

Regional Industry Focus

ASEAN Banks

Refer to important disclosures at the end of this report

DBS Group Research . Equity

14 Apr 2015

Watching the Digital Space

- Focusing on CAMEL is no longer enough. Digital is becoming a key driver in the future of banking
- In our survey of the Digital landscape, Singapore banks are clear winners, followed by Malaysian banks
- Leading the pack: Sing Banks, MAY, BBCA and KBANK; Indonesian banks have huge potential for digital banking

Beyond CAMEL; the push for digitisation. When thinking of risks in banking, the CAMEL variables immediately come to mind. In that order, importance is placed on liquidity and capital mainly due to regulatory changes. Asset quality is probably the next indicator many would focus on. Anything that goes wrong with these will in turn lead to earnings risks and management's agility to weather the storm. Recognising that Digital disruption will challenge the business model of banking in fundamental ways, we attempt an initial survey of the digital banking landscape in SE Asia.

Assessing the state of play in SE Asia. We observe Singapore banks as being the most advanced in their digital initiatives, followed by Malaysian banks. There are also handful of banks in Indonesia, Thailand and Philippines that appear to be moving faster on this front; but the majority appear to be lagging behind.

The leaders: Singapore banks, MAY, BBCA, KBANK, BPI. Singapore banks appear equally well placed in their digital offerings; with only slight differences in functionalities. In Malaysia, MAY had the first mover advantage in the internet/mobile banking space. In Indonesia, BBCA emerged as the winner, living up to its name as a superior transaction bank. Although Thai banks on average did not score very well, KBANK is a winner in the digital space thanks to the investment it made during its K-Transformation project in 2006. BPI in the Philippines was among the earliest to tap on electronic banking and has reached sufficient scale; this explains why its efficiency stacks up better than its peers. BPI Direct, which is the Philippines' first internet bank, "operating in a generally paperless environment with no defined geographical boundaries", makes an interesting case study.

Indonesian banks have huge potential. Indonesian banks would be emerging winners of digital banking. OJK has released regulations for banks to embark on branchless banking, an effort to infuse financial inclusion. Four banks have been licenced for the branchless banking initiative: BMRI, BBCA, BBRI and BTPN. Within Malaysia, HLB is a potential winner in the digital space with several initiatives on its plate.

Least prepared: Not surprisingly the smaller banks. Technically, there should not be losers at the end of the day as all banks will eventually catch up with the game. We would rather label this group of banks as "least prepared". As expected, the smaller banks fall in this category.

Analysts

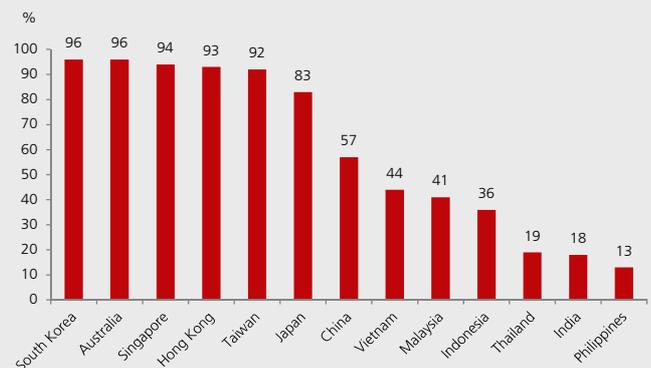
LIM Sue Lin +65 6682 3711
suelinlim@dbs.com

Christopher Daniel Wijaya +62 21 3003 4935
Christopher@id.dbsvickers.com

Lynette CHENG +603 2604 3907
lynettecheng@alliancedbs.com

Thaninee SATIRAREUNGCHAI, CFA , +662 657 7837
thaninees@th.dbsvickers.com

Digital banking penetration in Asia



Source: McKinsey Asia Personal Financial Services Survey, 2014; extracted from *Digital Banking in Asia: What do consumers really want?* – McKinsey & Company

Segregating Leaders and Laggards

Category	Bank(s)
Leaders	Singapore banks Maybank (MAY) Bank Central Asia (BBCA) Kasikornbank (KBANK)
Dark Horses	Indonesian banks Hong Leong Bank (HLB) CIMB Group (CIMB) Bank Danamon (BDMN)
Laggards	Smaller Indonesian banks Affin Bank (Affin) TISCO Financial Group (TISCO)

Source: DBS Bank

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Are ASEAN Banks ready to be digitally disrupted?

From ATMs to e-banking to mobile banking. Several studies have been done to track the evolution of digital banking. The Automated Teller Machine (ATM) created a buzz in the 1960s and it was first introduced in Asia in the 1980s (in Singapore 1979, Malaysia early 1980s, Indonesia 1979, Thailand 1983, Philippines 1981). Internet banking caught up in the 1990s, and now we are into the next phase of mobile banking. Soon, NFC (near field communication) will be up and about. This has started among the Singapore and Malaysian banks, less so in the banks in Indonesia, Thailand and the Philippines.

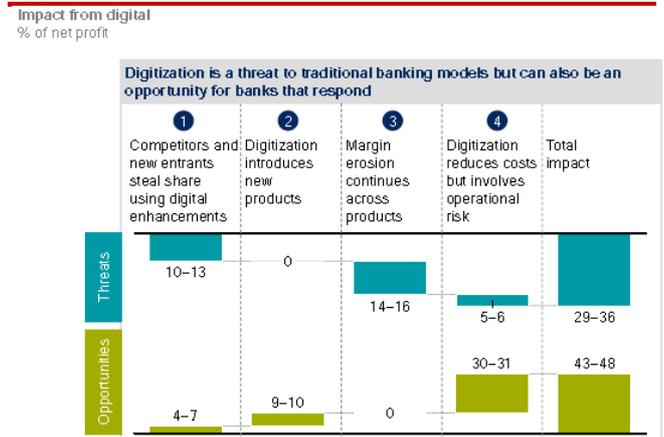
Who is ready and who is not. From our analysis and findings, we believe the Singapore banks are the most prepared for the digital banking phase, followed by Malaysian banks. While Indonesian, Thai and Philippine banks still lag behind, we believe there is huge potential for the Indonesian banks.

Early stages of digital banking in Asia but rapidly changing. Compared to the western world of banking, it would seem that digital banking is still at the early stages of development in Asia, and more so in ASEAN. The digital disruption in banking and finance has intensified over the past year with companies like Alibaba, Tencent and Baidu offering services almost equivalent to a bank or a finance company. This has prompted the Big Five Chinese banks to step up their digital initiatives. Competition is no longer just on rates, which bank can pay more interest or which bank can provide better service. It is now which bank or more like what platform can give a customer higher returns for their money conveniently, reliably and safely. Wealth management is no longer the playground for private banking or for high net worth individuals. This phase hits the low and middle income customers of the banks. It feels like we have not reached this stage in ASEAN; Singapore and Malaysia in particular, given their more developed bankable population. But we believe it will not take long.

Branches, ATMs will become a lesser necessity. We believe that physical banking will still remain a feature in Asia. At the moment, we gather that digitisation would largely still skew towards retail banking and perhaps increasingly SMEs (starting from retail/small SMEs), and less so on corporate banking which may require a full suite of financial solutions. At this juncture, we believe personal touch via relationship managers remains a crucial touch point for corporates.

Invest now for cost savings later. According to McKinsey's analysis, depending on the starting point, banks that adopt and implement digital banking systems could see a 30-50% impact on net profits. About two-thirds of the gains are expected to come from cost savings and the rest from new products and market share gains. On the other hand, inaction could possibly result in banks losing between 29-36% of bottom line. We are not able to quantify this at this juncture. Banks have started to invest in digitisation which includes key areas such as back-office automation, digitisation of document management and automation of credit decisions. DBS stated in its 2013 Annual Report that it plans to invest S\$200m a year over three years in digital banking.

Digital banking will emerge both as a threat and yet opportunities to banks

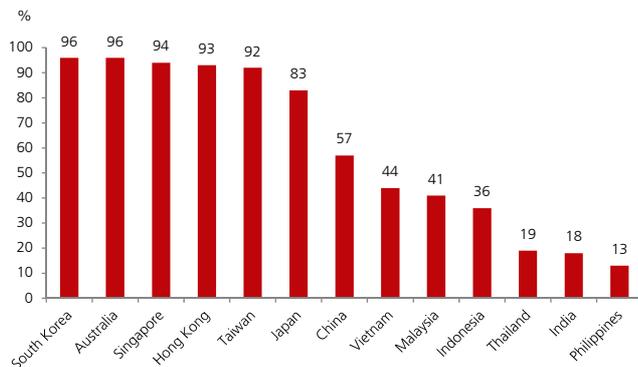


Source: *Digital Banking in Asia: Winning approaches in a new generation of financial services – McKinsey & Company*

Service levels to improve with increasing digitisation. Digital banking not only provides the convenience of 24-hour banking but also more control in the hands of the customer to perform various transactions. Most importantly, with the use of data analytics on data sitting inside multiple departments such as credit card, retail or private banking, banks can develop a 360-degree view of their customers to a point that it can be used to predict a customer's next purchase and hence target the most relevant promotions to the customer. This shows the importance of Big Data, something which banks will need to have before they can fully entrench in digitisation and make the most of it. The application of big data analytics to sales campaigns is the key to gaining sustainable market share.

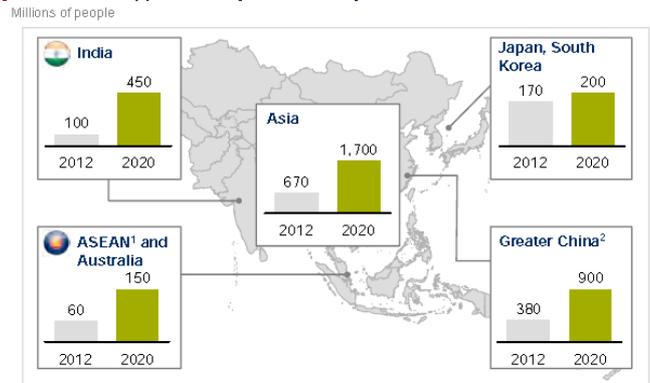
What is the end game for banks to go digital? Pleasing customers at the end of the day would be the critical success factor for digital banking in our view. According to McKinsey in the *McKinsey Asia Personal Financial Services Survey, 2014*, the number of digital banking customers in ASEAN and Australia is expected to increase to 150m in 2020 from just 60m in 2012. In addition, digital banking customers numbered 670m in Asia in 2012 and could almost triple to 1.7bn by 2020. The market is huge and this signals potential for market share gains for the banks which are more digitally savvy. According to McKinsey's research, about 40% of Asian mass affluent customers prefer online or mobile banking. Brick-and-mortar branch usage across Asia has declined by 27% since 2007, signalling the shift in channel preference in the market. In the same article, McKinsey opined that countries with less developed financial sectors and lower level of digitisation in banking are likely to see the biggest impact as digital banks might take away a big market share. Countries such as India, China and Indonesia, which have comparatively lower traditional banking penetration levels should therefore see higher impact. We have seen the speed of digitisation pick up in China and it is growing rapidly. We see huge potential in Indonesia, given its relatively younger demographics, wider spread locations across the archipelago, high mobile/smartphone penetration and regulations which support its branchless banking initiatives.

Digital banking penetration in Asia



Source: *McKinsey Asia Personal Financial Services Survey, 2014*; extracted from *Digital Banking in Asia: What do consumers really want?* – McKinsey & Company

Potential digital banking customers in Asia by 2020



Notes:

1 Data for the following ASEAN countries only have been included: Indonesia, Malaysia, Singapore, the Philippines and Vietnam

2 Data include China, Hong Kong and Taiwan

Source: *Digital Banking in Asia: Winning approaches in a new generation of financial services* – McKinsey & Company

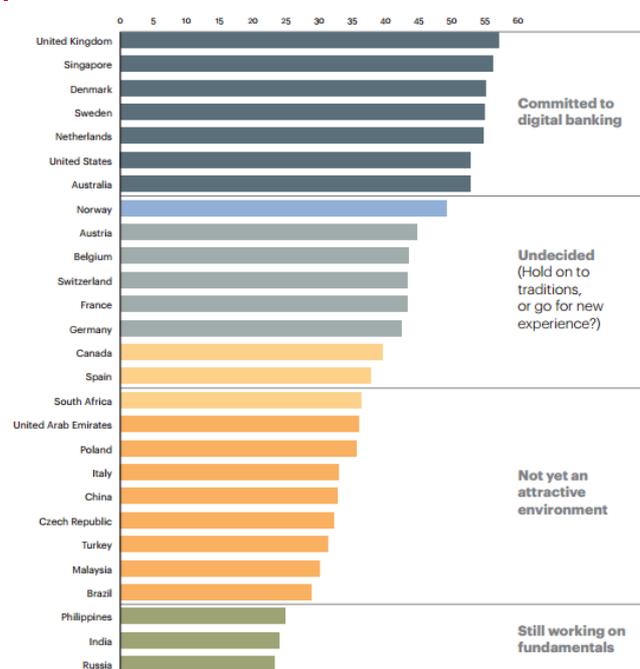
Positive traction in Indonesia. The Otoritas Jasa Keuangan (OJK or Financial Services Authority) has unveiled regulations pertaining to branchless banking in Mar 2014. While it is deemed more like agent banking, it still relies a lot on technology and infrastructure. We believe at the end of the day, the branchless banking initiative is a precursor to a large scale digital banking platform in Indonesia.

A. Singapore

Most ready among ASEAN peers. According to A.T. Kearney & EFMA global retail banking study, Singapore ranks second in the world (after UK) in terms of readiness for digital banking. Singapore was ranked in the top three in terms of banking capabilities which included advanced digital offerings, strong financial positions and digital structures. The domestic banks are equally scored when it comes to online banking functionalities but this differs for mobile banking.

Advanced features in online and mobile banking. In addition to plain vanilla online banking and mobile banking, Singapore's banks offer advanced features. For example, DBS Bank offers a mobile application that offer mortgage calculations, step-by-step loan guides and lets you view past transacted prices of real estate depending on your location. OCBC offers FRANK, a simplified three product service which is tailored for students and allows online account opening.

Digital banking readiness index

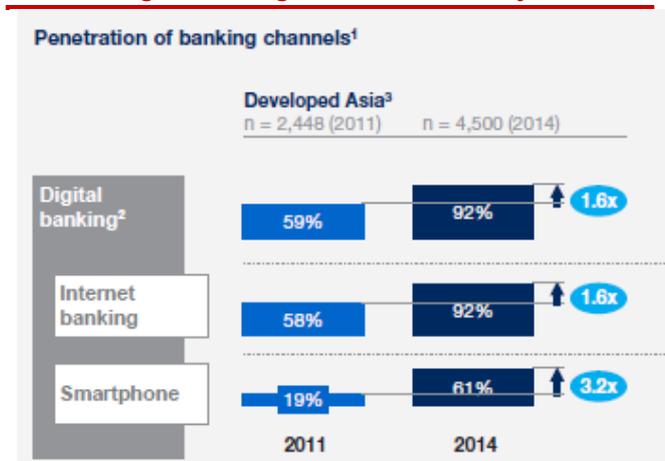


Source: A.T. Kearney and Efma global retail banking study

High digital penetration rate bodes well. Singapore tops the study's consumer behaviour category as well. The high number of digitally savvy consumers, high smartphone penetration levels and good digital service adoption rates have been highlighted in Singapore. With 94% penetration among banking consumers, Singapore has one of the highest digital banking penetration levels in Southeast Asia. Only South Korea and Australia have better penetration levels in the APAC region. Furthermore, according to a study by Bain & Company, online banking was the second most used service channel after ATMs in Singapore. It was found to be utilised more than traditional branch visits or telephone banking. Even with ATMs, Singapore banking customers use higher level functions other than withdrawing cash, such as bill payments, etc.

Big room for mobile banking to grow in Singapore. Mobile banking, on the other hand, has a comparatively lower penetration level than internet banking, though the usage levels in the whole region is rising fast.

Potential digital banking customers in Asia by 2020



Notes:

- 1 Penetration based on whether respondent uses the following channels or not
- 2 Digital banking penetration refers to respondents who say yes to either using internet banking via PC or smartphone
- 3 Australia, Hong Kong, Japan, Singapore, South Korea and Taiwan

Source: McKinsey Asia Personal Financial Services Survey, 2014; extracted from *Digital Banking in Asia: What do consumers really want?* – McKinsey & Company

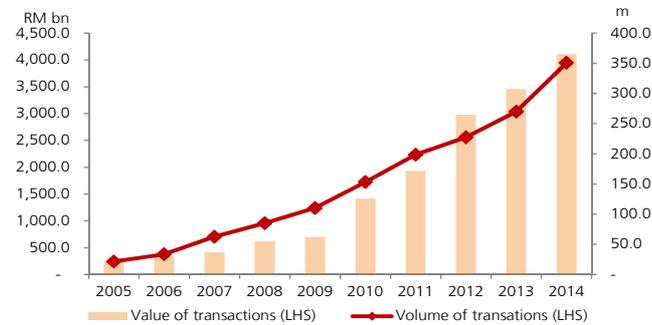
Digital banking to help banks with smaller physical presence.

Another important point to be noted is that online banking has been a solution for the foreign banks to overcome regulatory restrictions they face in reaching their customers. Some of the foreign banks face limitations on the number of branches and ATMs they can have in Singapore. As such restrictions do not apply to mobile and internet banking, foreign banks are able to close the service gap between them and local players.

B. Malaysia

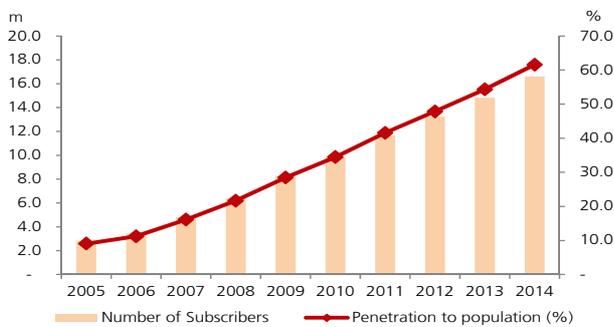
Building traction. Based on Bank Negara Malaysia (BNM) statistics, Malaysia had an internet banking penetration of 58% as at end 2014. Mobile banking penetration levels in Malaysia accelerated from a mere 5% of the population in 2011 to 19% as at end-2014. BNM has laid a blueprint which aims to increase the number of e-payment transactions per capita from 44 transactions to 200 transactions, and reduce the number of cheques by more than half from 207m to 100m per year by 2020. As a start to reduce cheque processing, BNM has begun to impose a RM0.50 clearing fee per cheque effective 1 Jan 2015.

Internet banking transaction volume - Malaysia



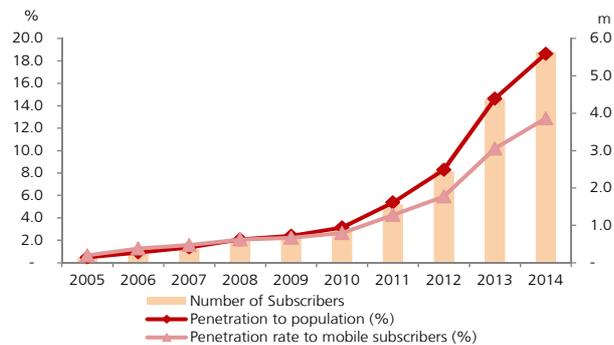
Source: Bank Negara Malaysia

Internet banking penetration rate - Malaysia



Source: Bank Negara Malaysia

Mobile banking penetration rate - Malaysia



Source: Bank Negara Malaysia

MAY spearheads digitisation in Malaysia. Malaysia's first revolutionary digital banking initiative was spearheaded by MAY in June 2000, with the launch of the nation's first internet financial portal. To date, digitisation within the financial sector remains a key priority as the government included the creation of an integrated payment ecosystem as one of its Entry Point Projects (EPP). EPPs are designed under Malaysia's Economic Transformation Programme (ETP) which strives to achieve the ultimate goal of elevating the country to

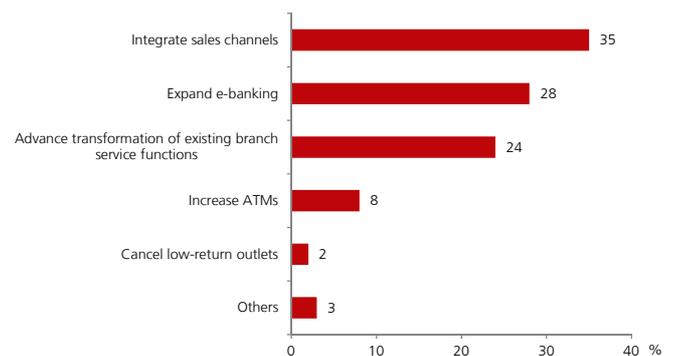
a developed nation status by year 2020. This EPP targets to reduce dependence on cash transactions to 63% of total transactions by 2020 (from 91% in 2013). It also aims to raise the number of e-payment transactions to 200 per capita per year and 25 point-of-sale (POS) terminals per 1,000 inhabitants by 2020.

C. Indonesia

Limited access to traditional banking channels. As a country that spans over 17,000 islands in the archipelago and has a comparatively low income level, Indonesia's infrastructure tends to lag its regional neighbours. Hence, a significant portion of the population in Indonesia does not have access to traditional banking channels. According to Spire Research and Consulting, only about a quarter of the Indonesian population utilise banking services. This is further supported by data from the World Bank which indicate that less than a quarter of the population have a formal account with a financial institution.

The need to increase distribution channels. Banks in Indonesia are already cognisant of the importance of mobile and internet banking to reach the untapped rural masses of Indonesia. This is supported by a survey done on the Indonesian banking sector in 2013, where expansion of e-banking was thought to be a top priority.

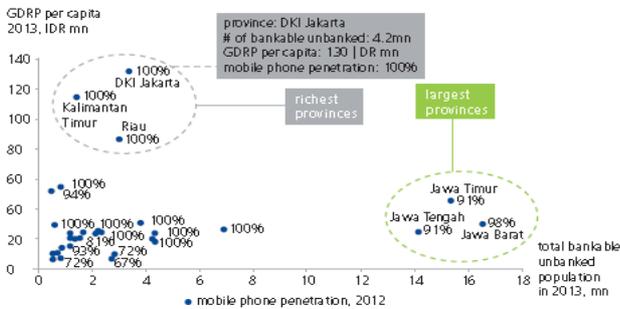
Priorities for channel initiatives (Indonesia)



Source: Indonesian Banking Survey, 2013 - PWC

High mobile phone penetration. However, the country's telecommunication networks have grown significantly over the past decade or so. Mobile phone usage tends to be close to 100%. As a result, unlike more developed regional countries such as Singapore and Malaysia, mobile and online banking is looked upon as a possible primary mode for consumers to interact with banks.

Macro indicators of digital financial services potential in 33 provinces in Indonesia



Notes:

Deloitte analysis demand based on weighted average of key macro variables including size of unbanked population, mobile penetration and gross domestic regional (GDRP) per capita, Bureau of Statistics Indonesia

Source: OECD Economic Survey of Indonesia, 2012; extracted from Digital Financial Services in Indonesia – Deloitte

Branchless banking initiative. Indonesia, being widespread in terms of geographical spread and having low banking penetration rates, with the intention of improving financial inclusion, has seen regulators taking the initiative towards a branchless banking framework. Four banks have been given the licences to start their branchless banking initiatives, namely Bank Mandiri (BMRI), Bank Central Asia (BCA), Bank Rakyat Indonesia (BRI) and Bank Tabungan Pensiunan Nasional (BTPN). For a start, it looks like an agent banking model and at the initial stages, it appears to be driven by deposit gathering. Banks under this initiative must already have a network of SMS/mobile banking and internet banking in place. We believe this is the beginning of more digital initiatives to come (see section on Page 25: Indonesian banks have huge potential).

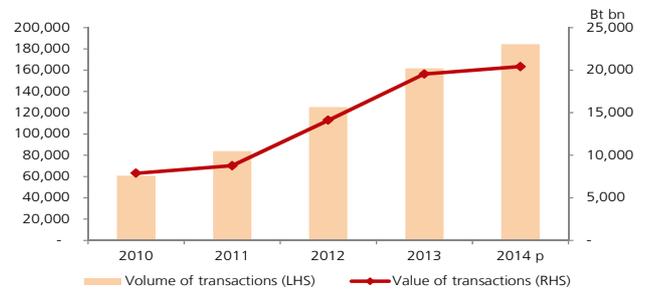
D. Thailand

Lagging behind regional peers. Thailand, being a middle income country, lags behind many of its regional peers in terms of traditional banking service penetration. Despite the growing mobile and internet usage levels, digital banking services have fairly low penetration in Thailand with only 19% of banking customers using digital channels in 2014, according to McKinsey and Company. According to the Bank of Thailand’s statistics for 1Q 2014, e-payments via mobile phones accounted for only 8% of the total number of transactions, and only 3% of total transactions in terms of value.

Growth picking up. ATMs, credit and debit cards tend to have the highest usage levels in Thailand while internet banking

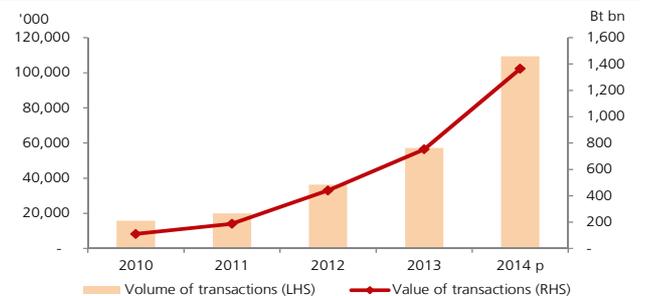
comes in third, according to a survey done by Bain in 2012. Mobile banking penetration was even lower. However, according to a Deputy Governor of Bank of Thailand, some banks in Thailand have strategically reduced the role of branches to pay attention to the virtual banking concept. According to Bank of Thailand data, internet banking transaction volume grew at a CAGR of 32% between 2010 and 2014 while the value of such transactions increased by 27%. Growth statistics of mobile banking is even more impressive. Mobile banking transaction volume grew at a CAGR of 62% between 2010 and 2014 while transaction value expanded at a CAGR of 88%.

Internet banking statistics – Thailand



Source: Bank of Thailand

Mobile banking statistics – Thailand



Source: Bank of Thailand

Banks getting more active. According to McKinsey and Company, Thailand is set to see strong growth in cashless transactions over the immediate future. Principal among those that are looking to innovate in the Thai banking sector is Kasikornbank (KBANK). For example, KBANK recently adopted Near Field Communication (NFC) for its credit cards. The bank also offers a service called K-Merchant where SMEs can securely accept credit card payment via an app over smartphones. Siam Commercial Bank (SCB) was among the first Thai banks to introduce internet banking and has stated that digitisation of the bank is one of its priorities SCB will focus on in 2015.

Leading the Pack

The leaders: Singapore banks, MAY, BBCA, KBANK. Banks within the ASEAN banking space already have a head start in digitisation, some ongoing, but some have relatively nothing. From our findings, Singapore banks are most prepared for the digital disruption phase, followed by Malaysian banks. Only a handful of banks emerge as winners in Indonesia, Thailand and Philippines at the moment; many others still lag behind. We have selected the key beneficiaries of digital banking for the ASEAN countries under our coverage based on the types of services offered online and via mobile banking and scored them accordingly (on equal weights) – please see tables on pages 10 and 11. All Singapore banks are almost equal in terms of product offerings, while clear winners such as Maybank (MAY) emerge among Malaysian banks, Bank Central Asia (BBCA) for Indonesia, Kasikornbank (KBANK) for Thailand. We have separately also highlighted emerging winners such as Hong Leong Bank in Malaysia and Bank Danamon in Indonesia for their digital initiatives. TISCO in Thailand is the least prepared for the digitisation phase.

Online banking and telegraphic transfer are basic offerings. The basic feature in digital banking has to be online banking or more commonly internet banking. Of the ASEAN banks under our coverage, only TISCO in Thailand does not offer any digital services besides generating an e-statement; transactions need to be done at its ATMs or branches. Telegraphic transfer is another common feature for online banking capabilities. Other common online offerings include inter-account (within the same bank) and interbank (across different banks) transfers and account summary viewing. Mobile apps, a trend that has recently started, is also not available across the banks under our coverage. Surprisingly, the Indonesian banks scored better than the Malaysian banks. For security purposes, a one-time-password generation is typically required for digital transactions.

Singapore banks, the most prepared. We mentioned above that the Singapore banks are the most prepared and when we compared offerings of the three domestic banks, their scores topped regional peers, indicating that they are all winners in this space. A key difference vs their regional peers would be the launch of mobile wallets to allow for easier fund transfers and mobile payments. What we could compare and contrast was the functionality of the services offered and app functions in terms of number of users. However, few seem to be going into fintech on a large scale. If nothing further is done, the non-bank financial providers could end up being the biggest nightmare for the banks. The

emergence of Alipay has literally disrupted the payment space in China is a solid example.

OCBC vs UOB, similar yet different. On face value, we initially guessed that OCBC was ahead of UOB when it comes to digitisation and innovation of product offerings online. But in the end, they both ranked on par with each other. UOB started its cardless withdrawal ahead of its peers in 2011, while OCBC recently started its fingerprint balance check – OCBC OneTouch™. OCBC's innovative product called FRANK basically captures the younger generation, which would be the main target market to engage digitisation with. Both banks capture the attention of customers for personal banking and SMEs.

Singapore banks' winning edge would be to regionalise its digital offerings. We believe Singapore banks could catch the winning edge if they could regionalise their digital offerings. Singapore banks operate not just within the country but also in Malaysia, Hong Kong and Indonesia. While the Singapore banks have online and mobile apps for each country they operate in, a consolidation of such applications that enable cross-border transactions could be the winning game. Malaysian banks such as MAY and CIMB are quick to catch up.

Digitisation picking up speed in Malaysia. Almost all Malaysian banks have stated that they will be embarking on digitisation going forward. The speed of adoption differs across the banks with MAY taking the clear lead, while HLB and CIMB tag close behind. CIMB's advantage is its regional presence and digitisation is included in its T18 strategy. Key initiatives highlighted include developing partnerships with telcos, e-commerce players, retail groups, etc. to broaden reach and offerings to customers.

Indonesian banks have clear digital leader; Thai banks lag. As we will highlight in the next section, BBCA champions digitisation in Indonesia. Other banks have caught up as well. With the high mobile and smartphone penetration rate in Indonesia, we see promising prospects of digital banking in the country. Thai banks have one clear champion – KBANK. While we see digitisation gradually picking up in Thailand, it is only centred towards the larger banks.

ASEAN Banks: Scoreboard on digital banking offerings

Bank	Basic offerings				Account opening		Fund transfer					Security feature	Applications		Special features			Score	Comment on "Others"	
	Mobile App	Online Banking	Account Summary	Bill Payment	New account opening	Account opening for existing customers	Interaccount Transfer	Interbank fund transfer	Instant Interbank transfer	Fund transfer to mobile number	Cardless withdrawal	Telegraphic Transfer	One Time Password	Credit/Debit Card Application	Loan Application	Investment	Mobile wallet			Others
Definition	Do they have their own mobile banking app?	Do they have an online banking platform?	Can customers check their account balance online?	Can customers pay their bills using the online banking platform?	Can new customers open an account from the online banking platform?	Can existing customers open a new account from the online banking platform?	Can customers transfer funds to accounts within the same bank?	Can customers transfer funds to accounts of another bank?	Can the transfer be done instantaneously? (If specify time lag on comment if unsure)	Can customers transfer fund if they provide mobile numbers alone?	Can customers or recipients of funds withdraw money from the bank's ATM without a card?	Can customers perform wire transfer from the online banking platform?	Does the bank send the customers a one-time use only password for every transaction	This refers to complete online application where there is no need to go to a branch for document	This refers to complete online application where there is no need to go to a branch for document	Does the internet banking platform support management of investments?	Does the bank support payment for goods and services using electronic money stored in mobile			
Singapore																				
DBS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	16	
OCBC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15	Fingerprint balance check
UOB	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15	
Avg 15																				
Malaysia																				
Maybank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	15	
Hong Leong Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13	Live chat for assistance
CIMB Group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13	
Public Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
RHB Capital	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
AMMB Holdings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
Affin Holdings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7	
Alliance Financial Group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7	
Avg 11																				
Indonesia																				
Bank Central Asia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
Bank Danamon	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10	
Bank Mandiri	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	
Bank Negara Indonesia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	
Bank Rakyat Indonesia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	
Panin Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	
Bank Tabungan Pensiunan Nasional	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	8	
Bank Tabungan Negara	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6	
Avg 8																				
Thailand																				
KASIKORNBANK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13	
Siam Commercial Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	13	
Bank of Ayudhya	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12	
Krung Thai Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12	
Bangkok Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
Thanachart Capital	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
Thai Military Bank	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	11	
Kiatnakin	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	7	
Tisco Financial Group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	

Source: Companies, DBS Bank

Industry Focus

ASEAN Banks

ASEAN Banks: Functionality of mobile apps

Bank	Balance check	Fund transfer	Bill payment	Cheque management	Branch/ATM locator	Promotions	Investment	Cardless withdrawal	Financial planning tools	Finger print balance check	Score	Functionality rating	Downloads	App Rating
Singapore														
UOB	✓	✓	✓		✓		✓	✓	✓		7	High	100,000-500,000	4+
DBS	✓	✓	✓		✓	✓	✓	✓			7	High	500,000-1,000,000	4+
OCBC	✓	✓	✓		✓			✓	✓	✓	7	High	100,000-500,000	4+
Avg											7			
Malaysia														
Maybank	✓	✓	✓		✓	✓		✓			6	High	1,000,000+	3+
Hong Leong Bank	✓	✓	✓		✓	✓		✓			6	High	100,000+	3+
CIMB Group	✓	✓	✓		✓	✓	✓	✓			6	High	1,000,000+	4+
Public Bank	✓	✓	✓	✓		✓	✓				6	High	50,000+	4
AMMB Holdings	✓	✓	✓	✓	✓						5	Medium	10,000+	3+
RHB Capital	✓	✓	✓		✓	✓					5	Medium	100,000+	4
Affin Holdings											0	N/A		
Alliance Financial Group											0	N/A		
Avg											4			
Indonesia														
Bank Danamon	✓	✓	✓		✓	✓	✓	✓			7	High	50,000+	4+
Bank Central Asia	✓	✓	✓		✓	✓	✓	✓			6	High	1,000,000+	4+
Bank Mandiri	✓	✓	✓		✓		✓	✓			5	Medium	1,000,000+	4+
Bank Rakyat Indonesia	✓	✓	✓		✓		✓	✓			5	Medium	1,000,000+	4+
Bank Tabungan Pensiunan Nasional	✓	✓	✓								3	Low	1,000 - 5,000	4+
Bank Tabungan Negara	✓	✓	✓								3	Low	100,000 - 500,000	4+
Bank Negara Indonesia											0	N/A		
Panin Bank											0	N/A		
Avg											3			
Thailand														
Bank of Ayudhya	✓	✓	✓		✓	✓	✓	✓			7	High	100,000 - 500,000	4+
Krung Thai Bank	✓	✓	✓	✓			✓	✓			6	High	100,000 - 500,000	4+
Siam Commercial Bank	✓	✓	✓		✓		✓	✓			5	Medium	500,000 - 1,000,000	4
Thai Military Bank	✓	✓	✓		✓	✓					5	Medium	10,000 - 50,000	3+
KASIKORN BANK	✓	✓	✓		✓						4	Medium	1,000,000 - 5,000,000	4+
Bangkok Bank	✓	✓	✓		✓						4	Medium	500,000 - 1,000,000	4+
Thanachart Capital						✓					1	Low	10,000 - 50,000	3+
Kiatnakin											0	N/A		
Tisco Financial Group											0	N/A		
Avg											4			

Note: We have used the downloads and app ratings from Android phones; the functionality rating is based on scoring of 0-3: Low, 4-5: Medium, 6-7: High

Source: Companies, DBS Bank

• **DBS: Embracing digital as a strategic priority**

(Extracted from DBS's 2014 Annual Report)

Strong innovation agenda. DBS has been pursuing a strong innovation agenda, driven by a desire to shape the future of banking. It recognises that with changing customer behaviours, rising smart device and social media usage as well as the encroachment into the payment space by non-bank players, the way banking is done is fast changing.

\$200m investment over three years. In 2014, DBS announced plans to invest S\$200m over three years to better harness digital technologies. This is on top of the S\$1bn the bank has invested in strategic technology initiatives. Among its cutting edge initiatives is a partnership with IBM that makes it among the first in the world to use artificial intelligence to provide contextualised and customised wealth advice to high net worth clients. This is currently being piloted in the bank for rollout in 2015. A partnership with Singapore research agency A*STAR to explore emerging technologies that will simplify the lives of customers is also progressing well.

Innovative apps for retail and SMEs. In May 2014, DBS launched DBS PayLah!. This app allows customers to transfer funds to others via their mobile phone with a few simple taps, just by knowing the payee's mobile number. Since its launch, DBS now has more than 200,000 registered users, helping to facilitate over 60,000 payment transactions every month. To make it easy for owners of small and medium enterprises (SMEs) to open business accounts with the bank, DBS launched a first-of-its-kind capability that would allow them to do this online. This significantly cuts down the time needed to start a relationship with DBS. During the year, DBS also rolled out DBS BusinessClass, an app which offers start-ups and SMEs valuable resources, including a unique platform through which they can consult and connect with industry experts, investors and fellow entrepreneurs. DBS's mobile banking apps strategy was ranked #1 in the world by Swiss research firm MyPrivateBanking.

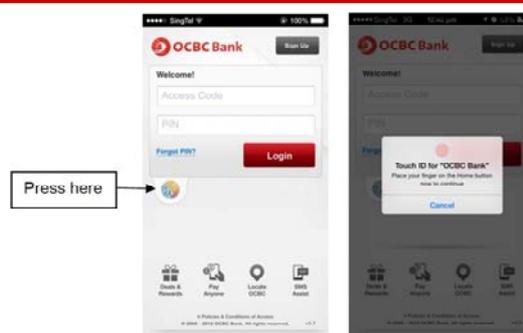
Expanding digitisation regionally. DBS rolled out mobile banking across China, Taiwan and India in 4Q14, and are already seeing significant customer sign-ups and activity. In China, DBS was the first foreign bank to launch online unit trust trading services, where customers are now able to subscribe for, redeem, switch and transact unit trusts online. DBS also expanded its overseas remittance service that provides same-day fund transfers at low costs. Previously available for India and Indonesia, it now includes Hong Kong and the Philippines. With greater convenience and attractive

fees, the number of remittances has doubled over the previous year. In Singapore and Taiwan, the bank has provided its relationship managers (RMs) with tablets that come with specially designed apps such as "Your Financial Profile". This has not only improved RM mobility, enabling RMs to serve customers at their own choice of locations, but has also significantly improved the quality of conversations with customers and the overall customer experience. In Hong Kong, DBS launched a tablet version of "mobile loan centre" to provide customers with the flexibility of applying for a loan online, via mobile or tablet. The online loan centre was recognised as "Asia's Best Mobile Banking" service in the IDC Financial Insights Innovation Award 2014.

• **OCBC: Innovative offerings**

Innovation; differentiating from peers. Compared to peers, OCBC's fingerprint balance check, OCBC OneTouch™, would be its key differentiator. The service is currently only available for iOS 8 devices (iPhone 5S onwards) that incorporate Apple's fingerprint sensors using Apple's Touch ID technology. To start using the service, a one-time activation with a PIN and access code is needed. After that customers only need to use their fingerprints to access their account details. In its press release in early Mar 14, the bank said that complete online view of a customer's bank account, card and investment balances can be accessed via fingerprint verification. The new service will allow faster access to check bank balances of both assets and liabilities. Such checks make up about 60% of all mobile banking transactions.

OCBC's OneTouch™ app



Source: Company

Leveraging on technology to build traction in existing products. OCBC's active internet banking customer base grew 19% in 2013 from 2012. Its active mobile banking customer base also increased 44%, and the total online activity volume grew 89%, in the same period. On 2 April 2014, OCBC launched its first account opening application on

smart phones (both iOS and Android) which enabled its customers to apply for the OCBC 360 account on their mobile phones or tablets, without the need to visit a branch. Within six months from its launch, it was reported that more than 8,000 accounts were opened via the OCBC Open Account app, which makes up around 15% of the total number of more than 60,000 OCBC 360 Accounts opened in the same period. More than 80% are new-to-bank customers, mostly aged between 23 and 35 years.

Comprehensive view of customer's financial position. Its online and mobile app also allows a comprehensive view of a customer's accounts with full transaction details of up to the past six months. Apart from that, it empowers the customer to set savings goals and at the same time track and categorise the customer's spending. In 2013, OCBC launched *OCBC Money Insights* believed to be the first to combine banking with an online tool that automatically tracks a customer's finances. We believe these would be initial steps towards further enhancing a personal financial management tool agenda going forward. In addition, the accumulation of customer spending patterns could be used as Big Data in the future to forecast spending patterns and predict the customer's next purchase and hence target the most relevant promotions, as discussed above.

FRANK by OCBC, is a digitally enabled product. A product such as FRANK by OCBC is customised for youths and young working adults, offering a simple, relevant and meaningful banking experience in non-traditional ways, and would ultimately cultivate usage towards digitisation.

Did you know...OCBC entered into a joint-venture with ANZ Bank in Australia to set up an internet bank in 2000 to create Asia's leading internet bank with a regional network to target the 40m "wired affluent" consumers who were then expected to be in Asia by 2005. The joint-venture required an investment of US\$100m over three years when OCBC had a high ambition of being a 'click-and-mortar' bank back then. However, six months later, plans were called off. OCBC cited then that entry costs in key Asian markets and the up-front investment in technology associated with a stand-alone entity were significant when assessed against the required returns.

- **UOB: Simplified**

Early starter, simplistic. UOB launched its internet banking services in 1997, calling it UOB Cyberbank, which provided the basic internet banking services such as online account applications, make real-time account balance and cheque status enquiries, view their share margin trading portfolios, transfer funds, stop cheque payments, as well as change password(s) anytime. UOB also prides itself as the first bank in Singapore to utilise digital certificates provided by Netrust, the first certification authority in Southeast Asia, for secure authentication.

First to launch cardless withdrawal. UOB launched its mobile app in Dec 11 and was the first in Singapore to allow customers to withdraw cash from ATMs without the need for an ATM card. This mobile cash feature differentiates its digital offerings vs its peers.

Not a lot of buzz on digital achievements. While internet banking is available across its regional operations in Singapore, Malaysia, Indonesia and Thailand, mobile applications are only limited to Singapore at the moment. UOB extended its Personal Internet Banking and UOB Mobile Banking to retail customers in Thailand and China respectively. Business customers in China, Hong Kong and Singapore have access to UOB Business Internet Banking Plus which enables efficient management of their day-to-day cash flow, treasury, and supply chain and trade requirements. Plans to roll out mobile banking in Malaysia are slated by 2016. Indonesia's digital plans will lag as there are other issues to be dealt with for its operations there.

Digitising branches. UOB stepped up efforts in automating and digitising our 500 branches region-wide. The programme includes branch redesigns, investment in new smart self-service machines and the digitisation of processes and transactions to make banking easier and faster. The first of these new branches is being piloted in Singapore. The branch features interactive touch screen displays that help investors plan their finances. It also has a floor-to-ceiling multi-media wall playing educational videos on how customers may start to invest for their future.

Singapore Banks: Online/Mobile banking products/services offered

	DBS		OCBC		UOB	
	Product	Purpose	Product	Purpose	Product	Purpose
Personal banking	DBS PayLah!	Enables customers to transfer money or pay for products and services using electronic money stored in mobile phone	OCBC OneTouch™	Enables users to check their account balance on the OCBC mobile banking app using fingerprint identification	UOB Mobile Cash	Enables customers to transfer money or pay for products and services using electronic money stored in mobile phone
	DBS HomeConnect	Assists users in home purchase	Money In\$ights	Tracks spending to assist in financial planning	Insure & Travel	Allows users to purchase travel insurance via online or mobile app
	TravellerShield	Enables customers to purchase travel insurance with ease	Pay Anyone	Enables users to transfer funds via Facebook, email and mobile contacts without sharing of bank account details		
	DBS Rewards	Enables DBS credit card members to redeem rewards and track past redemptions				
	DBS Indulge	Offers attractive dining deals				
	DBS Shopper	Offers attracting shopping deals				
	DBS Woman's card	Offers travel, dining, shopping and lifestyle privileges as well as priority cab booking				
	DBS Quick Credit	Mobile app which enables customers to submit loan applications				
SME banking	IDEAL™	Online banking platform featuring a comprehensive range of products and services to manage working capital	Velocity@OCBC	Online banking platform designed to manage payments and collections activities with ease	BIBPlus	Online banking platform featuring a comprehensive suite of cashflow management and trade services
	DBS BusinessClass	Mobile app designed to connect users with a network of industry experts, fellow entrepreneurs and DBS SME Specialists for advice and exclusive events			UOB Business app	Mobile app designed to provide access to customised FX price alerts, latest news, promotions and more for the customer's business needs
					UOB eAlerts	Send alerts regarding the business owner's accounts and transactions such as Inward Telegraphic Transfers, export Letter of Credits and inward bills for better management of company finances

Source: Companies (respective bank websites), DBS Bank

• **Maybank: Leader in Malaysia**

Market leader in internet banking in Malaysia. MAY launched the nation’s first internet financial portal in Malaysia in June 2000. With a 43.5% market share and close to 7.6m registered users, MAY is the market leader in internet banking in Malaysia. Its Maybank2u platform has evolved from providing bare basic features to more sophisticated features such as Fixed Deposit placements, unit trust inquiries and location based promotions. In 2014, Maybank2u processed transaction volume and value stood at 1.6bn and RM141.7bn which is an increase of 26.0% and 38.5% respectively from the year before. By 2020, MAY aspires to be the Global Leader in Digital Financial Services by developing an integrated digital platform for its corporate customers, offering a full suite of investment engine and building a digital direct lending platform.

MAY: Internet and mobile banking usage

	2011	2012	2013	2014
Internet banking - 3 months active users	35.7%	34.1%	33.9%	34.7%
Mobile banking - 1 month active users	87.0%	80.5%	75.4%	72.6%

Note: Figures refer to % of total customers registered for internet and mobile banking services

Source: Company (Presentation slides for FY14 results)

A pioneer to several digital initiatives. Apart from the nation’s first internet financial portal, MAY pioneered many other digitisation initiatives in Malaysia. This includes bring the first Malaysian bank to introduce comprehensive mobile banking services and cardless withdrawal. On top of retail-focused features, MAY also strives to enhance convenience for its SME customers. A case in point would be the launch of M2U Pay which is catered to small or home businesses that conduct online transactions. MAY’s advanced development in the digital space assists in retaining its strong customer deposit base and niche in the SME space. MAY has the largest market share in CASA and SME loans at 36% and 30% respectively.

First Malaysian bank for cardless withdrawal. Although not the first in ASEAN, MAY launched its cardless withdrawal facility in Malaysia in Jan 2014. MAY’s Cardless withdrawal enables customers to transmit money to any person in Malaysia using merely their mobile number. The recipient can subsequently withdraw the cash instantly at any Maybank ATM without an ATM card.

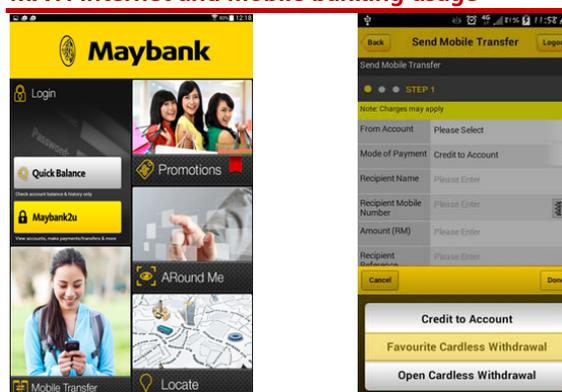
Tie-up with telcos. M-money is a product of collaboration between MAY and a local telecommunication services provider, Maxis Communications. It allows customers to transfer money to other Maxis subscribers or pay for goods and services using electronic money stored in mobile phones.

MAY: Digital banking product offerings

Product	Description
Maybank2u	Online financial portal which provides banking services through the internet.
Maybank Phonebanking	Provision of banking services through phone calls.
Mobile Financial Services	Provision of banking services through SMS.
Maybank2u Mobile/Tablet App	Provision of banking services through mobile/tablet application.
Cardless withdrawal	Enables Maybank2u users to transfer funds to any Malaysian mobile number. Recipient will receive a secure code via SMS to perform the cardless withdrawal at any Maybank ATM Machines without requiring an ATM Card.
Maybank2u Coin Box	A mobile application designed to assist in achieving saving goals.
M-money	Enables customers to transfer money or pay for products and services using electronic money stored in mobile phone.
Maybank2u Pay	Payment facility designed for small or home businesses conducting online transactions. It facilitates the management of sales transactions by providing and organising transaction details.
M2U Pay Snap&Sell	Mobile application that allows individuals to sell items on social media platform. It facilitates sales transactions by sending push notifications on transaction details to the sellers.

Source: Company, DBS Bank

MAY: Internet and mobile banking usage



Source: Company

Also for SMEs. M2U Pay is a payment facility for small businesses which facilitates the management of sales transactions by providing and organising transaction details. Business owners can register their online blogshops simply by providing business details online via Maybank2u. This also enhances the shopping experience of its customers as the payment procedure is simplified to a single click. Transaction details such as proof of payment and the seller's account number are automatically generated by M2U Pay.

• **Bank Central Asia**

BBCA, a transaction bank of choice. BBCA has the strongest transaction banking franchise in the Indonesian banking universe. BBCA has always been aggressively growing its ATM and branch networks in order to increase point of transactions and improve customer service. Like the rest of the Indonesian banks, BCA implemented e-banking and mobile banking in the year 2000/2001 after the global dotcom bubble. BBCA continues to improve its transaction banking services by offering new products and services and improving its existing products. This allows BBCA to retain its market leader position for CASA by maintaining a CASA ratio of 75% and CASA market share of 16% as of 2014.

BBCA: Transaction banking product and services

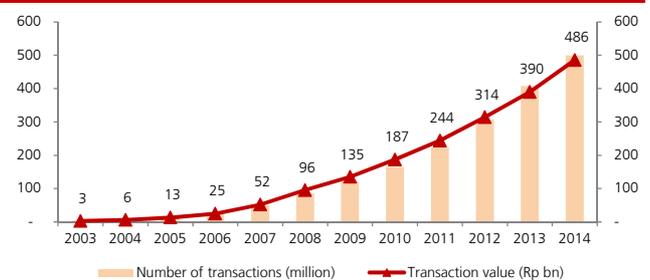
Products and Services	Description
KlikBCA	BBCA's internet banking platform which can also be accessed via mobile phone app and desktop. Transactions are safe due to token verifications and are able to conduct all non-cash transactions.
m-BCA	BBCA's mobile banking platform directly on the phone. Able to conduct banking transactions anywhere and anytime. This combines BCA mobile application as well as the SMS service to perform day-to-day banking.
Flazz BCA	Convenient pre-paid flazz cards which use RFID chips to use for payments.
ATM/Debit/Tunai BCA	ATM cards (BCA Paspor card) can be used for cash withdrawal, deposits, purchases and payments. BBCA Paspor cards can also be used for debit card payments as well. BBCA also offers cash withdrawals from merchants through Tunai BCA.
SMS BCA	Banking solely through SMS. Available through both GSM and CDMA networks.
BCA by phone	Banking call centre for financial transactions.

Source: Company website, DBS Bank

Strong transaction banking growth across all channels. BBCA currently has 1,111 branches, 16,694 ATMs and growing EDC (Electronic Data Capture) terminals penetration which supports its 13m customer base. Usage of ATMs, EDCs and Flazz machines recorded strong and stable growth throughout the years with Flazz cards driving high-traffic micro payments in retail outlets, supermarkets, parking lots and railways in Jakarta. BBCA's mobile banking and internet banking trends have been growing very rapidly over the years

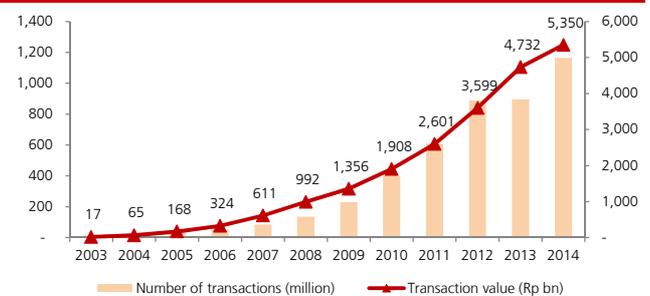
along with increasing smart phone, internet penetration and technological literacy. 'KlikBCA', its internet banking platform remains the growth driver for digital banking. BBCA continues to come up with new initiatives for digital banking. The bank is building on its 'KlikPay e-commerce' tool as an online internet payment system which is linked to its KlikBCA internet banking platform. BBCA also launched 'Info BCA' in 2013 which provides information about products, credit card applications, promotions and also a branch locator feature. 'Info BCA' is linked to 'Klik BCA' and 'm-BCA' in one mobile platform called 'BCA Mobile' to heighten its customer service and convenience to consumers. In order to accommodate electronic transactions, BBCA also provides 'Halo BCA' a 24-hour call centre to assist customers who seek help. It is also interesting to note that transaction values at the branch level experienced a negative trend over the past few years, indicating that there have been some switching of transactions from the branch level to the digital or ATM levels. This switching to electronic banking channels and automation will reduce high cost in-branch transactions. However, BBCA's branch banking is still the largest contributor to transactions and it will remain to be the bread and butter of BBCA's transaction banking business.

BBCA: Mobile banking transactions and transaction value



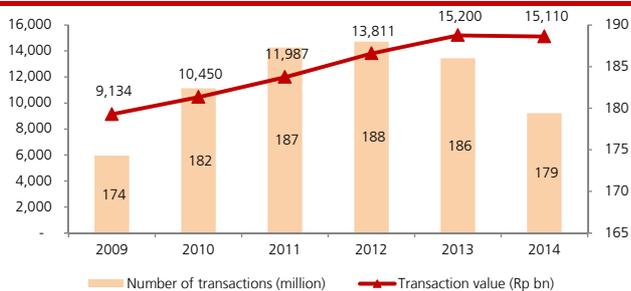
Source: Company, DBS Bank

BBCA: Internet banking transactions and transaction value



Source: Company, DBS Bank

BBCA: Transactions and transaction value at branches



Source: Company, DBS Bank

• **Kasikornbank: Digitisation Market leader in Thailand**

Taking the lead in Thailand. Among the Thai banks, we note that KBANK has taken the lead in the digital journey. KBANK announced in Apr 2014 that it will be investing as much as US\$15m per annum in IT to enhance its digital banking services for both corporate and individual customers. KBANK started to provide internet banking in 2000 and mobile application in 2006. Its digital banking services now include K-Mobile Banking (a mobile application allowing users to check their account balances, transfer money, and make bill payments), K-Cyber Banking (an internet-based banking service, providing the same services as K-Mobile Banking application), K-Cyber Trade (an internet-based stock trading service), K-Cyber Invest (an internet-based investment service), and K-PowerP@y (mPOS for merchants).

KBANK: Digital banking offering

Digital Banking



Digital Banking includes:

- K-Mobile Banking
- K-Cyber Service (K-Cyber Banking, K-Cyber Trade and K-Cyber Invest)
- K-Payment Gateway
- K-PowerP@y (mPOS)



K-Cyber Banking

Source: Company, DBS Bank

Largest market share. KBANK has the largest (28%) market share of Thailand Digital Banking users. It is number one in Digital Banking's top-of-mind brand perception rating. Also, KBANK is the number one in top-of-mind awareness (41%) for Mobile Banking Application in Thailand from Top Financial Application Survey 2013 of Zocial Inc. The number of transactions through digital banking was 723m in 2014, compared with 2013's 423m. The number of transactions through digital banking accounted for 40% of total transactions in 2014. KBANK expects the number of customers who perform transactions via mobile banking to grow further in 2015.

More initiatives to boost market share ahead. KBANK's Senior Executive Vice President, Mr. Pakorn Partanapat, said that the Thai population's access to digital media has rapidly increased, with mobile phone numbers jumping to more than 96m, while mobile phones or smartphones are their primary means of connecting to the internet. As such, KBANK is planning to enhance its service towards becoming a "Full Digital Banking" platform, while maintaining its leadership in the business under the "Digital Lifestyle Banking" concept. Product and service development will be carried out to serve the needs of savings, investments and financial transactions in all stages of the customer's life, through all digital channels.

Tying up with AIS for e-commerce opportunities. In Mar 2015, KBANK teamed up with Advanced Info Service (AIS) – a leader in communication technology – and Advanced mPay Co., Ltd., the provider of an electronic wallet and e-commerce platform, forging an alliance with the mission of developing digital financial solutions that are world-standard, convenient, fast and secure for consumers. This was seen as the first-ever collaboration between a financial institution and a mobile telecommunications provider in Thailand.

The Dark Horses: Banks to watch out for

From our score sheet on page 10, we have picked Hong Leong Bank and CIMB in Malaysia and Bank Danamon in Indonesia as emerging winners. But within Indonesia, we believe there is huge potential with initiatives for branchless banking (see next section).

• **Hong Leong Bank – New kid on the block**

Emerging digitally. Tailing MAY closely is HLB whom is slowly emerging as a key player in the digital banking space. Digitisation is a crucial point for HLB as it has a large retail exposure in its loan book (63% as of Dec 14). HLB’s digital banking strategy started to stand out in mid-2012 with the introduction of Mach, a banking concept geared for the Gen-Y segment. Given its focus on the younger age group, we saw HLB continuously improving on digitisation, from a rebranding of its online platform (Hong Leong Connect) to the implementation of innovative features such as Live Chat and cardless withdrawal.

HLB: Digital banking product offerings

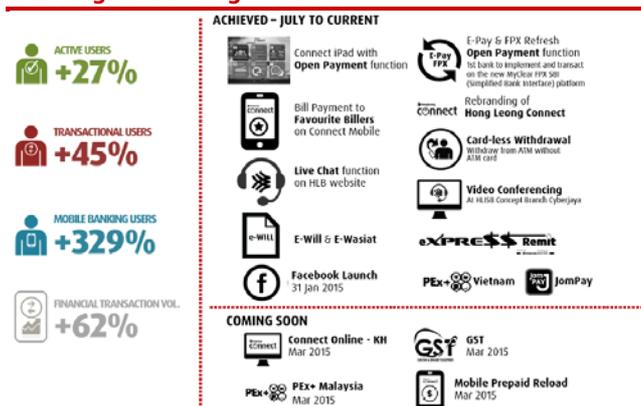
Product	Description
Hong Leong Connect	Online financial portal which provides banking services through the internet.
Hong Leong Phonebanking	Provision of banking services through phone calls.
Hong Leong Connect Mobile App	Provision of banking services through mobile/tablet application.
Cardless withdrawal	Allows customers to withdraw money without requiring an ATM Card by generating a secure code on the Hong Leong Connect Mobile app.
PEX+	Enables customers to transfer money or pay for products and services using electronic money stored in mobile phone.
Live Chat	Provides instant assistance via online chat with a Customer Relationship Officer.

Source: Company, DBS Bank

Introducing Mach. Each of HLB’s Mach branch embodies the modern lifestyle retail banking concept by utilising advanced self-service banking technology at the forefront to cater to customers who prefer a quick and easy banking experience. Just recently, Hong Leong established a concept branch in Cyberjaya that is equipped with state-of-the-art infrastructure and IT systems, including self-service banking technology, touch screen PCs, iPads and video conferencing facilities to help deliver advice, and handle customer complaints, enquiries and service requests. HLB plans to open three more of such branches as it improves cost efficiency. The cost to open a traditional branch is comparatively twice as much.

A lot more on its plate. We understand that there is a lot more to expect on HLB’s plate as far as digital banking is concerned. Tie-ups are being established with telcos locally and abroad for remittances (case in point with Indonesia).

HLB: Digital banking initiatives



Source: Company (presentation slides for 2QFY15 results)

• **CIMB – Leveraging on its regional platform**

High regional potential. CIMB Clicks is the bank’s digital banking portal accessible to all CIMB Bank (Malaysia), CIMB Niaga (Indonesia), CIMB Thai and CIMB Singapore account holders. CIMB Clicks is a convenient way to access a customer’s account information, manage finances and pay bills from the convenience and security of the customer’s own PC. It caters specifically to the needs of the bank’s consumer banking clients. Accessibility of accounts is one thing but the functionality of the internet banking appears to be only high with the Malaysian CIMB Clicks while being limited for accounts in the other regions. A special feature for CIMB Clicks would be fund transfers between CIMB Bank Malaysia and CIMB Bank Singapore.

Tie-up with AIS in Thailand. CIMB Thai and Advance Info Service (AIS) announced that they have signed a Memorandum of Understanding in Aug 2014 to formalise Thailand’s first business alliance between a bank and a mobile service operator. The collaboration called ‘Beat Banking’ is targeted at the ‘new’ consumers and will be developed to complement their modern lifestyle where mobile phones are an integral part of their daily lives. The first product to be launched under this initiative will be an electronic deposit account where customers can deposit, withdraw or transfer money easily anywhere and anytime.

CIMB: CIMB Clicks functionality

Functionality	CIMB Bank Malaysia	CIMB Bank Singapore	CIMB Niaga Indonesia	CIMB Thai	Comment
Basic					
Check & manage accounts	✓	✓	✓	✓	
Funds transfer	✓	✓	✓	✓	
Bill payment	✓	✓	✓	✓	
e-statement	✓	✓	✓	✓	
Remittance	✓		✓		
Scheduled transfers for payments	✓	✓	✓	✓	
Mobile phone reloads	✓		✓		For pre-paid mobile phones
e-IPO, share trading	✓				
e-application (loan/deposit)	✓	✓			
Others					
CIMB Kwik	✓				For online purchases
Octosend	✓				Money transfer via mobile app
Investments	✓			✓	Financial management tool
Cross-regional functions	Yes	Yes	No	No	Only between CIMB Bank Malaysia and Singapore accounts

Source: Company, DBS Bank

Further refinement expected. CIMB has identified digital banking as part of its T18 initiatives to enhance ROE over the longer term but emphasis on its digitisation would be on retail banking. Going forward, CIMB will be developing partnerships with telcos, e-commerce players, retail groups, etc. to broaden its reach and offerings to customers. All these will add to the functionalities of its internet and mobile banking facilities.

- **Bank Danamon – Innovative services**

Full range of functions. Bank Danamon (BDMN) does not have as strong a transaction banking franchise as BBKA as it specialises in disbursing productive micro loans through the Dana Simpan Pinjam Unit and consumer mass market auto loans from its subsidiary Adira Finance. Nevertheless, BDMN is the most innovative, being the first bank in Indonesia to offer cashless withdrawal services and direct features of transfers

and payments via social media such as Facebook (D-cash). In addition to the full feature of internet banking, ATM and mobile banking, BDMN is finalising its online registration form to open a new account online.

Ambitious plans ahead. BDMN can use its large mass market customer base in order to create a transaction banking ecosystem using current products and services to tap into different levels of its customer's value chain. Going forward, the bank will continue to look into full online application to open an account, investing in mutual funds through its online platforms as well as e-savings. It will also tap into wholesale internet banking which focuses on financial supply chain, cash management and being an integrated gateway for finance and treasury transactions. BDMN is targeting 150,000 D-cash customers by the end of this year (currently around 12,000) as well as increasing its SMS banking transaction from the current 8m transactions a month to grow by more than 20% in the next few years. Total e-banking channel is expected to grow more than 60% this year.

BDMN transaction banking product and services

Products and Services	Description
Danamon online banking	Danamon's internet banking platform can also be accessed via mobile phone app and desktop. Transactions are safe due to token verifications and are able to conduct all non-cash transactions.
D-Mobile	Bank Danamon mobile phone app which can do normal banking functions as well as SosMed D-cash which can transfer funds via facebook as well as Augmented Reality to find Danamon merchants.
Danamon ATM	Danamon's ATM card can withdraw cash, transfer, payments of credit cards and bills. A member of the ATM Bersama network.
SMS banking	Banking solely through SMS. Available through both GSM and CDMA networks and does not need internet access. Allows cardless withdrawal by phone number only.
Danamon Access Center	Banking call centre for financial transactions.

Source: Company, DBS Bank

Laggards: Will they catch up?

Lagging the trends. While we have identified winners in the digital space, our score sheet also indicates that there are clearly laggards within the digitisation trend. While lagging peers, we believe these banks will catch up over time in one way or another.

No digital enablers for TISCO. A case in point is TISCO in Thailand which has virtually no enablers in the digital space and only provides the simplest of online services to download and print statements.

Smaller banks in Indonesia and Malaysia lag in digitisation. In Indonesia, generally the smaller banks lag digital initiatives. But we expect this to change with the branchless banking initiative. In Malaysia, Affin Bank, which is also one of the smallest banks in the country, lag in the digital space. Although Alliance Bank scores similar to Affin Bank, initiatives are already in progress.

Branches will remain important to certain banks. Going digital does not mean branches will lose their functions. But over time, we should expect to see bank branches recalibrate to serve as either flagship branches or specialised branches catered to a specific segment of customers. At the current stage of digitisation, when applying for a loan online, the customer's journey may begin on the bank's website, but in many cases it will end with a phone call to the bank or even a trip to the branch.

A matter of customer segmentation? There will be a certain customer segment that will still go to a bank branch regardless of digital banking advancements. In Indonesia, BTPN, a pension loan-based bank will still attract many to a branch monthly as the branch acts as a community centre for the pensioners to meet and catch up. In addition, BTPN provides education for business start-ups as well as clinics for medical check-ups and treatments.

Indonesian banks have huge potential

Branchless banking regulations finalised in 2014. The branchless banking initiative in Indonesia was mooted back in 2011 to promote financial inclusion. Branchless banking in its simplest explanation means banking without relying on physical branches. According to OJK, it intends to take advantage of the high use of mobile phones with this regulation. Indonesia has a mobile penetration rate of over 90-100%, but the smartphone penetration rate is only at 28%.

Branchless banking technologies are the internet, automated teller machines (ATMs), POS devices, EFTPOS devices and mobile phones. The Otoritas Jasa Keuangan (OJK) finalised the regulations pertaining to branchless banking in Mar 2014. Under the regulation, the domestic banks would be able to provide basic banking services to a larger pool of Indonesians, especially the low-income group in remote places, by partnering with local agents. The products would include savings accounts, micro loans and micro insurance.

A means of financial inclusion. Indonesia has long been labelled as a banking society with a low penetration rate. According to the World Bank survey in 2012, less than 25% of the population have a formal account with a financial institution. It is probably a combination of the spread of the population across 17,000 islands and also that some Indonesians still do not understand about financial services, especially those who live in the rural areas. There are also some who lost their trust in banks after the 1997/98 financial crisis. The introduction of the branchless banking initiative via agents will be a means to bridge the financial inclusion gap.

Positive for banks but in the longer run. Although it is expected to have a slow start, the initiatives will initially require investments in IT, systems and infrastructure in addition to headcount or agents. We expect to see low-cost deposits pick up at the early stages and they will take time to be monetised and contribute to the banks' bottomline. Over time, apart from getting cheap funding, we also expect banks to tap into a wider pool of customers for loans, particularly the mass market segment for loans.

Steps to obtain the branchless banking licence. In order to apply for the licence, the bank has to include the branchless banking initiative in its business plan and outline the business model, timeline, strategy, risks as well as number of agents and target agents within a three-year timeline. The bank needs to specifically mention the SOP, targets and products,

risk mitigation strategies, readiness of its IT infrastructure and detailed scope, geographical operations of agents and other details that are relevant for its branchless banking business.

Requirements to obtain branchless banking licence. The bank must be an Indonesian legal entity and must have:

- 1) A risk profile of 1, 2 or 3 as decided by the OJK;
- 2) A branch network in East Indonesia and/or East Nusa Tenggara Province; and
- 3) Sufficient supporting infrastructure for electronic banking in the form of SMS or mobile banking and internet banking or host-to-host.

Rural banks (Bank Perkreditan Rakyat, BPR) or banks with lower risk profile rankings must fulfil additional requirements. These include a minimum capital of Rp100bn, good financial health for a year, NPL of less than 5%, CAR of at least 12% and no losses in the past one year.

Requirements of agents. The bank must provide the appropriate training and education to its agents. It must also maintain the list of agents and make it public for customers. An agent can be both an individual or business and must:

- Be a locally based in the specified area;
- Have good understanding, ability, credibility and integrity, with good product knowledge and ability to operate the electronic devices;
- Must have a main source of recurring income for at least two years;
- Must not be an agent of another bank; and
- Pass the bank's due diligence test.

The products. Three simple products will be available under the branchless banking initiative:

1. **Basic savings account (BSA):**
 - Maximum deposit of Rp20m.
 - Maximum transaction (cash withdrawal, transfers) of Rp5m a month or Rp60m a year.
 - Free of admin charges in the form of monthly fees, account opening fees, saving fees, closing fees, inbound transactions (must be below normal account fee).
 - Fees are for outgoing transfers, bill payments and cash withdrawals

A basic savings account is only for customers with no other savings accounts. If the customer has exceeded the limit of number of transactions or want to increase the maximum

limit of the account, the account can be upgraded to a normal savings account.

2. Micro credit:

- Customer must be a banking client for at least six months or those with high ability to repay.
- Maximum tenure of loan is one year or can be longer depending on the customer's business cycle
- Maximum loan is Rp20m.
- The loans can be disbursed through branches or agents but the bank will still conduct the due diligence and approval process.
- Liquidation of loans can be done from BSA or the bank account of the business.
- At least 70% of the loans must be productive

3. Micro insurance and other financial products that have received OJK's approval.

Four banks approved for branchless banking so far. At the end of Mar 2015, OJK officially started its branchless banking programme called 'Laku Pandai' and a total of 17 banks applied, out of which four banks' applications have been approved. These four banks are BBRI, BMRI, BTPN and BBKA, and all of them participated in OJK's pilot programme for the branchless banking initiative last year. OJK indicated that if the rest of the 13 banks have started the 'Laku Pandai' initiative this year, there will be a total of 350,000 agents covering 75% of all regions in Indonesia. Other banks which are applying include BBNI, BBTN, BDMN and other regional development banks (Bank Pembangunan Daerah, BPD). OJK is hopeful of getting 5m new customers in the early stages and targets 10-20m new customers a year subsequently. In total, OJK targets an additional 50m customers in the next four years.

BBRI launched its branchless banking initiative named **BRI Link**. BBRI currently has around 24,750 agents for branchless banking and the bank targets a total of 50,000 agents by year-end. This will greatly increase BBRI's network at a low outlay as the only cost incurred for an agent is for an Rp3m EDC machine. BBRI's first branchless launch in a rural village community in Jayapura gathered Rp3-5bn worth of basic savings accounts with a transaction value of Rp18.2bn. This is a promising start as Indonesia has a total of 70,000 villages. BBRI targets a total transaction value of Rp22.4tn in 2015. BBRI believes that its branchless banking initiative will help boost CASA as well as increase fee-based income as it charges Rp3,000 per transaction. Agents can also help market lending products and refer their customers to Teras or

Unit BRI for disbursements of loans. The launching of the satellite will also improve its network and communications quality to reach EDCs carried by its remote Teras and branchless banking units.

BTPN also launched its branchless banking initiative named BTPN WOW with a target of recruiting 24,000 agents. BTPN is hopeful to increase its number of customers by 20-30m within 2-3 years. BTPN indicates that there is a potential deposit opportunity worth Rp200tn in financial inclusion. **BTPN WOW** uses USSD (unstructured supplementary service data) codes which do not require smartphones and it currently offers the BSA product. BTPN has experience in mass market loans which can offer synergies to its branchless banking services. BTPN can recruit its micro and productive poor customers as agents as well as centralise its call centres and credit approval process.

For **BBKA**, the branchless banking initiative will be a long-term investment to increase its customer base and learn about the rural mass market. BBKA launched its branchless banking initiative **Laku** and it only targets 3,000 agents focusing more on the quality of agents and solidifying the business process. BBKA admits that they do not have expertise in the rural markets like BBRI and thus they will take this opportunity to learn. Uniquely, BBKA does not utilise cellular services for its branchless banking and its savings product is in the form of a card priced at Rp2,000. With the card, customers can perform transactions anywhere, in the presence of an agent. BBKA invested around Rp10.7bn for the early stages of branchless banking.

BMRI also launched **Mandiri TabunganMu** for its branchless banking initiative which is a basic saving account. BMRI charges transaction fees of Rp3,000-5,000 for cash withdrawals and transfers. Bank Mandiri targets 9,000 agents this year with a 3-year target of 50,000 agents and 5-year target of 200,000-300,000 agents. BMRI has a total of 14m customers through its pilot project last year. The bank is currently focusing on creating the network for its agents.

Indonesian Banks: Branchless banking targets

Bank	Target agents in 2015	Target potential customers in the long run
BRI	50,000	40-60m
Mandiri	9,000	50-100m
BCA	3,000	19-21m
BTPN	24,000	20-30m

Source: Companies, DBS Bank

The way forward

Being taken over? Banks generally fear that if they sit on their laurels and wait for the next wave, they may not survive. Hence, it is better to initiate something now rather than wait for peers or non-bank financial competitors to take over the bank's role in providing financial services digitally. Whether the financial technology (fintech) players eventually come here to disrupt and challenge the traditional banking players or end up collaborating with them to offer innovative solutions, it is clear that the consumer will win. Even at this stage, we see banks essentially trying to please the customer when a product/app is designed. At the end of the day, the bank would want customers remain loyal and use its services. What if you could manage day-to-day account activity on your smartphone through Facebook? Apply for a loan on Twitter? Perform one-click money transfers to your Facebook friends and LinkedIn contacts? It may surprise you to know that all these services are already available right now, somewhere in the world. The good news is that banks are the ones that are providing these services so far.

Malaysia's central bank's push for digitisation. In 1H13, Malaysian Electronic Clearing Corp Sdn Bhd (My-Clear), a wholly-owned subsidiary of Bank Negara Malaysia (BNM), launched a mobile e-banking facility called MyMobile. BNM teamed up with Malaysia's largest banks MAY, CIMB and PBK and Malaysia's largest telcos Maxis, Celcom and DiGi. The project was initiated to increase electronic payments in Malaysia. The platform allowed the users to top up their mobile accounts, perform third party fund transfers as well as pay credit cards and bills in real time. In its pilot stage around 74,000 customers subscribed to the services. Furthermore, MyMobile is also available for the remittance of payments to the Kuala Lumpur City Hall, Shah Alam City Council, Subang Jaya Municipal Council, Klang Municipal Council, Ampang Jaya Municipal Council and the National Higher Education Fund. The service does not require a smartphone which is an added advantage. Though mobile money systems were introduced earlier by telcos, they were not successful partly due to lack of interoperability between different networks. MyMobile adds interoperability as well as access to traditional feature phones making the potential subscriber base larger than before. This is likely to increase the overall adoption rates. Since the launch of MyMobile, mobile payments in Malaysia have increased by 103% (up to Dec 2014) on a monthly basis.

Indonesia, the trouble with telco operators. Many potential customers are reluctant to adopt mobile banking functions. The perceived lack of security as well as other benefits of cash transactions tends to be key reasons for this behaviour. In addition, the current e-money regulations limit telcos and smaller banks to registered (incorporated) legal entities when building agent networks, according to Helix Institute. This has limited their ability to expand the geographical spread of the service, due to lack of widespread distribution of such entities. Despite this, compared to regional peers, Indonesia has encouraging digital banking penetration levels. Its penetration is well ahead of Thailand and is closer to Malaysia, which is ahead of Indonesia in terms of income and infrastructure.

Third party disruption in Indonesia. In addition to banks, third parties are also disrupting the banking environment through different modes of innovation. Telcos play a major role in this. As many Indonesians do not have access to electronic payment methods such as credit cards, telcos have provided support in the form of carrier billing, giving them access to markets previously not accessible. U-Point is an e-payment system introduced by Telkomsel (a subsidiary of Telkom Indonesia), which is set to become an acceptable form of payment in Google Play. Another such service is Paperless Claim, which is a B2B service that facilitates the flow of insurance claims from hospitals to insurance companies. Other than telcos, Virtual Online Exchange (VOX), founded in 2008, uses SMSs to borrow, pay utilities, etc. This includes peer-to-peer micro finance facilities. Spread across the less developed Jakarta suburbs, VOX generally caters to a low-income population and has comparatively low transaction sizes.

Fintech innovations, another disrupter. Fintech, which by definition is a line of business based on using software to provide financial services, has made great strides in disrupting traditional banking services in several countries. For instance, Smartpesa is a Singapore based mPOS (mobile Point of Sales) provider which enables small merchants who cannot afford to have the systems in place to ordinarily accept credit card payments via a smartphone app. Another example where FinTech has taken the role of a bank is OneLyst, which connects licenced money borrowers to the portion of the society with lower income levels who need quick access to funds for medical and other urgent personal reasons. The key to its business is to financially empower these people who are unable to enjoy the benefits of the existing system due to lack of access to information and choices.

However, regulations and economies of scale continue to favour established players. Hence, in the long term, Fintech firms are likely to be absorbed by banks or work in collaboration with banks to provide certain services. In the long run, Fintech should not be considered by banks as a threat, as the future is more likely to be about the collaboration between Fintech players and banks, and not competition between them.

New products especially in the payment sector. Payments represent the platform for the entire banking relationship, and this platform is under attack. The average customer interacts with his or her bank at least twice a day for payment-related matters, such as buying a financial product or paying a bill. These interactions represent more than 80% of customer interactions with banks, making payments a superb platform, for cross-selling other financial services. Nonbank players such as telcos, local payment specialists and global players are keen to capture payment revenue. Players such as Alibaba in China, Globe in Philippines and PayPal across Asia Pacific are already gaining traction. The biggest payment company in Asia today is not a bank; it's Alipay. Nine months after entering the asset management business, Alibaba has become the world's fourth largest money market fund, with more than US\$80bn in holdings and more than 80m customers.

Looking at UK's experience. A study by Autonomous, a financial research firm, has revealed the following findings on costs incurred by banks in serving customers. According to the British Bankers Association (BBA), the footfall for branches has reduced by 30% in the last three years and the number of banking-related mobile applications has doubled in 2013. The development of alternative channels and lower footfall have led banks to trim their branch networks. Campaign for Community Banking Services, stated that in 2014, 350 bank branches were closed in the UK and predicts that the UK's 9,500-strong branch network will plummet to 7,000 by the end of 2018. Barclays has planned to cut down 400 branches, a quarter of its 1,600 in the UK in the medium term. This will cause the bank to slash 19,000 of its 140,000 jobs. Barclays plans to convert many of these branches into fully automated customer service centres.

Average cost of serving a client

Method	Cost (\$)
Branch Visit (per visit)	4.00
ATM (per transaction)	0.48
Online and Mobile (per transaction)	0.04

Source: Autonomous

UK branch closures due to digital disruption

Bank	Branches	Branches Closed	% Closed	Branches Left
HSBC	1095	65 (2014)	5.65%	1030
Lloyds Banking Group	2250	150 (2014)	6.66%	2100
Barclays	1515	89 (2014)	5.87% (25% more pending)	1426
RBS Group (Natwest and RBS)	1534	144(2014) 99 (2015)	9.39% (6.5% pending)	1500
Co-op	294	72 (2014) 57 (2015)	44%	165

Source: Companies

Rising usage of Mobile apps. According to a report by the BBA and Accenture, mobile banking tripled from 8% in 2010 to 27% in 2014. Lloyds Bank, for example, reported that the weekly use of its mobile app rose from 2.1m in 2012 to 4.7m in 2013 and 6.6m in 2014. BBA states that, with the growing demand for digital banking, 29 new firms applied for banking licences from the UK's financial regulator, Prudential Regulatory Authority (PRA) in 2014.

Where do ASEAN banks stand now. Are ASEAN banks ready to be digitally disrupted? The ASEAN banks have started to go digital, some faster than others. It appears that the initial focus on digitisation would be for retail customers and to some extent SMEs. We believe corporate accounts require less digitisation as they would involve relationship managers being able to provide advice and discuss on a full suite of financial solutions which may need to be tailor-made according to the needs of the corporates.

Industry Focus

ASEAN Banks

ASEAN Banks: Peer comparison

Bank	FYE	Mkt Cap (US\$m)	Price (LCY) 4/10/2015	Target Price (LCY)	% Upside	Rcmd	Share Price Performance (%)					Avg 6-mth Vol (m)	CAGR 14-16 (%)	PE (x)			P/BV (x)			Dividend Yield (%)			ROE (%)		
							YTD	1M	3M	6M	12M			14A	15F	16F	14A	15F	16F	14A	15F	16F	14A	15F	16F
Singapore																									
DBS*	Dec	37,143	20.50	NA	NA	NA	0	5	2	12	23	3.8	9	12.6x	11.9x	10.6x	1.4x	1.3x	1.2x	2.8%	3.0%	3.2%	11.5%	11.0%	11.5%
OCBC	Dec	30,967	10.64	12.70	19%	Buy	2	3	2	9	13	4.2	9	11.7x	10.7x	9.9x	1.4x	1.3x	1.1x	3.4%	3.8%	4.1%	14.1%	12.6%	12.2%
UOB	Dec	27,123	23.16	23.10	0%	Hold	-6	2	-1	4	6	2.2	7	11.6x	11.1x	10.2x	1.3x	1.2x	1.1x	3.3%	3.2%	3.5%	12.2%	11.6%	11.7%
Weighted average												8	12.0x	11.3x	10.2x	1.4x	1.3x	1.2x	3.1%	3.3%	3.6%	12.5%	11.7%	11.8%	
Simple average												8	12.0x	11.2x	10.2x	1.4x	1.3x	1.2x	3.2%	3.4%	3.6%	12.6%	11.7%	11.8%	
Malaysia																									
Affin Holdings	Dec	1,538	2.90	3.00	3%	Hold	0	0	-1	-12	-20	0.6	4	9.3x	9.3x	8.7x	0.7x	0.7x	0.7x	5.2%	5.4%	5.8%	8.4%	7.5%	7.8%
Alliance Financial Group*	Mar	2,020	4.78	NA	NA	NA	2	2	4	-1	4	1.3	5	13.1x	13.1x	11.9x	1.8x	1.7x	1.7x	6.2%	4.6%	5.0%	13.8%	13.3%	14.2%
AMMB Holdings	Mar	5,258	6.39	6.70	5%	Hold	-3	1	0	-5	-11	4.3	2	10.8x	12.1x	10.4x	1.5x	1.4x	1.3x	3.8%	3.8%	3.8%	14.2%	13.3%	12.5%
CIMB Group	Dec	14,212	6.18	6.00	-3%	Hold	11	7	16	-7	-17	9.2	14	16.6x	14.5x	12.9x	1.4x	1.4x	1.3x	2.4%	2.8%	3.1%	9.4%	9.7%	10.4%
Hong Leong Bank	Jun	7,022	14.30	17.60	23%	Buy	2	2	2	1	1	0.7	10	12.8x	11.7x	10.6x	1.9x	1.7x	1.5x	2.9%	3.0%	3.3%	15.3%	15.0%	15.0%
Maybank	Dec	23,846	9.37	9.90	6%	Hold	2	3	9	-3	-4	9.6	5	12.7x	12.9x	11.6x	1.6x	1.5x	1.5x	6.1%	5.7%	6.0%	13.6%	12.3%	13.2%
Public Bank	Dec	20,092	19.06	22.60	19%	Buy	4	5	9	4	-1	4.4	10	16.6x	15.0x	13.7x	2.7x	2.4x	2.2x	2.9%	3.0%	3.3%	18.5%	17.1%	17.1%
RHB Capital	Dec	5,766	8.21	8.20	0%	Hold	8	4	7	-8	-2	1.3	5	10.3x	10.1x	9.4x	1.3x	1.0x	1.0x	0.7%	2.9%	3.2%	12.2%	11.3%	10.8%
BIMB Holdings	Dec	1,684	4.00	4.10	2%	Hold	-2	-2	1	-6	-7	0.8	3	11.2x	11.2x	10.5x	2.0x	1.9x	1.7x	3.7%	4.5%	4.7%	18.8%	17.3%	16.9%
Hong Leong Financial Group	Dec	4,995	17.38	19.50	12%	Buy	5	3	5	-2	13	0.3	11	10.7x	9.8x	8.7x	1.6x	1.5x	1.3x	2.2%	2.4%	2.6%	15.8%	15.6%	15.9%
Weighted average (ex-HLFG)												8	14.4x	13.7x	12.4x	1.9x	1.7x	1.7x	4.0%	4.1%	4.3%	14.7%	13.8%	13.9%	
Simple average (ex-HLFG)												6	11.2x	10.8x	10.0x	1.5x	1.4x	1.5x	3.5%	3.6%	3.8%	12.9%	12.2%	12.7%	
Weighted average (ex-Public Bank, BIMB)												7	13.8x	13.3x	12.0x	1.6x	1.5x	1.5x	4.3%	4.5%	4.6%	13.3%	12.6%	12.8%	
Simple average (ex-Public Bank, BIMB)												6	11.8x	11.5x	10.4x	1.4x	1.3x	1.5x	3.9%	4.1%	4.3%	12.0%	11.5%	12.0%	
Indonesia																									
Bank Central Asia	Dec	28,722	15,050	14,100	-6%	Hold	15	5	16	18	38	11.9	17	22.5x	19.1x	16.5x	4.8x	4.0x	3.4x	0.8%	1.3%	1.6%	23.3%	22.9%	22.5%
Bank Danamon	Dec	3,765	5,075	5,600	10%	Buy	12	9	10	30	10	2.8	30	18.6x	13.2x	11.0x	1.5x	1.4x	1.2x	1.6%	2.3%	4.1%	8.1%	10.7%	11.8%
Bank Mandiri	Dec	21,674	12,000	13,200	10%	Buy	11	1	8	26	24	19.7	20	14.1x	11.9x	9.7x	2.7x	2.4x	2.0x	2.3%	1.8%	2.1%	20.9%	21.3%	22.3%
Bank Negara Indonesia	Dec	10,285	7,125	6,400	-10%	Hold	17	6	16	33	45	22.0	12	12.3x	11.1x	9.8x	2.2x	2.0x	1.7x	2.0%	2.4%	2.7%	20.2%	18.9%	18.7%
Bank Rakyat Indonesia	Dec	24,872	13,025	12,600	-3%	Hold	12	1	8	29	38	24.8	13	13.3x	11.8x	10.3x	3.3x	2.6x	2.2x	1.5%	1.7%	1.9%	27.4%	24.8%	23.1%
Bank Tabungan Negara	Dec	953	1,165	1,130	-3%	Hold	-3	3	-5	7	-5	42.3	24	10.8x	8.6x	7.0x	1.0x	0.9x	0.8x	3.9%	2.8%	3.5%	9.4%	11.0%	12.4%
Bank Tabungan Pensiunan Nasional	Dec	1,853	4,100	4,400	7%	Hold	4	-3	3	-8	1	0.1	16	12.4x	10.9x	9.3x	2.0x	1.7x	1.5x	0.0%	0.0%	2.7%	17.2%	16.5%	16.8%
Panin Bank	Dec	2,638	1,415	1,060	-25%	Hold	21	17	36	44	80	3.5	14	14.5x	12.0x	11.1x	1.6x	1.4x	1.3x	0.0%	0.0%	0.0%	11.9%	12.7%	12.2%
Bank Jabar Banten*	Dec	660	880	NA	NA	NA	21	-9	7	18	-22	14.7	14	7.6x	7.1x	5.9x	1.2x	1.1x	1.0x	8.1%	7.5%	8.4%	16.3%	16.9%	18.4%
Bank Jatim*	Dec	635	550	NA	NA	NA	20	5	9	27	16	12.6	20	8.7x	7.1x	6.1x	1.4x	1.2x	1.1x	n.a.	6.7%	7.2%	16.0%	18.1%	19.4%
Bank Bukopin*	Dec	506	720	NA	NA	NA	-4	-5	-5	2	13	4.9	27	9.0x	6.4x	5.6x	n.a.	0.8x	0.7x	n.a.	3.7%	4.3%	n.a.	16.4%	15.0%
Weighted average (ex-unrated banks)												17	16.3x	14.0x	12.0x	3.3x	2.8x	2.4x	1.5%	1.6%	2.0%	22.3%	21.6%	21.3%	
Simple average (ex-unrated banks)												18	14.8x	12.3x	10.6x	2.4x	2.0x	1.8x	1.5%	1.5%	2.3%	17.3%	17.3%	17.5%	
Weighted average (ex-BBCA)												17	13.7x	11.8x	10.0x	2.7x	2.3x	1.9x	1.8%	1.8%	2.2%	21.9%	21.0%	20.8%	
Simple average (ex-BBCA)												19	13.7x	11.4x	9.7x	2.0x	1.8x	1.5x	1.6%	1.6%	2.4%	16.5%	16.5%	16.8%	
Indonesia Multifinance																									
Adira Dinamika Multifinance	Dec	680	6,375	NA	NA	NR	-11	-17	-5	-9	19	0.1	14	8.0x	8.2x	6.9x	1.6x	1.4x	1.3x	42.4%	8.2%	9.8%	15.7%	20.6%	22.4%
BRI Finance	Dec	321	2,675	3,100	16%	Buy	7	-16	-5	-9	19	0.2	12	7.3x	6.2x	5.4x	1.1x	1.0x	0.9x	5.2%	5.8%	6.6%	15.7%	15.7%	16.2%
Clipan Finance	Dec	125	405	480	19%	Buy	-8	0	-6	-7	0	0.8	11	3.8x	3.8x	3.4x	0.5x	0.4x	0.4x	0.0%	4.8%	5.4%	13.2%	12.7%	12.9%
Weighted average												12	6.3x	5.5x	4.8x	0.9x	0.8x	0.7x	3.8%	5.5%	6.3%	15.0%	14.8%	15.3%	
Simple average												12	5.6x	5.0x	4.4x	0.8x	0.7x	0.6x	2.6%	5.3%	6.0%	14.4%	14.2%	14.6%	
Thailand																									
Bank of Ayudhya	Dec	9,945	44.00	NA	NA	NR	-2	-20	-12	-7	13	2.5	24	15.3x	11.8x	9.9x	2.0x	1.8x	1.6x	2.2%	2.8%	3.4%	13.6%	15.9%	16.7%
Bangkok Bank	Dec	11,173	190.50	220.00	15%	Buy	-2	4	0	-4	2	4.9	5	10.0x	9.8x	9.1x	1.1x	1.0x	1.0x	3.4%	3.7%	3.7%	11.7%	11.1%	11.0%
KASIKORN BANK	Dec	17,208	234.00	280.00	20%	Buy	2	3	2	3	26	5.5	11	12.1x	11.2x	9.9x	2.2x	1.9x	1.6x	1.7%	1.9%	2.1%	19.4%	18.1%	17.7%
Krung Thai Bank	Dec	10,178	23.70	30.00	27%	Buy	4	3	5	1	25	37.8	8	10.0x	9.2x	8.5x	1.4x	1.3x	1.2x	3.8%	4.0%	4.2%	15.2%	14.7%	14.4%
Siam Commercial Bank	Dec	18,513	177.50	210.00	18%	Buy	-2	0	-4	0	9	5.4	8	11.3x	11.0x	9.6x	2.1x	1.9x	1.7x	3.4%	3.7%	3.9%	20.1%	18.1%	18.4%
Thanachart Capital	Dec	1,260	34.00	36.00	6%	Hold	7	-3	5	-3	-6	2.7	4	8.0x	7.8x	7.4x	0.8x	0.8x	0.7x	4.5%	5.0%	5.6%	10.4%	9.9%	9.9%
Tisco Financial Group	Dec	1,132	46.00	44.00	-4%	Hold	8	1	1	8	10	1.1	6	8.7x	8.3x	7.7x	1.4x	1.3x	1.2x	4.3%	4.9%	5.2%	17.4%	16.3%	16.0%
Thai Military Bank	Dec	4,107	3.06	3.60	18%	Buy	5	-16	-16	23	55	117.4	13	14.0x	12.3x	10.9x	1.9x	1.7x	1.5x	1.6%	2.0%	2.3%	14.5%	14.7%	14.7%
Kiatnakin*	Dec	998	38.50	NA	NA	NA	-3	1	-3	-4	-16	0.9	27	12.3x	9.2x	7.6x	0.9x	0.9x	0.8x	4.9%	5.6%	6.4%	7.4%	9.6%	10.7%
Weighted average												11	11.7x	10.7x	9.5x	1.8x	1.6x	1.4x	2.9%	3.2%	3.4%	16.5%	15.8%	15.9%	
Simple average												12	11.3x	10.1x	9.0x	1.5x	1.4x	1.3x	3.3%	3.7%	4.1%	14.4%	14.3%	14.4%	

Based on Bloomberg consensus

Source: Companies, Bloomberg Finance L.P., DBS Bank

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BUY (>15% total return over the next 12 months for small caps, >10% for large caps)

HOLD (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

FULLY VALUED (negative total return i.e. > -10% over the next 12 months)

SELL (negative total return of > -20% over the next 3 months, with identifiable catalysts within this time frame)

Share price appreciation + dividends

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DBS Bank Ltd.

12 Marina Boulevard, Marina Bay Financial Centre Tower 3

Singapore 018982

Tel. 65-6878 8888

Company Regn. No. 196800306E