEDA pursues an aggressive strategy of digitalization that will require less staffing throughout the bank[28].

Depreciation and Amortization represented respectively 5.5% and 1.0% of total income. We assume that this trend will continue over the modeling horizon.

4.1.5 Provision for loan losses

We estimate the provisions for loan losses as a fraction of reported non-performing loans (NPLs). On average, between 2009 and 2018, they represented 75% of NPLs. In 2019, they fell to 25.7% of NPLs. Going forward, we assume 40% for the period 2020-23 and 50% for the period 2024-28. This might seem arbitrary but we do not believe the low level recorded in 2019 can be maintained during the expected economic slowdown induced by the Covid-19 crisis. We would rather err on the conservative side in gradually bringing provisions back up towards the historical mean.

NPLs are forecast to increase from 1.2% of average loans in 2019 to reach 1.5% for the period 2020 to 2023, again, due to the expected slowdown in business activity and the resulting stress for borrowers. For the period 2024-28, we assume a return to the historical level of NPLs of 1.1% of average loans.

4.1.6 Income tax

We assume 21% taxation rate throughout the modeling horizon except for the three years 2020, 2021 and 2022 when the taxation rate is 11%. This is due to the 50% tax reduction offered as an incentive for listing on the Cambodia Securities Exchange.

The forecast earnings model is presented in ANNEX 2. This is the basis for all our inputs to the valuation models we described in the previous sections.

4.2 Balance sheet forecasts

As discussed in Section 2.1, banks make money from the asset side as well as from the liabilities side of the balance sheet. However, the utilization of the balance sheet to generate profits is constrained by banking regulations. The main provisions consist in reserve requirements, a capital buffer and a liquidity buffer.

4.2.1 Reserve requirements and Liquidity ratio

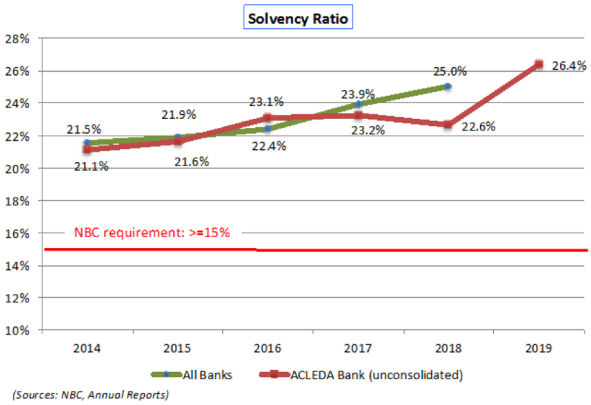
The banks must maintain an 8% reserve for Khmer Riel deposits and a 12.5% reserve for non-KHR deposits[29]. The liquidity ratio must be above 100%, which ACLEDA exceeds comfortably.

4.2.2 Capital adequacy ratio

In order for banks to be able to absorb losses incurred in the course of normal business, the National Bank of Cambodia (NBC) prescribes a minimum capital requirement of 15%[30].

ACLEDA maintains a solvency ratio comfortably above the 15% threshold, in the 21%~23% range. The latest solvency ratio as at the end of 2019 stood at 26.36% (bank only). In our balance sheet modeling, we assume ACLEDA will gradually reduce its solvency ratio towards the 21% level. However, this is mostly the strategic decision of the bank's management. Reducing the capital buffer would allow ACLEDA to extend more loans, grow earnings faster and increase dividends, or a combination of all three.

Figure 7



(Sources: NBC, Annual Reports)

However, as seen on Figure 7, ACLEDA's solvency ratio is at the same level as that of other banks. Assuming the bank can reduce its solvency ratio without objection from the NBC, large competitors such as Advanced Bank of Asia (ABA) or Canadia Bank are unlikely to stay put. Presumably, they would follow ACLEDA's move in bringing down their own solvency ratios in order to compete.

In our balance sheet modeling, we assume ACLEDA maintains a constant structure (see ANNEX 3). The overall size of the balance sheet is driven by loans to customers, which in turn determine the deposits size. We assume a loan/deposit ratio of 97%, slightly above the 96.1% average for the period 2009-2018.

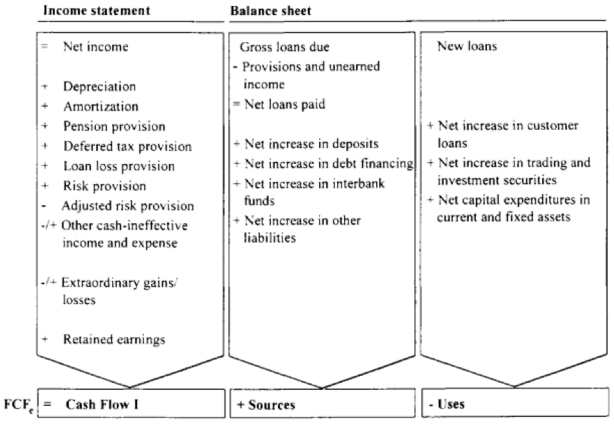
The balance sheet forecast allows us to determine the level of risk-weighted assets (RWA) from which, via the Capital Adequacy Ratio (=Solvency Ratio), we derive the Shareholders' Equity. From the profit for the year and the capital share increase (if any), we can deduce the potential dividends. We note that actual dividends will be less than the potential dividends thus calculated. The bank's management aims at a maximum dividend payout of 50% of the net profit for the year. We assume a 50% payout throughout the forecast period. All the calculations are presented in ANNEX 4.

Having explained these forecasting assumptions and choices, we can now turn to the valuation results from our two models.

4.3 The Free Cash Flow to Equity model

Starting from the forecast Net Profit, we arrive at the FCFE with the adjustments recommended by the figure 8[31] on Derivation of Free Cash Flow to Equity for Banks (Gross, 2006):

Figure 8



Source: Copeland and Al (2000)

The ANNEX 5 shows the derivation of FCFE for ACLEDA. The valuation we find for ACLEDA, based on the 10-year horizon, cost of equity and terminal value we discussed earlier, is a market capitalization of US$2.2bn, or US$5.13 per share (KHR20,511). We note that this is 27% above the IPO price.

4.4 The Residual Income model

Starting again from the forecast Net Profit that is equivalent to net operating profit after interest and tax (NOPAIT), we arrive at the Residual Income with the adjustments recommended below[32] in the figure 9:

Figure 9

	Adjusted NOPAIT =	Economic equity =
	Net operating profit after interest and taxes (NOPAIT)	Common equity
Risk provision	+ Loan loss provisions – Net charge-offs + General risk provision	+ Net loan loss revenue + General risk reserve
Deferred taxes	+ Increase in deferred tax reserve	+ Deferred tax reserve
Goodwill	+ Goodwill amortization + Unrecorded goodwill	+ Cumulative goodwill amortization
Restructuring costs	+ Restructuring charge*	+ Cumulative restructuring charges*
Securities accounting	+/– Loss (gains) from securities +/– IAS 39 adjustments	+/– Cumulative loss (gains) from securities +/– Cumulative IAS 39 adjustments

* Possibly other unusual gains and losses

Source: Copeland and Al (2000)

The ANNEX 6 shows the results of the Residual Income model. The valuation we find for ACLEDA, based on the 10-year horizon, cost of equity and terminal value we discussed earlier, is a market capitalization of US$1.9bn, or US$4.32 per share (KHR17,274). We note that this is about 7% above the IPO price of 16,200.

4.5 Valuation conclusion

Table 3: ACLEDA valuation summary

Model	Value (US$ bn)	Per share (US$)	Per share (KHR)	EPS (US$)	PER	BVPS (US$)	PBR
FCF Equity	2.244	5.13	20,511				
Residual Income	1.890	4.32	17,274				
Mid-point	2.067	4.72	18,893	0.25	18.9x	2.12	2.2x
IPO price	1.772	4.05	16,200	0.25	16.1x	2.12	1.9x

(assuming USD: KHR=4,000)

We will use the mid-point (average) of the two valuation results for the two models as our baseline valuation for ACLEDA. This will be the basis of the "sanity check" we perform with the comparison with regional peers.

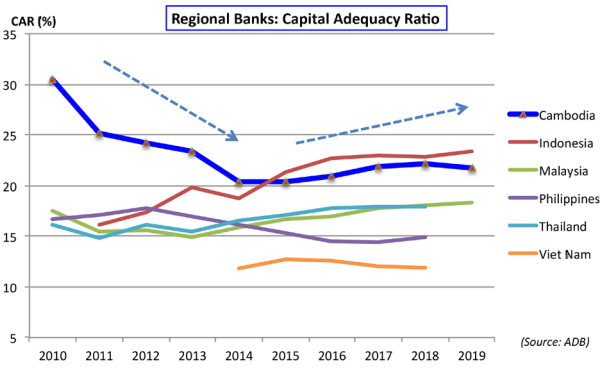
5. REGIONAL and LOCAL COMPARISIONS

5.1 Regional banking characteristics

Regional comparisons must always be approached with some caution. Differences in accounting standards, banking regulations and the degree of international investors participation in the local bourses can introduce substantial differences in reported earnings, book values, risk-weighted assets, and valuation multiples. Thus, it can be more useful to compare trends rather than absolute levels.

The trend in "Capital Adequacy Ratio" (CAR) for Cambodia is a case in point. The period from 2010 to 2015 saw a decline from a high level (30.5%) towards 20.3%, still above the regulatory minimum of 15%. The CAR from 2016 to 2019 remains in a narrower range (20.9% ~ 21.8%). Notice that Cambodian banks have about the strongest CARs among banks in the region (Figure 10).

Figure 10



Maintaining a smaller capital buffer allowed Cambodian banks to extend more loans and generate more earnings. We can see that return on assets (ROA) on Figure 11 and return on equity (ROE) on Figure 12 increase over the period when CAR decreases (2010 to 2015). Banks in other countries had different experiences.

Figure 11

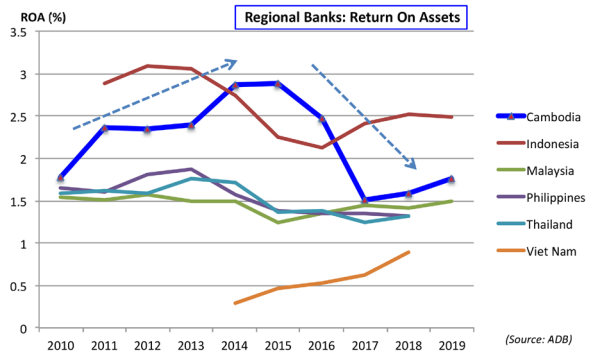
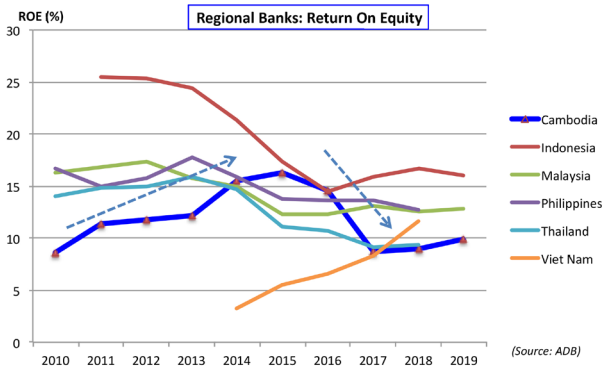


Figure 12



Therefore, comparisons must also be interpreted in the context of historical trends and strategic intents. Banks in a given country can make a trade-off between maintaining a high CAR (balance sheet strength) at the expense of efficiency in assets and capital utilization. Conversely, boosting ROEs and ROAs in the short run at the expense of a strong capital buffer can result in losses later on if non-performing loans increase in an economic slowdown for example. Hence, regional comparisons of valuation multiples should not be used without a proper understanding of local characteristics and strategies.

4.2 Peer banks selection

We chose banks that are as "purely" commercial banks as possible. Universal banks that have substantial investment banking and trading activities tend to have lower valuations as such businesses are cyclical and inherently unpredictable. We also picked banks whose sizes (by market capitalization) are commensurate with ACLEDA's. Lastly, we selected banks from countries that are geographically close to Cambodia. They also share some economic characteristics even though they are at more advanced stages of development, namely: Indonesia, Malaysia, Thailand, Philippines, and Vietnam.

Table 4: Regional peer selection

	Short name	Ticker (Reuters)	Country	CCY	Recent price	Market Cap. 2020 (local bn)	(USDl bn)
Bank of the Philippine Islands	BPI	(BPI:PS)	Philippines	PHP	63.10	284.8	5.5
Metropolitan Bank & Trust Co.	MetroBank	(MBT:PS)	Philippines	PHP	41.10	184.9	3.6
Bangkok Bank	Bangkok Bank	(BBL:BK)	Thailand	THB	116.00	221.4	6.8
Krung Thai Bank	KTB	(KTB:BK)	Thailand	THB	10.90	152.3	4.7
TMB Bank	TMB	(TMB:BK)	Thailand	THB	0.93	89.6	2.8
Bank Negara Indonesia	BNI	(BBNI:JK)	Indonesia	IDR	4200	78324	4.9
Bank Tabungan Negara	BTN	(BBTN:JK)	Indonesia	IDR	960	10166	0.6
AMMB Holdings	AMMB	(AMM:KL)	Malaysia	MYR	3.09	9.3	2.1
Alliance Bank Malaysia	ABM	(ALLI:KL)	Malaysia	MYR	1.90	2.9	0.7
Hong Leong Bank	HongLeong	(HLBB:KL)	Malaysia	MYR	13.56	29.4	6.8
Asia Commercial Bank	ACB	(ACB:HN)	Vietnam	VDN	20400	33793	1.5
Vietnam Techcom Bank	Techcom Bank	(TCB)	Vietnam	VDN	17150	60027	2.6
Vietnam Bank	Vietcom Bank	(VCB)	Vietnam	VDN	70900	262959	11.3

(Sources: Reuters, Bloomberg)

5.3 What price? Which measures?

5.3.1 Pricing issues

The most obvious question is that of the appropriate price or market value to use in our comparisons. For ACLEDA, we show the valuation at the mid-point price ("ACLEDA" in the charts and tables) of our analysis and at the IPO price ("ACLEDA-IPO" in the charts and tables).

For the regional peers, the current Covid-19 crisis raises the issue of the appropriateness of using the latest 2020 prices. The dramatic collapse in stock markets all over the world likely reflects both the enormous negative economic impact and the depressed sentiment of investors globally. As such, ACLEDA's IPO listing is bound to be affected as it cannot remain insulated from global market trends. This would likely result in a negative performance for the shares after the listing. Conversely, one can also argue that the IPO of ACLEDA will mostly attract local investors who are more knowledgeable about Cambodia and the leadership position enjoyed by the bank. This would ensure a reasonable success in the performance of the shares after the listing. Which argument will win the day is anyone's guess.

We surmise that looking at market conditions in 2018 and 2019 could be edifying as well. In 2019 the Covid-19 crisis had not yet unfolded in stock market terms. We look at the average valuations of the regional peer group in both 2018 and 2019. In 2018, Emerging Markets in Asia fell by 15.5% as measured by the MSCI Emerging Markets Asia index. In 2019, the same index rose by 19.2%[33] (Figure 13). In 2020 year-to-date, the same index in down about 13%. Which year mighty be the most representative of investors' views?

Figure 13

(Source Bloomberg)

To summarize, we look at three sets of valuations: average 2018, average 2019 and 2020 (priced on 15-Apr-2020). The results are shown in ANNEX 7.

5.3.2 Meaningful correlations

From the data, we look for meaningful correlations. To avoid "data mining" and spurious relationships, we restrict ourselves to the most commonly used ratios and measures such as PER, PBR, ROE, Dividend Yield, EPS growth and Market Capitalization. We also search for intuitively sensible correlations by asking questions like "Does a high ROE correlate with a high market cap?" for example. To answer that question, we would chart a scatter plot with ROE as the independent variable and "Market Cap" as the dependent variable. Our results are shown in the set of graphs below.

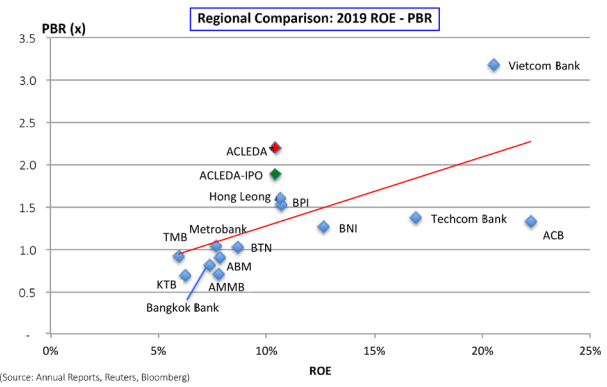
- **ROE – PBR 2019 (Figure 14)**

The correlation is strong and positive with the 2019 average price. A bank with a high return on equity (ROE) has a high price-to-book ratio (PBR) as well. A high ROE means a high efficiency in capital utilization. Investors correctly reward such a company with a high PBR. A market value (P) higher than the book value (B) i.e. PBR>1, means that investors expect the company to generate more value. Conversely, a PBR<1 means investors have low expectations about the company's prospects.

Academic research suggests that high PBR stocks indeed have higher expected returns[34]. If they are wrong, a PBR<1 would signal an undervalued company.

For ACLEDA, both in the case of the IPO price (ACLEDA-IPO) and our mid-point price (ACLEDA), the valuation seems somewhat on the high side, sitting above the trend line.

Figure 14



(Source: Annual Reports, Reuters, Bloomberg)

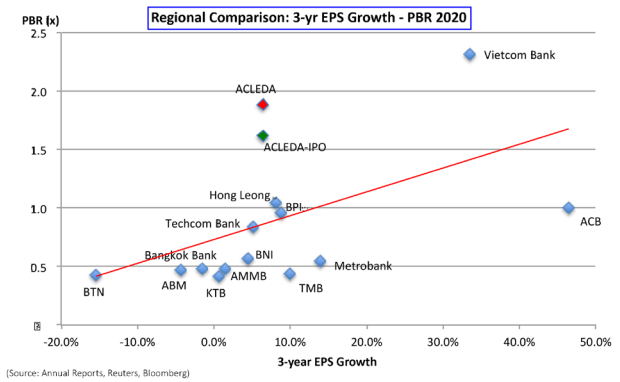
• 3-year EPS growth – PBR 2020 (Figure 15)

The correlation is strong and positive with the 2020 recent price. We calculate the growth in EPS between 2017 and 2020 using the forecast EPS for 2020 given by Bloomberg. This forecast is a consensus of all analysts covering a given stock and who feed data to the Bloomberg service. A bank with a high 3-year EPS growth should have a high price-to-book ratio (PBR) too as investors expect the high profit growth to continue and therefore bid its share price up.

For ACLEDA, both in the case of the IPO price (ACLEDA-IPO) and our mid-point price (ACLEDA), the valuation seems to be too high, putting its PBR above the trend line.

We do not conclude that ACLEDA is overpriced relative to its regional peers. If Cambodian investors have superior information, they might assess the growth prospects of ACLEDA more accurately than regional investors do for the prospects of the banks in their respective local stock markets. The IPO price would be justified in this way. Our fundamental valuation supports that view as well.

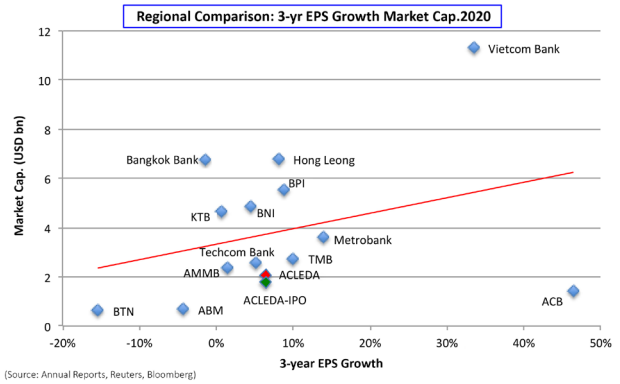
Figure 15



(Source: Annual Reports, Reuters, Bloomberg)

• 3-year EPS growth – Market Cap. 2020 (Figure 16)

The correlation is weaker between the 3-year EPS growth and the market cap. (size) of the peer group banks. However, it remains intuitively correct to believe that investors would prefer banks showing a high rate of earnings growth.



(Source: Annual Reports, Reuters, Bloomberg)

In this case, ACLEDA's valuation is lower than what would be expected relative to the peer group given its 3-year EPS growth record (+6.4% p.a.). Its size (Market Cap.) should be higher. Again, we would not rush to conclusions. Because its listing is unlikely to attract international or even regional investors in large numbers, ACLEDA is likely not priced in relation to its regional peer group.

On balance, we find the ROE-PBR relationship to be the most convincing. It suggests ACLEDA-IPO is priced rather high compared with its regional peers. However, a plausible explanation could be that local investors will accept such valuations because they have high expectations about its future performance as they know ACLEDA's dominant position in the local banking sector. Moreover the GDP of Cambodia has risen at a faster rate than that achieved by the peer group countries over the past few years. This suggests that growth opportunities might be more attractive in Cambodia. Finally, the size of the IPO itself, 2% of new shares plus up to 3% of existing shares is not very large compared with the expected demand. Hence there might be a scarcity factor in the pricing. All of this could explain ACLEDA's higher valuations.

5.4 Local comparisons

We now turn to the limited sample of transactions that took place in Cambodia among banks and micro-finance institutions (MFIs).

Table 4: Recent financial transactions

Acquirer	Bought	Price (US$mn)	Stake	Implied total value (US$ mn)	Book value (US$ mn)	PBR (X)
National Bank of Canada	ABA	83.5	10%	835.0	405.0	2.1
SBI Holdings	Ly Hour	81.7	70%	116.7	21.6	5.4
Kookmin Bank	Prasac	603.4	70%	862.0	376.7	2.3

(Sources: Phnom Penh Post, NBC)

Table 4 shows that the lowest PBR multiple for a recent transaction was a 2.1x multiple of book value for the acquisition by National Bank of Canada of the 10% in Advanced Bank of Asia (ABA) that it did not own yet. As such, it is the closest in essence to the IPO of ACLEDA. This is just in-between the valuation mid-point price PBR (2.2x) and the IPO price PBR of (1.9x). The two other transactions with higher multiples (5.4x and 2.3x) implicitly include a premium for the management control it gave to the acquirers. Hence, in our view, they are less appropriate comparisons for the ACLEDA listing.

CONCLUSIONS

- Our valuation analysis is one made "from the outside, looking in". In particular, we did not have access to ACLEDA's management. We used only available public information form the National Bank of Cambodia and documents released by ACLEDA in the run-up to its IPO. Strategic decisions made by ACLEDA could result in different fundamental outcomes. To name but one such decisions, the level of solvency ratio the bank wishes to maintain will have a substantial impact on earnings and shareholders' equity.
- We find a valuation range of ACLEDA of KHR17,274 to KHR20,511 (US$4.32 to US$5.13) on a fundamental basis. The mid-point of this range is KHR18.893 (US$4.72). Our valuation is based on the models we chose and the assumptions we made with respect to the economic environment of the next few years. Other models and assumptions would yield different results.
- The IPO price of KHR16,200 (US$4.05) seems sensible to us and leaves an attractive upside towards our fundamental valuation range. However, this is not a guarantee for quick positive returns to investors in the IPO. Investors' sentiment, the global economic situation, the Covid-19 crisis, and much else, could have a stronger influence than fundamentals, at least in the short to medium term.

ACLEDA BANK — **OPERATIONS** — Last updated: 15-Apr-20

in USD 000s	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Loans													
Loans & Advances to Customers (year end)	2,841,391	3,085,215	3,513,594	3,775,834	3,889,109	4,355,802	4,834,940	5,318,435	5,850,278	6,435,306	7,078,836	7,786,720	8,565,392
yoy change	*13.3%*	*8.6%*	*13.9%*	*7.5%*	3.0%	12.0%	11.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Loans & Advances to Customers (average	**2,674,639**	**2,963,303**	**3,299,404**	**3,644,714**	**3,832,472**	**4,122,456**	**4,595,371**	**5,076,688**	**5,584,356**	**6,142,792**	**6,757,071**	**7,432,778**	**8,176,056**
yoy change	*17.5%*	*10.8%*	*11.3%*	*10.5%*	*5.2%*	*7.6%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Other Interest-Earning Assets (year end)	1,194,114	1,567,422	1,568,442	1,882,130	1,938,594	2,171,225	2,410,060	2,651,066	2,916,172	3,207,789	3,528,568	3,881,425	4,269,568
yoy change	*43.9%*	*31.3%*	*0.1%*	20.0%	3.0%	12.0%	11.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Other Interest-Earning Assets (average)	**1,011,898**	**1,380,768**	**1,567,932**	**1,725,286**	**1,910,362**	**2,054,909**	**2,290,642**	**2,530,563**	**2,783,619**	**3,061,981**	**3,368,179**	**3,704,997**	**4,075,496**
yoy change	*43.4%*	*36.5%*	*13.6%*	*10.0%*	*10.7%*	*7.6%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Interest-Earning Assets (year end)	4,035,505	4,652,637	5,082,035	5,657,964	5,827,703	6,527,027	7,245,000	7,969,500	8,766,450	9,643,095	10,607,405	11,668,145	12,834,960
yoy change	*20.9%*	*15.3%*	*9.2%*	*11.3%*	*3.0%*	*12.0%*	*11.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Interest-Earning Assets (average)	**3,686,537**	**4,344,071**	**4,867,336**	**5,370,000**	**5,742,833**	**6,177,365**	**6,886,014**	**7,607,250**	**8,367,975**	**9,204,773**	**10,125,250**	**11,137,775**	**12,251,552**
yoy change	*23.7%*	*17.8%*	*12.0%*	*10.3%*	*6.9%*	*7.6%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
NPLs (year end)	19,710	67,834	62,862	**43,737**	**57,487**	**61,837**	**68,931**	**76,150**	**61,428**	**67,571**	**74,328**	**81,761**	**89,937**
yoy change	*96.4%*	*244.2%*	*-7.3%*	*-30.4%*	*31.4%*	*7.6%*	*11.5%*	*10.5%*	*-19.3%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
NPLs/Average Loans	0.7%	2.2%	1.8%	1.2%	1.5%	1.5%	1.5%	1.5%	1.1%	1.1%	1.1%	1.1%	1.1%
Provision for Loan Losses/NPLs	69.3%	50.5%	64.8%	25.7%	40.0%	40.0%	40.0%	40.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Interest Income	411,926	425,346	423,256	**460,489**	**421,572**	**474,082**	**551,445**	**634,586**	**725,966**	**798,563**	**878,419**	**966,261**	**1,103,768**
yoy change	*16.1%*	*3.3%*	*-0.5%*	*8.8%*	*-8.5%*	*12.5%*	*16.3%*	*15.1%*	*14.4%*	*10.0%*	*10.0%*	*10.0%*	*14.2%*
Interest on Loans	409,086	417,642	416,260	**455,589**	**421,572**	**474,082**	**551,445**	**634,586**	**725,966**	**798,563**	**878,419**	**966,261**	**1,103,768**
yoy change	*15.7%*	*2.1%*	*-0.3%*	*9.4%*	*-7.5%*	*12.5%*	*16.3%*	*15.1%*	*14.4%*	*10.0%*	*10.0%*	*10.0%*	*14.2%*
Lending Rate	15.3%	14.1%	12.6%	12.5%	11.0%	11.5%	12.0%	12.5%	13.0%	13.0%	13.0%	13.0%	13.5%
Yield on Interest-Earning Assets	11.2%	9.8%	8.7%										
Net Interest Income	287,223	275,704	271,852	**304,594**	**294,106**	**311,757**	**370,498**	**434,687**	**469,430**	**516,373**	**568,010**	**624,811**	**728,172**
yoy change	*11.9%*	*-4.0%*	*-1.4%*	*12.0%*	*-3.4%*	*6.0%*	*18.8%*	*17.3%*	*8.0%*	*10.0%*	*10.0%*	*10.0%*	*16.5%*
Net Interest Margin	7.8%	6.3%	5.6%	5.7%	5.1%	5.0%	5.4%	5.7%	5.6%	5.6%	5.6%	5.6%	5.9%
Fee & Commission as % of Interest Income	12.8%	13.8%	15.2%	15.6%	15.0%	15.0%	15.0%	15.0%	14.0%	14.0%	14.0%	14.0%	14.0%
Deposits													
Deposits from Customers (year end)	2,764,757	3,117,210	3,548,889	4,049,688	4,009,391	4,490,518	4,984,475	5,482,922	6,031,214	6,634,336	7,297,769	8,027,546	8,830,301
yoy change	*16.2%*	*12.7%*	*13.8%*	*14.1%*	*-1.0%*	*12.0%*	*11.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Deposits from Customers (average)	**2,572,429**	**2,940,984**	**3,333,049**	**3,799,289**	**4,029,540**	**4,249,954**	**4,737,496**	**5,233,698**	**5,757,068**	**6,332,775**	**6,966,053**	**7,662,658**	**8,428,924**
yoy change	*17.4%*	*14.3%*	*13.3%*	*14.0%*	*6.1%*	*5.5%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Other Interest-Bearing Liabilities (year end)	1,019,278	1,140,227	1,032,689	1,043,016	1,095,167	1,226,587	1,361,511	1,497,663	1,647,429	1,812,172	1,993,389	2,192,728	2,412,001
yoy change	*26.9%*	*11.9%*	*-9.4%*	1.0%	5.0%	12.0%	11.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Other Interest-Bearing Liabilities (average	**911,296**	**1,079,752**	**1,086,458**	**1,037,853**	**1,069,091**	**1,160,877**	**1,294,049**	**1,429,587**	**1,572,546**	**1,729,800**	**1,902,780**	**2,093,058**	**2,302,364**
yoy change	*32.4%*	*18.5%*	*0.6%*	*-4.5%*	*3.0%*	*8.6%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Interest-Bearing Liabilities (year end)	3,784,036	4,257,437	4,581,578	5,092,704	5,104,558	5,717,105	6,345,986	6,980,585	7,678,643	8,446,508	9,291,158	10,220,274	11,242,302
yoy change	*18.9%*	*12.5%*	*7.6%*	*11.2%*	*0.2%*	*12.0%*	*11.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Interest-Bearing Liabilities (average)	**3,483,725**	**4,020,736**	**4,419,507**	**4,837,141**	**5,098,631**	**5,410,831**	**6,031,545**	**6,663,285**	**7,329,614**	**8,062,575**	**8,868,833**	**9,755,716**	**10,731,288**
yoy change	*21.0%*	*15.4%*	*9.9%*	*9.4%*	*5.4%*	*6.1%*	*11.5%*	*10.5%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Interest Expense	124,703	149,641	151,405	**155,896**	**127,466**	**162,325**	**180,946**	**199,899**	**256,536**	**282,190**	**310,409**	**341,450**	**375,595**
yoy change	*27.3%*	*20.0%*	*1.2%*	*3.0%*	*-18.2%*	*27.3%*	*11.5%*	*10.5%*	*28.3%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Cost of Funds	3.6%	3.7%	3.4%	3.2%	2.5%	3.0%	3.0%	3.0%	3.5%	3.5%	3.5%	3.5%	3.5%
Loans/Deposits Ratio	104.0%	100.8%	99.0%	95.9%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Fee & Commission as % of Interest Expense	3.8%	1.9%	0.5%	0.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%

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(USD 000s) — EARNINGS FORECASTS

INCOME	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Interest Income	411,926	425,346	423,256	460,489	421,572	474,082	551,445	634,586	725,966	798,563	878,419	966,261	1,103,768
Interest Expense	(124,703)	(149,641)	(151,405)	(155,896)	(127,466)	(162,325)	(180,946)	(199,899)	(256,536)	(282,190)	(310,409)	(341,450)	(375,595)
Net Interest Income	**287,223**	**275,704**	**271,852**	**304,594**	**294,106**	**311,757**	**370,498**	**434,687**	**469,430**	**516,373**	**568,010**	**624,811**	**728,172**
yoy change	*11.9%*	*-4.0%*	*-1.4%*	*12.0%*	*-3.4%*	*6.0%*	*18.8%*	*17.3%*	*8.0%*	*10.0%*	*10.0%*	*10.0%*	*16.5%*
Fee & Commission Income	52,863	58,862	64,413	71,679	63,236	71,112	82,717	95,188	101,635	111,799	122,979	135,277	154,527
Fee & Commission Expense	(4,737)	(2,867)	(750)	(960)	(2,039)	(2,597)	(2,895)	(3,198)	(4,105)	(4,515)	(4,967)	(5,463)	(6,010)
Net Fee & Commission Income	**48,127**	**55,995**	**63,664**	**70,719**	**61,196**	**68,515**	**79,822**	**91,990**	**97,531**	**107,284**	**118,012**	**129,813**	**148,518**
yoy change	*23.8%*	*16.3%*	*13.7%*	*11.1%*	*-13.5%*	*12.0%*	*16.5%*	*15.2%*	*6.0%*	*10.0%*	*10.0%*	*10.0%*	*14.4%*
Other Income	**10,815**	**10,602**	**14,934**	**17,842**	**19,626**	**21,589**	**23,748**	**26,122**	**28,212**	**30,469**	**32,907**	**35,539**	**38,382**
yoy change	*33.6%*	*-2.0%*	*40.9%*	*19.5%*	10.0%	10.0%	10.0%	10.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Total Income	**346,165**	**342,301**	**350,449**	**393,155**	**374,928**	**401,861**	**474,067**	**552,799**	**595,173**	**654,126**	**718,929**	**790,164**	**915,073**
yoy change	*14.0%*	*-1.1%*	*2.4%*	*12.2%*	*-4.6%*	*7.2%*	*18.0%*	*16.6%*	*7.7%*	*9.9%*	*9.9%*	*9.9%*	*15.8%*

EXPENSES	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Provision for loan losses	(13,655)	(34,250)	(40,711)	(11,220)	(22,995)	(24,735)	(27,572)	(30,460)	(30,714)	(33,785)	(37,164)	(40,880)	(44,968)
Other Provisions	-	(1,815)	142	325	-	-	-	-	-	-	-	-	-
Net Provisions	**(13,655)**	**(36,065)**	**(40,569)**	**(10,895)**	**(22,995)**	**(24,735)**	**(27,572)**	**(30,460)**	**(30,714)**	**(33,785)**	**(37,164)**	**(40,880)**	**(44,968)**
yoy change	*41.8%*	*164.1%*	*12.5%*	*-73.1%*	*111.1%*	*7.6%*	*11.5%*	*10.5%*	*0.8%*	*10.0%*	*10.0%*	*10.0%*	*10.0%*
Personnel Expenses	(105,784)	(112,239)	(125,922)	(137,624)	(146,247)	(148,441)	(153,276)	(158,664)	(164,241)	(170,014)	(175,990)	(182,176)	(188,579)
General and Administrative Expenses	(42,142)	(52,309)	(51,866)	(53,905)	(57,283)	(58,142)	(60,036)	(62,146)	(60,638)	(62,769)	(64,975)	(67,259)	(69,623)
Depreciation Charges	(22,889)	(21,265)	(21,935)	(21,426)	(20,621)	(22,102)	(26,074)	(30,404)	(32,734)	(35,977)	(39,541)	(43,459)	(50,329)
Amortization Charges	(3,311)	(4,051)	(3,550)	(3,537)	(3,749)	(4,019)	(4,741)	(5,528)	(5,952)	(6,541)	(7,189)	(7,902)	(9,151)
Total Operating Expenses	**(174,127)**	**(189,864)**	**(203,273)**	**(216,493)**	**(227,900)**	**(232,703)**	**(244,126)**	**(256,742)**	**(263,565)**	**(275,301)**	**(287,696)**	**(300,796)**	**(317,682)**
yoy change	*7.9%*	*9.0%*	*7.1%*	*6.5%*	*5.3%*	*2.1%*	*4.9%*	*5.2%*	*2.7%*	*4.5%*	*4.5%*	*4.6%*	*5.6%*
Total Expenses	**(187,782)**	**(225,929)**	**(243,842)**	**(227,389)**	**(250,895)**	**(257,438)**	**(271,698)**	**(287,202)**	**(294,279)**	**(309,086)**	**(324,859)**	**(341,676)**	**(362,651)**
yoy change	*9.8%*	*20.3%*	*7.9%*	*-6.7%*	*10.3%*	*2.6%*	*5.5%*	*5.7%*	*2.5%*	*5.0%*	*5.1%*	*5.2%*	*6.1%*
Pretax Profit	**158,383**	**116,372**	**106,608**	**165,766**	**124,034**	**144,423**	**202,369**	**265,597**	**300,894**	**345,039**	**394,069**	**448,488**	**552,422**
yoy change	*19.5%*	*-26.5%*	*-8.4%*	*55.5%*	*-25.2%*	*16.4%*	*40.1%*	*31.2%*	*13.3%*	*14.7%*	*14.2%*	*13.8%*	*23.2%*
Income Taxes	(31,014)	(23,844)	(22,598)	(34,911)	(13,644)	(15,887)	(22,261)	(55,775)	(63,188)	(72,458)	(82,755)	(94,182)	(116,009)
Net Profit	**127,369**	**92,528**	**84,009**	**130,855**	**110,390**	**128,537**	**180,108**	**209,822**	**237,706**	**272,581**	**311,315**	**354,305**	**436,413**
yoy change	*20.8%*	*-27.4%*	*-9.2%*	*55.8%*	*-15.6%*	*16.4%*	*40.1%*	*16.5%*	*13.3%*	*14.7%*	*14.2%*	*13.8%*	*23.2%*

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Last updated: *15-Apr-20*

Balance Sheet (Consolidated)

Year to December *in USD 000s*	2016	2017	2018	2019	Forecasts 2020	2021	2022	2023	2024	2025	2026	2027	2028
ASSETS													
Cash on Hands	286,217	321,744	407,865	421,527	438,296	490,892	544,890	599,379	659,317	725,249	797,774	877,551	965,306
Balances with Central Banks	1,239,883	1,497,133	1,470,593	1,581,619	1,543,297	1,728,493	1,918,627	2,110,490	2,321,539	2,553,693	2,809,062	3,089,968	3,398,965
Balances with Other Banks	86,821	120,255	26,568	119,484	61,732	69,140	76,745	84,420	92,862	102,148	112,362	123,599	135,959
Loans and Advances to Customers	2,841,391	3,085,215	3,513,594	3,775,834	3,889,109	4,355,802	4,834,940	5,318,435	5,850,278	6,435,306	7,078,836	7,786,720	8,565,392
Other Assets	51,988	49,570	51,351	49,912	67,905	76,054	84,420	92,862	102,148	112,362	123,599	135,959	149,554
Statutory Deposits	307	307	249	245	-	-	-	-	-	-	-	-	-
PP&E	125,991	133,328	137,862	131,160	129,637	145,193	161,165	177,281	195,009	214,510	235,961	259,557	285,513
Intangible Assets	11,842	11,340	11,198	8,999	18,520	20,742	23,024	25,326	27,858	30,644	33,709	37,080	40,788
Deferred Tax Assets	20,133	25,321	21,940	22,894	24,693	27,656	30,698	33,768	37,145	40,859	44,945	49,439	54,383
Other Investments	154	154	154	154	-	-	-	-	-	-	-	-	-
TOTAL ASSETS	5,083,533	5,616,077	5,977,956	6,111,828	6,173,189	6,913,972	7,674,509	8,441,960	9,286,156	10,214,771	11,236,248	12,359,873	13,595,860

Year to December *in USD 000s*	2016	2017	2018	2019	Forecasts 2020	2021	2022	2023	2024	2025	2026	2027	2028
LIABILITIES													
Due to Other Banks and Financial I	361,414	212,455	286,941	283,185	308,659	345,699	383,725	422,098	464,308	510,739	561,812	617,994	679,793
Deposits from Customers	2,764,757	3,117,210	3,548,889	4,049,688	4,009,391	4,490,518	4,984,475	5,482,922	6,031,214	6,634,336	7,297,769	8,027,546	8,830,301
Provision for Off Balance Sheet Co	-	1,815	1,666	1,348	-	-	-	-	-	-	-	-	-
Other Liabilities	80,619	86,097	103,964	105,240	(47,685)	(6,807)	44,170	105,486	178,624	265,333	291,867	321,053	353,159
Borrowings	616,064	906,378	784,672	557,586	648,185	725,967	805,823	886,406	975,046	1,072,551	1,179,806	1,297,787	1,427,565
Subordinated Debts	109,400	108,684	77,101	140,101	123,464	138,279	153,490	168,839	185,723	204,295	224,725	247,197	271,917
Current Income Tax Liabilities	35,698	23,972	13,811	30,459	30,866	34,570	38,373	42,210	46,431	51,074	56,181	61,799	67,979
Employee Benefits	35,984	47,541	17,953	16,258	18,520	20,742	23,024	25,326	27,858	30,644	33,709	37,080	40,788
TOTAL LIABILITIES	4,341,258	4,925,378	5,352,589	5,183,867	5,091,399	5,748,968	6,433,080	7,133,287	7,909,204	8,768,972	9,645,870	10,610,457	11,671,502
EQUITY													
Share Capital	307,764	358,545	395,224	428,818	462,824	537,256	537,256	537,256	537,256	537,256	537,256	537,256	537,256
General Reserves	238,722	302,148	348,163	390,160	370,391	414,838	460,471	506,518	557,169	612,886	674,175	741,592	815,752
Currency Translation Reserves	(2,082)	(2,512)	(6,741)	(7,592)	(6,173)	(6,914)	(7,675)	(8,442)	(9,286)	(10,215)	(11,236)	(12,360)	(13,596)
Other Reserves	(14,132)	(14,132)	(14,279)	(14,279)	(12,346)	(13,828)	(15,349)	(16,884)	(18,572)	(20,430)	(22,472)	(24,720)	(27,192)
Retained Earnings	126,887	91,685	84,009	130,855	267,094	233,652	266,726	290,225	310,385	326,301	412,657	507,648	612,138
Minority Interests	3,631	4,482	-	-	-	-	-	-	-	-	-	-	-
SHAREHOLDERS' EQUITY	660,790	740,215	806,375	927,962	1,081,790	1,165,004	1,241,429	1,308,673	1,376,951	1,445,799	1,590,379	1,749,416	1,924,358
TOTAL LIABILITIES & EQUITY	5,002,048	5,665,593	6,158,965	6,111,828	6,173,189	6,913,972	7,674,509	8,441,960	9,286,156	10,214,771	11,236,248	12,359,873	13,595,860

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Last updated: *15-Apr-20*

CAPITAL ADEQUACY RATIO & RISK WEIGHTED ASSETS (Consolidated)

	Year: 0	1	2	3	4	5	6	7	8	9	10
(USD 000s)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Risk Weighted Assets (RWA)	3,836,406	4,048,940	4,160,729	4,660,017	5,172,619	5,689,881	6,258,869	6,884,756	7,573,231	8,330,554	9,163,610
Tier 1 Capital	787,294										
Tier 2 Capital	79,559										
Total Regulatory Capital	866,853	1,067,301	1,081,790	1,165,004	1,241,429	1,308,673	1,376,951	1,445,799	1,590,379	1,749,416	1,924,358
Capital Adequacy Ratio (Solvency Ratio)	22.60%	26.36%	26.0%	25.0%	24.0%	23.0%	22.0%	21.0%	21.0%	21.0%	21.0%

IMPLIED EQUITY MOVEMENT (Consolidated)

	Year: 0	1	2	3	4	5	6	7	8	9	10
(USD 000s)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Equity (Beg. of the year)		806,375	1,067,301	1,081,790	1,165,004	1,241,429	1,308,673	1,376,951	1,445,799	1,590,379	1,749,416
Capital Share Increase (+)		33,594	34,006	74,432	-	-	-	-	-	-	-
Profit for the Period (+)		130,855	110,390	128,537	180,108	209,822	237,706	272,581	311,315	272,581	311,315
Dividends and Potential Dividends (-)		96,476	(129,907)	(119,754)	(103,684)	(142,578)	(169,428)	(203,733)	(166,735)	(113,543)	(136,373)
Equity (End of the year)	806,375	1,067,301	1,081,790	1,165,004	1,241,429	1,308,673	1,376,951	1,445,799	1,590,379	1,749,416	1,924,358

RISK WEIGHTED ASSETS (Estimated) (Consolidated)

		Year: 0	1	2	3	4	5	6	7	8	9	10
(USD 000s)	*Weighting*	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Cash on Hands	0%	-	-	-	-	-	-	-	-	-	-	-
Balances with Central Banks	0%	-	-	-	-	-	-	-	-	-	-	-
Balances with Other Banks	50%	13,284	59,742	30,866	34,570	38,373	42,210	46,431	51,074	56,181	61,799	67,979
Loans and Advances to Customers	100%	3,513,594	3,775,834	3,889,109	4,355,802	4,834,940	5,318,435	5,850,278	6,435,306	7,078,836	7,786,720	8,565,392
Other Assets	100%	51,351	49,912	67,905	76,054	84,420	92,862	102,148	112,362	123,599	135,959	149,554
Statutory Deposits	100%	249	245	-	-	-	-	-	-	-	-	-
PP&E	100%	137,862	131,160	129,637	145,193	161,165	177,281	195,009	214,510	235,961	259,557	285,513
Intangible Assets	100%	11,198	8,999	18,520	20,742	23,024	25,326	27,858	30,644	33,709	37,080	40,788
Deferred Tax Assets	100%	21,940	22,894	24,693	27,656	30,698	33,768	37,145	40,859	44,945	49,439	54,383
Other Investments	100%	154	154	-	-	-	-	-	-	-	-	-
Total Risk Weighted Assets		3,749,631	4,048,940	4,160,729	4,660,017	5,172,619	5,689,881	6,258,869	6,884,756	7,573,231	8,330,554	9,163,610
Regulatory Capital		866,853	1,067,301	1,081,790	1,165,004	1,241,429	1,308,673	1,376,951	1,445,799	1,590,379	1,749,416	1,924,358
Capital Adequacy Ratio (Estimated)		23.12%	26.36%	26.00%	25.00%	24.00%	23.00%	22.00%	21.00%	21.00%	21.00%	21.00%

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ACLEDA BANK

Last updated: 15-Apr-20

FREE CASH FLOW TO EQUITY

(USD 000s)	Year 1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028
CASH FLOW										
Net Profit	130,855	110,390	128,537	180,108	209,822	237,706	272,581	311,315	354,305	436,413
(+) Depreciation & Amortization	24,964	24,370	26,121	30,814	35,932	38,686	42,518	46,730	51,361	59,480
(+) Provision for Loan Losses	11,220	22,995	24,735	27,572	30,460	30,714	33,785	37,164	40,880	44,968
Total (1)	167,039	157,755	179,392	238,495	276,214	307,106	348,885	395,209	446,546	540,861
SOURCES										
(+) Net Increase in Deposits	500,799	(40,298)	481,127	493,957	498,447	548,292	603,121	663,434	729,777	802,755
(+) Net Increase in Debt Funding	(164,086)	73,961	92,598	95,067	95,931	105,524	116,077	127,685	140,453	154,498
(+) Net Increase in Interbank Funds	(3,757)	25,475	37,039	38,027	38,373	42,210	46,431	51,074	56,181	61,799
(+) Net Increase Other Liabilities	1,277	(152,925)	40,878	50,977	61,316	73,137	86,710	26,533	29,187	32,105
Total (2)	334,234	(93,787)	651,642	678,028	694,067	769,164	852,339	868,725	955,598	1,051,158
USES										
(-) Net Increase in Loans	(262,240)	(113,275)	(466,693)	(479,138)	(483,494)	(531,843)	(585,028)	(643,531)	(707,884)	(778,672)
(-) Net Increase in Securities and Investments	1,440	(17,993)	(8,149)	(8,366)	(8,442)	(9,286)	(10,215)	(11,236)	(12,360)	(13,596)
(-) Net Increase in Amounts due from Banks	(203,943)	96,074	(192,604)	(197,740)	(199,537)	(219,491)	(241,440)	(265,584)	(292,142)	(321,357)
(-) Net Capital Expenditures	8,901	(7,998)	(17,779)	(18,253)	(18,419)	(20,261)	(22,287)	(24,515)	(26,967)	(29,664)
Total (3)	(455,843)	(43,192)	(685,224)	(703,497)	(709,892)	(780,881)	(858,969)	(944,866)	(1,039,353)	(1,143,288)
FREE CASH FLOW to EQUITY (FCFE) Total 1+2+3	45,430	20,776	145,810	213,027	260,389	295,389	342,254	319,068	362,791	448,731
Present Value of FCFE	40,211	16,277	101,107	130,746	141,454	142,032	145,659	120,191	120,960	132,425
Total	1,091,061									
Terminal Value (TV)	3,905,825	(=FCFE(10) * k)								
Present Value of TV	1,152,649									

	USD	KHR	
Number of shares	437,569,545	437,569,545	1USD=KHR
Equity Value (billion)	2.244	8,975	4,000
Per Share Value	5.13	20,511	

Value of Equity 2,243,710

ACLEDA BANK

RESIDUAL INCOME	(USD 000s)	Year 1 2019	2 2020	3 2021	4 2022	5 2023	6 2024	7 2025	8 2026	9 2027	10 2028
Net Profit		130,855	110,390	128,537	180,108	209,822	237,706	272,581	311,315	354,305	436,413
(+) Loan Loss Provision		11,220	22,995	24,735	27,572	30,460	30,714	33,785	37,164	40,880	44,968
(-) Cost of Capital Employed		(104,668)	(120,449)	(140,416)	(151,218)	(161,137)	(169,866)	(178,728)	(187,665)	(206,431)	(227,074)
Residual Income (RI)		37,408	12,936	12,855	56,463	79,145	98,555	127,638	160,814	188,754	254,307
Present Value of RI		33,110	10,134	8,914	34,654	42,995	47,388	54,321	60,577	62,934	75,049
	Total	430,076									
Terminal Value (TV)		2,213,532	(=RI(10) * k)								2.067
Present Value of TV		653,236									
(=Beg. Equity + PV RI + PV TV)		1,889,687									

	USD	KHR	
Number of shares	437,569,545	437,569,545	1USD=KHR
Equity Value (billion)	1.890	7,559	4,000
Per Share Value	4.32	17,274	

ANNEX 7

2020	Country	CCY	Recent price	Market Cap. 2020		PER_{n-1}	PER_n	PER_{n+1}	PBR	Div. yield	ROE	EPS 3-yr growth
				(local bn)	(USD bn)	(x)	(x)	(x)	(x)			
Bank of the Philippine Islands	Philippines	PHP	63.10	284.8	5.5	12.3	9.9	9.9	1.0	1.8%	9.7%	8.8%
Metropolitan Bank & Trust Co.	Philippines	PHP	41.10	184.8	3.6	8.4	6.6	6.9	0.5	1.2%	8.0%	13.9%
Bangkok Bank	Thailand	THB	116.00	221.4	6.8	6.3	6.2	7.0	0.5	3.9%	6.8%	-1.5%
Krung Thai Bank	Thailand	THB	10.90	152.3	4.7	5.3	5.2	6.6	0.4	6.9%	6.2%	0.7%
TMB Bank	Thailand	THB	0.93	89.6	2.8	7.7	12.4	7.8	0.4	4.3%	5.7%	10.0%
Bank Negara Indonesia	Indonesia	IDR	4200	78324	4.9	5.2	5.1	5.0	0.6	4.9%	11.3%	4.5%
Bank Tabungan Negara	Indonesia	IDR	960	10166	0.6	3.6	48.6	5.5	0.4	0.2%	7.6%	-15.4%
AMMB Holdings	Malaysia	MYR	3.09	9.3	2.1	8.2	6.2	6.7	0.5	6.5%	7.2%	1.5%
Alliance Bank Malaysia	Malaysia	MYR	1.90	2.9	0.7	6.0	5.5	6.6	0.5	8.9%	7.2%	-4.3%
Hong Leong Bank	Malaysia	MYR	13.56	29.4	6.8	11.1	11.0	10.8	1.0	3.7%	9.6%	8.1%
Asia Commercial Bank	Vietnam	VDN	20400	33793	1.5	6.8	5.7	5.5	1.0	0.0%	18.3%	46.4%
Vietnam Techcom Bank	Vietnam	VDN	17150	60027	2.6	4.5	6.0	5.7	0.8	0.0%	14.6%	5.1%
Vietcom Bank	Vietnam	VDN	70900	262959	11.3	21.3	15.8	15.0	2.3	1.1%	15.5%	33.5%
Average					4.1	8.2	11.1	7.6	0.8	3.3%	9.8%	
ACLEDA Bank	Cambodia	KHR	18893	8267	2.1	24.6	15.6	18.5	1.9	2.7%	10.4%	6.4%
ACLEDA Bank - IPO	Cambodia	KHR	16200	7089	1.8	21.1	13.5	16.1	1.6	3.1%	10.4%	6.4%

2019	Country	CCY	Average price 2019	Average Maket Cap. 2019		PER_{n-1}	PER_n	PER_{n+1}	PBR	Div. yield	ROE	EPS 3-yr growth
				(local bn)	(USD bn)	(x)	(x)	(x)	(x)			
Bank of the Philippine Islands	Philippines	PHP	90.70	409.4	8.0	17.7	14.2	14.2	1.5	2.0%	10.7%	8.8%
Metropolitan Bank & Trust Co.	Philippines	PHP	70.59	317.5	6.2	14.4	11.3	11.8	1.0	1.2%	8.7%	13.9%
Bangkok Bank	Thailand	THB	181.50	346.4	10.6	9.8	9.7	11.0	0.8	3.9%	7.4%	-1.5%
Krung Thai Bank	Thailand	THB	18.00	251.6	7.7	8.8	8.6	11.0	0.7	4.2%	6.3%	0.7%
TMB Bank	Thailand	THB	1.85	177.8	5.5	15.3	24.6	15.4	0.9	2.2%	5.9%	10.0%
Bank Negara Indonesia	Indonesia	IDR	8288	154551	9.6	10.3	10.0	9.9	1.3	2.5%	12.7%	4.5%
Bank Tabungan Negara	Indonesia	IDR	2350	24887	1.6	8.9	118.9	13.6	1.0	0.1%	7.7%	-15.4%
AMMB Holdings	Malaysia	MYR	4.14	12.4	2.9	11.0	8.3	9.0	0.7	4.8%	7.8%	1.5%
Alliance Bank Malaysia	Malaysia	MYR	3.33	5.1	1.2	10.4	9.6	11.5	0.9	5.1%	7.8%	-4.3%
Hong Leong Bank	Malaysia	MYR	18.90	41.0	9.5	15.5	15.4	15.1	1.6	2.6%	10.6%	8.1%
Asia Commercial Bank	Vietnam	VDN	22285	36915	1.6	7.4	6.2	6.0	1.3	0.0%	22.2%	46.4%
Vietnam Techcom Bank	Vietnam	VDN	24250	84878	3.7	6.4	8.4	8.1	1.4	0.0%	16.9%	5.1%
Vietcom Bank	Vietnam	VDN	73500	272602	11.7	22.1	16.4	15.5	3.2	0.0%	20.5%	33.5%
Average					6.1	12.2	20.1	11.7	1.3	2.2%	11.2%	
ACLEDA Bank	Cambodia	KHR	18893	8267	2.1	24.6	15.6	18.5	2.2	3.2%	10.4%	6.4%
ACLEDA Bank - IPO	Cambodia	KHR	16200	7089	1.8	21.1	13.5	16.1	1.9	3.8%	10.4%	6.4%

2018	Country	CCY	Average price 2018	Average Maket Cap. 2018		PER_{n-1}	PER_n	PER_{n+1}	PBR	Div. yield	ROE	EPS 3-yr growth
				(local bn)	(USD bn)	(x)	(x)	(x)	(x)			
Bank of the Philippine Islands	Philippines	PHP	99.32	448.3	8.7	19.4	15.6	15.5	1.8	1.8%	11.6%	8.8%
Metropolitan Bank & Trust Co.	Philippines	PHP	80.33	361.3	7.0	16.4	12.9	13.4	1.3	1.1%	9.5%	13.9%
Bangkok Bank	Thailand	THB	202.50	386.5	11.9	10.9	10.8	12.3	0.9	3.2%	7.6%	-1.5%
Krung Thai Bank	Thailand	THB	19.40	271.1	8.3	9.5	9.3	11.8	0.9	3.7%	7.5%	0.7%
TMB Bank	Thailand	THB	2.39	229.8	7.1	19.8	31.8	19.9	0.2	2.5%	1.0%	10.0%
Bank Negara Indonesia	Indonesia	IDR	9313	173666	10.8	11.6	11.3	11.2	1.6	2.2%	14.4%	4.5%
Bank Tabungan Negara	Indonesia	IDR	3075	32564	2.0	11.6	155.6	17.7	1.4	1.7%	7.7%	-15.4%
AMMB Holdings	Malaysia	MYR	4.38	13.2	3.0	11.6	8.7	9.5	0.8	3.4%	8.4%	1.5%
Alliance Bank Malaysia	Malaysia	MYR	4.05	6.3	1.4	12.7	11.7	14.0	1.1	3.7%	8.2%	-4.3%
Hong Leong Bank	Malaysia	MYR	18.75	40.6	9.4	15.4	15.3	15.0	1.7	2.6%	11.3%	8.1%
Asia Commercial Bank	Vietnam	VDN	22104	36615	1.6	7.3	6.2	5.9	1.7	0.0%	29.4%	46.4%
Vietnam Techcom Bank	Vietnam	VDN	29975	104917	4.5	7.9	10.4	10.0	2.0	0.0%	20.2%	5.1%
Vietcom Bank	Vietnam	VDN	61700	228838	9.8	18.6	13.8	13.0	3.2	0.0%	24.6%	33.5%
Average					6.6	13.3	24.1	13.0	1.4	2.0%	12.4%	
ACLEDA Bank	Cambodia	KHR	18893	8267	2.1	24.6	15.6	18.5	2.5	2.3%	10.4%	6.4%
ACLEDA Bank - IPO	Cambodia	KHR	16200	7089	1.8	21.1	13.5	16.1	2.2	2.6%	10.4%	6.4%

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