CAMEL Analysis – The good, the bad, and the chronically mispriced

Ranking the 17 listed banks on our fundamental framework

CAMEL analysis: A fundamental framework for understanding and ranking commercial bank operations. In this report we examine the entire universe of 17 listed Vietnamese banks based on the old-school CAMEL framework, a fundamental approach to analyzing banks that focuses on **C**apital, **A**sset quality, **M**anagement, **E**arnings, and **L**iquidity. Our analysis is based on 2018A audited financial statements and seven-year trends in 67 bank-related metrics (largely financial ratios). Not surprisingly, the results are a mixed bag: asset quality has improved notably across the sector in recent years, but balance sheets remain highly leveraged and the liability structure of most banks is somewhat less than ideal.

Stock implications. A bank's CAMEL score does not by itself imply that the stock is a "Buy" or "Sell". Valuations and future expectations of business performance are critical to make that decision. Also, our reliance on FiinPro data for this exercise has limitations common to all data aggregators; a closer examination of the individual banks' published disclosures and discussions with management teams are required for a more complete understanding. However, the CAMEL framework provides us with a good platform to search for hidden diamonds and/or lumps of coal, as well as a solid reference on the overall sector trends. Among the four banks in our coverage universe, we continue to recommend a barbell strategy comprising 1) a core long position in VCB as a proxy on Vietnam's economic development and 2) an allocation to STB as an undervalued turnaround play (think risk-reward).

Tanh Tran
Banks Analyst
tanh.tran@yuanta.com.vn

Matthew Smith, CFA
Head of Institutional Research
matthew.smith@yuanta.com.vn

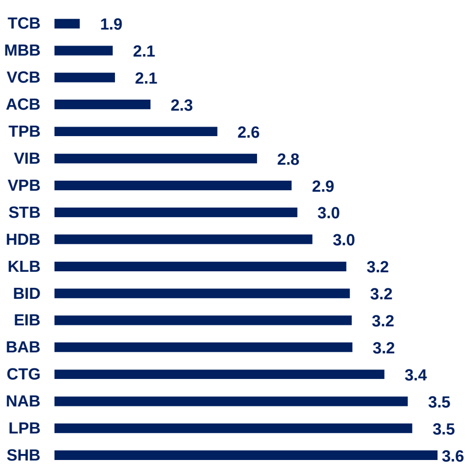
Themes and catalysts

- **Hunting for quality.** The sector is thinly capitalized and poorly funded.
- **Asset quality has improved** markedly in recent years.
- **Solvency capital** is likely to remain a key theme. FOL rules reduce the options; NVDRs would help.

Risks

- **Basel 2 looms**, although forbearance appears likely.
- **ALM matters.** Stable funding requirements are wise, but will pressure NIMs.
- **Asset quality** has improved, but watch consumer finance.

CAMEL Rankings



Source: Yuanta Vietnam

Ranking the banks. In our opinion, bank analysis is a mix of science and art. This view is reflected in our application of the CAMEL model, an old-school fundamental analytical framework that takes a bottom-up approach based on quantifiable metrics (i.e., ratio analysis) with a dash of qualitative judgement. The overall results can be seen in the chart at left. Note that lower scores representing stronger quality.

Implications for investors? We believe that banks with stronger CAMEL rankings deserve a premium valuation relative to weaker banks. This is the case with VCB, which scores highly and trades at a sector-high 4.2x 2018 P/BV (source: Bloomberg). By contrast, MBB trades at just 1.5x 2018 P/BV despite generating the same CAMEL score as VCB. We almost hesitate to mention TCB (Not Rated), but its sector-high CAMEL score of 1.9 doesn't match up to its 1.5x P/BV valuation either.

FOL cap drives the anomaly. We attribute the mismatch between fundamentals and valuation to market inefficiencies created by these banks' full FOL status. This anomaly may eventually correct as the market develops (NVDRs might represent a solution). But reaping the potential rewards is likely to require patience, and foreign investors must also consider the risks related to FOL premiums and settlement issues. Ultimately, this exercise bolsters our cautious tactical view on full-FOL stocks.

Yuanta Vietnam Coverage Universe

Sector	Company	Stock code	Market cap (USDm)	3-month ADT (USDm)	Yuanta Rating	Current price (VND)	Target price (VND)	Up (down) side	2019E Dividend yield	12-m TSR*
Banks	BIDV	BID VN	4,722	1.3	BUY	32,100	38,713	21%	2.7%	23%
	MB Bank	MBB VN	1,910	2.0	BUY	21,000	29,889	42%	3.4%	46%
	Sacombank	STB VN	881	1.4	BUY	11,350	14,101	24%	0.4%	25%
	Vietcombank	VCB VN	11,107	1.9	BUY	69,600	75,275	8%	1.4%	10%
Brokers	HCM City Securities	HCM VN	312	0.5	BUY	23,700	36,219	53%	3.9%	57%
	Saigon Securities	SSI VN	544	1.3	HOLD	24,850	26,125	5%	4.1%	9%
	Viet Capital Securities	VCI VN	216	0.2	BUY	30,800	43,850	42%	4.0%	46%
	VNDirect Securities	VND VN	136	0.3	BUY	15,100	21,029	39%	4.5%	44%
Consumer	Masan Group	MSN VN	4,250	1.4	BUY	84,500	93,035	10%	1.8%	12%
	Phu Nhuan Jewelry	PNJ VN	706	1.6	BUY	73,700	118,489	61%	2.7%	63%
	Digiworld	DGW VN	39	0.3	BUY	21,850	31,574	45%	5.4%	50%
Oil & GAS	PV Drilling	PVD VN	306	3.1	BUY	18,600	24,535	32%	2.7%	35%
Property	Nam Long	NLG VN	298	1.2	BUY	29,000	32,000	10%	1.7%	12%
	Vinhomes	VHM VN	13,123	3.3	BUY	82,000	94,860	16%	1.2%	17%

*Note: TSR = Total shareholder return over the next 12 months inclusive of expected share price change and dividends.
Pricing data as of close on July 3, 2019.

TABLE OF CONTENTS

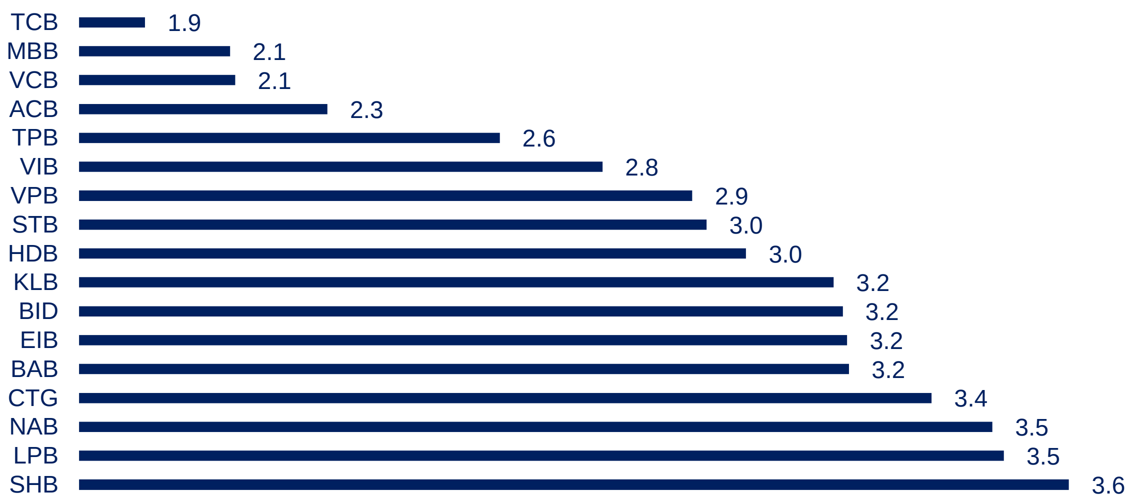
The CAMEL framework: An old-school fundamental approach to analyze the Vietnam banks

In this report, we introduce our preferred framework for analyzing commercial banks: the CAMEL model. In our view, the role of a bank analyst is a healthy (and occasionally dismal) mix of science and art. This is reflected in our application of the CAMEL model, which is a fundamental analytical framework that takes a bottom-up approach based largely on quantifiable metrics (i.e., ratio analysis) with a dash of qualitative judgement on the part of the analyst.

The CAMEL framework is an old-school fundamental approach; we consider it to be akin to "Bank Analysis 101". The five components examined by the framework are (C) capital adequacy, (A) asset quality, (M) management capability, (E) earnings, and (L) liquidity. In this report, the ratios are calculated based on historical full-year annual financial statements for all of the banks, including the four stocks in our coverage and the 13 banks for which we do not yet have a rating.

We delve into the details below, but a quick summary of the results of our analysis of Vietnam's 17 banks is exhibited in the chart below. Each bank's CAMEL score represents its weighted ranking on some 67 metrics (largely financial ratios) related to each of the framework's five components. Ratings for each bank are applied within a range of 1 (best) to 5 (worst) for each metric, and each metric is weighted based on our perception of its importance in understanding the banks.

Listed Vietnam Bank Rankings by CAMEL Scores



Source: Yuanta Vietnam

<u>* Note:</u> We define the CAMEL ratings of 1-5 as follows:

1: strong
2: satisfactory
3: weak
4: poor
5: unsatisfactory

Our analysis derives an average CAMEL score of 2.9 for the 17 listed banks, but with a healthy range and rankings that will probably not surprise investors who are familiar with the Vietnam banks. TCB (Not rated), MBB (BUY), and VCB (BUY) are at the top of the CAMEL rankings with scores of 1.9-2.1, followed by ACB (Not rated) at 2.3. By contrast, SHB, LPB, and NAB (all non-rated by Yuanta) are positioned at the bottom with a less impressive average score of 3.5.

Notably, STB (BUY – and one of our top picks along with CAMEL leader VCB) does not score particularly well. This should perhaps come as no surprise given its 20% ratio of non-performing assets to total assets, which is clearly not a great number. Our positive view on STB is based on our expectation that its turnaround efforts will succeed, and we believe that the bank's CAMEL score is likely to improve substantially in the years ahead (as will its share price, in our view).

Weighted ratings for each component of the CAMEL model

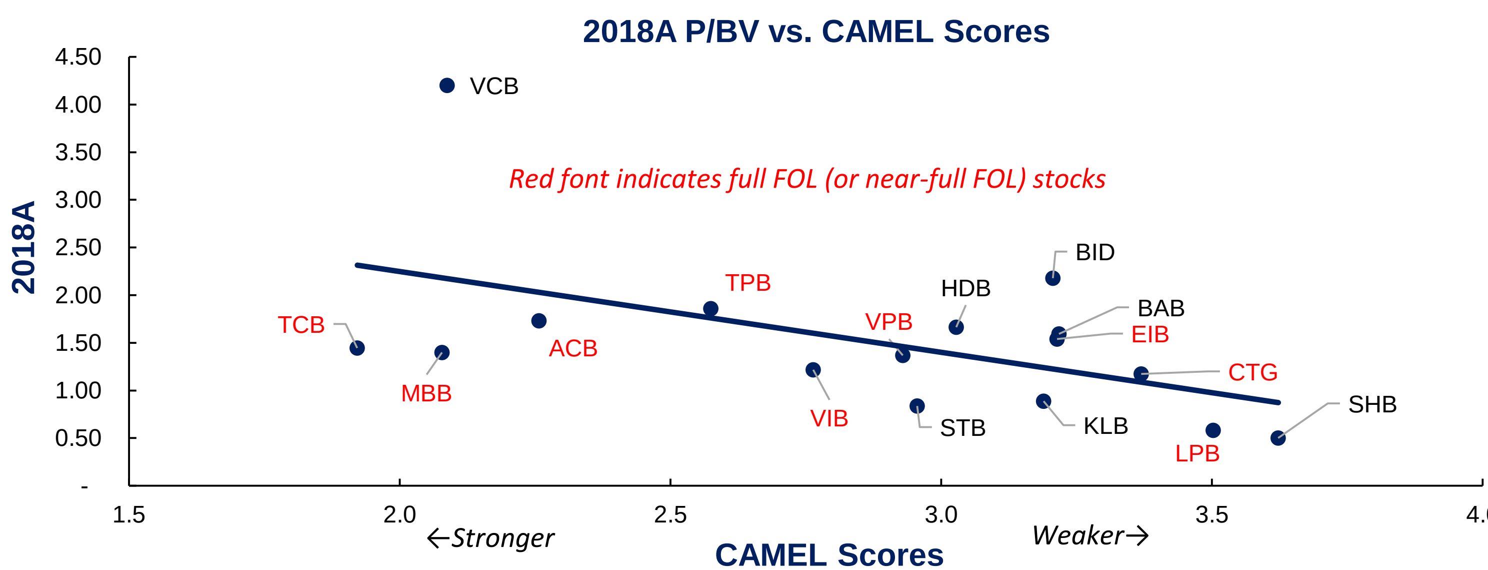
SUMMARY	ACB	BAB	BID	CTG	EIB	HDB	KLB	LPB	MBB	NAB	SHB	STB	TCB	TPB	VCB	VIB	VPB
Capital Adequacy	3.0	3.3	3.7	4.4	3.4	3.4	2.9	3.9	2.1	4.3	3.7	3.6	1.6	2.9	2.9	2.6	2.2
Asset Quality	1.7	2.0	3.4	2.3	3.0	3.1	2.6	2.8	2.2	2.4	3.9	2.9	2.8	2.3	1.5	3.6	3.9
Management	2.1	4.0	3.4	3.6	3.5	3.0	3.3	3.8	2.0	3.8	3.2	2.4	1.7	2.2	2.6	2.0	2.5
Earnings	2.1	3.8	3.4	4.0	3.7	1.88	3.9	3.9	1.8	3.6	3.9	3.7	1.4	1.8	2.0	1.9	2.3
Liquidity	2.4	3.0	2.2	2.6	2.4	3.8	3.3	3.2	2.3	3.3	3.5	2.2	2.1	3.6	1.6	3.8	3.7
CAMEL Score	**2.3**	**3.2**	**3.2**	**3.4**	**3.2**	**3.0**	**3.2**	**3.5**	**2.1**	**3.5**	**3.6**	**3.0**	**1.9**	**2.6**	**2.1**	**2.8**	**2.9**

Implications for investors?

We believe in our fundamentalist hearts that banks with stronger CAMEL rankings deserve a premium valuation relative to weaker banks. This should be intuitive – stronger banks are more likely to create value over time, and investors in an efficient market should recognize this and price it into such banks' stock valuations.

This is the clearly case for VCB, which both scores highly on our CAMEL framework and trades at a sector-high 4.2x 2018 P/BV (source: Bloomberg). The same can be said for the banks with less-optimal scores, which tend to trade at relatively low valuations.

However, this happy coincidence with market efficiency does not appear to be universal across the banks. For example, MBB trades at just 1.5x 2018 P/BV despite generating the same CAMEL score as VCB. We almost hesitate to mention TCB (Not Rated), but its sector-high CAMEL score of 1.9 doesn't appear to be reflected in its 1.5x P/BV valuation. Of course, these prices are typically only available to domestic investors; foreign investors would have to find a willing seller who would no doubt demand a premium price for his/her full-FOL shares. Even so, the valuation mismatch is striking.



Source: Bloomberg, Yuanta Vietnam

FOL cap drives the anomaly

We attribute the mismatch between fundamentals and valuation to market inefficiencies created by these banks' full FOL status. We think it is highly unlikely that domestic investors (who largely determine the share prices and valuations exhibited in the chart above) are bearish on the fundamentals of banks such as TCB and MBB. Instead we would argue that they are avoiding these stocks due to their full-FOL status, which implies no further net buying by foreigners.

This anomaly may eventually correct as the market develops in the years ahead. For example, the potential implementation of nonvoting depository receipts (NVDRs) might create a more efficient pricing environment. If implemented, the capital-hungry banking sector is likely to be among the early adopters of such instruments. The effect of NVDRs on existing FOL premiums is perhaps worthy of consideration for investors holding full-FOL stocks, although the NVDR pricing could also encompass existing premiums. We will reserve this particular guessing game for subsequent consideration given that NVDR adoption is not likely to happen until 2H20 at the very earliest (if it happens at all).

Our main point here is that reaping the potential rewards of high-quality full-FOL bank stocks is likely to require patience among investors. Ultimately, if our CAMEL exercise does nothing else, it bolsters our cautious tactical view on full-FOL stocks in Vietnam. For details, please see our strategy note of April 9 titled Of FOLs and Money.

The CAMEL Framework: Banks Analysis 101

The CAMEL framework is an old-school fundamental approach; we consider it to be akin to "Bank Analysis 101". The five components examined by the framework are (C) capital adequacy, (A) asset quality, (M) management capability, (E) earnings, and (L) liquidity. In this report, the ratios are calculated based on historical full-year annual financial statements for all of the banks, including the four stocks in our coverage and the 13 banks for which we do not yet have a rating.

In truth, each of these five components could (and probably should) be treated as a separate theme, with a more thorough assessment than we provide here. However, as we are still in the process of ramping up our coverage of the Vietnamese banks, we believe that a more general overview of the aggregate data is an appropriate means of identifying opportunities in the banks that may be worthy of greater focus. To be clear, we are not suggesting that bank with a high CAMEL score is necessarily a "Buy", nor that a low CAMEL score relegates a weaker bank to "Sell" status. However, we believe that a rigorous fundamental overview of the banks is the best place to start looking for such opportunities.

In an efficient market, banks with superior CAMEL scores would trade at higher multiples than banks with lower CAMEL rankings. But of course, that doesn't always happen; markets (not just in Vietnam) are not always efficient, and stock investors often fail to recognize the underlying trends in a bank's fundamentals (i.e., improving or decaying). Thus, a thorough combination of CAMEL analysis with an assessment of market valuation vs estimated fair value is likely to be a winning investment strategy, in our opinion – and research coverage decisions are supported by this approach.

Our assessment of the Vietnam banks comprises the calculation of 67 metrics (largely financial ratios) corresponding to the five CAMEL components for each of the 17 listed banks. Based on the ranges of these ratios among the banks (with some room for judgement calls on our part), our model then generates a score (1-5, with 1 being the best) for each individual component at each individual listed bank. Most of these scores are based on ratio analysis of the banks' 2018 audited results, but we also give ourselves some flexibility for judgement based on improvement or decay in their fundamental trends in recent years, or for items that are inherently difficult to quantify (e.g., transparency of financial disclosures, or openness of investor relations departments).

We then generate an overall ranking for each bank by calculating the average of the respective bank's component scores.

Crucially, the scores generated by this analysis only serve to rank each individual bank against its peers – specifically, where its ratios fall within the range of the group of listed Vietnamese banks. Extending our CAMEL analysis to include regional ASEAN banks would very likely illustrate the weaknesses of Vietnam's banking system in crucial items such as bank capitalization, funding, and management. However, such a comparison is well beyond our scope at this time.

The sections below present an introduction to the ratios and other measures that we have applied for each component of the CAMEL analysis.

1) We apply a total of 13 metrics in ratings the banks' balance sheet solvency capital.

Capital ratios and other measures

	Ratio	Weight (%)	Comment
1	Tier 1 CAR	0%	Disclosure issues caused us to weight Tier 1 and 2 at zero
2	Tier 2 CAR	0%	Disclosure issues caused us to weight Tier 1 and 2 at zero
3	CAR	10%	Based on the Basel 1 approach (Circular 36)
4	Equity / Assets	15%	Straightforward leverage.
5	Equity / Assets + Off BS exposures	5%	
6	VAMC-adj equity / Adj Assets	5%	Stripping out VAMC assets shows "clean book".
7	Tangible Equity / Tangible Assets	5%	Intangible assets are a small component of VN bank balance sheets.
8	VAMC adj TE / VAMC adj TA	5%	
9	Interbank / Assets	5%	Historical practice of booking credit assets as "interbank" is less prevalent today.
10	Loans / Assets	5%	
11	Current FOL room (%)	15%	Open FOL room means that a bank has greater flexibility to raise new capital.
12	Basel II approval	15%	Seven banks have achieved this so far (some won't be ready in 2020).
13	Trend	15%	The recent trend is more important than a static snapshot.

Source: Yuanta Vietnam

These measures include several fairly straightforward items such as reported CAR ratios under the Basel 1 approach with extra points for the seven listed banks that have achieved Basel 2 approval. We tried to include measures of Tier 1 and Tier 2 CAR, but weak disclosure standards overcame our ambitions so we gave up that effort – for now. Other measures include straight equity / assets, straight equity / assets plus off-balance sheet exposures, and tangible equity / tangible assets.

In addition, we delved a bit deeper into a some of the standard ratios discussed above with Vietnam bank-specific idiosyncrasies in mind. Thus, we also measured some of the capital ratios after adjusting for VAMC exposures and "other assets", including interest receivables. In addition, we rate the banks with substantial remaining FOL room (foreign ownership room) more highly than full-FOL banks when thinking about capital. This might be counterintuitive (the full-FOL banks tend to be of better quality, right?). But foreign investment is the only obvious source of new capital for a bank, and open FOL room implies greater flexibility for a bank to raise capital than a that is already at full FOL.

2) We examine 16 metrics to rank the banks' asset quality.

Asset quality ratios and measures

	Ratio	Weight	Comment
1	SML ratio	5%	Special mention loans (SMLs) are excluded from reported NPLs.
2	Type 3 NPL ratio	5%	
3	Type 4 NPL ratio	5%	
4	Type 5 NPL ratio	5%	
5	NPL & SML ratio	5%	
6	Gross NPL ratio	10%	
7	Net NPL ratio	5%	This reflects the amount of specific provisions.
8	LLR / Gross loans	5%	
9	LLR / NPLs	10%	Also known as NPL reserve coverage.
10	GPs / Performing loans	5%	General provisions are a bullwark against future NPL formation.
11	SPs / NPLs	5%	Specific NPL coverage.
12	SPs / NPLs + SMLs	5%	
13	VAMC bonds / Assets	5%	VAMC bonds = NPAs that have been converted pending resolution.
14	Accrued interest / Assets	5%	High levels of accrued interest are reflective of high NPAs.
15	Other receivables / Assets	5%	High levels of "other receivables" are reflective of high NPAs.
16	Trend	15%	The recent trend is more important than a static snapshot.

Source: Yuanta Vietnam

Most of these ratios are common to banks everywhere and are likely familiar to investors. The Vietnam banks disclose their loan books on a five-tier scale of quality. Type 1 loans are performing loans. Type 2 loans are special mention loans (SMLs), which are problematic assets but are not included in the banks' reported NPL figures. However, we think it makes sense to consider the banks' SMLs when assessing their asset quality. Loan Types 3, 4, and 5 are all official NPLs, with Type 5 as the lowest ranked in terms of quality (i.e., a loss requiring 100% provisioning). The gross NPL ratio represents the headline NPL number, but net NPLs (which account for specific provisions that have already been recognized) are perhaps a more important indicator of determining future credit costs.

We also present various measures of loan loss reserve (LLR) coverage to total loans, NPLs, and NPLs plus SMLs. Items 13-15 are Vietnam-specific ratios that include VAMC bonds (i.e., NPLs that have been transferred to the Vietnam AMC in line with a restructuring plan with the State Bank of Vietnam), as well as accrued interest and "other receivables" – the latter of which, for a few banks, include large proportions of assets that are nonperforming in economic terms. As a general statement, we find that asset quality has improved markedly across the sector over the past several years, in line with policy-led restructuring efforts post the 2011-12 banking crisis, a reflation of the property market, and (we believe and hope) much-improved credit risk management practices on the part of the banks.

3) Our assessment of management comprises 10 items. But to be fair, more thorough examinations of the individual banks is probably required here.

Management ratios and other measures

	Ratio	Weight	Comment
1	Fees / Adj income	10%	Fee generation as a function of operational excellence.
2	Fees / Assets	10%	
3	Costs / Adj income	10%	Opex control is a key area where management can drive value.
4	Costs / Assets	5%	
5	CASA growth	15%	Structural preference for banks that are focused on liability structure.
6	Credit costs / Assets	5%	Are they lending, or giving it away?
7	Credit cost adjusted NIM	15%	NIM as a reflection of asset risks. Are they lending, or giving it away?
8	Governance rating	5%	Based on items such as proactive disclosure, regulatory compliance, investor relations.
9	Management acumen	10%	More art than science, this is a judgement call based on and modifying the above.
10	Trend	15%	The recent trend is more important than a static snapshot.

Source: Yuanta Vietnam

Based on our experience, we believe that bank managers are best able to drive long-term value by focusing on defense – in other words, cost efficiencies and credit risk management, as well as prioritizing cheap funding. A myopic focus on asset growth and asset market share rarely impresses us. After all, the main product here is money, so finding a willing customer is not particularly difficult (the tricky part is to ensure that you're lending rather than giving it away). Given the relatively undeveloped state of the Vietnamese banks, we also think that a focus on generating fee income can also help banks to stand out in terms of returns on risk-weighted capital.

Ultimately, however, forming a view on a bank's management is a necessarily subjective process. This component of the CAMEL framework is perhaps least well-served by our reliance on aggregate data. A fair assessment of each bank's management would require a closer bottom-up focus as well as deeper conversations with the bankers to understand their operational plans and forward strategies. The top-down approach that we apply for this exercise (i.e., our reliance on the data aggregator FiinPro) is admittedly insufficient for a thorough assessment of all of the management teams – but at least it's a start.

4) We look at 15 metrics to assess the banks' earnings.

Earnings ratios and other measures

	Ratio	Weight	Comment
1	NIM	10%	NIM is a key major driver of earnings.
2	Fees / adj revenue	10%	Fees are a minor driver of earnings but are a key driver of ROE.
3	Investment inc / adj revenue	5%	Investment income is worth less in valuation terms, in our view.
4	Total adj non-int inc / adj revenue	5%	We have stripped out "other income" here given its dominance by nonoperating revenues, including loan loss recoveries.
5	Cost / adj revenue	5%	Cost control is a key area where management can drive value.
6	PPOP / Assets	10%	Indicator of ongoing business operations for banks under restructuring.
7	Provisioning / assets	5%	
8	OROA	10%	
9	Other income / assets	5%	This is reported in "other income" on bank balance sheets but we see it as credit-related.
10	Pretax ROA	5%	
11	PAT ROA	5%	
12	Minority interests / assets	0%	Not meaningful for most of the Vietnam banks.
13	Average Leverage	5%	Used to calculate ROE
14	PATMI ROE	5%	
15	Trend	15%	The recent trend is more important than a static snapshot.

Source: Yuanta Vietnam

The 15 earnings metrics listed in the table above should be fairly straightforward. Bank earnings (which are the key driver of balance sheet solvency) can be simplistically broken down as being driven by four ratios: 1) net interest margin (NIM, or net interest income divided by assets), 2) non-interest income to revenues, 3) operating costs to revenues, and 4) credit costs as defined by provisioning as a percentage of assets. From these four ratios we derive an operating return on assets (OROA) ratio which ignores taxes and one-off items but is useful in gauging underlying bank profitability, especially when engaging in cross-bank comparisons as we have done in this report. We also apply a high weighting to the ratio of pre-provisioning operating profit to average assets (PPOP ROA) which is helpful in understanding the underlying profitability of a bank that is engaged in NPL restructuring (such as STB).

The key Vietnam-specific change that we have made here is in handling "other income". We retain fees and investment income as "above the line" components of operating revenues, but we strip out "other income", which for many banks includes substantial credit cost recoveries and other asset divestment gains. We think that this lumpy and occasionally large item obscures the underlying operational trends and we also view loan loss recoveries as a credit cost item. Thus, we adjust the reported P&L statements of the banks in our models by moving this item down to the credit cost level. The bottom line is not affected, and we think this approach gives a more accurate view on the operating trends of the banks.

5) **Liquidity is a weak point with many banks, according to our 13 measures of the final CAMEL component.**

Liquidity ratios and other measures

	Ratio	Weight	Comment
1	Gross LDR	10%	Gross loans to deposits, an indicator of potential funding pressures.
2	Net LDR	10%	Loans net of provisions to deposits.
3	Net VND LDR	0%	Weighted at zero due to limited disclosure in recent years.
4	Net FX LDR	0%	Weighted at zero due to limited disclosure in recent years.
5	Deposits / Assets	10%	
6	Deposits / Liabilities	10%	
7	Current accounts / Deposits	10%	Also known as the CASA ratio -- VN banks tend to be weak, with a few exceptions.
8	SOE deposit ratio	5%	Higher is better -- the state banks dominate this bracket.
9	LTMT loans/Current deposits	10%	An indicator of the asset-liability duration gap and required boost to stable funding. For liquidity, a lower ratio here is better.
10	MT loans / Total loans	5%	
11	LT loans / Total loans	5%	
12	ST deposits / LTMT loans	10%	Capped at 30% by regulation, which is driving a search for stable funding and pressuring NIM.
13	Trend	15%	The recent trend is more important than a static snapshot.

Source: Yuanta Vietnam

Across the region, banks with strong funding franchises tend to be rewarded with sector-high or near-high valuation multiples. The Vietnam banking system overall has rather low current account / savings account (CASA) deposits, a sad fact that is not likely to disappear anytime soon. According to our informal discussions with bankers, competition for deposits is such that the banks willingly allow early withdrawal of large time deposits with no or limited financial penalty, which means that liquidity is not really a concern for corporate treasurers. The result is that really only two banks – VCB and MBB – have substantial CASA franchises and this is among the core competitive advantages that these banks offer.

Although the State Bank of Vietnam is in the process of enforcing Basel 2 standards, we also see prudent application of the liquidity-related asset/liability management which are really more a feature of Basel 3. Specifically, the authorities have been gradually requiring banks to curtail the funding of long-term assets with short-term liabilities, and the ratio of short-term deposits to long- and medium-term loans has been reduced to 30%. In our view, this increased focus on stable funding a key reason for increased bond issuance among the banks in recent months.

As a general statement, the state banks (including most notably VCB but also BID and CTG) and quasi-state banks (e.g., MBB) tend to enjoy stronger deposit franchises than their private sector peers, but liabilities-focused private banks (e.g., TCB) have been making inroads. But given the large proportion of the population that remains unbanked (we have seen estimates ranging from 50% to 65%), we think that unlocking liquidity in Vietnam is likely to be a key theme in the years ahead.

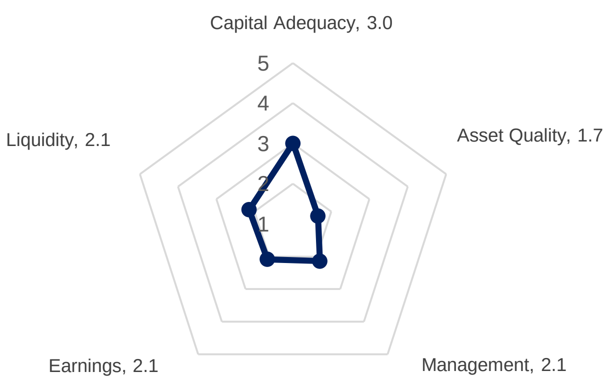
The table below presents the CAMEL scores for each bank and each metric. Yuanta clients who would like to see the underlying ratios for any of the banks (or all of them) are welcome to request this data (see our contact details on Page 1).

CAMEL RATINGS

	FY2018	ACB	BAB	BID	CTG	EIB	HDB	KLB	LPB	MBB	NAB	SHB	STB	TCB	TPB	VCB	VIB	VPB
Capital Adequacy	CAR	2	5	4	5	1	2	1	3	3	3	3	3	2	3	2	2	2
	Equity / Assets	4	3	5	4	2	3	3	4	2	4	4	4	1	3	4	3	2
	Equity / Assets + Off BS	4	3	5	4	4	4	2	4	4	4	5	4	3	4	4	4	3
	VAMC-adj equity / Adj Assets	3	3	5	4	3	3	2	4	2	4	5	5	1	3	4	3	2
	Tangible Equity / T. Assets	4	4	5	4	3	3	3	4	2	4	5	4	1	3	4	3	2
	VAMC adj TE / VAMC adj TA	3	3	5	4	4	3	3	4	2	4	5	5	1	3	4	3	2
	Interbank / Assets	2	3	2	3	3	4	3	1	3	3	2	1	3	3	5	2	2
	Loans / Assets	5	5	5	5	5	3	5	5	3	5	5	4	1	3	3	5	5
	Current FOL room (%)	5	1	1	5	5	4	1	5	1	5	1	2	3	5	3	2	3
	Basel II approval	1	5	5	5	5	5	5	5	1	5	5	5	1	1	1	1	1
	Trend	1.7	2.4	1.9	3.8	2.8	2.9	3.5	2.5	2.8	4.8	3.4	3.3	1.2	2.0	1.8	3.1	2.1
Asset Quality	SML ratio	1	1	3	1	1	2	1	2	2	2	3	1	2	3	1	2	5
	Type 3 NPL ratio	1	1	2	1	3	1	1	1	2	1	1	1	1	1	1	1	5
	Type 4 NPL ratio	1	1	5	2	1	5	1	1	3	1	4	1	5	3	1	4	5
	Type 5 NPL ratio	2	1	3	4	4	2	2	3	1	4	5	5	4	1	3	5	3
	NPL & SML ratio	1	1	5	3	3	3	2	3	4	4	5	3	4	4	2	4	5
	Gross NPL ratio	1	1	3	3	3	3	1	2	2	3	4	4	3	2	1	4	5
	Net NPL ratio	1	2	3	2	4	3	2	2	2	1	4	3	3	2	1	5	5
	LLR / Gross loans	3	4	3	1	4	3	5	3	1	1	2	2	1	3	1	4	1
	LLR / NPLs	1	1	5	2	5	4	2	3	1	2	5	5	3	1	1	5	5
	GPs / Performing loans	2	2	1	1	1	1	2	2	1	5	2	2	1	1	1	2	1
	SPs / NPLs	3	4	4	3	4	4	4	3	2	1	4	3	3	3	1	5	4
	SPs / NPLs + SMLs	2	3	4	2	4	4	5	4	3	1	4	3	3	4	1	5	4
	VAMC bonds / Assets	1	1	4	4	5	3	1	3	1	2	5	5	1	1	1	1	3
	Accrued interest / Assets	2	5	1	1	1	4	5	5	1	4	5	5	5	1	1	2	3
	Other receivables / Assets	2	1	3	2	4	4	5	3	4	2	5	2	2	5	4	3	5
	Trend	2.4	3.2	3.6	3.1	1.8	3.0	3.3	3.4	3.4	3.0	3.6	1.4	3.1	2.6	2.1	3.5	3.3
Management	Fees / Adj income	3	5	4	3	4	5	5	5	3	5	3	1	1	3	4	3	4
	Fees / Assets	3	5	3	4	4	4	4	5	2	5	4	2	1	2	3	2	2
	Costs / Adj income	3	2	1	3	4	2	5	3	2	4	2	5	1	3	1	2	2
	Costs / Assets	4	1	2	2	3	4	4	3	5	3	2	4	3	4	2	4	5
	CASA growth	1	5	4	3	2	5	1	5	1	5	3	1	1	1	2	3	1
	Credit costs / Assets	2	1	5	3	2	2	1	2	4	1	2	2	3	2	4	2	5
	Credit cost adjusted NIM	1	4	5	5	4	1	3	2	1	2	5	4	1	2	4	1	1
	Governance rating	3	5	3	4	5	3	4	4	2	5	4	3	4	3	2	2	2
	Quality of current management	1	5	3	4	5	2	3	4	1	4	3	1	2	2	1	1	2
	Trend	2.6	3.8	3.1	3.6	2.9	2.2	3.4	3.8	2.4	3.3	2.8	2.3	2.7	2.2	2.4	1.5	4.1
Earnings	NIM	2	5	3	5	4	1	4	3	1	3	5	5	1	2	3	1	1
	Fees / adj revenue	3	5	4	3	4	5	5	5	3	5	3	1	1	3	4	3	4
	Investment inc / adj revenue	5	3	4	4	1	2	1	5	4	5	4	5	1	3	1	5	5
	Total adj non-II / adj revenue	2	3	3	2	1	3	2	5	2	5	2	1	1	1	1	3	4
	Cost / adj revenue	3	2	1	3	4	2	5	3	2	4	2	5	1	3	1	2	2
	PPOP / Assets	2	5	2	5	5	1	5	4	1	5	5	5	1	1	1	1	1
	Provisioning / assets	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	5
	OROA	2	4	5	5	5	1	5	4	1	3	5	5	1	1	2	1	1
	Other income / assets	3	5	4	5	5	5	5	5	4	5	5	5	3	5	4	4	1
	Pretax ROA	1	4	4	5	5	1	5	5	1	3	5	5	1	1	1	1	1
	PAT ROA	1	4	4	5	5	1	4	4	1	3	4	5	1	1	1	1	1
	Minint / assets	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Average Leverage	3	2	5	3	2	2	2	3	2	3	3	3	1	3	3	2	1
	PATMI ROE	1	4	2	5	5	1	5	4	1	3	4	5	1	1	1	1	1
	Trend	1.6	3.3	3.2	3.7	3.3	1.2	3.3	3.8	1.9	2.8	4.1	2.1	2.8	1.2	1.8	1.8	3.4
Liquidity	Gross LDR	2	2	3	4	2	3	4	3	2	3	3	1	1	4	1	5	5
	Net LDR	2	2	3	4	2	3	4	3	2	3	3	1	1	4	1	5	5
	Deposits / Assets	1	2	1	2	1	5	3	2	3	2	3	1	4	5	2	4	5
	Deposits / Liabilities	1	1	2	2	1	5	2	2	3	2	3	1	3	5	2	4	5
	Current accounts / Deposits	2	5	2	2	3	4	5	2	1	5	4	3	1	2	1	3	3
	LTMT loans/Current deposits	3	5	3	4	4	5	5	5	1	5	5	3	2	5	1	5	5
	MT loans / Total loans	1	3	1	1	1	4	3	5	3	2	5	4	4	5	1	5	5
	LT loans / Total loans	3	3	3	3	4	2	2	2	3	1	3	2	3	4	3	5	2
	ST deposits / LTMT loans	5	5	2	2	2	3	2	5	2	5	5	3	2	2	1	3	2
	Trend	3.7	3.6	2.4	2.5	4.1	4.4	3.9	4.4	4.3	4.3	3.1	3.9	2.4	3.3	3.3	2.8	2.5

ACB VN: Asia Commercial Bank

ACB's CAMEL Rating: 2.3



CAMEL ranking: 4th, with total score of 2.3, of which:

Capital (Rating: 3.0): This rating rests largely on: 1) CAR of 12.8% under Basel I (or 1.5ppt lower (or 11.3%) under Basel II in our estimate), which is well-above the Basel II minimum requirement of 8%. 2) Basel II approval from the SBV is another plus score. 3) We also ranked based on the trend over the last three years, and ACB's capital trend stayed at the upper end of the ranking, with a score of 1.7, well below the median value of 2.8. However, equity/asset is at a low level of 6%, which is below the median of all listed banks of 7%. Full-FOL is another factor that drags down the rating of ACB.

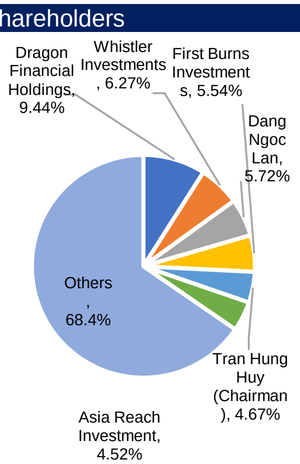
Asset Quality (Rating: 1.7): Low NPL ratio (0.73%) thanks to substantial NPL recoveries (related to a scandal of former Vice Chairman) in 2017 and 2018, non-VAMC exposure, and a high loan loss coverage ratio (152%) give ACB a high rating score for asset quality.

Management (Rating: 2.1): We highly value the quality of ACB that brought up the Bank from the brink of bankruptcy to a strong bank as it is today. CASA growth showed an impressive growth among banks with 18%, staying at the top of the rank. We see rating can be higher if ACB can increase fee income to total adj. income (which was 12% in 2018A) and reduce the cost to income ratio (55%).

Earnings (Rating: 2.1): Earnings stay at the top of the rank with superior ROA (1.67%) and ROE (27.7%), and the trend looks pretty strong.

Liquidity (Rating: 2.1): Liquidity position appears to be solid. Deposit franchise is above the median of the 17 listed banks, with CASA ratio of 16.7% vs. the median of 14.8%.

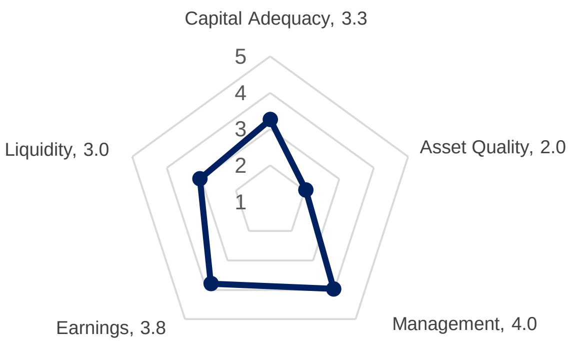
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
ACB VN	Not Rated	VND 355 tn (USD 14 bn)	VND 12.9 tn (USD 553 mn)	▪ Market cap: VND 36 tn *(USD 1.6 bn)* ▪ 2019E P/BV (**): 1.4x
Shareholders	**Company overview**	**Revenue breakdown**	**Asset Quality**	**Capital Adequacy**
	ACB is the 3rd largest JOCB by assets, with 5% market share. Remaining FOL: 0% Premium: 10%-20%	Retail is the key driver of the Bank, contributing 60% of the total loans. Interest income accounted for 85% of the adjusted revenue, and non-interest income represented 15% (12% from fee income)	In 2018, the Bank made good progress from NPL recoveries from group of six companies (G6) related to ex-Vice Chairman of ACB. NPL was 0.68% as at 1Q19, which is well below the SBV's target of 3%. NPL (cat. 2-5) was only 0.98%. Loan loss coverage ratio was 158% as at 1Q19.	ACB is quite well-capitalized with CAR at 12.8% under Basel I (or 11.3% under Basel II in our estimate).

Note: (*): Yuanta's estimate; (**) Bloomberg Data

BAB VN: North Asia Bank

BAB's CAMEL Rating: 3.2



CAMEL ranking: 13th, with total score of 3.2, of which:

Capital (Rating: 3.3): We grant this rating due to: 1) current FOL of 30%, 2) but low equity/asset of 7%, 3) non-approval Basel II and undisclosed CAR.

Asset Quality (Rating: 2.0): Same as ACB, low NPL ratio (0.76%) and high loan loss coverage ratio (122%) give BAB a high score for asset quality.

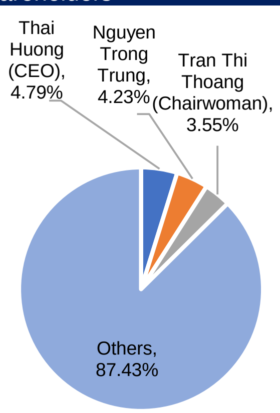
Management (Rating: 4.0): Low fee income to the total adj. income, a negative CASA growth, and a low score for governance rating in our view bring a significant low rating for management.

Earnings (Rating: 3.8): BAB deserves a low earnings rating due to its below the sector's median of NIM (1.80% vs. 2.78%), ROA (0.72% vs. 0.91%), and ROE (10.1% vs. 15.1%).

Liquidity (Rating: 3.0): A rating of 3.0 is based on a reasonable deposit to asset and LDR ratios but an extremely low CASA ratio. Undisclosed short-term deposit to medium and long term loans also downgrades the rating.

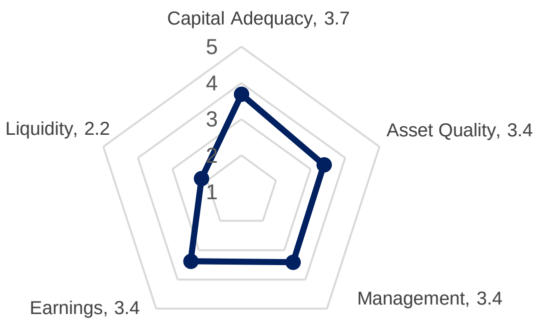
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
BAB VN	Not Rated	VND 97 tn (USD 4 bn)	VND 5.5 tn (USD 236 mn)	▪ Market cap: VND 11.3 tn *(USD 484 mn)* ▪ 2019E P/BV (**): 1.7x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	BAB is one of the medium-size commercial banks, with 30 branches, and 90 transactions offices in 27 provinces/cities of Vietnam. Remaining FOL: 30%	Net interest income accounted for 89% of the total adjusted revenue, while non-interest income represented only 11%. Of which, fee income contribution is insignificant with only 4%.	NPL was quite low at 0.43% in 1Q19, and NPL (cat. 2-5) was 0.81%.	

BID VN: Bank for Investment and Development of Vietnam

BID's CAMEL Rating: 3.2



CAMEL ranking: 11th, with total score of 3.2, of which:

Capital (Rating: 3.7): Low rating is mainly due to low CAR of 9.0% under Basel I (or 7.5% under Basel II in our estimate), highly leverage, and non-Basel II approval. Vietnam's overly leveraged banks are under pressure to raise capital to comply with Basel 2 accords, and BID is among this group. Unlike most other banks, BID's FOL room is currently 26.9%, which is more than sufficient for the plan 15% (603.3 mn share) sale to KEB Hana Bank. We believe that the successful of stake sale would address the capital deficiency, and strengthen the balance sheet (i.e. reduce leverage), which would enhance the rating.

Asset Quality (Rating: 3.4): Above the sector's median of 2.83%, NPL ratio (including SML) of BID was 4.23%. Moreover, a low loan loss coverage ratio of 66% also downgrades its asset quality rating. BID still had a significant of amount of VAMC bond (1.08% of the total asset as at 2018A), and we expect BID to clear 100% of its remaining net VAMC exposure in 2019E.

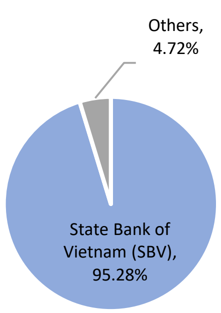
Management (Rating: 3.4): A rating of 3.4 derives from a low fee to the total adj. income of 9%, a significantly low CASA growth of only 1% YoY. Credit cost adjusted NIM of 1.28% was also far below the sector's median of 2.60%.

Earnings (Rating: 3.4): Profitability of the Bank is slightly below the sector's median, while leverage is off the roof with 25.8x – the highest among banks. We expect the stake sale will help reduce leverage, which will lower funding cost and NIM.

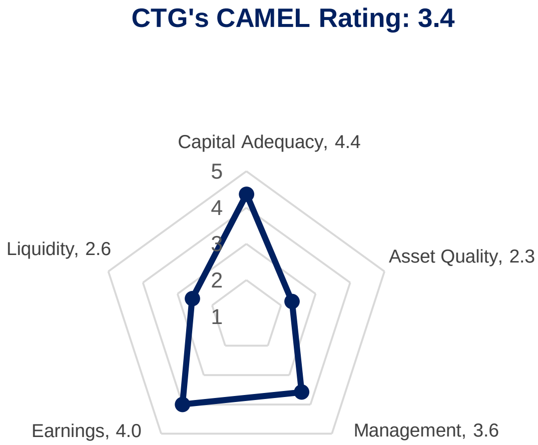
Liquidity (Rating: 2.2): The Bank's LDR of 99.9% was already above the regulatory cap for State-owned banks (90%). Short-term deposit to medium-and long term loans of 31.1% was below the regulatory requirement of 40%.

Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Market Cap
BID VN (SOCB) (Initiated in Mar 2019)	VND 38,713 (Upside: +18%)	VND 1,343 tn (USD 58 bn)	VND 34.2 tn (USD 1.5 bn)	▪ Market cap: VND 110 tn *(USD 4.7 bn)* ▪ 2019E P/BV (*): 1.7x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
Major shareholders 	BID is the Vietnam's largest SOCB by assets, with 20% market share as at 1Q19 among listed banks. It has broad retail and SME-focused footprint with 190 branches and 854 transaction offices. Remaining FOL: 26.9%	BID's loan book reflects its retail & SME focused, with 55% of the total loan was retail and SME. Net interest income accounted for 86% of the total adjusted income while non-interest income represented only 14%.	Current NPL ratio of 1.74% was still under control (below the SBV's target of 3%). However, NPL ratio (including special mention loans) was 4.37%, which is quite high and causes a concern. Currently, BID has a net VAMC bond of VND 6.6 tn, and the Bank had been increased provisions against the VAMC bond over the last 3 years from 27% in 2016 to 54% in 2018. Thus, we expect BID will fully provisioned VAMC exposure in 2019 and this would help profit in 2020E.	BIDs need additional capital to meet Basel II accords as its current CAR is just slightly at the limit, with 10% under Basel I or roughly 8% under Basel II (in our estimate). BID plans to raise VND6,033 bn by issuing 603.3 mn shares to KEB Hana Bank, but the deal remains subject to regulatory approval.

CTG VN: Vietnam Bank for Industrial and Trade



CAMEL ranking: 14th, with total score of 3.4, of which:

Capital (Rating: 4.4): CTG is really in need of capital, and it has no room to raise Tier 1 capital via selling capital to foreign investors as well as Tier 2 capital. It has a low rating due to its capital constraints and of course non-Basel II approval.

Asset Quality (Rating: 2.3): Asset quality is bit better than its SOCB peer (BID), with NPL ratio (including SML) of 2.19% below the sector's median of 2.83%. As at 2018A, CTG's VAMC exposure was at 1.15% of the total asset. Remember that CTG's asset is the 2nd largest among listed banks with VND1,164 tn, and VAMC exposure amount turns out to be a huge amount of VND13.4 tn.

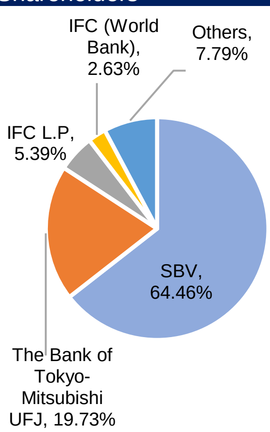
Management (Rating: 3.6): Cost controlling is less efficient than the sector's median, and the credit cost adjusted NIM of 1.31% is significant lower than the sector's median of 2.60%.

Earnings (Rating: 4.0): With capital constraint and high leverage, it is no doubt that profitability of the bank is well below the sector's median.

Liquidity (Rating: 2.6): LDR of 105%, which exceeds the regulatory cap of 90% for SOCBs, causing liquidity concern for the Bank.

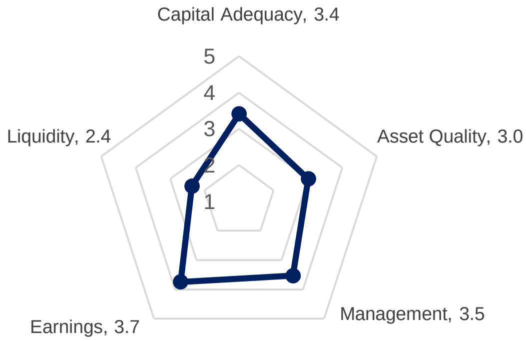
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
CTG VN (SOCB)	Not Rated	VND 1,147 tn (USD 49 bn)	VND 37.2 tn (USD 1.6 bn)	▪ Market cap: VND 75.4 tn *(USD 3.2 bn)* ▪ 2019E P/BV (**): 1.0x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	CTG is the second largest listed SOCB, just behind BID in terms of total assets. It has 155 branches and 1,000 transaction offices across 63 provinces/cities. Remaining FOL: 0.1%	84% of the total adjusted revenue came from net interest income and 16% were from non-interest income (fee income was 10%) as at 2018A.	NPL ratio: 1.85% NPL ratio (cat.2-5): 2.44%	The Bank is under-capitalized and looking for new capital to boost CAR. However, there is limited option for it to raise Tier 1 or Tier 2 capital because of its full-FOL and zero quota for Tier 2.

EIB VN: Eximbank

EIB's CAMEL Rating: 3.2



CAMEL ranking: 12th, with total score of 3.2, of which:

Capital (Rating: 3.4): CAR as at 2018A was 15% under Basel I (or 13.5% under Basel II in our estimate), and equity to asset of 10% was above the sector's median of 7%. However, EIB was highly exposure to off-balance sheet item, with equity/ (asset + off-balance sheet exposures) was only 6%. Non-Basel II approval and full-FOL room are another downside to the rating.

Asset Quality (Rating: 3.0): On the surface, NPL ratio (including SML) of 2.45% seems to be low; however, it was highly exposure to VAMC bond (3.59% of the total asset as at 2018A). Loan loss coverage ratio of 56% was far below the sector's median of 88%.

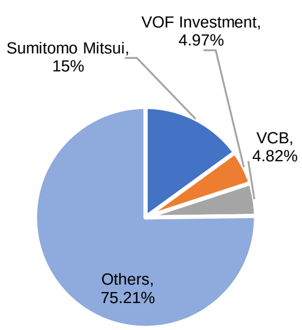
Management (Rating: 3.5): The issue from the corporate governance results in less favorable rating. An Annual General Meeting (AGM) has been delayed up until now due to an ongoing shareholders dispute.

Earnings (Rating: 3.7): Business performance was poor. NIM of 2.12% was below the sector's median, while ROA and ROE stayed at the low end of the range.

Liquidity (Rating: 2.4): Liquidity seems to be fine, with short-term deposit to medium-and long term loans at 33.9%, which is below the regulatory requirement of 40%.

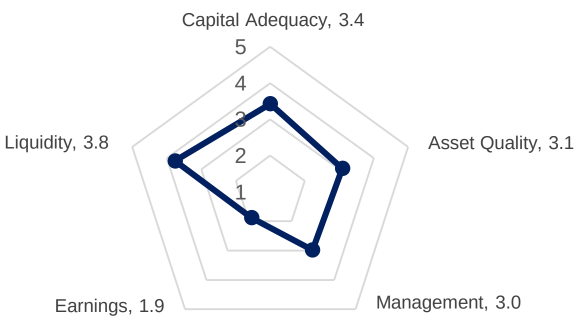
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
EIB VN	Not Rated	VND 151 tn (USD 6 bn)	VND 12.4 tn (USD 1.6 bn)	▪ Market cap: VND 22.9 tn *(USD 981 mn)* ▪ 2019E P/BV (**): 1.4x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	EIB is the mid-size joint stock commercial bank, with 44 branches and 163 transaction offices. Remaining FOL: 0.3%	Net interest income: 76% Non-interest income: 24% (fee income was only 8%) as at 2018A.	NPL: 1.88% NPL (cat. 2-5): 2.49% as at 1Q19	CAR: 15% as at 2018A.

HDB VN: Ho Chi Minh City Development Bank

HDB's CAMEL Rating: 3.0



CAMEL ranking: 9th, with total score of 3.0, of which:

Capital (Rating: 3.4): CAR was at 12% under Basel I (or 10.5% under Basel II in our estimate), which is above the minimum requirement of 8% under Basel II. However, non-Basel II approval drags down the rating for the Bank, but it expects to receive approval by the end of 2Q19. As of now, the SBV has not announced the result yet.

Asset Quality (Rating: 3.1): Asset quality rating is in middle of the range. NPL ratio (even including SML) was 2.83%, still below the regulatory requirement of 3%. Loan loss coverage ratio was low of 71% and below the sector's median of 88%.

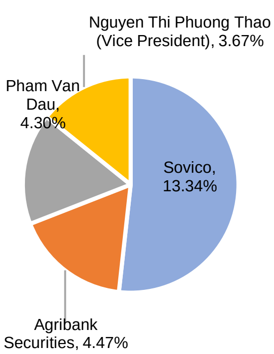
Management (Rating: 3.0): Cost to the total adjusted income was in line with the sector's median of 50%, while credit cost adjusted NIM was far above the median. However, low fee income ratio of 5% and a negative CASA growth of -26% bring down the rating.

Earnings (Rating: 1.9): Earnings was superior with NIM, ROA and ROE far above the median of 17 listed banks. These positive earnings mainly came from its subsidiary in consumer finance field – HD Saison. In 2018, HD Saison contributed 22% to the consolidated net profit of HDBank.

Liquidity (Rating: 3.8): LDR was above the regulatory cap of 80% for JOCBs, and short-term deposit to medium-and long term loans was already at the limit, which causes a liquidity concern.

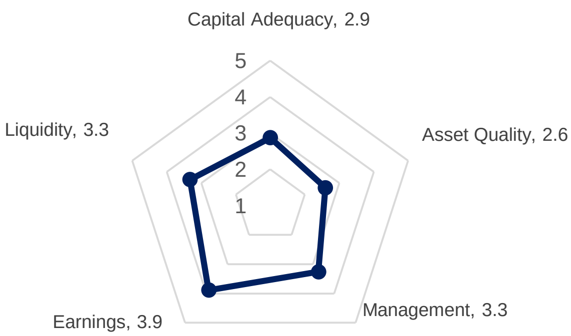
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
HDB VN	Not Rated	VND 203 tn (USD 9 bn)	VND 9.8 tn (USD 421 mn)	▪ Market cap: VND 25.5 tn *(USD 1.1 bn)* ▪ 2019E P/BV (**): 1.5x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	HDB has 283 branches/transaction offices across Vietnam. It owns a subsidiary in consumer finance, namely HD Saison Remaining FOL: 5.5%	Net interest income: 85% Non-interest income: 15% (fee income contributed only 5%) as at 2018A.	NPL: 1.45% NPL (cat. 2-5): 3.56% as at 1Q19	CAR: 15% as at 2018A.

KLB VN: Kien Long Bank

KLB's CAMEL Rating: 3.2



CAMEL ranking: 10th, with total CAMEL score of 3.2, of which:

Capital (Rating: 2.9): Capital seems to be more than sufficient for this Bank, with CAR of 17% under Basel I (or 15.5% under Basel II in our estimate), and FOL room of 30% is another plus. However, non-Basel II approval diminishes the rating.

Asset Quality (Rating: 2.6): Asset quality looks pretty strong, with low NPL ratio (including SML) of 1.93%, well below the sector's median of 2.83% and the regulatory requirement of 3.0%. The Bank had no exposure to VAMC bonds; however, we should be cautious with accrued interest that accounted for 3.69% of the total assets.

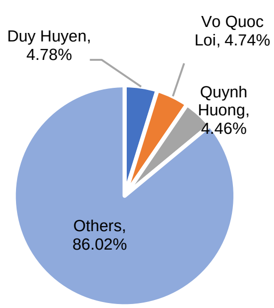
Management (Rating: 3.3): Same as most other banks, fee income still accounted for a small portion of the total adjusted income, with only 5% as at 2018A. Cost management seems to be the least efficient among banks, with cost to income ratio of 80% at the top of the range

Earnings (Rating: 3.9): With really high CIR, it is no surprise that profitability was poor. OROA was extremely low of 0.49%, and ROA, ROE were far below the sector's median.

Liquidity (Rating: 3.3): Liquidity appears to cause concern, with gross LDR of 101%.

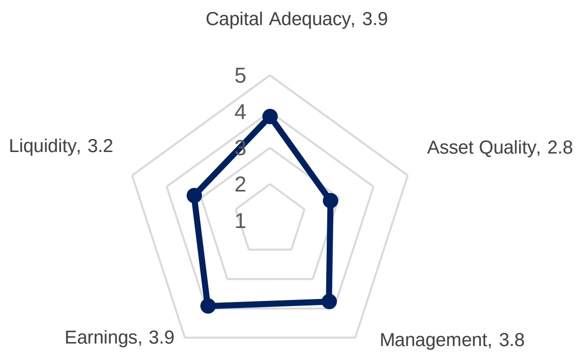
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
KLB VN	Not Rated	VND 44 tn (USD 2 bn)	VND 3.2 tn (USD 139 mn)	▪ Market cap: VND 3.2 tn *(USD 139 mn)*

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	KLB has 31 branches and 103 transaction offices, mainly in Mekong Delta area. Remaining FOL: 30%	Net interest income: 84% Non-interest income: 16% (fee income contributed only 5%) as at 2018A.	NPL: 1.00% NPL (cat. 2-5): 2.19% as at 1Q19	CAR: 16.6% as at 2018A.

LPB VN: Lien Viet Post Bank

LPB's CAMEL Rating: 3.5



CAMEL ranking: 16th, with total score of 3.5, of which:

Capital (Rating: 3.9): Capital rating is poor due to its low CAR, and highly leverage. Its CAR was 10.9% as at 2018A under Basel I (or 9.4% under Basel II in our estimate), and it has less room to raise Tier 1 capital via selling to foreign investors as its current FOL is only 0.9%. The Bank has not applied Basel II is another downside.

Asset Quality (Rating: 2.8): Asset quality rating of 2.8 rests largely on low NPL ratio. Gross NPL was 1.41% and gross NPL & SML ratio was 2.61%, which were both below the sector's median of 1.54% and 2.83%.

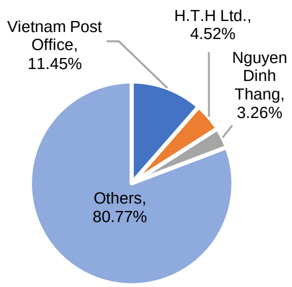
Management (Rating: 3.8): Poor performance on fee income (3% of the total adjusted revenue), inefficient cost control (CIR: 59%), and negative CASA growth (-36% YoY) lead to a low rating for management.

Earnings (Rating: 3.9): High cost to income ratio was the main reason that contracted the profitability of the Bank.

Liquidity (Rating: 3.2): Liquidity seems not to be a problem, but need to watch out as LDR exceeded the regulatory cap of 80%. Low rating was also due to non-disclosure of the short-term deposit to medium-and long term loans.

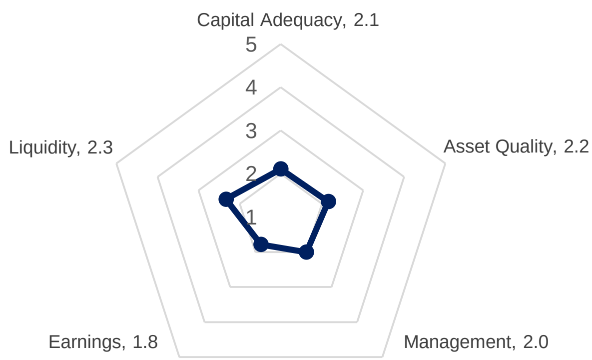
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
LPB VN	Not Rated	VND 182 tn (USD 8 bn)	VND 8.9 tn (USD 381 mn)	▪ Market cap: VND 6.9 tn *(USD 297 mn)* ▪ 2019E P/BV (**): 0.6x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	LPB is one of the commercial bank that owns the largest operation network nationwide, including 388 branches and transaction offices, 917 post-offices, and 10,000 transaction locations in the postal network. Remaining FOL: 0.9%	Net interest income: 97% Non-interest income: 3% (mainly fee income with 3%) as at 2018A.	NPL: 1.36% NPL (cat. 2-5): 2.73% as at 1Q19	CAR: 10.9% as at 2018A.

MBB VN: Military Bank

MBB's CAMEL Rating: 2.1



CAMEL ranking: 2nd, with total CAMEL score of 2.1, of which:

Capital (Rating: 2.1): Capital status of MBB looks solid, with current CAR above the Basel II requirement and low leverage. The Bank also plans to sell at least some proportion (or all) of the 10% remaining FOL room by the end of 2019, this would further improve capital adequacy. MBB is also one the first nine banks as at 2Q19 that received Basel II approval from the SBV.

Asset Quality (Rating: 2.2): The asset quality sounds solid, with low NPL and high loan loss coverage ratio. It has no exposure to VAMC bond, which helps profitability.

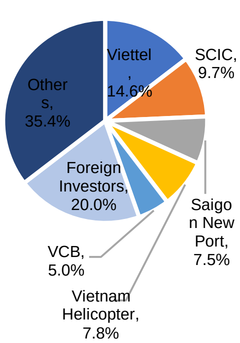
Management (Rating: 2.0): We highly value the management quality of MBB, with efficient cost management and high CASA growth (+16% YoY).

Earnings (Rating: 1.8): Strong deposit franchise is the key driver of MBB's profitability. With its sector-high ratio of current account and saving accounts (CASA) deposits to total deposits, MBB is better positioned than other banks to sustain and improve its net interest margin (NIM) without taking on undue credit risk. MBB's CASA ratio is 34%, far above the median of 14% among listed peers as at 1Q19. We also see further room for NIM improvement from a shifting more to retail and SME.

Liquidity (Rating: 2.3): Net LDR of 88% was above the cap for JOCBs (80%), but MBB states that its LDR strictly complies with the SBV's regulations. The seeming disconnect here could be due to a portion of loans possibly being excluded from the LDR calculation based on SBV policy. That said, we do not believe that the LDR has room to expand

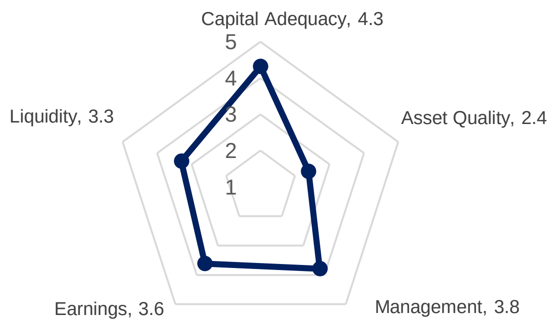
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
MBB VN (Initiated in Jun 2019)	VND 29,880 (Upside: +41%)	VND 383 tn (USD 16 bn)	VND 21.6 tn (USD 927 mn)	▪ Market cap: VND 44 tn *(USD 1.9 bn)* ▪ 2019E P/BV (*): 1.1x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
Major Shareholders 	MBB is the 2nd largest listed JOCB by assets, with 6% market share. It has the sector's highest CASA ratio with 34% as at 1Q19. Remaining FOL: 0.0% (10% FOL is currently locked by the bank) Subsidiaries: MCredit, MB Ageas Life, MBS, MIC, Premium: 7%-30%	Net interest income accounted for 81% *(mostly come from retail and SME, representing 88% of the total loans),* and another 19% came from non-interest income (mostly fee income with 14%) in 2018A. We expect fee income trend will continue to accelerate with a strong support from its insurance arm – MB Ageas Life.	NPL ratio (cat. 3-5) was 1.41% in 1Q19; however, if including special mention loans (cat. 2), the NPL ratio was 3.26%, slightly above the 3% of the SBV's target. Loan loss coverage ratio was 96% as at 1Q19.	The current CAR is 10.9% under Basel I or 9.5% under Basel II (1.5ppt lower in our estimate). The Bank's plan to unlock the remaining FOL room (about 10%) to foreign investors by the end of 2019 will boost CAR further.

Nam A Bank (OTC traded)

NAB's CAMEL Rating: 3.5



CAMEL ranking: 15th, with total score of 3.5, of which:

Capital (Rating: 4.3): Capital rating was weak mainly due to its lack of information (currently not listed), and the trend had declined for both CAR and Equity/Asset ratio over the period 2016-2018.

Asset Quality (Rating: 2.4): Asset quality seems to be fine, with low gross NPL ratio of 1.54% and low exposure to VAMC bonds (0.22% of the total assets). However, accrued interest (which considered as bad asset) accounted for 1.57% of the total asset (vs. the sector's median of 1.37%), which causes a bit concern.

Management (Rating: 3.8): Low fee income proportion, negative CASA growth, and lack of transparency information results in a low rating for management.

Earnings (Rating: 3.6): Earnings were in line with the sector's median; however, cost controlling (CIR: 65.9% in 2018A) needs to be more efficient to bring down CIR and improve profitability going forward.

Liquidity (Rating: 3.3): Net LDR of 92% was higher than the JOCB's cap (80%), which is not serious issue but need to reduce to meet the requirement. Once again, lack of information on short-term deposit to medium-and long term loans drags down the rating.

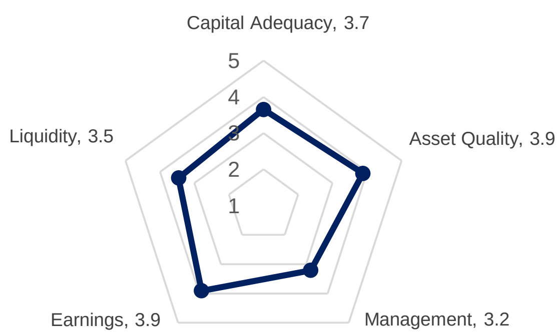
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
NAB: (OTC)	Not Rated	VND 75 tn (USD 3.2 bn)	VND 3.4 tn (USD 144 mn)	

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	NAB operates mainly in the Southern of Vietnam, with 52 branches and transaction offices. Remaining FOL: 0.9%	Net interest income: 97% Non-interest income: 3% (mainly fee income with 3%) as at 2018A.	NPL: 1.54% NPL (cat. 2-5): 3.11% as at 2018A	CAR: 11.2% as at 2018A.

SHB VN: Saigon Hanoi Bank

SHB's CAMEL Rating: 3.6



CAMEL ranking: 17th, with total score of 3.6, of which:

Capital (Rating: 3.7): CAR ratio was 11.8%, which is above the Basel II requirement (8%). However, the Bank was highly leverage, especially exposure to VAMC bonds (2.32% of the total assets). VAMC adjusted tangible equity/VAMC adjusted tangible asset was only 1.5%, which is far below the sector's median of 6.2%. Current FOL room 20% gives it more flexibility to raise more capital and reduce leverage.

Asset Quality (Rating: 3.9): Asset quality appears to be problematic since its loan loss coverage ratio of 58% was far below the sector's median of 88%. Its asset structure was highly exposure to VAMC bonds (2.32% of the total assets), accrued interest (2.82% of the total assets), and other receivables (1.32% of the total assets), which are considered as legacy asset.

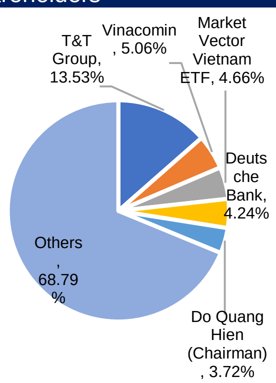
Management (Rating: 3.2): Management rating is in line with the sector's average rating.

Earnings (Rating: 3.9): Business performance was inefficient. OROA of 0.64% was 0.44ppt below the sector's median of 1.08%**,** ROA and ROE was also underperformed the sector's median. The earnings trend showed a declining momentum since 2016.

Liquidity (Rating: 3.5): Just like NAB, high LDR and lack of information on short-term deposit to medium-and long-term loans results in a low liquidity rating.

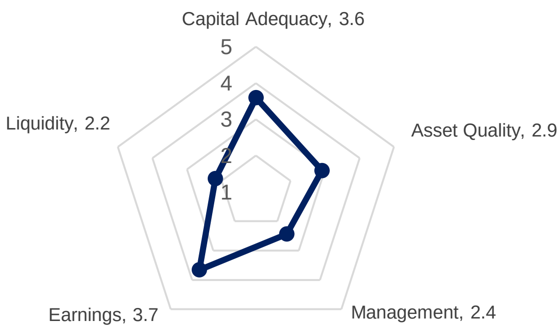
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
SHB VN	Not Rated	VND 333 tn (USD 14 bn)	VND 12 tn (USD 517 mn)	▪ Market cap: VND 8.4 tn *(USD 361 mn)*

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	SHB has 400 branches and transaction offices, and 3 branches in Lao and Cambodia. It has more than 2 million clients. Remaining FOL: 20.2%	Net interest income: 97% Non-interest income: 3% (mainly fee income with 3%) as at 2018A.	NPL: 2.40% NPL (cat. 2-5): 4.56% as at 2018A.	CAR: 11.8% as at 2018A.

STB VN: Sacombank

STB's CAMEL Rating: 3.0



CAMEL ranking: 8th, with total score of 3.0, of which:

Capital (Rating: 3.6): Capital is the key risk to STB. Its NPL prudential restructuring plan implies gradual loss recognition based on topline profitability in the next several years. We view this workout as entirely appropriate from a prudential perspective. But investors could face equity dilution if a one-off recapitalization were adopted, which necessitates an assessment of the potential risk.

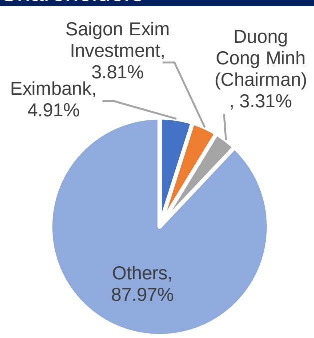
Asset Quality (Rating: 2.9): A merger with the former Southern Bank in 2015 resulted in substantial asset quality woes, a challenge that the Bank's management is now addressing with strong support from government policy. However, the trend showed a significant improvement from 2016A-18A.

Management (Rating: 2.4): Fee income proportion of STB came out on top of the sector's rank, with 25%. Admittedly, CIR of 73% in 2018A was really high, but the management did a good job to bring it down from 98% in 2016A to 73% in 2018A. We believe in the management's capability in resolving legacy asset. Sacombank brought in Chairman Duong Cong Minh, who has deep experience in real estate and banking, to execute the restructuring.

Earnings (Rating: 3.7): In our view, topline PPoP growth is a better indicator of the strength of the bank's underlying business than net profit, which we assume will continue to be flattened by provisioning for legacy assets. Topline growth should be driven by improving NIMs as the Bank's very low LDR rises toward the regulatory cap, higher consumer banking fee income as the bank better leverages its attractive retail franchise, and improved efficiencies as management shakes off the effects of the 2015 merger with Southern Bank. PPOP/assets showed a significant improvement from 0.04% in 2016A to 0.75% in 2018A.

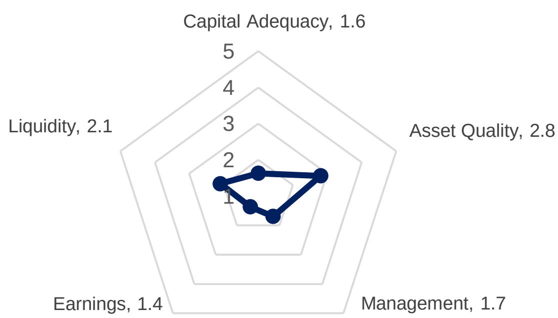
Liquidity (Rating: 2.2): Liquidity seems not to be a problem for STB as it has focused on resolving legacy assets rather boosting loan growth. Net LDR was only 72.4% as at 2018A, which is well below the cap of 80% for JOCBs. We see this as a key attractive feature for STB, given that it has room to increase its LDR, and thus also improve its NIM, going forward.

Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Market Cap
STB VN (Initiated in Jan 2019)	VND 14,049 (Upside: +23%)	VND 425 tn (USD 18 bn)	VND 18.9 tn (USD 810 mn)	▪ Market cap: VND 21 tn *(USD 900 mn)* ▪ 2019E P/BV (*): 0.8x
Shareholders	**Company overview**	**Revenue breakdown**	**Asset Quality**	**Capital Adequacy**
	STB is the largest listed JOCB by assets with roughly 6% market share. It has a wide range of networks with 566 branches nationwide and about 5 million active clients. Remaining FOL: 9.3%	It operates a primarily retail banking business. Loans are the heart of the business, with interest income accounts for 71% of the total adjusted income. While non-interest income portion is the largest among banks with 29% (mainly fee income with 25%)	After the merger with Southern Bank in 2015, STB has to deal with problematic assets of VND 82 tn as at 2018A (or 20% of assets). The Bank's strategy is to focus strongly on "quality" instead of "quantity" with the main goals of cleaning up the balance sheet, and raising capital to adapt Basel II accords.	The current CAR of about 11% (under Circular 36, or 9% under Basel II in our estimate) is still above the Basel II requirement; however, the risk of losing some portion of the problematic assets still exists, which requires an additional capital in order to meet the Basel II. In our view, the capital raising is not likely to happen soon as the top priority of the Bank now is to clean up the balance sheet.

TCB VN: Techcombank

TCB's CAMEL Rating: 1.9



CAMEL ranking: 1st, with total score of 1.9, of which:

Capital (Rating: 1.6): Based on ratio analysis, TCB appears to be the best bank in terms of capital. CAR was 14.3% under Basel I (or 12.8% under Basel II in our estimate), which is well above the Basel II's minimum requirement of 8%. Its leverage was the lowest among banks with equity/asset of 16% in 2018A. Meeting Basel II standards also boost the rating.

Asset Quality (Rating: 2.8): Asset quality seems to be under controlled, but one should be noted that its loan portfolio was highly exposure to real estate, with 8.5% in 2018A vs. the sector's average of 7% (according to the local media).

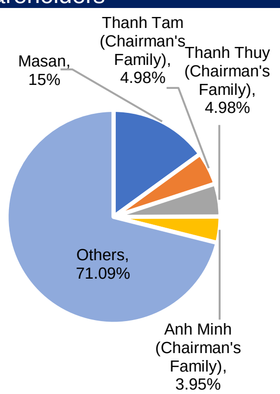
Management (Rating: 1.7): Management performance was impressive, with the most effective cost control (CIR of 35% - the lowest among banks), and the highest CASA growth of 43% YoY.

Earnings (Rating: 1.4): With effective cost control and strong CASA deposit franchise, it's no surprise that TCB was among the top banks in terms of profitability. NIM, OROA, ROA, and ROE were far above the sector's median, with 3.77%, 3.06%, 2.87%, and 21.5%, respectively.

Liquidity (Rating: 2.1): Liquidity looks strong, with net LDR below 80%, and short-term deposit to medium-and long term loans (31.5%) was below the regulatory requirement of 40%.

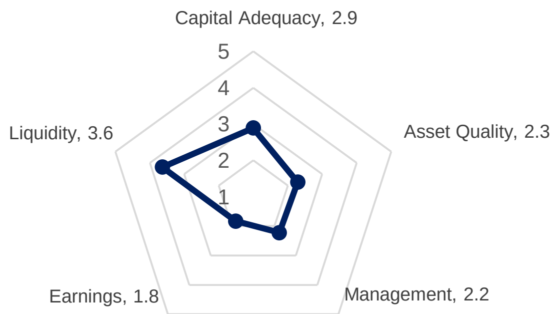
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
TCB VN	Not Rated	VND 326 tn (USD 14 bn)	VND 34.9 tn (USD 1.5 bn)	▪ Market cap: VND 70.3 tn *(USD 3.0 bn)* ▪ 2019E P/BV (**): 1.2x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	TCB is third largest commercial bank in terms of network, with 2 representatives and 314 transaction offices. Remaining FOL: 0.0% Premium: 7%-10%	Net interest income: 67% Non-interest income: 33% (mainly fee income with 21%) as at 2018A.	NPL: 1.78% NPL (cat. 2-5): 3.95% as at 1Q19.	CAR: 14.3% as at 2018A.

TPB VN: Tien Phong Bank

TPB's CAMEL Rating: 2.6



CAMEL ranking: 5th, with total score of 2.6, of which:

Capital (Rating: 2.9): The Bank already met Basel II; however, the CAR still caused concern, with only 10.2% under Basel I. In our estimate under Basel II, CAR was only 8.7%, which is just slightly above the requirement of 8%. TPB has no FOL room, but management intends to implement a rights issue.

Asset Quality (Rating: 2.3): Asset quality was strong, with gross NPL ratio of 1.12%, and NPL (including SML) was only 3.18%. Loan loss coverage ratio (103%) was high and above the sector's median of 88%.

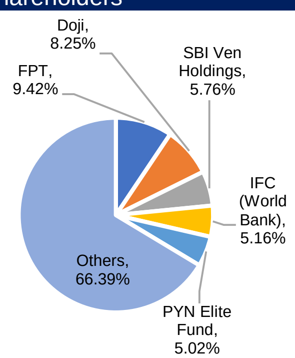
Management (Rating: 2.2): Management did a good job in boosting fee income and reducing operating cost from 2016A-18A. Credit cost adjusted NIM of 2.96% was higher than the sector's median, which showed the quality in risk management.

Earnings (Rating: 1.8): Effective management results in a high profit, with NIM, OROA, ROA, ROE outperformed the sector's median. In particular, the earnings trend revealed a strong increasing momentum from 2016A-18A.

Liquidity (Rating: 3.6): Liquidity ratio causes a bit concern here, with net LDR of 100% was far above the cap of 80% for JOCBs.

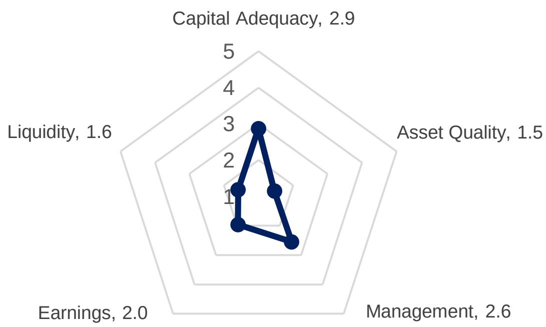
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
TPB VN	Not Rated	VND 140 tn (USD 6 bn)	VND 8.6 tn (USD 368 mn)	▪ Market cap: VND 19.9 tn *(USD 854 mn)* ▪ 2019E P/BV (**): 1.6x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	TPB has 75 branches and transaction offices, 1 representative, and 1,000 Livebank outlets. Remaining FOL: 0.0%	Net interest income: 80% Non-interest income: 20% (mainly fee income with 12%) as at 2018A.	NPL: 1.39% NPL (cat. 2-5): 3.74% as at 1Q19.	CAR: 10.2% as at 2018A.

VCB VN: Vietcombank

VCB's CAMEL Rating: 2.1



CAMEL ranking: 3rd, with total score of 2.1, of which:

Capital (Rating: 2.9): Vietcombank is one of the first banks that met Basel II standards. After issuing 111 mn shares to Mizuho Bank (16.7 mn shares) and GIC (94.4 mn shares) in 2018, CAR under Basel I increased from 10.7% to 11.5% and we estimate that the bank's CET1 ratio increased from 7.8% to 8.6%. our estimate of VCB's 2019E Basel II CAR is 10% (in line with current guidance of 9.7%), which is 1.5ppt below its Basel I CAR.

Asset Quality (Rating: 1.5): VCB's asset quality was the strongest among banks, with low NPL ratio (0.98%) and the highest loan loss coverage of 165%. It has no remaining exposure to VAMC bonds.

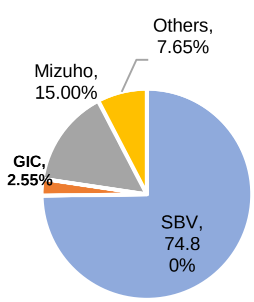
Management (Rating: 2.6): VCB's management team is one of the most efficient teams among banks. Management is successful in building a strong CASA deposit franchise, which produces the sector's lowest funding cost at 2.8% (vs. sector's average of 5.1%).

Earnings (Rating: 2.0): Banks with sustainably low funding costs typically generate relatively high ROA without taking on undue credit risks. We believe VCB's superior earnings will persist due to: 1) sector-low cost of funds which is driven by a relatively high CASA ratio of c.30%. 2) superior credit growth outlook given its compliance with Basel II. 3) the application of its competitive strengths in retail banking.

Liquidity (Rating: 1.6): Liquidity appears to be the best among banks, with net LDR of only 77.5%, which is well-below the regulatory cap of 90% for SOCBs.

Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Market Cap
VCB VN (SOCB) (Initiated in Jun 2019)	VND 75,270 (Upside: +4%)	VND 1,073 tn (USD 46 bn)	VND 37.1 tn (USD 1.6 bn)	▪ Market cap: VND 257 tn *(USD 11 bn)* ▪ 2019E P/BV (*): 3.3x

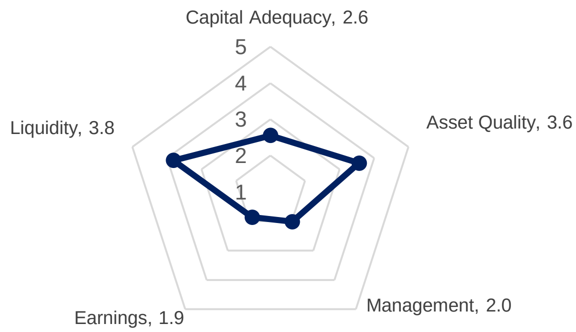
<table>
<tr><th>Shareholders</th><th>Company overview</th><th>Revenue breakdown</th><th>Asset Quality</th><th>Capital Adequacy</th></tr>
<tr>
<td>Major Shareholders

</td>
<td>VCB is the 3rd largest listed SOCB by assets, with 16% market share in 1Q19 among listed banks.
VCB's strong competitive rests largely on a high CASA ratio of 30% as at 1Q19, reasonable Basel II CAR of 9.7%, and broad national footprint (with 552 branches and transaction office and 16.8 million e-banking users).
Subsidiaries & JV: VCBS, VCBF, VCB Cardif…
Remaining FOL: 6.2%</td>
<td>Net interest income accounted for 79% of the total adjusted revenue. Retail loan was 46% of the total loan in 2018 vs. just 28% in 2015, and we think the retail-focused strategy coupled with the Bank's sustained relative low funding cost should drive NIM higher in the coming years.</td>
<td>Sound asset quality. The Bank's NPL ratio was at a low level of 1.03% in 1Q19 (below the SBV's target of 3%). The NPL ratio (including special mention loan) was only 1.61% in 1Q19.

Currently, the Bank has no exposure to VAMC bond as it cleared in 2016.

The Bank is quite conservative with a high loan loss coverage ratio of 169% as at 1Q19.</td>
<td>After issuing 111.1 mn shares to Mizuho Bank (16.7 mn shares) and GIC (94.4 mn shares) in 2018, CET1 ratio and CAR ratio jumped from 7.8% and 10.7% to 8.6% and 11.5%, respectively. However, we estimate that CAR under Basel II is 10% (1.5ppt lower under Circular 36 and in line with guidance of 9.7%).</td>
</tr>
</table>

VIB VN: Vietnam International Bank

VIB's CAMEL Rating: 2.8



CAMEL ranking: 6th, with total score of 2.8, of which:

Capital (Rating: 2.6): Along with VCB, VIB is also the one of the first banks that received Basel II approval. VIB's capital looks pretty strong, with CAR under Basel II was 11.4%. Equity/asset (8%) was above the sector's median of 7% and it had no exposure to VAMC bonds.

Asset Quality (Rating: 3.6): NPL ratios look fine; however, loan loss coverage ratio was weak and the lowest among banks, which downgrades the rating.

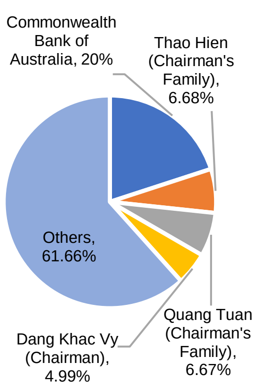
Management (Rating: 2.0): Management performance was effective during the period 2016A-18A. Fee income proportion increased from 8% to 13%, CIR decreased from 68% to 48%, and CASA growth was from 3% to 9%.

Earnings (Rating: 1.9): Earnings rating was the 2nd best among banks, with NIM, OROA, ROA, and ROE well above the sector's median.

Liquidity (Rating: 3.8): Liquidity seems to be a problem, with extremely high net LDR (112.3%) – far exceed the regulatory cap of 80% for JOCBs.

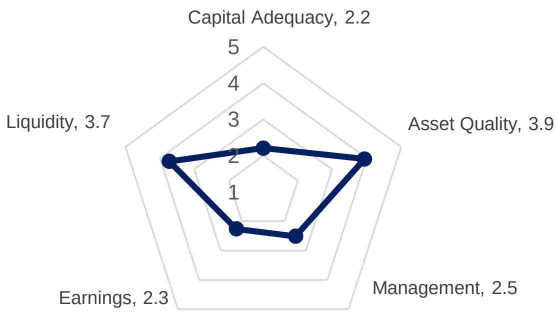
Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
VIB VN	Not Rated	VND 145 tn (USD 6 bn)	VND 7.8 tn (USD 336 mn)	▪ Market cap: VND 12.5 tn *(USD 538 mn)* ▪ 2019E P/BV (**): 1.1x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	VIB has 163 branches and transaction offices. It signed a bancasurrance agreement with Prudential Vietnam. Remaining FOL: 0.0% Premium: 7%-11%	Net interest income: 87% Non-interest income: 13% (mainly fee income with 13%) as at 2018A.	NPL: 2.52% NPL (cat. 2-5): 3.74% as at 2018A.	CAR: 12.9% as at 2018A.

VPB VN: Vietnam Prosperity Bank

VPB's CAMEL Rating: 2.9



CAMEL ranking: 7th, with total score of 2.9, of which:

Capital (Rating: 2.2): VPB is one of seven listed (and nine total) Vietnamese banks to qualify for early Basel II approval by the State Bank of Vietnam. Total CAR under the Basel II framework is 11.0% as of May 2019. Total CAR under the Basel 1 approach (which is still in force in 2019) is 12.5%, or 1.5ppt higher than under the Basel 2 approach. The bank's straight equity / assets ratio is 11%, which is the second highest among the listed Vietnamese banks.

Asset Quality (Rating: 3.9): Asset quality is solid especially considering the high-risk nature of consumer finance lending. The consolidated NPL ratio was 3.23% as of 1Q19 (down 25bps YoY). If we include net VAMC bonds in this calculation, the NPL ratio would be 4.13% in 1Q19 (down 114bps YoY). NPL coverage (LLR / gross NPLs) was 46% and LLR / gross loans was 1.63% as at 2018; both of these ratios improved over their end-2017 levels.

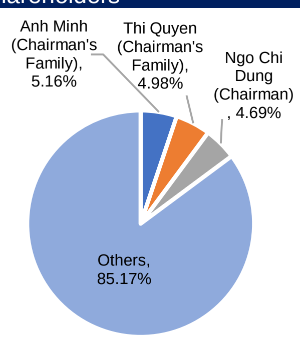
Management (Rating: 2.6): Management is among the more professional teams in Vietnam, in our opinion. They were early movers into consumer finance and will likely benefit from their ability to comply with whatever regulatory changes are actually implemented, which will set them apart from competitors that lack the scale / know-how to ramp up this business (and are likely to exit the consumer finance market as a result). The bank's CIR of 40% is the second lowest in the sector, which is impressive given their retail focus. Their credit cost-adjusted NIMs (net interest income minus provisioning / assets) is the highest in the sector, which demonstrates that their credit risk management is quite strong.

Earnings (Rating: 2.3): Earnings are very strong: ROA of 2.45% in 2018 was the second highest in the Vietnam banks. This is largely supported by their high yield loan profile, solid cost efficiencies, and reasonable credit losses (given the high-risk nature of consumer finance

Liquidity (Rating: 3.7): Liquidity: relatively weak liability franchise. VPB appears to be dependent on higher cost time deposits and wholesale funding, suggesting that funding costs are highly sensitive to rates. Part of this is because FE Credit is not a retail deposit-taking institution. The consolidated CASA ratio is quite weak at around 10%, implying that funding costs are sensitive to overall interest rates and deposit competition.

Company Profile

Ticker	Target price	Total Asset	Total Chartered capital	Valuation
VPB VN	Not Rated	VND 322 tn (USD 14 bn)	VND 25.3 tn (USD 1.1 bn)	▪ Market cap: VND 45.6 tn *(USD 2 bn)* ▪ 2019E P/BV (**): 1.1x

Shareholders	Company overview	Revenue breakdown	Asset Quality	Capital Adequacy
	VPB has 221 branches and transaction offices, 8,000 POS, and 600 ATMs. Subsidiary FE Credit is No. 1 by assets in the consumer finance subsector. Remaining FOL: 0.0% Premium: 2%-7%	Net interest income: 94% Non-interest income: 6% (mainly fee income with 6%) as at 2018A.	NPL: 3.62% NPL (cat. 2-5): 9.45% as at 2018A.	CAR: 12.3% as at 2018A.

APPENDIX I: TERMS FOR PROVISION OF REPORT, DISCLAIMERS AND DISCLOSURES

Analyst Certification

Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers; and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

Ratings	Expected return within the next 12 months
BUY	Above 10%
HOLD	Between -10% to +10%
SELL	Below -10%

BUY: We have a positive outlook on the stock based on our expected absolute or relative return over the investment period. Our thesis is based on our analysis of the company's outlook, financial performance, catalysts, valuation and risk profile. We recommend investors add to their position.
HOLD-Outperform: In our view, the stock's fundamentals are relatively more attractive than peers at the current price. Our thesis is based on our analysis of the company's outlook, financial performance, catalysts, valuation and risk profile.
HOLD-Underperform: In our view, the stock's fundamentals are relatively less attractive than peers at the current price. Our thesis is based on our analysis of the company's outlook, financial performance, catalysts, valuation and risk profile.
SELL: We have a negative outlook on the stock based on our expected absolute or relative return over the investment period. Our thesis is based on our analysis of the company's outlook, financial performance, catalysts, valuation and risk profile. We recommend investors reduce their position.
Under Review: We actively follow the company, although our estimates, rating and target price are under review.
Restricted: The rating and target price have been suspended temporarily to comply with applicable regulations and/or Yuanta policies.

Note: Yuanta research coverage with a Target Price is based on an investment period of 12 months. Greater China Discovery Series coverage does not have a formal 12 month Target Price and the recommendation is based on an investment period specified by the analyst in the report.

Global Disclaimer

This report provides general information only. Neither the information nor any opinion expressed herein constitutes an offer or invitation to make an offer to buy or sell securities or other investments. This material is prepared for general circulation to clients and is not intended to provide tailored investment advice and does not take into account the individual financial situation and objectives of any specific person who may receive this report. Investors should seek financial advice regarding the appropriateness of investing in any securities, investments or investment strategies discussed or recommended in this report. The information contained in this report has been compiled from sources believed to be reliable but no representation or warranty, express or implied, is made as to its accuracy, completeness or correctness. This report is not (and should not be construed as) a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on such business in that jurisdiction.

Yuanta research is distributed in the United States only to Major U.S. Institutional Investors (as defined in Rule 15a-6 under the Securities Exchange Act of 1934, as amended and SEC staff interpretations thereof). All transactions by a US person in the securities mentioned in this report must be effected through a registered broker-dealer under Section 15 of the Securities Exchange Act of 1934, as amended. Yuanta research is distributed in Taiwan by Yuanta Securities Investment Consulting. Yuanta research is distributed in Hong Kong by Yuanta Securities (Hong Kong) Co. Limited, which is licensed in Hong Kong by the Securities and Futures Commission for regulated activities, including Type 4 regulated activity (advising on securities). In Hong Kong, this research report may not be redistributed, retransmitted or disclosed, in whole or in part or and any form or manner, without the express written consent of Yuanta Securities (Hong Kong) Co. Limited.

YUANTA SECURITIES NETWORK

YUANTA SECURITIES VIETNAM OFFICE

Head office: 4th Floor, Saigon Centre, Tower 1, 65 Le Loi Boulevard, Ben Nghe Ward, District 1, HCMC, Vietnam

Institutional Research

Matthew Smith, CFA
Head of Research
Tel: +84 28 3622 6868 (ext. 3815)
matthew.smith@yuanta.com.vn

Binh Truong
Deputy Head of Research (O&G, Energy)
Tel: +84 28 3622 6868 (3845)
binh.truong@yuanta.com.vn

Quang Vo
Analyst (Consumer)
Tel: +84 28 3622 6868 (ext. 3872)
quang.vo@yuanta.com.vn

Tanh Tran
Analyst (Banks)
Tel: +84 28 3622 6868 (3874)
tanh.tran@yuanta.com.vn

Tam Nguyen
Analyst (Property)
Tel: +84 28 3622 6868 (ext. 3874)
tam.nguyen@yuanta.com.vn

Institutional Sales

Huy Nguyen
Head of Institutional sales
Tel: +84 28 3622 6868 (3808)
Huy.nguyen@yuanta.com.vn

Duyen Nguyen
Sales Trader
Tel: +84 28 3622 6868 (ext. 3890)
duyen.nguyen@yuanta.com.vn