

IDC InfoBrief  
October 2022

# How Southeast Asia Buys and Pays 2022

## New Opportunities, Connectivity and Risks



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# Recovery and complexity: navigating through digital commerce in SEA

After a turbulent 2 years, the Southeast Asia (SEA) region has fully reopened for business in 2022 and is set on the path to recovery. The drivers that have accelerated the growth of digital payments from 2020 to 2022 continue to exert their influence into 2023. The widespread adoption of all things digital in SEA has altered the way business is conducted, as well as how consumers choose to transact and purchase. Online activities settled through digital payments have become ubiquitous across SEA, and there is now a growing

demand to extend the use of these new payment methods to cross-border activities both online and offline.

This surge in digital activity comes with new challenges. With the massive growth of new users, and online and cashless transactions, the region has become a target for sophisticated fraudulent activities which threaten to damage consumer and business confidence. Confounding this threat are inflationary and

recessionary pressures which add to the complexity in handling digital payments.

This IDC InfoBrief explores these developments and the need for businesses to adapt to rapidly changing customer demands in payments. For this report, SEA covers Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Their economies make up 90% of geographic SEA's total GDP.



From 2021 to 2026, it is estimated that **189.7 million new users** will begin using ecommerce

Close to **300% new domestic payments** transactions fueled by markets such as Indonesia coming online in 2021

Mobile wallets users in SEA to **grow a further 114%** from 2021 to 2026

## What this means for merchants

While the region's recovery is well underway, businesses find themselves in a more complex environment in 2022. New fraud, geo-political, and economic threats have cast a shadow on the economic revival. Businesses will need to stay nimble and flexible in adopting new payments to stay on top of market shifts, and pay close attention to new fraud risks, while continuing to explore opportunities to strengthen the customer experience for continued business success and growth.

"E" denotes estimate.

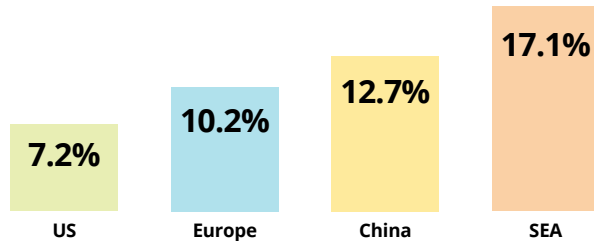
Sources: IDC Digital Economy Model – Asia/Pacific 2022; central bank data

# SEA's digital economy continues to expand rapidly

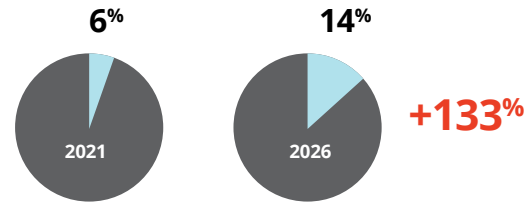
The digital economy of SEA continues to grow and will reach US\$314 billion by 2026 from US\$143 billion in 2021. Sustained growth in ecommerce and sharing economy services, and a resurgence of online travel, among other digital services, continue to fuel growth for the 700 million people who call SEA home. From 2021 to 2026, the growth rate of the SEA digital economy will be faster than many other major regions including China, Europe and the US.

## Digital economy\* growth rate, SEA vs other regions 2021-2026E

SEA's digital economy will see impressive growth rates from 2021 to 2026E, outpacing many other regions including China, Europe and the US.

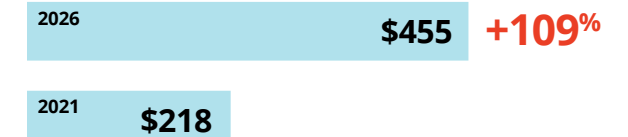


## SEA total digital economy GMV (% of total consumer payments)



Digital economy GMV is predicted to make up 14% of SEA consumer payments by 2026, a jump of 133% from 2021.

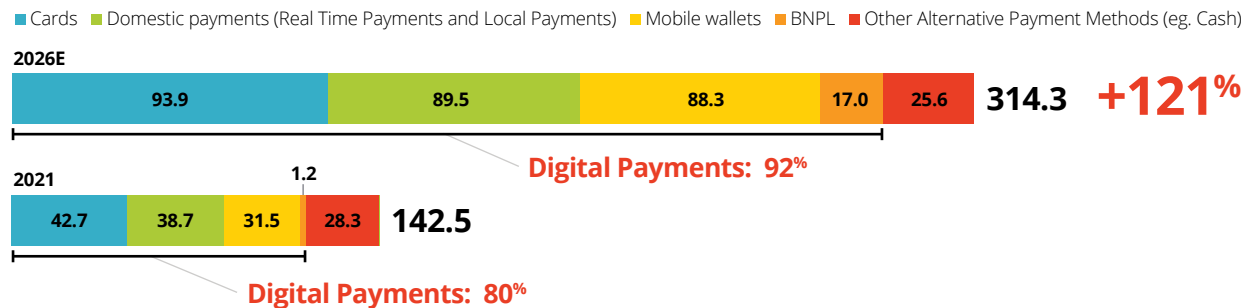
## SEA total digital economy spend per capita



Spending on digital services per capita (total population) will be at \$455 in 2026, a rise of 109% from 2021.

## SEA digital economy GMV by payment method (\$ Billion)

Digital economy spending will rise by 121% by 2026, and digital payments will grow to 92% of total digital economy payments by 2026, up from 80% in 2020.



\*Digital economy defined as total GMV of ride hailing, sharing economy services, ecommerce, online travel, online video and media and gaming.

Sources: IDC Digital Economy Model – Asia/Pacific 2022; IMF data

# SEA re-opens for business

In Asia/Pacific, SEA has been the first sub-region in Asia to reopen its borders for both business and leisure. As once-isolated neighbors resume travel and trade with each other, every SEA market has seen a huge jump in the use of digital payments and fintech services.

## Digital payments online and offline have exploded – cash usage continues to decline

■ From 2020 to 2022, physical barriers and social distancing in SEA have led to a surge in digital payments, which has been closely tied to the growth of the digital economy in each market.



■ This surge has led to a reduction in the use of cash in markets like Malaysia, where cash will no longer be accepted in government hospitals from the end of 2022, and in Singapore, where several government offices no longer accept cash payments for some services. Further policy measures to reduce cash are being rolled out regularly across the region.

■ Support for digital payments has now become an important consideration for SEA businesses to thrive, and even micro-vendors in the region are supporting digital payments due to the no or low charges practices being pushed by many governments.

## Ongoing push to interconnect SEA's fragmented payments infrastructure

■ There is a concerted effort by SEA governments to interconnect their domestic real-time payments (RTP) rails for cross-border use.

■ Singapore, Thailand, and Indonesia have already started their integrations which by the end of 2022 will be brought online. Further connections will be laid out across SEA, linking all major markets and creating a future-proof modern infrastructure that allows for regional interoperability across a wide range of payment modes for the present and the future.



■ Mobile wallets have also been particularly active here. Alipay has launched a cross-border solution connecting major popular wallet providers in the region through its international infrastructure.

## Intra-SEA cross-border commerce: the next growth opportunity

■ Intra-SEA trade is the most significant compared to trade with partners outside the region. Yet, for ecommerce, only 9% of goods sold in SEA are sent to other SEA markets.

■ A lack of card acceptance among merchants in the region is one factor, but this can be resolved by new cross-border options such as real-time payments and mobile wallets.

■ eCommerce platforms are now offering businesses the opportunity to sell their goods with greater ease to neighboring markets, and businesses are well advised to explore these.



### Business takeaway:

Now is the time for businesses operating in SEA to think about how they can maximize their reach and potential in neighboring SEA markets, and how a comprehensive payments strategy can help them achieve their goals.

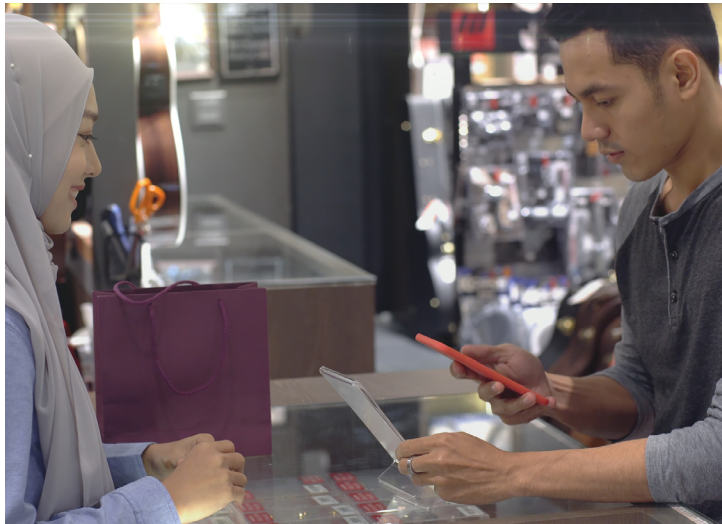
Source: IDC consumer payments survey Asia/Pacific 2021

# Payment methods continue to evolve






Digital payments trends driven by the pandemic will accelerate further

Within a short span of 24 months, SEA has seen major shifts in how consumers make payments, propelled by the surge in digital commerce, physical distancing, and government incentives/adoption initiatives. As the region emerges from the shadow of the pandemic, these shifts will become more pronounced as newly-ingrained digital lifestyles continue to influence payment behavior.

Major gainers across the region include domestic payments, mobile wallets, and BNPL, all of which offer cardless options for online payments, providing convenience and security, and which are seeing increased adoption by businesses. Our data and insights here show the growth of different payment methods from 2021 to 2026.



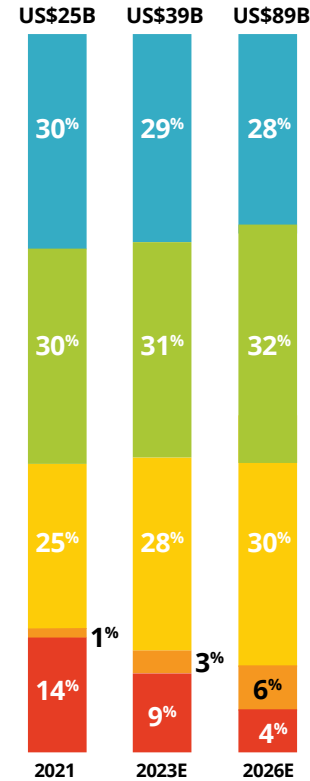
## A GUIDE TO PAYMENT METHODS

- 
**Cards**  
 Credit and debit cards
- 
**Domestic payments**  
 Includes real-time payment (RTP) schemes, local payments, and online banking transfers through a variety of platforms
- 
**Mobile wallets**  
 Stored value payment wallet mobile applications
- 
**BNPL**  
 Buy now pay later short-term consumer loans
- 
**Other payment methods**  
 Cash on delivery, counter payments, ATM payments etc.

## eCommerce payments breakdown by markets, 2021-2026E

(% gross transaction value or GTV)

### INDONESIA

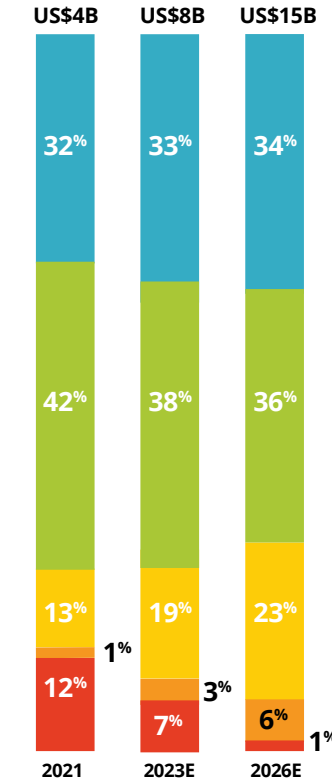


### % change in market share 2021 to 2026E

Cards	-2%
Domestic payments	+2%
Mobile wallets	+5%
BNPL	+5%
Others	-10%

- The largest economy in SEA continues to see rapid growth in digital services, making this the most important market for digital commerce in the region.
- BI-FAST, Indonesia's new real-time domestic payments system launched in late 2021, will likely see significant adoption in the coming years.
- Mobile wallets and BNPL will also see substantial growth while card usage remains stagnant.
- Major gainers: mobile wallets, BNPL, domestic payments

### MALAYSIA



### % change in market share 2021 to 2026E

Cards	+2%
Domestic payments	-6%
Mobile wallets	+10%
BNPL	+5%
Others	-11%

- Malaysia's mature payment mix sees a wide variety of digital payments being used.
- Online banking was the most used payment method in 2021, but will see its adoption challenged by newer payment methods such as mobile wallets and BNPL as well as post-pandemic restoration of card usage.
- Conventional methods like cash on delivery will continue to decline and make up only 1% of payments by 2026.
- Major gainers: mobile wallets, BNPL, cards

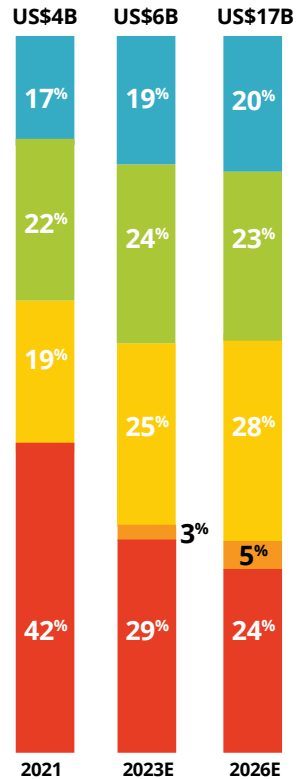
Source: IDC consumer payments survey Asia/Pacific 2021, modeled data

# Payment methods continue to evolve (Cont.)

## eCommerce payments breakdown 2021-2026E

(% GTV)

### PHILIPPINES

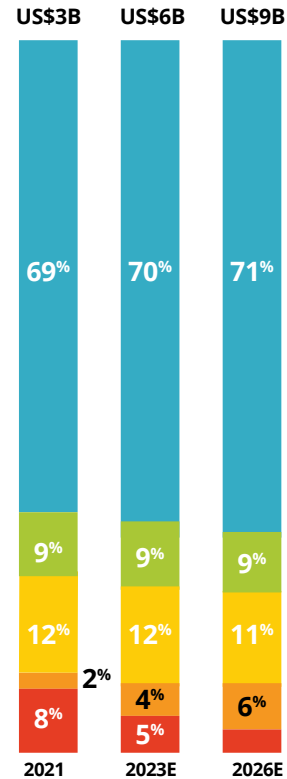


#### % change in market share 2021 to 2026E

Cards	+3%
Domestic payments	+1%
Mobile wallets	+9%
BNPL	+5%
Others	-18%

- The Philippines historically suffered from low banking penetration, which has made digital payments difficult.
- Cash on delivery was still a major option in 2021 and will continue to be so in 2026.
- The Philippines' payment scene will remain diversified, with mobile wallets, BNPL, cards and domestic payments predicted to post gains.
- **Major gainers: mobile wallets, BNPL, cards, domestic payments**

### SINGAPORE

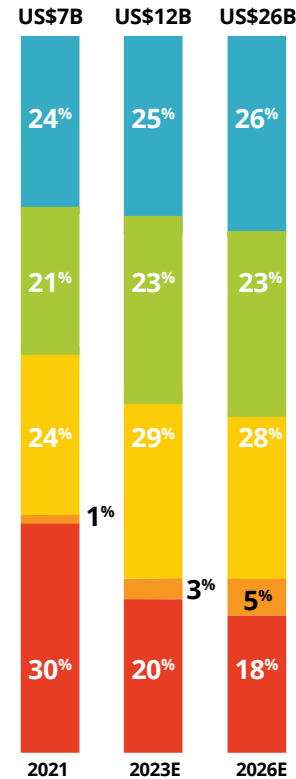


#### % change in market share 2021 to 2026E

Cards	+2%
Domestic payments	0%
Mobile wallets	-1%
BNPL	+4%
Others	-5%

- Singapore's mature payment landscape is the only one in SEA which is card dominant.
- The online payment picture has changed little throughout the pandemic: Singapore remains a card-driven market, although BNPL has started to make headway.
- Digital payments will continue to grow in adoption, backed by government drives and policies to reduce cash use.
- **Major gainers: BNPL, cards**

### THAILAND

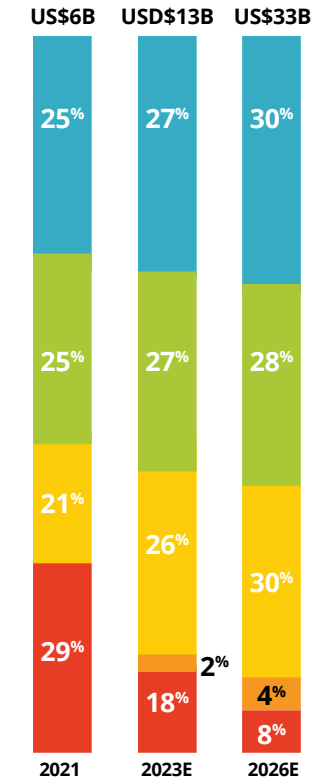


#### % change in market share 2021 to 2026E

Cards	+2%
Domestic payments	+2%
Mobile wallets	+4%
BNPL	+4%
Others	-12%

- Thailand's digital payment growth has been fueled by government-driven projects with local banks (e.g. PromptPay).
- Card usage was low in 2021 and while still predicted to grow, other digital payments such as mobile wallets, BNPL will outpace card growth.
- Government initiatives to encourage digital payments have played a major role in adoption.
- **Major gainers: mobile wallets, BNPL, domestic payments, cards**

### VIETNAM



#### % change in market share 2021 to 2026E

Cards	+5%
Domestic payments	+3%
Mobile wallets	+9%
BNPL	+4%
Others	-21%

- A market full of promise, Vietnam is predicted to be the second biggest market for ecommerce in SEA by 2026.
- Burgeoning online and offline use cases for digital payments have seen mobile wallets, credit cards, BNPL, and domestic payments all seeing jumps in usage from their previous low bases.
- The current reliance on cash on delivery will decline as newer digital payments grow.
- **Major gainers: mobile wallets, BNPL, cards, domestic payments**

Source: IDC consumer payments survey Asia/Pacific 2021, modeled data

# Payment methods that will shape the SEA payments landscape

## Domestic payments (real-time and local payments)

### Domestic payments continue to grow with Indonesia introducing RTP

Domestic payments in SEA remain a unique characteristic of the region, and each market has its own payment systems. These payments systems, which are largely government-driven, are used extensively in several markets including Thailand, Malaysia, and Singapore as both online and offline real-time payments (RTP).

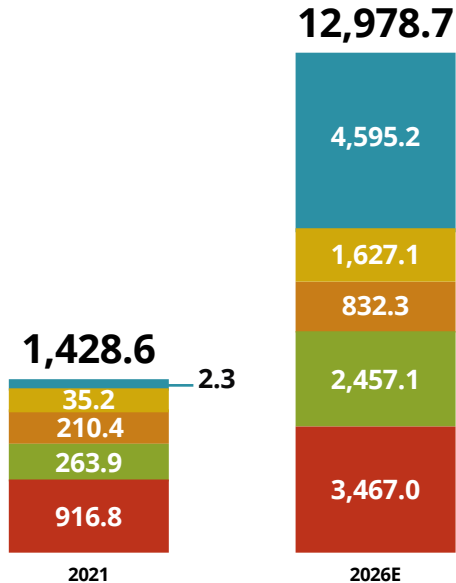
Indonesia is the latest market to add real-time payments (RTP) to its payment infrastructure in 2021. With its population and large digital economy, it is predicted to be the largest SEA market for RTP transaction values in 2026, surpassing Thailand which held the top spot in 2021. This prediction differs from our 2021 report where Thailand took the top spot.

Mobile banking apps have been the main platform from which domestic RTPs have exploded in popularity in SEA, and they are expected to be the key medium for cross-border RTPs in the future. Major banking apps used in the region include:

- Indonesia** – Brimo BRI, Livin' by Mandiri, and BCA mobile
- Malaysia** – MAE by Maybank, CIMB Clicks, and Go by Bank Islam
- Philippines** – UnionBank Online, BPI Mobile and BDO Digital Banking
- Singapore** – DBS Digibank, UOB TMRW, and OCBC Digital
- Thailand** – K Plus by Kasikorn, SCB Easy and Krungthai Next
- Vietnam** – Vietcombank, Vietin Bank iPay, and Techcombank Mobile.

### SEA RTP transaction values

US\$ Billion



By 2026, RTP transaction values will expand by +\$11,550.1 billion, growing 8.1X from 2021.

Note: As of October 2022, Vietnam does not yet have active RTP networks

### Intra-SEA operability is the next golden opportunity

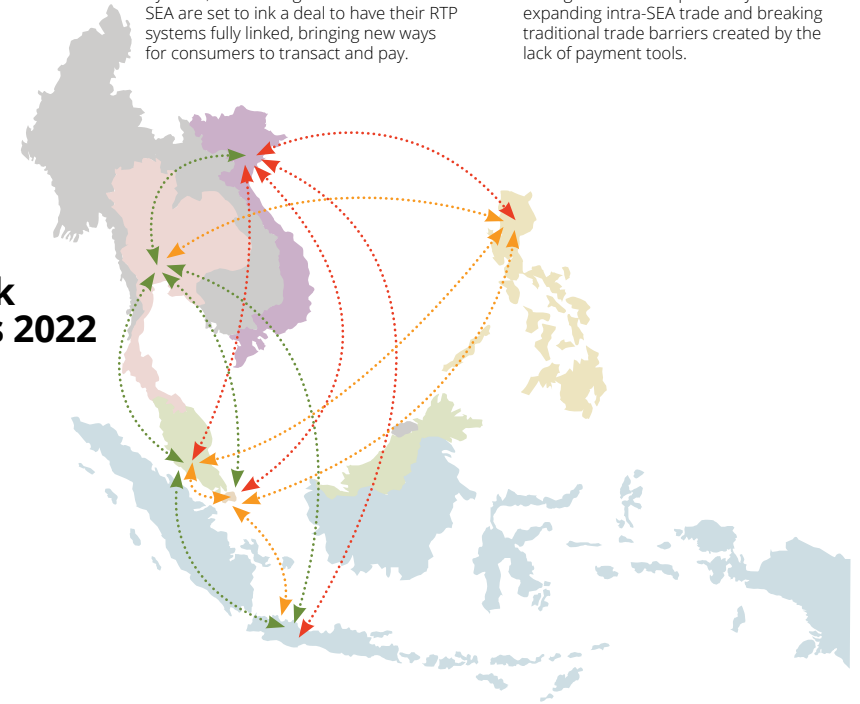
From 2021 to 2026E, RTP transaction values in SEA will grow 8 times from \$1,428.6 billion to \$12,978.7 billion.

The next stage of growth for RTP will be connecting the domestic systems to form an intra-SEA network. Interoperability is already a reality between Singapore and Thailand, Thailand and Malaysia, Thailand and Indonesia, and Thailand and Vietnam. By 2022, the five largest economies in SEA are set to ink a deal to have their RTP systems fully linked, bringing new ways for consumers to transact and pay.

This network allows smaller businesses to quickly and easily accept payments from other SEA countries at lower costs, representing a significant potential revenue generator if such payment options were offered to their customers. Intra-SEA RTPs give rise to the possibility of further expanding intra-SEA trade and breaking traditional trade barriers created by the lack of payment tools.

### Status of intra-SEA RTP network connections 2022

- Real-time payments connection live in 2022
- Real-time payments connection in planning for launch
- Real-time payments connection not yet announced



Source: Central bank data 2022, Central bank data, IDC analysis

# Payment methods that will shape the SEA payments landscape

## Mobile wallets

Mobile wallet acceptance is key to succeeding in SEA



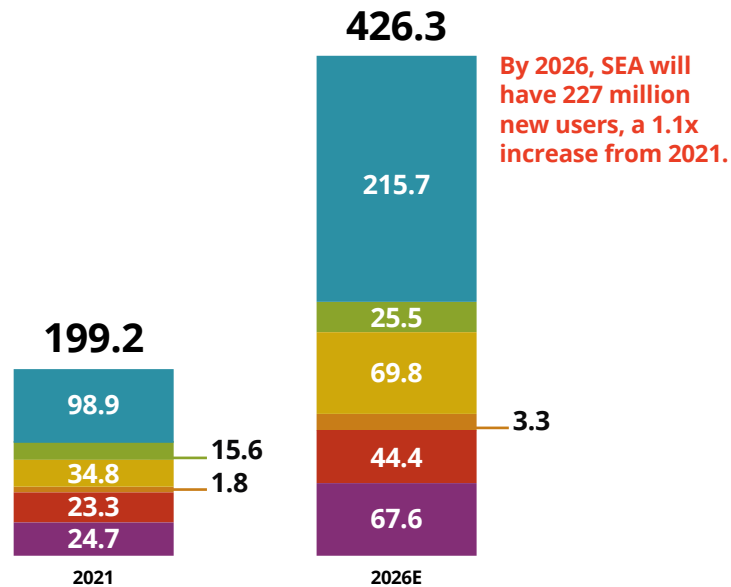
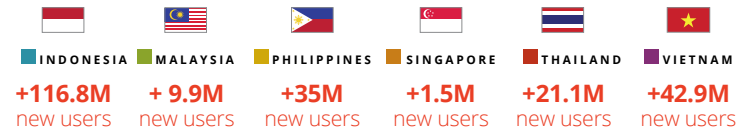
■ By 2026, there will be an estimated 426 million users of mobile wallets in SEA, representing 62% of the total population, with 227 million new users added from 2021 to 2026. Indonesia, Malaysia, and Vietnam will see the highest penetration by 2026 of 76%, 74% and 66% respectively.

■ Mobile wallets are key payment tools both online and offline due to the lack of card and other legacy payment tools, and it is essential for businesses to accept these payments in key SEA markets such as Indonesia and Malaysia.

■ While most wallets are accepted only in one market, there are now efforts to allow for intra-SEA and regional operability. Platforms such as Alipay+ aim to provide a one-wallet solution for travelers globally, and cross-border fintech-driven foreign exchange wallets such as BigPay, YouTrip, Wise and Revolut are also used for international payments.

## SEA mobile wallet users

Million users



## BNPL

BNPL continues to grow in importance



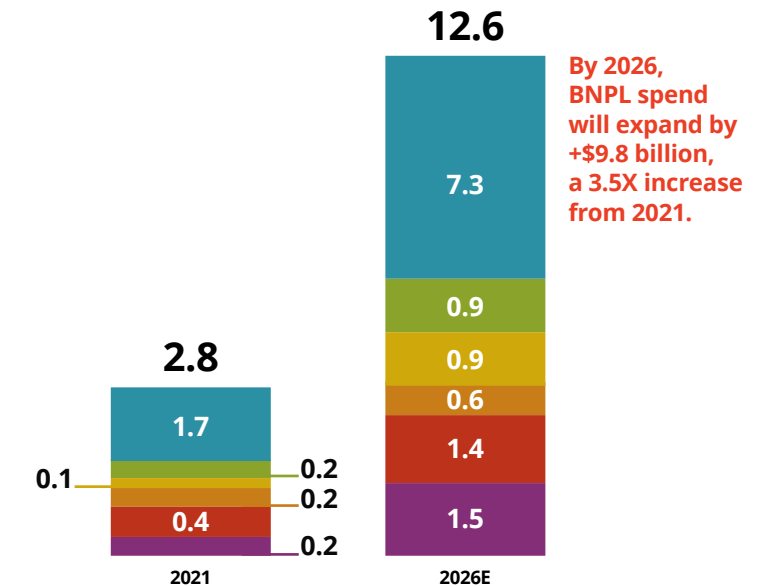
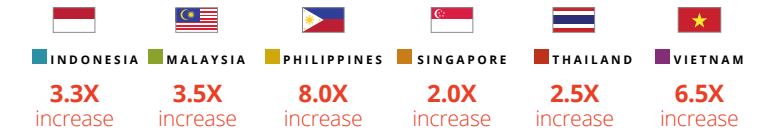
■ A payment method which is fairly new to SEA but which is growing rapidly, BNPL shares many of the advantages of mobile wallets in that it offers a genuine alternative to cards for online payments in markets where card penetration has been historically low.

■ BNPL will increase more than three times from 2021 to 2026E, from \$2.8 billion in 2021 to \$12.6 billion in 2026E. In 2026, BNPL is predicted to make up to 6% of online spending in several key SEA markets.

■ Its rapid growth has been accompanied by new regulatory guidelines across SEA to ensure that customers are aware of the possible dangers of these financial tools. These regulations ensure a healthier and more sustainable environment for transactions to grow in the long-term.

## BNPL spend on ecommerce

US\$ Billion



Source: IDC Digital Economy Model -Asia/Pacific 2022

# Payment methods that will shape the SEA payment landscape

## Central Bank Digital Currencies (CBDCs)

### The future of currencies globally?







- CBDCs are digital currencies issued and managed by central banks. While offering a similar user experience to payments such as RTPs, they differ in their usage of distributed ledger technology (DLT) to overcome existing financial infrastructure restrictions.
- CBDCs offer greater reliability than traditional currency since they are issued and supported by central banks. This also allows for better management of the flow and destinations of the currency, and with the removal of intermediaries, improved accessibility to funds, and lower costs.
- CBDCs also have significant advantages over existing payments in the area of security, with their consensus mechanism (an inherent part of DLT implementations) for transactions offering far greater security levels than can be offered with existing technology infrastructure.
- There is also the upside of real-time 24/7 cross-border payments with much lower fees, greater accessibility and better rates. Singapore and Malaysia are already working on Project Dunbar with Australia and South Africa which aims to make CBDC-based cross-border payments a reality in these markets.
- Regulators in SEA, such as the Monetary Authority of Singapore (MAS), have been observed to show greater interest in wholesale CBDCs used mostly for more efficient inter-bank and cross-border payments. Retail CBDCs for consumer payments remain at an exploratory stage with current payment rails and infrastructure deeply entrenched. Thailand will be piloting its retail CBDC trials in 2023 and other markets in SEA are still exploring its potential.

	Current State of CBDC Development
 <b>INDONESIA</b>	Plans to <b>release conceptual designs</b> for the wholesale digital Rupiah in 2022
 <b>MALAYSIA</b>	Assessing both <b>wholesale and retail</b> CBDCs as of 2022
 <b>PHILIPPINES</b>	Plans to <b>pilot wholesale</b> CBDCs in May 2022
 <b>SINGAPORE</b>	Has concluded no pressing need for retail CBDC, other use cases in wholesale CBDC <b>still being developed</b> in 2022
 <b>THAILAND</b>	Conducted wholesale CBDC tests starting in 2018, will <b>launch retail CBDC</b> pilot in 2022
 <b>VIETNAM</b>	<b>Undertaking studies</b> for CBDCs with partner as of 2022

## Cryptocurrencies

### Innovative and exciting new technologies which will shape the formation of future digital economies

- In SEA, no market has outright banned the holding of cryptocurrencies. However, they have been subject to regulatory scrutiny which continues to evolve with the increasing volume of crypto activities and presence in the region.
- In Singapore, a major bank offers crypto trading to accredited investor customers. While the MAS has spoken openly of the transformative potential of the digital asset ecosystem, retail trading in cryptocurrencies is not encouraged, and MAS, along with other regulators such as those in Thailand, are looking closely to see if this area should be regulated further.
- While regulators have been scrutinizing cryptocurrencies focused on payments, other types of cryptocurrency such as stablecoins pegged to assets such as the USD have also generated concern and attention. The Bank of Thailand has expressed interest in further exploring such use cases, while MAS is looking at tightening regulations on stablecoin reserves.
- Several high-profile cryptocurrency-related collapses in the region have led to regulatory tightening and further restrictions being imposed on domestic platforms, but do not extend to assets traded on overseas platforms. For businesses in SEA, crypto payments can be an option for differentiation in crowded markets, but volatility will continue to be a barrier for mass adoption until stablecoin-type payments grow in usage.

	Legality – Trading and Holding	Legality – Payment Instruments
 <b>INDONESIA</b>	Legal	Not legal
 <b>MALAYSIA</b>	Legal	Legal
 <b>PHILIPPINES</b>	Legal	Legal
 <b>SINGAPORE</b>	Legal	Legal
 <b>THAILAND</b>	Legal	Not legal
 <b>VIETNAM</b>	Pending	Not legal

Source: Compiled from regulatory data and resources

# The SEA payments landscape is diverse and still highly localized

■ The SEA region is diverse and consists of markets which have developed in unique ways, with payments environments to match. Singapore is the only card-dominant market in SEA while other markets have varied preferences, many of which are options designed to suit local needs.

■ In SEA, the rise of domestic payments, especially RTP, has been a constant theme, partly due to governmental push to reduce cash use. Even cards now have a domestic element, with Indonesia, Malaysia, and Thailand mandating that domestic card transactions be processed on local networks with lower merchant fees. This reduces costs for merchants offering this mode of payment.

■ Mobile wallets and BNPL have also seen rapid expansion in user numbers. In all the SEA markets save Singapore, mobile wallet users outnumbered card users by the end of 2021, with Indonesia emerging as the regional leader. While BNPL usage was still relatively low in 2021, its growth is undeniable and it is attracting new users at a rapid pace.

Note: Brands featured are representative only and not meant to be comprehensive.

	Cards <sup>1</sup>				Domestic payments <sup>2</sup>			Mobile wallet brands			Buy-now-pay-later			Others		
	Years in market	Users in 2021 (Mil.)	Months to add 1M users <sup>3</sup>	Domestic Low Fee Processing available? <sup>4</sup>	Years in market	Users in 2021 (Mil.)	Months to add 1M users <sup>3</sup>	Years in market	Users in 2021 (Mil.)	Months to add 1M users <sup>3</sup>	Years in market	Users in 2021 (Mil.)	Months to add 1M users <sup>3</sup>	Years in market	Users in 2021 (Mil.)	Months to add 1M users <sup>3</sup>
INDONESIA	Visa, Mastercard			Yes	BI-FAST (New in 2021), GPN, ATM Bersama, Prima			OVO, ShopeePay, Dana, GoPay			Akulaku, Kredivo, Indodana PayLater			Cash on delivery, Counter payments		
	20+	12.2	19.7		5	54	1.1	6	91.4	0.8	3	11.3	3.2	11	62.8	2.1
MALAYSIA	Visa, Mastercard			Yes	Duitnow, FPX			TouchnGo, GrabPay, <b>ShopeePay</b>			Atome, PayLater, <b>SPayLater</b>			Cash on delivery, Counter payments		
	20+	10.8	22.2		3	9.2	3.9	4	15.9	3	3	4	9	11	5.4	24.3
PHILIPPINES	Visa, Mastercard			No	Pesonet, Instapay			Gcash, PayMaya			Billease, TendoPay			Cash on delivery, Counter payments		
	20+	9.7	24.7		5	11.4	5.3	4	33.2	1.4	3	5.1	7	11	34.5	3.8
SINGAPORE	Visa, Mastercard			No	NETS, FAST, PayNow			GrabPay, DBS PayLah, Singtel Dash			Atome, GrabPayLater, Hoolah			Cash on delivery		
	20+	4.3	55.5		8	4.8	20.1	5	1.7	35.7	4	1.5	31.3	11	1.2	113.6
THAILAND	Visa, Mastercard			Yes	PromptPay			TrueMoney, LinePay, AirPay			Atome, Traveloka, <b>SPayLater</b>			Cash on delivery, Counter payments		
	20+	7.6	31.7		5	64.6	0.9	8	22.1	4.3	3	2.4	15	11	23.8	5.6
VIETNAM	Visa, Mastercard			Coming soon	NAPAS			MoMo, Zalopay, ViettelPay			WowMelo, PayLater by Lotte			Cash on delivery, Counter payments		
	10+	4.8	25.0		5	15	4	5	23.4	2.6	3	5	7.1	11	26.1	5.1

Players highlighted in **bold** indicate new payment methods in the market or fast risers.

<sup>1</sup> Credit cards used as data point

<sup>2</sup> For domestic payments statistics, figures used are for RTP retail interfaces such as BI-FAST/Duitnow/PayNow/Promptpay type implementations

<sup>3</sup> Average time it has taken to add one (1) million new users

<sup>4</sup> Indonesia, Malaysia and Thailand have domestic card processing arrangements in place which handle domestic card payments locally for lower fees rather than going through international card networks

Source: SEA central banks, regulators, payment network data, IDC data 2022

# Growing payments complexity in SEA creates challenges for merchants



In 2022, there have been further evolutions in the payments options available to SEA consumers. The need for businesses to support new payment methods continues to create complexity in payments management and operations. With each market's unique characteristics in how payments are used, any business operating in the region will require a high degree of localization and understanding in order to offer the right payments propositions to their customers. Domestic payments are now going cross-border in SEA, new currencies and assets are coming into play, and new regulations to guide the sustained growth of digital transactions are also emerging. This complexity means that businesses operating in SEA, more than ever, need assistance in navigating the region's payments landscape.

## Rise of new payment methods – domestic goes international

Payment methods continue to evolve rapidly: New use cases and applications for existing payments, as well as new payment methods, are entering the scene. The key trend in 2022 has been that of domestic real-time payments and mobile wallets now being used cross-border, including for traveling.

### THE OPPORTUNITY

For businesses with pan-SEA operations, or those considering expanding or entering new SEA markets, providing support for domestic payments from other SEA markets provides a huge opportunity to tap into a large segment of regional customers by offering greater accessibility and lower fees when compared to more traditional payment methods. For businesses in SEA eager to explore the opportunities from their neighboring markets, being able to offer SEA customers their preferred payment options could generate significant new revenue streams.

## New currencies, new assets, new considerations

In 2022, the range of new options for payments has grown further: new mobile wallets (ApplePay expanded across SEA), new digital currencies, new asset classes (NFTs), and the emergence of new concepts such as the metaverse. Merchants need to be on top of these changes in order to remain relevant to their customer bases.

### THE OPPORTUNITY

Businesses will need to assess how these new developments can affect their business and if there is the potential for them to capitalize on new opportunities. Particularly for businesses which have young client bases, the option to use new, emerging currencies may be a key swing factor in purchasing decisions, and they will need to ensure they can provide for such arrangements if there is market demand.



## New regulations guiding new payment usage

Regulation continues to be a driving force in the uptake and usage of new payments, and is constantly evolving. In Indonesia, for example, all cashless payments must be channeled through the national payment gateway (NPG) which requires all payments to be connected to this network. Malaysia has recently introduced new guidelines for BNPL which may affect payments operations for businesses which offer it. Singapore's regulatory body is also closely monitoring BNPL adoption and has introduced a code of conduct for BNPL providers.

### THE OPPORTUNITY

Businesses which can skillfully navigate the regulation roadmaps across SEA and avoid falling into possible legal black areas will be able to expand at a more rapid rate. A partner familiar with the intricacies of the region's regulatory regimes will prove to be an invaluable asset.

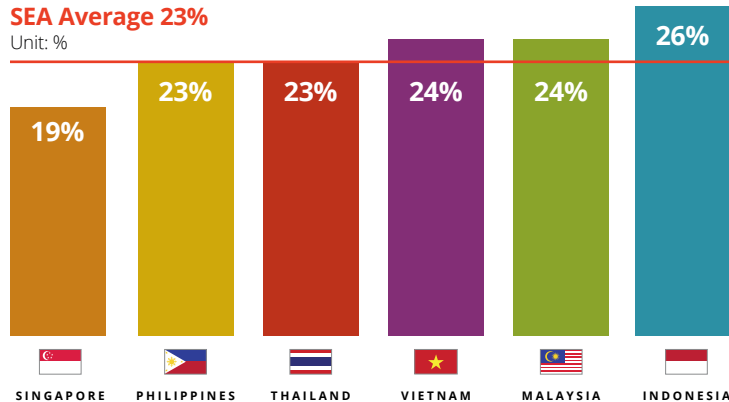


Source: IDC 2022

# Rapidly emerging threats targeting digital payments

With the increased use of digital payments and digital economy services, the SEA region has become a focal point for fraudulent activities. The move to digital lifestyles and the shift of daily transactions from the physical world to the digital realm means that there is now a greatly expanded spectrum of vulnerabilities for fraudsters to specifically target.

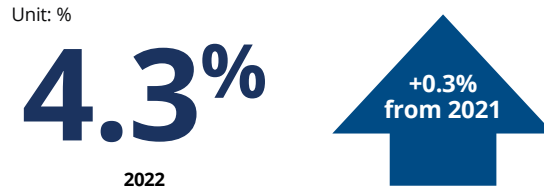
## Percentage of internet users in SEA who were victims of fraud 2021



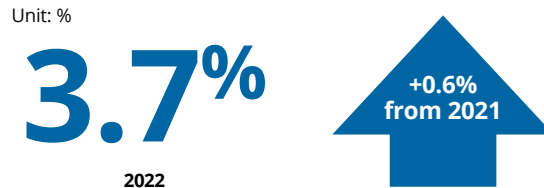
In Indonesia, Malaysia and Vietnam, incidences where internet users have suffered from fraud attacks are higher than the SEA average of 23%. All markets in the region have seen rapid growth in digital activities. In markets such as Indonesia where there may be many new users of digital services, the success rate for fraudulent attacks can be much higher due to consumers' unfamiliarity with transaction and security protocols and processes.

Source: IDC 2021  
Survey respondents n=500 across six markets in SEA

## Percentage of eCommerce revenue lost to payment fraud in Asia/Pacific



## Percentage of international eCommerce orders that turned out to be fraudulent in Asia/Pacific



Businesses in Asia/Pacific lost more revenue to payment fraud in 2022, and also experienced more fraudulent orders from international e-commerce as compared to the previous year. Attackers are becoming more sophisticated in their orchestration, and in selecting markets and businesses for their assault.

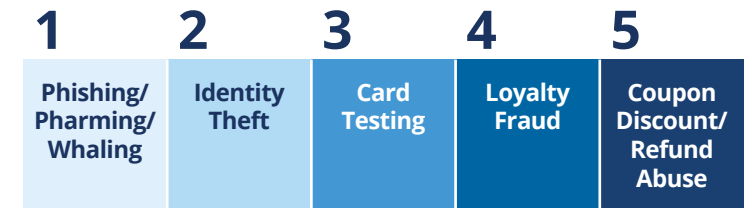
Source: MRC Global Payments and Fraud Report 2022

## Top fraudulent attacks on businesses in Asia/Pacific by attack type

Asia/Pacific is particularly susceptible to phishing/pharming/whaling attacks, and the incidences have become so severe that the Singapore government has directed banks to take major preventative measures to quickly limit the damage caused to victims of phishing.

In developing markets where regulation may be more lax and there may be a general lack of digital awareness, fraud attacks such as phishing and identity theft can potentially be much more damaging.

Businesses will also need to be aware of 'fraud migration' where fraudsters shift their activities from one region to another depending on the regulatory and security environment. The Asia/Pacific region is likely where global bad actors are now highly active in areas such as phishing.



Source: MRC Global Payments and Fraud Report 2022

# How different markets are being targeted for fraud

As SEA markets are so diverse, and with their varying levels of risk, bad actors have fine-tuned their activities to exploit the weaknesses.

## Evolving regulations targeting fraud

Regulation across the region has been enacted to try to curb the increasing fraud problem, for newer payments such as Buy-Now-Pay-Later, tighter regulation on BNPL being used will lead to less avenues for fraudsters to be able to use illegitimately controlled accounts. Further work, however, needs to be implemented for emerging currencies and asset classes such as cryptos and NFTs, which often fall beyond the purview of financial regulators.

## Some payments inherently more secure

Domestic payments including real-time payments and bank payment gateways, as well as BNPL, often leverage modern verification methods such as biometrics for authentication. Such methods make transactions more secure, simplify payment flows, and reduce incidences of cart abandonment and friction. They offer an opportunity to keep businesses growing while protecting revenue.

WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>THAILAND'S</b> use of mobile wallets and domestic payments puts users at particular risk for phishing and identity theft attacks where passwords and login details are stolen and used to make fake purchases online.
1	Mobile Wallets	1	Phishing/Pharming/Whaling	
2	Domestic Payments	2	Identity Theft	
3	Cards	3	Card Testing	

WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>MALAYSIA'S</b> predominant use of domestic-bank-driven payments online makes it prone to identity theft attacks where users' personal data is stolen and fraudulent transactions are made. Card testing and phishing are also frequently encountered.
1	Domestic Payments	1	Identity Theft	
2	Cards	2	Card Testing	
3	Mobile Wallets	3	Phishing/Pharming/Whaling	

WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>SINGAPORE</b> is the only market in SEA where cards are predominantly used for online payments. This puts it the most at risk from card testing fraud as well as refund abuse through card buying facilities.
1	Cards	1	Card Testing	
2	Mobile Wallets	2	Coupon Discount/Refund Abuse	
3	Domestic Payments	3	Phishing/Pharming/Whaling	



WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>VIETNAM</b> is particularly vulnerable as anti-fraud measures have not kept pace with the rate of digital acceleration. With domestic bank payments being prevalent, most attacks focus on stealing data and IDs which are then used to make fraudulent transactions.
1	Domestic Payments	1	Phishing/Pharming/Whaling	
2	Mobile Wallets	2	Identity Theft	
3	Cards	3	Card Testing	

WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>THE PHILIPPINES'</b> underdeveloped fraud measures have left it open to phishing and identity theft where fraudsters aim to access OTPs to validate online transactions. Lack of telco regulations on SIM cards have allowed these activities to expand.
1	Domestic Payments	1	Phishing/Pharming/Whaling	
2	Mobile Wallets	2	Identity Theft	
3	Cards	3	Card Testing	

WIDELY USED PAYMENTS		FRAUD VULNERABILITIES		<b>INDONESIA</b> is the market with the most incidences of fraud according to an IDC survey, and online fraud is the second largest category of police reports. Slow development in ID verification has led to fraudsters honing in on domestic payments users with phishing attacks and identity theft.
1	Domestic Payments	1	Phishing/Pharming/Whaling	
2	Cards	2	Identity Theft	
3	Mobile Wallets	3	Card Testing	

Source: IDC 2022

# Key considerations for businesses in the fight against fraud




The rise in digital payments has seen a corresponding rise in fraudulent activities across SEA threatening the healthy growth of the burgeoning digital economy. This region is particularly vulnerable to phishing, pharming, whaling, identity theft, and card testing.

## 1 2FA and passwords are circumvented using phishing and identity theft techniques

 Traditional verification methods such as passwords and two-factor authentication (2FA) using text messaging or key generation have been the mainstay of payment identity verification for years, but have become vulnerable targets to fraudsters. They gain access to passwords and one-time passwords (OTPs) through means such as phishing, identity theft, and social engineering. OTP delivery is now being migrated to in-app notifications in markets such as Singapore and Malaysia.


Businesses must understand this evolving threat matrix and consider implementing techniques such as artificial intelligence/machine learning (AI/ML) and biometric authentication to provide extra layers of security.

## 2 Rules-based approaches to fraud detection are no longer as effective

 Traditional rules-based approaches to tackling fraud are limited in effectiveness, and often too restrictive in the transactions they allow through. They are also not as useful when handling larger datasets which all modern payments systems are now processing on a daily basis, and may not be able to take action immediately if manual intervention is required to verify the integrity of a transaction.

Pure rules-based approaches also do not have the ability to pick up suspicious behaviors from new fraudulent techniques which have not yet been documented. New fraud-detection methods using AI/ML are highly productive in analyzing and automatically acting on a range of potential fraudulent activities.

## 3 First party misuse: a growing concern

 Fraudulent activities conducted by the authorized user of the account or a member of the same household (first-party misuse, previously known as friendly fraud), such as refund abuse, are on the rise in SEA.

Such misuse has been exacerbated by the pandemic, with the slowdown in economic activities and loss of income for many, growth in digital payments, as well as improvements to mobile banking apps. The disputes that arise are often protracted and require multiple parties' involvement. Solutions include biometrics and adhering to the best possible protocols during checkout with clear evidence trails. In 2023, Visa will adjust its chargeback program to make it easier for merchants to dispute first-party misuse cases with adequate evidence, further highlighting the importance of accurate records to combat this threat. Other card schemes are also expected to implement similar measures.

## 4 The overseas threat

 While the promise of tapping into overseas markets is enticing, data from the Merchant Risk Council (MRC) suggests the threat of fraud from international orders is rising. This threat is closely tied to the anonymity and discrepancies in regulation across different markets which embolden fraudsters sitting in relative safety across borders to conduct their malicious activities.

International threats are often more difficult to safeguard against due to difficulties in taking action, as well as the ease of hiding addresses and other incriminating details. Hence, when dealing with international transactions, it is essential to ensure parity with domestic transactions in process flow and standards. It is also worthwhile to seek advice from industry peers and partners on overseas risks prior to making decisions.

Source: IDC 2022

# Five recommendations for selecting a payments partner in 2022



## Superior intra-SEA support, especially for cross-border payments

- Both physical and digital borders are open in SEA in 2022 and now is the time for businesses to look at how they can optimize their intra-SEA strategies.
- While many partners can offer support for cards for international payments, not all will be familiar with the web of domestic payments used in each market, as well as the relevant connections which now link the markets together. Finding one which understands how the real-time payments connections in SEA can provide value for your business will be key to unlocking and expanding operations across borders.



## Familiar with the intricacies of the region, and able to update their payment offerings as changes occur

- The region's payment mix and behaviors still continue to evolve, and new entrants and new regulations mean that changes may occur rapidly. Businesses not abreast with these developments may be left wrong footed, and either miss out on revenue opportunities or incur losses by falling foul of the law.
- Partnering with a payments provider with deep and intimate knowledge of the SEA region helps businesses optimize revenue possibilities through features such as domestic payment switching, payment selection, and access to new markets, while minimizing potential risks such as data breaches and electronic Know-Your-Customer (eKYC) requirements.



## Ability to recognize and adapt new threats and equipped to counterattack new threat vectors

- Fraud threats are rising and attack vectors are becoming more numerous and more sophisticated in SEA. New types of attacks, fraud behavior migration and new methods of detection make conducting online business in SEA more complex.
- A payments partner familiar with the latest threats and use techniques like AI/ML, which can automate the detection and resolution of suspicious behaviors, will enable businesses to counter the threats.



## Offers technology for more accurate authentication based on the latest techniques, as well as a clear roadmap for future developments

- Authentication is a key tool in online transaction security and bad actors are now finding ways to breach traditional security tools such as 2FA and passwords.
- A payments partner that has advanced authentication techniques such as biometrics, location, and behavioral analysis offer far better protections against these new attacks. An ideal payments partner is one that can provide a clear roadmap for its future developments in technology to counter emerging threats, demonstrating its understanding of the dynamic nature of threats.



## Global insight to stay on top of the latest threats and best practices

- No markets exist as islands and trends across the rest of the world very often affect other regions, whether it be positive developments such as regulation or negative ones such as fraud threats.
- A payments partner with clear knowledge of global developments will allow their customers to benefit from the global views of latest developments in regulation and threats, and apply that knowledge to their own technology roadmap.

# Essential Guidance

Beyond payments: what businesses need to do to create new value for their business



Businesses need to understand the changes that continue to take place in the payments space in SEA, and work at leveraging those changes to their advantage. This includes optimizing their payment offerings to suit the needs of customers, be cognizant of how the digital commerce environment is evolving, and the emerging fraud menace that threaten revenue growth across SEA.

Despite these new developments, the region continues to be one that is full of promise. For businesses, the good news is that many of the challenges can be navigated through a comprehensive payment and fraud strategy.

1

## Select the right technology and innovations to defend against fraud

- Gain awareness of the different kinds of fraud such as first party misuse, understand what circumstances such activity propagates in your industry and which techniques are best suited to deal with them.
- Use all available tools to fight new threats; understand the evolving nature of threats in the region.
- Pick solutions that use core technologies such as AI and ML to detect and combat fraudulent activities.
- Implement biometrics and other forms of authentication against the most common types of new fraud.

2

## Seize the opportunities from intra-SEA cross border payments in a secure manner

- For first timers to cross-border selling, explore how the new RTP schemes could potentially boost your revenues through opening up new markets.
- For those already involved in cross-border sales, look to see how the RTP schemes in SEA could potentially reduce your costs for international payments, helping you to orchestrate and optimize payment channel flows and revenues.
- Ensure your cross-border transactions are secure by adopting payment partners who are aware and are fully equipped to deal with international threats.

3

## Leverage network to share best practices across the industry

- Knowledge is power, and getting information from peers in the industry about best practices regarding regulation and fraud behaviors is invaluable.
- New fraud behaviors can be quickly assimilated and analyzed with counter measures if detected by peers involved in data-sharing agreements.
- Such data-sharing agreements are particularly useful for co-developing AI/ML algorithms to jointly combat fraud. With Fraud-as-a-Service syndicates now colluding directly with fraudsters to further their aims, the industry too must find its own collaborative means to fight back.

## Appendix

# Explanation of terms used in this IDC InfoBrief



- **Card testing:** Fraudulent activity where bad actors determine the validity of misappropriated card information through small purchases
- **Coupon discount/refund abuse:** Abuse of promotions or refund policies to defraud a business; a form of first-party misuse
- **Cryptocurrency:** Digital currency which uses cryptography to secure transaction records
- **Distributed ledger technologies:** Decentralized peer-to-peer database which eliminates the need for intermediaries to process and authenticate transactions
- **eKYC:** Electronic know-your-customer, remote processes used by institutions to verify their customer identity and details
- **First-party misuse:** Knowing misrepresentation of identity or intent for the purpose of fraud, typically through chargebacks to reverse transactions. Also known as friendly fraud and could also manifest as coupon or refund abuse.
- **Loyalty fraud:** Bad actors exploiting loyalty programs for fraudulent transactions and other activities
- **Phishing:** Using deceitful methods to gain access to personal and valuable information such as passwords or payment details
- **Pharming:** Fake online portals to which users are redirected by using malicious codes. Portmanteau of 'phishing' and 'farming'
- **Rules-based fraud prevention:** Preventing fraud by using 'rules' to define which payments are allowed to be authenticated and processed
- **Sharing economy services:** Online services such as Uber and Airbnb where assets and services are shared between private individuals
- **Social engineering:** Using psychologically manipulative techniques to coerce victims to perform actions unwittingly
- **Whaling:** Phishing for high value targets such as high net-worth individuals using more customized and targeted approaches

Source: IDC 2022

## Common problems require unified solutions

Success in the digital economy requires keeping up with rapid developments in payments and fraud. New innovations, trends and threats are constantly emerging to disrupt established business strategies.

These challenges may be daunting, but you don't have to tackle them alone. Wherever you are, consider tapping into a network that seeks to solve the same problems you are facing.

### SIMPLIFY PAYMENTS WITH 2C2P

Scaling your business across Asia and overwhelmed by the sheer number of payment methods, rapidly shifting consumer trends and differing regulations?

A leading payments platform with 20 years of local expertise in the region, 2C2P simplifies payments for your business.

With just one point of integration, tap into our established network of financial institutions and payment providers to securely accept over 250 types of payment methods from your customers, anywhere, anytime.

Grow your business with 2C2P today.  
Contact us: <https://2c2p.com/contact>



### COMBAT FRAUD WITH THE MERCHANT RISK COUNCIL

Is your business struggling to keep up with the latest fraud actors and suffering a hit to your revenue?

The Merchant Risk Council (MRC) brings together the best-in-class merchant players, solution providers, and law enforcement strategies to combat fraud and optimise payment processes.

Faced with common fraud and payments challenges, we empower you to craft winning strategies and keep you up-to-date with the best practices through conferences, educational programs, online forums, career development and networking events.

Join the MRC today.  
Visit <https://merchantriskcouncil.org/>



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