

RESEARCH 2017

THE MILLENNIAL INFLUENCE

HOW MILLENNIALS OF ASIA WILL SHAPE
TOMORROW'S PAYMENTS LANDSCAPE

INTRODUCTION



As Bank of Thailand's technology partner for the launch of the PromptPay e-payment platform in Thailand, and the company behind The Clearing House's Immediate Payment Service in the US, Faster Payments Services in the UK and FAST in Singapore, Vocalink has been at the forefront of the evolving payments landscape for over 50 years.

We see thought leadership, proprietary research, market analysis and opinion sampling as central to our offer. As providers of the infrastructure through which so much of business and personal commerce is conducted, we are uniquely well-placed to explore and offer insight on emerging trends in the way people and organisations want to access and move their money. At the same time, customer insight is a vital part of our own product and strategy development, so research like this serves a dual purpose to inform thinking across our industry and to enlighten and drive our own innovation.

This research into South East Asian millennials' payments behaviour completes our examination, for now at least, of the opinions of perhaps the most studied of all generations in recent times. But we have an ongoing commitment both to inform and shape the discussion about the future of

payments systems, to understand what millennials are doing and thinking as they mature, and to explore the habits and perceptions of the generations that follow.

Millennials are coming of age - the oldest of them are hitting the peak of their economic productivity and their greatest purchasing power. Meanwhile the youngest are exploiting technology in ways we never anticipated, and contending with the economic realities of a world that appears to have faltered in its previously inexorable progress. Their choices, their behaviours and their concerns will profoundly shape developments across every spectrum of business and commerce, and nowhere more so than in the way they move and exchange their money. The first phase of our research focused on the US. We then looked at Europe, and now we are examining the views and behaviours of millennials in South East Asia. Our purpose is to understand how millennials feel about the way they move money - how they pay and how they are paid - and, in particular, to take their temperature with regards to mobile payments, the next major development in banking and one in which they are heavily invested.

Hearing what millennials around the world think has been fascinating, and the compulsion to jump in, make comparisons between millennials' views in different regions and draw conclusions is almost overwhelming - the data is so rich. But before we make those comparisons - and we will - it's absolutely vital that we let the region and market-specific insights land properly; let them sink in so that we appreciate the nuances and can reflect on what they mean in the context of these individually huge markets. You only have to consider the endurance of the cheque in the US while it dies in Europe, or consider the enhanced role of the ATM in Thailand to see that drawing universal conclusions is a dangerous game.

I hope you find these insights and themes both interesting and useful and encourage you to continue the debate through our online hub Vocalink CONNECT.

CARA O'NIONS
MARKETING AND CUSTOMER
INSIGHT DIRECTOR

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WHAT ARE WE TALKING ABOUT?

This is, by definition, a technical subject so let's start by being clear about our references and meanings.



LAPTOP OR PC

This a general term used to describe all conventional home or office-based desktop and laptop computers, specifically including Apple's Mac range of PCs and laptops.



MOBILE PAYMENT

A mobile payment is any payment made from or via a mobile phone. This could be using an application that sits on top of a contactless payment system such as Apple Pay, usually used to pay for low value goods in a store. It could also be buying an app, music, digital content or shopping through a mobile phone. In this way, most of us who have smart phones have made mobile payments at some point.

Mobile payments therefore offer, and are increasingly being valued as, an alternative to conventional payments methods such as cash, cheque and credit or debit card.



MOBILE BANKING

This means accessing and managing your bank accounts via a mobile phone - simple as that. For the purposes of this paper, if a person accesses their account via a tablet while out and about - in a coffee shop for example - that isn't mobile banking, it's online banking.

It is also possible to make a digital interbank payment via a mobile banking app, but that wouldn't count as a mobile payment either. In this study, mobile payments refers to payments services operated under financial regulation and performed via a mobile device. So, while all mobile payments are digital, not all digital payments are mobile.



MILLENNIALS

For our purposes, millennials are the generation of people born between the early 1980s and the years leading up to 2000 i.e. those who approached adulthood at or since the turn of the millennium and who are now 18-35.

P2P

Peer-to peer

P2B

Person-to-business

B2B

Business-to-business

OUR AIMS AND APPROACH

12,102

MILLENNIALS WERE SURVEYED, ACROSS 8 COUNTRIES



SINGAPORE
1,018

3,042

MILLENNIALS WERE SURVEYED IN SOUTH EAST ASIA



MALAYSIA
1,019



THAILAND
1,005

Much has been written and said about the millennial generation - their attitudes and expectations, ambitions and concerns and, perhaps most of all, their behaviours.

They are, above all else, digital natives - they've never known a world without the internet and increasingly they can't imagine a world where most people didn't carry a phone in their pocket or bag. And, given that there are so many millennials, it's not surprising to see the digital world tracking their behaviours closely and looking for signs of what will be the 'next big thing'.

The dramatic spread of mobile phone technologies around the world, in both developed and developing economies, and the rapid pace of developments in the payments industry, prompt some important questions: How do millennials pay for goods and services? How do they want to pay for goods and services? How do they receive payment? And, how do they see behaviours and

preferences evolving as technology continues to advance and offer new alternatives?

As a pioneer in the development and integration of new payments systems, Vocalink has an important role to play, both in understanding the perceptions and behaviours of millennials, and also in helping the wider financial and commercial world to understand how millennials' preferences will impact their demands for products, services and the infrastructure that supports commerce.

So, we set out to research how millennials are using the payment technologies and methods currently available to them. We've looked at the US and European markets and in this report we are turning our attention to South East Asia, specifically to Thailand, Singapore and Malaysia.

We held focus groups with millennials - men and women aged between 18 and 35 - and surveyed the opinions and

behaviours of over 3,000 millennials across these three territories through the leading market research provider Ipsos MORI.

The specific aims of the study were to:

- Understand how technology and social media influences the lives of millennials
- Explore attitudes and trends in millennials' current payment behaviour - and examine how this may evolve in the future, looking in particular at:
 - Banking behaviour
 - How money comes in and goes out of their accounts, including P2P, regular financial commitments, transport and day-to-day consumption
- Explore how millennials see and want payments to operate in the future

MILLENNIALS AND THEIR MOBILES



50%

OF THAI AND SINGAPOREAN
MILLENNIALS USE AN IPHONE



65%

OF MALAYSIAN MILLENNIALS
USE A PC OR MAC



12%

OF MILLENNIALS IN THAILAND
USE A WEARABLE DEVICE

MILLENNIALS LOVE SMART PHONES

By definition, almost all millennials in our sample are smartphone users. As the smartphone market has matured, two brands - Apple and Samsung - have emerged as leaders in South East Asia.

With 50% of the millennial market, Apple's iPhone is the leader in both Singapore and Thailand, with Samsung trailing at 43% and 45% respectively. However, in Malaysia the picture is reversed: just 28% of millennials use iPhones while 42% use Samsung smartphones. Apple's leadership of the millennial phone market in Thailand is interesting because it differs so significantly from the figures for share across all age groups where Android has 74% of the market and Apple just 17%.

It is also worth noting that in Singapore especially, it is the latest models of iPhone that attract millennials:

for example, 42% are using an iPhone 6 or newer, which is a higher percentage even than that recorded in the US (40%). The effect is less marked in Thailand and Malaysia but it's still fair to say that a very significant proportion of millennials in these territories are communicating on the latest models of their favourite brands.

// I can't live without my cell phone. I use it to connect with people, to remind me what I have to do, to wake me up and to transfer money. //
Thailand 18-24

However, while these brands are foremost, other Android smartphones have a significantly higher penetration in Malaysia and Thailand than in any of the other territories we explored. In fact, 52% of millennials in Malaysia are using 'Other brands of Android Smartphone', which is the second largest single block in our entire survey after iPhone users in the US. With other Android

smartphones at 40% in Thailand and 26% in Singapore, it would appear that the dominant brands face much more serious competition in South East Asia, most notably from Huawei. These figures also suggest that, in Malaysia and Thailand in particular, a significant number of millennials are using more than one smartphone. Our cross-market summary will show that this dual usage is significantly less marked in other territories.

LAPTOPS AND PCS HANG ON

Millennials in South East Asia continue to use laptops and PCs significantly more than they do tablet computers. Laptops and PCs are used by 58-68% of our sample, with the lowest figure recorded in Thailand. Tablets are used by 40-46% of millennials, meaning that the percentage point difference in the use of these two platform is just 12% in Thailand - the smallest gap of any of the countries surveyed across the US, Europe and South East Asia.





85%

OF THAI MILLENNIALS AGREE THAT TECHNOLOGY GIVES THEM MORE FREEDOM OF MOBILITY



78%

OF MALAYSIAN MILLENNIALS AGREE THEY LIKE TECHNOLOGY THAT ALLOWS THEM TO TAILOR THINGS TO FIT THEIR NEEDS



79%

OF THAI MILLENNIALS AGREE THEY COULDN'T LIVE WITHOUT THEIR SMARTPHONE

WEARABLE TECHNOLOGY GAINING GROUND

Wearable technology, in the form of fitness trackers, GPS watches and most famously the Apple Watch is starting to gain traction in South East Asia and, perhaps surprisingly, its use is highest in Thailand. Twelve percent of millennials in Thailand were using wearable technology, while the figure was 10% in tech-hub Singapore and 8% in Malaysia.

TECHNOLOGY THAT MAKES LIFE EASIER

South East Asian millennials love their smartphones. In fact, 79% of Thai and 72% of Singaporean millennials say they couldn't live without them. In Malaysia the figure is lower, at 63%, but still illustrates the strength of the relationship millennials in this part of the world have, just like in the US and Europe, with a device that has existed for less than 10 years.

Technology is empowering for millennials and they value both the freedom and control it offers. Across the board, more than three quarters of South East Asian millennials agree that 'Technology gives more freedom of mobility' and that they 'Like technology

that allows to tailor things to fit my own needs.' In a continuation of the passion for smartphones outlined above, these feelings are most strongly felt in Thailand, then Singapore and then Malaysia - although the gap between Singapore and Malaysia is very small.

The convenience and control that millennials value in technology is also reflected in their very positive attitudes towards mobile banking. Four in five Thais (80%) agree that mobile banking is 'easy to use', and nearly three quarters of Singaporeans agree (74%). While the figure is slightly lower for Malaysians (67%), it still indicates a comfort and familiarity with the idea of managing money via mobile technology that is at least equal to that shown in mature economies in Europe. These figures also highlight a pattern within South East Asia that we will see again and again in this report. Millennials in Thailand are very enthusiastic users of mobile technology and have warmly embraced its liberating potential. Singaporeans display a similar, if slightly less pronounced, view and Malaysians too are positive but not as much as their peers in the other two South East Asian countries we surveyed.

Similarly, Thai millennials welcome banking and payments functionality through their mobile phones more

than their South East Asian peers do, but overall the positive appetite for this kind of functionality is stronger in South East Asia than it is in Europe, and stronger or equal to that felt in the USA. Overall, the greatest enthusiasm is for being able to view a live balance when making a payment with a mobile phone. The facility to manage all accounts via a single app or website showed the greatest divergence of views, with four in five Thais (80%) welcoming this but a lower, if still strong, level of agreement in Malaysia (65%).

Looking beyond our survey sample, it is interesting to note that, according to Bangkok Post, 16 million Thais have downloaded mobile wallet apps from the three main mobile operators, although to date fewer than 3 million are active users. It's also worth pointing out that even in Malaysia, which appears to show a relatively lukewarm preference for this functionality, the figure still represents a substantially stronger positive response than that seen in Europe, except Italy (65%). In the US it was 74% - well behind Thailand. It's clear that millennials in South East Asia want to have greater control over their finances and that many are experimenting with new tools for achieving that, especially in Thailand.

SOCIAL MILLENNIALS

Alongside the growing reliance on smartphones, and supported by it, social networking is perhaps the other defining behavioural trait that millennials around the world share. They are connected in ways not previously possible and increasingly regard online communication not as a proxy for 'real' relationships but as an integral part of modern relationships and self-expression.

In South East Asia, around three-quarters of millennials regard 'social networking as an essential method of communication'. Paradoxically, a similar proportion of them are 'concerned about the amount of information available about me on social media', with marginally more Singaporeans (79%) expressing concerns than their counterparts in Thailand and Malaysia (both 75%). The correlation between the figures for 'essential' and 'concerned' across all three of these countries is striking: Singapore 72/79, Malaysia 74/75 and Thailand 79/75. Millennials are committed to social networking but simultaneously fear the consequences of sharing so much online.

Given their growing reliance on social media, we asked millennials how often they use different platforms. Unsurprisingly, given its ubiquity, Facebook has the highest proportion of millennials using it at least daily compared to all other social media platforms asked about in our survey, across all three South East Asia countries. In Thailand, 90% of millennials are active on Facebook while 85% of Malaysians and 77% of Singaporeans favour this channel.

The figures are again comparable to the US (78%) and Italy (79%). In Thailand 90% of millennials are active

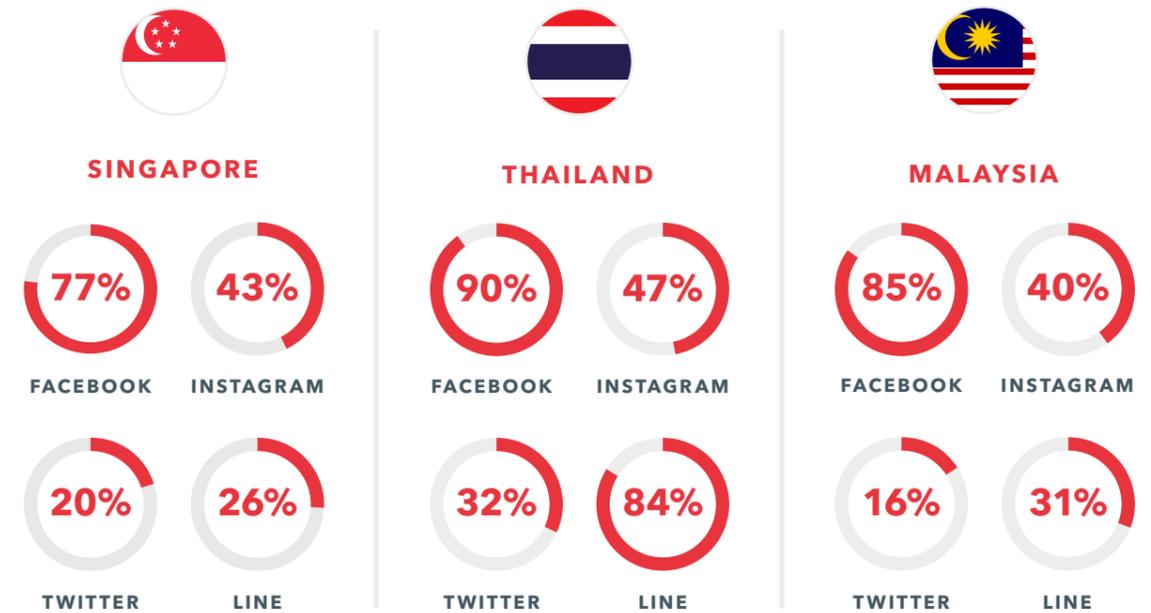
on Facebook at least daily, compared to 85% in Malaysia and 77% in Singapore.

Instagram is also making headway, with 47% of Thais, 43% of Singaporeans and 40% of Malaysians using it at least daily, while Twitter is also popular with use ranging from 32% in Thailand to 16% in Malaysia. Millennials, particularly the younger ones, are also enjoying the brevity of Snapchat, though more so in Singapore where 15% of millennials are regular users, compared with 10% in Malaysia and 9% in Thailand.

More interesting though is the high use of the instant messaging app LINE, particularly in Thailand where, at 84%, regular usage is almost as high as that of Facebook. Thailand is LINE's second largest market after Japan, with around 33 million users. Figures for LINE are less impressive for Malaysia (31%) and Singapore (26%), but usage is substantially higher than for either Twitter or Snapchat in all three territories. As well as instant messaging, LINE offers mobile payment and e-wallet functionality through LINE Pay and in 2015 a LINE spokesperson confidently predicted that at least 10% of its Thai user base would be using this facility within the year. In late 2016, LINE unveiled Citi LINE Connect, a new partnership with Citibank Thailand that allows Citi customers to register their

cards and then manage their accounts and receive transaction updates via LINE. It's early days for this new venture but, as we shall see page 23, millennials appear to like the idea of new payment technologies being delivered through or in collaboration with major banks. At the same time, LINE has linked up with e-money service Rabbit and its 5 million users to launch Rabbit LINE Pay, Thailand's first integrated online and offline payment platform.

In keeping with patterns of behaviour that we have already seen in this report, Thai millennials appear to be especially engaged with social media, though the gap between Singapore and Malaysia is less marked, and Malaysians are in fact heavier users of LINE than their Singaporean peers.



MILLENNIAL MIX

It is worth remembering that millennials are not a homogenous slice of the population: they aren't all the same. At the younger end of the group, millennials are starting their first full-time jobs or heading off to university, whereas millennials in their early 30s may already have children, own their own homes and be rapidly advancing in their careers. Equally, they do not all have the same career trajectories or lifestyles. The stereotypical image of a millennial is of a metropolitan, tech-savvy hipster, when in fact a millennial in Bangkok is just as likely to be driving a tuk-tuk taxi as he or she is to be sitting in the back being driven, while a Malaysian millennial might just as easily be assembling products in a factory or planting crops in a field as designing the latest life-enhancing gadget. Or they could be unemployed.

Social media means different things to different people, and millennials are no exception. Younger millennials access different social media platforms and use them in different ways to older ones. Facebook and Twitter have similar appeal to millennials of all ages, with the exception of Singaporean 18-24 year olds who, at 27%, are heavier users of Twitter than 25-29 or 30-35 year olds (15% and 16%). Moving away from these

two dominant platforms we can see that, perhaps unsurprisingly, younger millennials are generally making greater use of social media. There are small variations by age across platforms such as Tumblr, Google+ and even LinkedIn, where one might have anticipated stronger use by career-focused older millennials. In fact, it's LINE in Thailand and Malaysia where use is 10 and 11 percentage points higher among 30-35 year olds that seems to appeal more to older millennials. Younger millennials in all three territories are heavier users of Instagram and Snapchat in Singapore and Malaysia, with Singapore being the country where there is the greatest disparity between younger and older millennials.

Within the scope of this study, the other area in which millennials differ by age is the complexity of their incomes and outgoings. Millennials in South East Asia have increasingly diversified income streams. While regular wages and salaries are still the norm, discussions in our groups suggested that millennials in Thailand and Singapore are supplementing their incomes with freelance jobs - such as teaching and appearing as extras in movies - and activities such as selling used items or running online shops using platforms such as Carousell, Shopee and Gumtree. Others have

been successful in turning their leisure activities into revenue streams including gardening and playing video games online 'professionally'.

At the same time, millennials also receive payments from all the sources that we have seen in our European and US surveys - parents and extended family, investments, loans, tax refunds and cash back offers. In broad terms, younger millennials have more complex incoming payment patterns, with multiple sources of income, while older millennials have more complex outgoings, with, for example, family expenses and mortgages added to general expenditure.

All of these sources of income and outgoings require millennials to engage with the payments industry and, in many cases, to explore new payments channels.

As well as socialising online, millennials are increasingly taking to their screens to shop, with respondents in our groups in all three territories alluding to their hectic pace of life and the high cost of living as drivers towards the rise of online shopping. Many millennials associate online shopping with better value and lower prices, as well as convenience.

MILLENNIALS AND THEIR MONEY

Millennials in South East Asia are living very different lives to any generation that has preceded them, with technology and connectivity driving changes in behaviours and perceptions.

Technology is also making possible new ways of buying and selling, paying and being paid. We set out to understand how millennials' attitudes and habits around the movement of money are changing - and how they would like them to change further.

When it comes to the major payments in - salary or wages for work and payment for goods sold on the internet - bank transfer is the dominant method.

Between 70% and 76% of millennials in all three territories receive at least some of their pay via bank transfer. However, there are other routes: 32% in Thailand and 26% in Malaysia are paid in cash, while 23% in Malaysia and 18% in Singapore receive payment by cheque. More noteworthy is the fact that 18% of Thai millennials receive payment 'from a place of work' via an app or functionality on their mobile phone. This is the highest level of mobile payment for work that we found anywhere in our survey - the closest was in the US where

13% receive pay this way. Interestingly, 14% of Thai millennials receive payment from a place of work via PayPal, which did not feature significantly for either Malaysia or Singapore.

The picture for payments for goods sold through internet auctions is, understandably, more nuanced. In Singapore and Malaysia, 57% and 56% of millennials receive such payments, but in Thailand the figure is 72%. Of these online sellers, more than half in Singapore and Thailand receive payment via bank transfer, while 71% do so in Malaysia. But, at least a third in all three countries receive payment in cash - presumably when the 'customer' collects the items they have bought. PayPal is also popular: 36% of internet sellers in Thailand, 14% in Singapore and 12% in Malaysia receive payment this way.

The emerging picture of Thai millennials as more 'mobile-minded' is further strengthened by the fact that 31% of

them receive payment for internet-auctioned items via app or functionality on a mobile or tablet, while in Malaysia and Singapore it's just 20% and 14% respectively.

MONEY MANAGEMENT

The advent of online banking and banking apps offers users enormous benefits in terms of flexibility and convenience. How have millennials responded?

Millennials in South East Asia appear to have embraced online banking enthusiastically, particularly in Singapore and Malaysia, where online channels are the preferred means of managing finances. Thailand, however, is different. Offline remains the preferred channel and, while it may seem counter-intuitive given Thai millennials' comfort with the digital world, this may in fact be associated with their preference for managing their finances through ATMs. This

functionality is available in some other countries but appears not to have gained such a strong grip on people's behaviour. A closer examination of the data indicates that when Thai millennials do manage their finances online, they are slightly more likely to have done so through their smartphones rather than via a PC or laptop, which is definitely not the case in either Malaysia or Singapore.

Looking at banking activities carried out in the last three months*, the most common activities are checking balances and reviewing transactions, transferring money between accounts, making and receiving payments, and paying bills. Interestingly, between

62 - 67% of millennials still deposit cheques, which is substantially more than in Europe, and the vast majority of them (87-89%) do so in branches or via ATMs, rather than using photo and scanning apps available through PC/laptops and smartphones.

// I pay cash for my mobile bill at 7-11. It's quick and convenient. //
Thailand 18-24

For everyday banking and financial management activities, millennials in Singapore and Malaysia have emphatically made the switch to online, while their Thai counterparts continue to

value a physical interface when moving their money - which is itself interesting given the relative inconvenience of visiting branches and the potential risk associated with using ATMs.

*at the time of survey

// I often use mobile banking to transfer money. But I don't want to pay 25 baht to transfer to another bank, so I'll go to the branch or use an ATM to deposit money into that account. //
Thailand 25-35



41%

OF THAI MILLENNIALS STILL WRITE CHEQUES, COMPARED TO 28% IN MALAYSIA AND 29% IN SINGAPORE



67%

OF MALAYSIAN MILLENNIALS AGREE THAT MOBILE BANKING IS EASY TO USE



48%

OF SINGAPOREAN MILLENNIALS WHO REGULARLY CHECK THEIR ACCOUNT, DO SO VIA MOBILE PHONE

THE ENDURING CHEQUE

The humble cheque has been in decline for years, overtaken by faster, safer and more convenient methods of payments. However, cheques stubbornly cling on in some countries, notably the US, and also in South East Asia. In Thailand, 41% of millennials continue to write cheques, while 29% of their peers in Singapore and 28% in Malaysia do the

same. And it's not just the occasional cheque: millennials who write cheques do so between 10 and 13 times per month. For a generation that has so enthusiastically embraced the digital life, the persistence of the analogue cheque book may seem either quaint or perverse. Cheques are costly, inconvenient and slow - for everyone.

Their persistence demonstrates the failure of banks and others to adequately promote the alternatives and more energetically recruit customers of all ages, and especially digital champions like millennials, to modern, cost-effective payment mechanisms.

MILLENNIALS AND PAYMENTS

Millennials have already shown themselves to be comfortable with the emergence of new technologies in finance, but which methods do they favour when they are making payments themselves?

It's worth remembering that, in this respect at least, many transactions are governed by the seller and how they choose to accept payment - or, in some cases, whether there is any alternative to cash.

Looking first at person-to-person payments (P2P) - to friends, family and other individuals - 64% of millennials in Malaysia use cash, while it's 62% in Singapore and 57% in Thailand. Bank transfer is the next most commonly used method in all markets followed by credit/debit cards. However, at least one in 10 millennials now make P2P payments via a mobile platform. Singaporeans are the slowest to make the switch to mobile with just 11% of P2P payments made this way, but it is more common in Malaysia (14%) and Thailand (12%).

For sending payment to an individual in another country, the picture is much more complex. Just over half of millennials need to make international P2P payments and they use a variety of methods to do so. In Singapore, millennials are most likely to use bank transfer (43%) followed by credit/debit cards (33%), but money transfer companies at 22% and PayPal at 20%

are now a favoured alternatives for a sizeable proportion.

// When I buy street food, I have to pay cash because the food vendor won't accept any other form of payment. But when I buy groceries at the supermarket, I can pay cash or credit card or debit card because they offer these choices. //
Thailand 25-35

Remarkably, in each market there is little difference between the proportion of millennials who use mobile payments for international P2P transactions, and those who simply send cash. In fact, in both Singapore and Malaysia cash is by a narrow margin the most common method for sending international payments despite the risks this entails, which may suggest some concerns about the security or reliability of mobile payment platforms.

In Thailand, however, the picture shows a more even spread of use across different channels. Credit/debit cards are the commonly mentioned method for sending P2P payments internationally (45%), just ahead of bank transfer (42%). PayPal is also a common channel with 35% of Thais sending money this way. But with 35% of Thai

millennials sending money via mobile platforms - double the proportion in either Singapore or Malaysia - Thailand is easily the most mobile-minded of these three markets for this activity. It's perhaps worth remembering that some of this P2P traffic is in fact commercial, the result of internet-based 'auction-style' transactions and PayPal is very well established in this arena.

// No choice. [We] will still need cash, until the uncles at the hawker accept credit card. But they won't. //
Singapore 25-35

In fact, while mobile is by no means the most popular channel, Thai millennials are significantly more likely to use mobile payments across all the forms of expenditure that we reviewed than their peers in Singapore or Malaysia. Across all four groups of expenditure - P2P, financial commitments, transport, and consumption - use of mobile payments does not dip below 24%, whereas the highest level of mobile use in either of the other countries is in Malaysia where 25% of millennials use mobile to pay their utility bills, six percentage points higher than the next highest, where 19% of Singaporeans pay their utility bills this way.

21%

OF SINGAPOREAN MILLENNIALS WHO USE PUBLIC TRANSPORT PAY VIA A PRE-PAID CARD

69%

OF MALAYSIAN MILLENNIALS PAY FOR GROCERIES WITH CASH VS 61% BY CARD

25%

OF THAI MILLENNIALS WHO REGULARLY LEND MONEY TO PEOPLE, DO SO VIA MOBILE PAYMENT

33%

OF THAI MILLENNIALS WHO SEND INTERNATIONAL PAYMENTS, DO SO VIA CASH

75%

OF SINGAPOREAN MILLENNIALS RECEIVE THEIR SALARY BY BANK TRANSFER, WITH ONLY 12% PAID IN CASH

57%

OF SINGAPOREAN MILLENNIALS SELL GOODS ONLINE, 56% BY BANK TRANSFER AND 25% VIA PAYPAL

Not surprisingly, cash and cards are the most widely used methods of payment for transport with around three quarters of millennials in Thailand and Malaysia, and half in Singapore paying in cash. Pre-paid cards are also an important option in Singapore with 21% paying for transport this way. Perhaps more interesting though is the uptake of mobile payment for transport: 12% in Singapore, 18% in Malaysia and 33% in Thailand.

// You can't survive without carrying cash in Thailand. //
Thailand 18-24

When it comes to everyday consumption - groceries, snacks and lunches, entertainment and dining out - millennials tend to pay by card or cash. That's not surprising, although it is interesting to see how much more often cash is mentioned as a method of payment than card in Malaysia and Thailand (79% vs. 39% and 72% vs. 41%

respectively) for everyday eating out, and that Singaporeans are more likely to mention cards over cash (84% vs. 51%) when dining or going out. Even for tech-equipped millennials, cash continues to be a very important part of their everyday payment mix - possibly as a function of the lack of availability of other payment options at small-scale eateries, street vendors, shops and in some taxis.

UTILITIES AND HOUSING - THE PREDICTABLE SIDE OF PAYMENTS?

Utility bills and housing costs offer an insight into the complexity and fragmentation of payments in these territories. Regular and fairly predictable, these kinds of payments ought to be easily managed and therefore illustrate how millennials like to manage their money when spontaneity is not a factor.

In Singapore the most commonly used method for paying utility bills is credit/debit card (58%) and the next most used channel is bank transfer (31%), ahead of

cash (20%). In Malaysia, cash and cards (both 51%) lead, with bank transfer at 46%. In Thailand, cash is used most often (61%) just ahead of cards (58%) with bank transfer (32%) trailing behind mobile payments (42%).

Just 44% of millennials in Singapore make rent or mortgage payments, compared with 68% in Malaysia and 70% in Thailand, suggesting that many either live with their families or share accommodation costs with another and possibly then view their share as

a P2P payment. In Singapore, 39% of those paying for housing do so by bank transfer and 36% by card. Bank transfer (51%) is also the most commonly used method of payment in Malaysia, ahead of cash (41%) and card (26%). But Thailand again stands out with 57% of millennials paying for housing with cash, and 34% using either bank transfer or card. Mobile is also a significant channel in Thailand with just under a quarter paying this way.

THE MILLENNIAL INFLUENCE

SOUTH EAST ASIA MILLENNIALS AND THEIR MONEY



18%

of Malaysian millennials who use public transport, pay via a mobile payment



69%

of Thai millennials send International payments, 33% do so via cash



69%

of Malaysian millennials pay for groceries with cash vs 61% by card



41%

of Thai millennials still write cheques, compared to 28% in Malaysia and 29% in Singapore



57%

of Singapore millennials sell goods online, 56% by bank transfer and 25% via PayPal



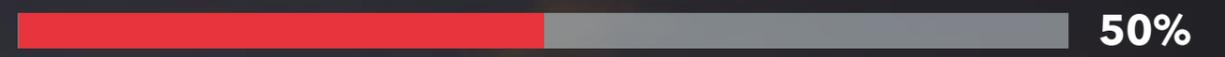
75%

of Singapore millennials who receive a salary do so by bank transfer, with only 12% paid in cash

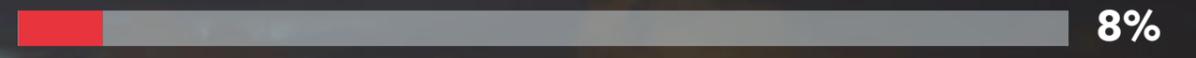
TECHNOLOGY



Thai and Singaporean millennials use an iPhone



Malaysian millennials use a wearable device



SOCIAL



of Thai millennials use Facebook at least once a day



of millennials in Singapore have concerns about the amount of information available to them on Social Media

MOBILE PAYMENTS

At least

8 in 10

Millennials across the 3 countries surveyed have experienced problems whilst making a mobile payment



43% of millennials in Singapore are currently using mobile payments, 31% have never tried



of millennials in Malaysia that have tried mobile payments have since lapsed

83%



Thai millennials would be more likely to use a new mobile payment service if provided by their own bank

THE FUTURE

At least

7 in 10

millennials in the 3 countries surveyed agreed that they would like to see their available balance to spend when they make a mobile payment



At least

70%

of millennials in the 3 countries surveyed agreed that they would like to be able to make instant payments, regardless of who they bank with



70%

of Thai millennials agree that they would use eye scans to verify payments

OBSTACLES AND ISSUES

We've seen that different payment methods are popular for different kinds of transactions in these markets. Our focus groups allowed us to understand some of the issues and concerns that shape South East Asian millennials' use of different payment methods.

Thailand stands out as a market in which a very significant proportion of financial management is conducted through ATMs - transferring funds, paying bills and depositing cash, as well as the usual withdrawals and balance checks - and this, combined with the convenience and low cost of mobile alternatives may go some way to explaining the country's relatively low engagement with online banking.

In Malaysia, participants in our groups talked about the risks of carrying a lot of cash, and also the difficulty of accessing cash late at night. In Thailand many card operators require applicants to demonstrate an income of at least 15,000 Baht, while operators in Malaysia set an age threshold of 21.

Millennials in all three territories also voiced frustration at not always being able to access contactless terminals and/or having cash cards that lack debit functionality, or, in Malaysia, at unacceptable processing times of 20-30 seconds that make cards uncompetitive with cash.

They also resent the bank fees that are levied on bank transfers - both within bank and inter-bank, and internationally. In Malaysia, different fees may be levied according to the speed of transfer, while in Thailand the fee is dependent on the sum involved. For savvy millennials, these charges serve as obstacles to the evolution of payment behaviours.

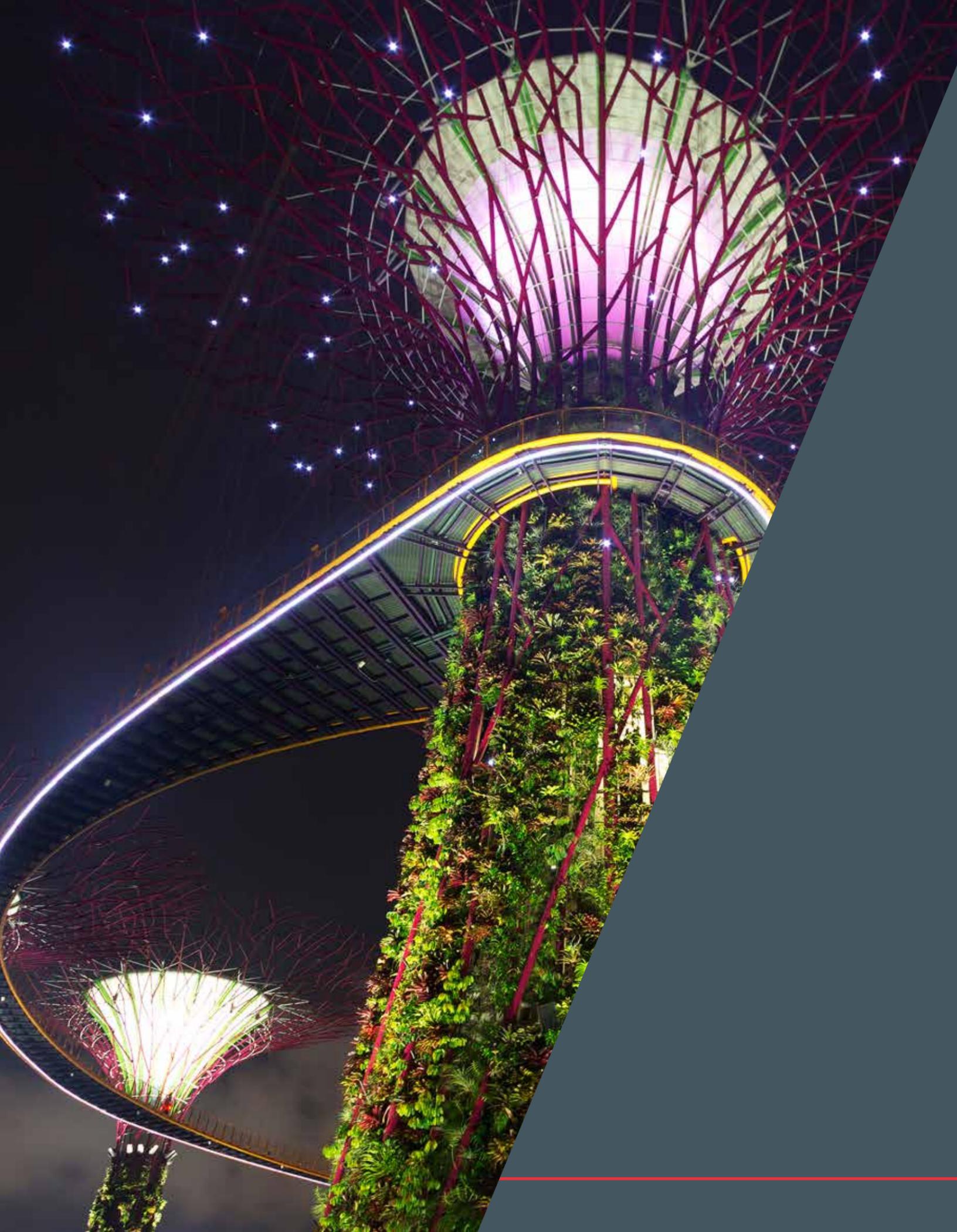
32%

OF THAI MILLENNIALS RECEIVE
THEIR SALARY IN CASH

23%

OF MALAYSIAN MILLENNIALS
RECEIVE THEIR SALARY
BY CHEQUE





22 Million

THAI CITIZENS REGISTERED FOR PROMPTPAY, BEFORE ITS LAUNCH IN JANUARY 2017

At the same time, new and existing government and sector-led initiatives are also shaping the payments landscape in these countries.

SINGAPORE

Singapore sees itself as the financial heart of Asia and has taken steps to secure its reputation as 'the Smart Nation' in terms of payments, a significant element of which is becoming an electronic payments society.

- FAST - launched in 2014, FAST is Singapore's real-time payments system, offering 24/7 immediate payments. FAST is based on Vocalink's Immediate Payments Solution, which also underpins the variously branded real-time payment systems in the UK and US
- Monetary Authority of Singapore has articulated a detailed plan for the payments sector:
 - Streamline the regulatory and operational environment
 - a central Payments Council to accelerate the adoption of payments innovations and drive further innovation
 - Promote the interoperability of infrastructure
 - Support wider acceptance of electronic payments among businesses
- Banks have introduced the main e-wallet apps and launched P2P payments platforms of their own, including DBS PayLah, Standard Chartered's Dash, UOB's Mighty and OCBC's Pay Anyone

MALAYSIA

The Malaysian government and its central bank, Bank Negara, have stated a clear intention to become a cashless society and numerous initiatives are already in place or in the advanced stages of development to support this:

- Requirements for card issuers and acquirers to enable Chip and PIN and/or contactless for point of sales transactions
- Reduced Merchant Discount Rate (MDR) on card transactions are intended to encourage both merchants and consumers to embrace card payments
- Domestic debit and ATM cards to have a domestic app
- Malaysian debit card chips to be migrated to a higher proprietary standard.
- Cooperation between banks and telcos to spread availability of mPos (mobile point of sale) machines and enabled phones
- JomPay - a free-to-consumer service that allows people to make payments from their banks to merchants via ATMs
- Touch 'n Go - e-money functionality has been added to the compulsory MyKad electronic ID card

These innovations and the growing focus on alternatives to cash, look set to provide a host of opportunities for banks and fintechs to develop overlay services, many of them aimed squarely at mobile-minded millennials

THAILAND

- Bank of Thailand, the nation's central bank, has articulated and published a clear and detailed strategy to overhaul Thailand's financial system in its Financial Services MasterPlan (FSMP), which aims to deliver greater efficiency and strength, and to broaden access. Having completed its first two phases, the FSMP's final phase explicitly aims to 'Promote electronic financial and payment services as well as enhance efficiency of the financial system by enhancing competitiveness of financial service providers and promoting new technological innovation to facilitate business expansion'
- PromptPay - Launched in January 2017 and underpinned by Vocalink's Faster Payments technology, PromptPay allows users to make P2P transfers using the recipients' mobile phone number or Citizen ID as a proxy for their bank account

MILLENNIALS AND MOBILE PAYMENTS

We've already seen that millennials, particularly those in Thailand, are beginning to embrace the idea of mobile payments. But we wanted to look in more detail at their perceptions of this rapidly expanding channel - which platforms did they know about, which ones do they actively use and, critically, what factors govern their willingness to further adopt these emerging technologies?

BIG BRAND AWARENESS

In South East Asia, awareness of mobile payment platforms mirrors the picture we saw with mobile phone brands - the global brands have been successful in building brand awareness, though they do not completely dominate, and this awareness has yet to be converted into uptake.

Singapore shows the highest overall awareness of mobile platforms. The best-known platform, ApplePay, is recognised by 84% of millennials with 5% saying they use it as well. This is impressive given that ApplePay only launched in Singapore in April 2016, though PayPal, with recognition as a mobile platform at just 66%, can boast a slightly higher conversion rate at 6%. Samsung Pay and Android Pay, which are recognised by 83% and 75%, respectively, are used by just 3% and 2% respectively, which again is impressive given that they have only been available since June 2016. Perhaps the biggest

mobile payments success story is eNETS, recognised by 69% and used by 7%, the highest proportion in Singapore.

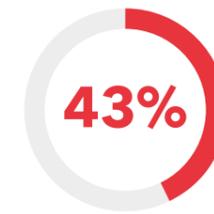
In Malaysia, PayPal is the best-known (70%) and most-used (7%) of the international mobile payment brands. But again, the leading player in this market is not one of the global brands. Four in five (80%) Malaysians have heard about Touch'n'Go and 14% use it - twice the next most used platform.

So, PayPal, long-established as a payment channel in e-commerce, has been significantly more successful in converting millennials to become mobile payment users in all three countries, while local brands in both Singapore and Malaysia have also been more successful than the global giants.

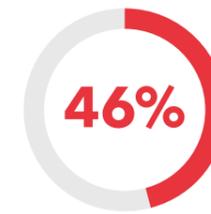
But while mobile payment use is currently relatively low, it seems unlikely to stay that way - particularly given the stated objectives of some governments to reduce the significance of cash in

the economy. So we asked millennials what kind of provider would make them more likely to adopt a mobile payment solution. In all three countries, they indicated that a bank would be their preferred provider, followed by a card provider in Singapore and Malaysia, and PayPal in Thailand. In each case, at least three in five millennials said a platform provided by these organisations would make them more inclined to pay for goods and services via their mobile phones. And, in each country the least favoured option was a new-to-market brand, which suggests that while millennials are willing, even enthusiastic about moving towards mobile payments, they want them to be delivered by familiar, dependable brands. In the light of this insight, LINE's partnerships with Citibank Thailand (see page 10) and Rabbit look like very smart moves.

CURRENT MOBILE PAYMENT USERS



SINGAPORE



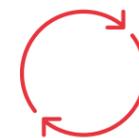
MALAYSIA



THAILAND

IF YOU WERE TO PAY FOR ITEMS USING YOUR MOBILE PHONE, WOULD YOU BE MORE OR LESS LIKELY TO USE THIS NEW PAYMENT SERVICE IF IT WERE PROVIDED BY EACH OF THE FOLLOWING?

	SINGAPORE	MALAYSIA	THAILAND
Most preferred provider	Bank 65%	Bank 78%	Bank 83%
Second most preferred provider	Card 59%	Card 66%	PayPal 78%



30%

OF MILLENNIALS IN MALAYSIA THAT HAVE TRIED MOBILE PAYMENTS HAVE SINCE LAPSED



9%

OF THAI MILLENNIALS HAVE NEVER TRIED MOBILE PAYMENTS



8 in 10

MILLENNIALS ACROSS THE 3 COUNTRIES SURVEYED HAVE EXPERIENCED PROBLEMS WHILST MAKING A MOBILE PAYMENT



MOBILE PIONEERS

While current usage of mobile payment platforms is relatively low, the same cannot be said of mobile payments themselves. Applying our definition of 'mobile payments' as any payment made from or via a mobile phone or 'cell phone', including via applications that sit on top of a contactless payment system such as Apple Pay when shopping through a mobile phone, yields a very different picture. In Singapore and Malaysia respectively, 43% and 46% of millennials use mobile payments, while in Thailand the figure is 69% - the highest level of any country we sampled, including the US and in Europe.

Thailand also shows the lowest proportion of lapsed users in the region: just 20% of Thais have tried mobile payments and then stopped, whereas in Singapore the figure is 24% and in Malaysia it's 30%. While the number of lapsed users is not huge, in both Singapore and Malaysia the figures are as high or higher than Europe where the proportion of millennials making mobile payments is much lower. Despite the relatively high adoption of

mobile payments, something about the experience has caused more than a fifth of millennials to stop paying via their mobile phones. What could that be?

The simple answer is concerns about security, ranging from the risk of physically losing a handset carrying financial information to the risk of hacking and other forms of fraud. In Singapore, half of lapsed users cite security concerns as the reason for abandoning mobile payments. In Malaysia the figure is 70%. The other major group of reasons for users to drop mobile payments are technical issues - problems with terminals, inexperience or unfamiliarity on the part of the vendor and the technology itself not functioning as it should (is there anything more interesting on this?).

// We are depending too much on the phone, what happens if we change phone? My banking information may still be there. //
Malaysia 25-35

However, even though a very large proportion of millennials describe themselves as 'current users' of mobile payments, their continuing use is

not guaranteed. At least four in five millennials in each of our South East Asian markets have experienced problems when paying with mobile - including 89% in Thailand, the highest level we encountered anywhere in our research. The largest proportion of these are technical issues with the next largest block being problems relating to the knowledge or experience of the vendor staff, or with mobile payment not being accepted at all. Interestingly, a significant proportion of current users, particularly in Malaysia, say they 'feel hassled' when attempting to pay by mobile - a combination of their own unfamiliarity with the technology and the sense that other customers were watching critically. With a mere 11% of current users in Thailand, rising to 18% in Singapore saying they had enjoyed problem-free mobile payments, it is clear that there is work to be done to improve the experience. But the fact that so many current users have experienced problems and have continued using mobile suggests both that the problems may be minor or at least that there is an appetite for the platforms to be improved.

That insight is supported by millennials' responses about their likely future mobile payments behaviour. Asked whether they were more or less likely to increase their use of mobile phones to make payments in the future, the answer from current users is an overwhelming 'yes' - two thirds or more in each country expect to pay by mobile more frequently in the future. While the proportion of 'yes' votes in all three countries is high, in Thailand it is, once again, much higher, indicative perhaps of strong acceptance of the likely evolution of payments.

Perhaps even more encouraging is the high proportion of non-users of mobile payments who said they are more likely to use them in the future. In Singapore two-fifths and in Malaysia more than half of non-users expect to begin using mobile payments. In Thailand the response is more positive still. Three-quarters of non-users expect that they will begin using mobile payments in the future.

These figures say two things. First, that despite the concerns and frustrations experienced by users of mobile payments, millennials who start paying

by mobile are likely to keep going and increase their use of mobile payments services. Second, they suggest that there is widespread acceptance of the inevitability of mobile payments - that they are what is next.

With current users in each country more likely to increase mobile payments usage than non-users are to start making mobile payments, the real challenge is to get millennials to start using mobile payments in the first place, and this may not be as hard as it sounds.

At least two thirds of millennials in our South East Asian countries agree that mobile banking is easy to use and when we asked them what kind of functionality they would like to see in a mobile platform, they demonstrate a clear appetite for the kinds of services and enhancements that are in development and which are only really possible on a mobile platform. For example, nearly three quarters of Singaporeans (73%) agree they would like to be able to see an available balance when making a payment with their mobile phone. For Malaysia the figure is 75% and for Thailand it's 85%. Two-thirds or more would like to be able

to manage all of their accounts via a single mobile app or website, and at least 70% in each country would like to be able to make instant payments and pay bills regardless of which bank the recipient is with. All of those point towards a more complete, more immediate mobile banking platform - millennials can't rely on being in front of computer when the need to make a payment or manage their accounts arises.

And at least two thirds of millennials in each country indicated that they wanted their bank 'to offer more services on its mobile banking app'. They also agree that they would like more control over how people pay them - whether that's receiving salary or their friend's share of last night's dinner cheque. Flexibility and control, the very qualities that millennials say they value in technology, are what they are looking for in payments services and banking, so in South East Asia at least, it is not a matter of 'if' but 'when' and 'who'.

EDUCATION IS KEY

70%

OF THAI MILLENNIALS AGREE THAT THEY WOULD USE EYE SCANS TO VERIFY PAYMENTS

60%

OF MALAYSIAN AND SINGAPOREAN MILLENNIALS AGREE THAT THEY WOULDN'T KNOW WHERE TO GO OR WHO TO SPEAK TO IF A MOBILE PAYMENT WENT WRONG

87%

OF THAI MILLENNIALS AGREE THAT THEY EXPECT THEIR BANK TO GUARANTEE THE SECURITY OF MOBILE PAYMENTS

One advance that may help to accelerate the adoption of mobile payments is better education.

Around two thirds of millennials interviewed in South East Asia (60-68%) say they wouldn't know who to speak to if a mobile payment went wrong. And they are equally confused about who should provide technical support for mobile payments - the bank, the mobile network provider or the card provider.

Millennials don't know who is responsible for mobile payments, although as we have already seen, they have a clear preference for it to be banks ahead of card providers and PayPal that provide mobile payment services. This lack of certainty over the operational side of mobile payments undermines confidence and potentially obstructs progress towards uptake of mobile payments.

A MORE SECURE FUTURE?

While millennials in South East Asia, particularly in Thailand, are already embracing mobile payments they also indicate significant concerns about the security of this channel, and an appetite to address these through enhanced verification tools.

Fingerprint verification is already available for some payment platforms and with good reason: millennials like it. Two-thirds or more in all three countries would prefer to see fingerprint verification replace signature or PIN to pay by mobile and by card. Interestingly, slightly more of them want to see this in place for card payments than they do for mobile, with the largest discrepancy being in Thailand where 75% prefer fingerprint verification of cards, but only 68% prefer it for mobile payments. In both Singapore and Malaysia, the gap is just three percentage points, but the fact that there is a gap at all may indicate that, while millennials do have

security concerns about mobile these are no greater than their concerns about card security.

In fact, fingerprint verification is the most preferred enhancement to signature or PIN. Other options, such as eye scans, facial recognition and voice to pay are each less preferred, although more than half of Singaporeans and Malaysians and 70% of Thais would prefer eye scans over signature or PIN. Consistent with what we have seen about Thais' willingness to embrace new technologies, their levels of preference for all of the options we offered were higher than their counterparts elsewhere - 65% would prefer facial recognition over signature or PIN and 55% would prefer voice to pay.



WHAT'S NEXT?



80% OF THAI MILLENNIALS AGREED THAT THEY WOULD LIKE TO MANAGE ALL OF THEIR ACCOUNTS VIA ONE MOBILE APP OR WEBSITE



OVER 70% OF MILLENNIALS IN THE 3 COUNTRIES SURVEYED AGREED THAT THEY WOULD LIKE TO BE ABLE TO MAKE INSTANT PAYMENTS, REGARDLESS OF WHO THEY BANK WITH



7 IN 10 OF MILLENNIALS IN THE 3 COUNTRIES SURVEYED AGREED THAT THEY WOULD LIKE TO SEE THEIR AVAILABLE BALANCE TO SPEND WHEN THEY MAKE A MOBILE PAYMENT

Whatever verification method is used, it's clear that millennials in South East Asia want enhanced security measures and, above all, that they want more from their banks and from their smartphones: more services, more flexibility, more control and higher speeds.

Mobile payments are the point of confluence between advances in banking and a growing reliance on a pocket-sized device that offers instant satisfaction in all other spheres - from communication and navigation to entertainment and information. Finance is what's next for the smartphone.

Levels of use in mobile payments are already higher than in Europe, and in Thailand they are higher even than the US. Clearly there are still significant issues to resolve around security and education - both for consumers and vendors - but millennials' dependence on smartphones means that mobile payments are not the next big thing - they are already here. And while Thailand appears to be the most fertile market, both Singapore and Malaysia have an appetite for new technology that provides opportunities for banks and others with the right proposition.

Above all, it would appear that the proliferation and prominence of social media will both deepen millennials' relationships with their smartphones, and help to normalise finance-by-phone behaviour of all kinds.

The launch of instant payments platforms in both Singapore and Thailand, running on Vocalink systems, will support these developments and offer millennials and others the chance to gain the kind of control over their finances that they aspire to. 'Seamless spending' looks set to be the trend for finance in 2017. This combination of contactless, app-based and wearable payments technologies will allow adopters - for which we should read millennials - the power and flexibility to buy, consume or access anything anywhere or, more likely, everything everywhere.

TECHNICAL NOTE

This research has been conducted in partnership with Ipsos MORI and has been commissioned by Vocalink.

The first stage of the research consisted of 12 focus groups across Singapore, Bangkok and Kuala Lumpur between 23 and 27 May 2016. The groups were split by age (18-25 and 26-35 year olds) and restricted to those people who are holders of a bank account and a smartphone.

This was followed by the quantitative phase of the study, which was conducted via Ipsos MORI's online global panel which surveyed the views of nationally representative quota samples of those aged 18-24 between 4-22 July 2016. The data has been weighted to match the known national profile for online millennials. Among these millennials, those who have a bank account(s) and are able to access a smartphone or tablet computer were taken through the main part of the interview and it is this audience that is reported upon within this document - totalling 1018 in Singapore, 1019 in Malaysia and 1005 in Thailand.

This is the third part of a wider global study looking into the payments behaviour of the millennial generation.

For the markets we refer to in this report for comparison, the US market quantitative fieldwork dates were 26 April - 11 May 2016 (5,027 interviews), the quantitative fieldwork in the European markets took place 4 - 15 July (1008 interviews in Germany, 1014 in Italy, 1009 in Netherlands) and finally the UK the dates for the quantitative fieldwork were 4 - 10 May (1002 interviews).

This is the third part of a wider global study looking into the payments behaviour of the millennial generation.

For further information on the research, please contact:

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