PROMOTING SUSTAINABILITY AND STRENGTHENING RESILIENCE IN ASEAN

CHIANG RAI, THAILAND
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We look forward to working with Thailand on its over-arching theme of Advancing Partnership for Sustainability and the themes of advancing a digital, green and sustainable ASEAN.

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EXECUTIVE SUMMARY

The US-ASEAN Business Council is celebrating its 20th consecutive meeting with the ASEAN Finance Ministers in 2019. Its Financial Services Committee (FSC) delegation to the 5th ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM) seeks to expand upon past collaboration with ASEAN governments and present policy recommendations in support of a stable, integrated and open financial sector which support sustainable growth in ASEAN. The U.S. financial services industry is committed to working with stakeholders in supporting innovations which make services more inclusive and attract more partners and resources into ASEAN's financial systems, benefiting the economies of the ASEAN members and ultimately the people of ASEAN. In addition, we are committed to continued engagement with ASEAN Member States (AMS) to strengthen the consumer safety, institutional soundness, cybersecurity and systemic resilience of financial ecosystems to help governments address innovation generated disruptions and related public policy challenges.

As we celebrate ASEAN's 52nd anniversary and the 35th anniversary of the US-ASEAN Business Council, the current global environment contains both external economic headwinds and economic opportunities for ASEAN. We look forward to working with Thailand on its over-arching theme of Advancing Partnership for Sustainability and the themes of advancing a digital, seamless and sustainable ASEAN. As ASEAN continues its ongoing regional capital markets development and financial sector integration efforts, we note the Government of Thailand's focus on deepening regional cross-border e-payments frameworks and the ASEAN Capital Market Forum's Roadmap on ASEAN Sustainable Capital Markets and Financial Professional Mobility

Framework initiatives. In thinking about areas for continued collaboration with AMS in 2019 and beyond, this document offers our ideas and recommendations on the following four themes: Promoting Sustainable Finance; Enabling Digital Finance; Strengthening Cybersecurity; and Enhancing the Competitiveness of AMS to Attract Foreign Investment.

Each of the above areas represent important dimensions in the evolution of financial sector ecosystems to better enable financial services institutions, services providers and other stakeholders to operate efficiently in competitive markets and help financial sectors to play their role in supporting inclusive and sustainable growth. On behalf of a cross section of US-ASEAN Business Council members, we have included detailed content in each section of the following paper.

THIS PAPER FOCUSES ON THE FOLLOWING ISSUES AND RECOMMENDATIONS:

1 PROMOTING SUSTAINABLE FINANCE AND INSURING AGAINST DISASTER

- Catastrophe (Cat) Bonds and (Parametric) Risk Transfer Solutions
- Green, Social and Sustainability Bonds

2 ENABLING DIGITAL FINANCE

- Instant Payments
- Building Trust in Digital Payments
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- Promoting Digital Innovation (FinTech)
- Use of Cloud in Financial Services

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- Standards and Cooperation
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- Insurance
- Private Equity/Venture Capital/IPOs

PROMOTING SUSTAINABLE FINANCE AND INSURING AGAINST DISASTER

Catastrophe (Cat) bonds and (Parametric) Risk Transfer Solutions:

- Investigate the possibility for a member state or ASEAN cat bond, for instance based on the Pacific Alliance experience.
- Explore parametric risk transfer as a type of re/insurance solution to be applied in the ASEAN context, for instance based on the Philippines province-based protection.

Green, social and sustainability bonds:

- Explore greater sovereign issuance to mobilize the market and instill investor confidence.
- Consider adjusting existing taxonomies to account for a wider range of projects which are relevant and supportive of green, social and sustainability objectives in the region.
- Explore using financial incentives to encourage green bond issuance and investment.

ENABLING DIGITAL FINANCE

Instant payments

- Consider ways to implement robust instant payment systems that includes:
  - A settlement mechanism with more frequent intra-day settlement.
  - A collateral system which allows for online monitoring and top up by program operators and real time debiting or ear-marking of funds.
  - Establishing a central counterparty and settlement guarantee fund to ensure customer protection and program participation by non-banks.
  - Allowing consumer choice by ensuring a level playing field and open competition as countries develop their domestic and cross-border instant payment rails.

Building trust in digital payments:

- Maintain a clear and consistent set of principles for security and reliability.
- Adopt global open standards so all stakeholders can participate and benefit equally to help scale adoption of new technology for digital payments in a safe and reliable way.
- Enable data to flow and be stored securely while still being accessible to legal authorities, ensuring global scalability and better fraud algorithms to identify fraudulent transactions in real time.

Building trust in cross-border payments:

- Develop harmonized regional standards for identification and verification processes.
- Work on the components of the “stack” to build a digitalized identity solution that promotes even greater efficiency.

Promoting digital innovation (FinTech):

- Ensure incumbent financial services firms are on a level playing field with new entrants including on access to regulatory sandboxes and customer information sharing obligations.
- Explore enhancement and participation in cross-border cooperation through government-to-government agreements, such as MOUs and the ASEAN Financial Innovation Network (AFIN) and the Global Financial Innovation Network (GFIN).
- Aim to reduce diversity in national requirements when governments are pursuing shared aims (e.g. stringent AML/KYC processes, prevention of terrorist financing, digitization of traditional processes).
- Ensure a simple application process for sandboxes and a commitment from regulators to respond to applications within a specified timeframe.

Use of cloud in financial services

- Support the use of cloud by domestic and international financial services firms.
- Draw on the recommendations of the Asia Cloud Computing Association in considering regulation of cloud in financial services regulation of cloud in financial services.

STRENGTHENING CYBERSECURITY

Standards and cooperation

- Use global principles and standards relating to financial services such as the G7 Fundamental Elements of Cybersecurity for the Financial Sector and the Payment Card Industry Data Security Standard (PCI DSS) and EMVCo standards for the Payments Sector.
- Expand existing US-ASEAN Business Council country forums involving host governments, the US embassy and member firms, such as those in the Philippines and Singapore to facilitate cooperation on cybersecurity.
- Create inter-agency forums to coordinate policy across government agencies.
- Establish a permanent cross-border forum to discuss cybersecurity policy among governments to help drive coherent strategic outcomes, harmonized standards, and adoption of international standards and manage threats.

Information sharing

- Explore additional ways to enable timely sharing of cyber risk information as well as developing a harmonized approach to reporting to allow companies to make sense of crisis prioritization and compliance.
- Develop frameworks for exchanging data on cyber threats with insurers to help them develop insurance products.

Digital data governance

- Input by Finance Ministers and Central Bank governors to the ASEAN Digital Data Governance Framework being led by ICT Ministers.
- For any data classification system, distinguish between national security information and business information and consider its impact on financial services firms, which protect sensitive personal information.

ATTRACTING FOREIGN INVESTMENT

Insurance

- Reduce or remove foreign equity caps for insurance on life and non-life products.
- Remove requirements on domestic retention of reinsurance risks, to enable market growth and development and risk diversification.

Private equity, venture capital and IPOs

- Remove funding caps on financial services, banks and insurance firms to ensure the benefits of private equity (PE) and venture capital (VC) can flow into this sector.
- Consider additional measures to encourage private equity and venture capital investment in ASEAN countries, such as frameworks to establish a well-functioning and predictable IPO market.

ONGOING & FUTURE COLLABORATIONS

1. **Cyber Risk in the Financial Sector Workshop**
   To expand upon our cooperation on cyber issues in the financial services industry, the Council proposes a Cyber Risk in the Financial Sector Workshop be held on the sidelines of an appropriate ASEAN Working Committee meeting in 2019.

2. **Working Committee on Payment and Settlement Systems (WC-PSS)**
   The Council extends our gratitude for the opportunity to participate in WC-PSS meetings to advance ongoing dialogue between the public and private sectors on strategies to improve payment and settlement systems as part of the regional integration agenda. We look forward to continuing engaging in these discussions in 2019 and collaborating on payments and settlements issues in ASEAN.

PROMOTING SUSTAINABLE FINANCE

The theme of this year's ASEAN Chairmanship, "Advancing Partnership for Sustainability", represents an opportunity to build on work already done in ASEAN and to explore new initiatives in sustainable finance. We welcome a continued focus on this area in Thailand's host year. A large source of opportunities for sustainable finance in ASEAN lies in the bond market. The issuance of bonds based on the ASEAN Green Bond Standards (ASEAN GBS), launched by the ASEAN Capital Markets Forum (ACMF) in November 2017, was supported by Ministers and Governors in 2018. The ACMF followed with the ASEAN Social Bond Standards (ASEAN SBS) and the ASEAN Sustainability Bond Standards (ASEAN SUS) in October 2018 in an effort to drive a more integrated and sustainable capital market. ASEAN has also identified disaster resilience as an area of focus. Cat bonds by countries or a group of countries in ASEAN could help meet these needs along with re-insurance solutions such as parametric risk transfer.

CATASTROPHE BONDS AND (PARAMETRIC) RISK-TRANSFER SOLUTIONS

Parametric risk transfer is a type of re/insurance solution that pays out on a predefined parametric trigger. The trigger is typically defined based on an objective parameter(s) related to the risk in question, such as the magnitude of an earthquake, rainfall intensity or wind-speed. Because it eliminates the need for loss appraisal, parametric risk-transfer among others has the advantage of predictability and speed of payout – typically within 30 business days – which can provide critical financing for immediate disaster response and recovery activities. Parametric solutions can be structured to transfer risks to re/insurance markets and capital markets.

Catastrophe (cat) bonds are a form of insurance linked security (ILS) - instrument which are sold to investors whose value is affected by an insured loss event. Although currently a niche product, the market for cat bonds is growing (US$13.9 billion of cat bonds issued in 2018) and is anticipated to increase significantly in the next 5-10 years. Cat bonds transfer risk to the capital markets. In contrast, government debt issued following a natural disaster would be reflected on a government's balance sheet and can have a rating impact.

Cat bonds issued by an individual country or a multilateral development bank such as the World Bank or Asia Development Bank and price-based on the level of catastrophe risk (and therefore not based on an individual country's debt financing levels). In addition, unlike post-event funding in which the principal must be paid back, in a catastrophe bond, the principal is reduced. Cat bonds, similar to parametric insurance, where an event is triggered based on a pre-defined index, parameters, or modeled loss also guarantee a quick payout following a disaster event (can be as short as 14 days depending upon trigger selected) due to the elimination of the loss appraisal process in traditional insurance. Cat bonds also offer investors diversification, with almost no correlation to the financial markets. In addition, cat bonds are: rated by credit risk agencies; tradable in secondary markets; and offer attractive returns in a low interest rate environment. Pension plans, endowments and mutual funds (either directly or via Investment Linked Securities (ILS) funds) have been the largest end investor of this emerging asset class to date.

There may be opportunities for individual countries – or a group of countries – to utilize parametric risk transfer mechanisms (e.g. either cat bonds or re/insurance). Examples of such usage include for multi-country solutions include the 2018 Pacific Alliance Cat Bond (providing dedicated protection to each of the four participating countries), the Caribbean Catastrophe Risk Insurance Facility (CCRIF) or the envisaged South-East Asia Disaster Risk Insurance Facility (SEADRIF).

Examples for national cat bonds are FONDEN's historical usage of cat bonds (including the 2017 Capital At Risk note issuance via IBRD's CAR program that triggered a full payment from a September 2017 earthquake) and other sovereign risk-transfer (such as the Cat Swap for Local Government Units completed in both 2017 and 2018 for the Philippines). Other countries, such as Indonesia, are also exploring cat bonds.

Multilateral institutions like the World Bank are a valuable partner taking on an advisory role. Major banks and re/insurance intermediaries (including securities arms of re/insurance intermediaries) are also valuable partners. Placement by them achieves broader distribution, transparency, pricing and a larger-sized benchmark deal which can attract international investors and re/insurers.

“IN ADDITION, CAT BONDS ARE: RATED BY CREDIT RISK AGENCIES; TRADABLE IN SECONDARY MARKETS; AND OFFER ATTRACTIVE RETURNS IN A LOW INTEREST RATE ENVIRONMENT.”

On a regional product, ASEAN may be able to draw on one of the several cat bonds benefitting countries (or their cat pools) or risk-transfer programs such as the one being implemented in the Pacific Islands or the Caribbean Cat Risk Insurance Facility which are all examples of extremely successful regional risk-transfer programs. There are differences between regions. Latin America is, for example, a contiguous landmass while ASEAN is not. Modelling for an ASEAN cat bond would be a challenge as well given the differences between countries, but APEC is exploring an APEC cat bond and the idea may be worthy of further consideration.

RECOMMENDATIONS

1. Investigate the possibility for a member state or ASEAN cat bond, for instance based on the Pacific Alliance experience or similar transactions.

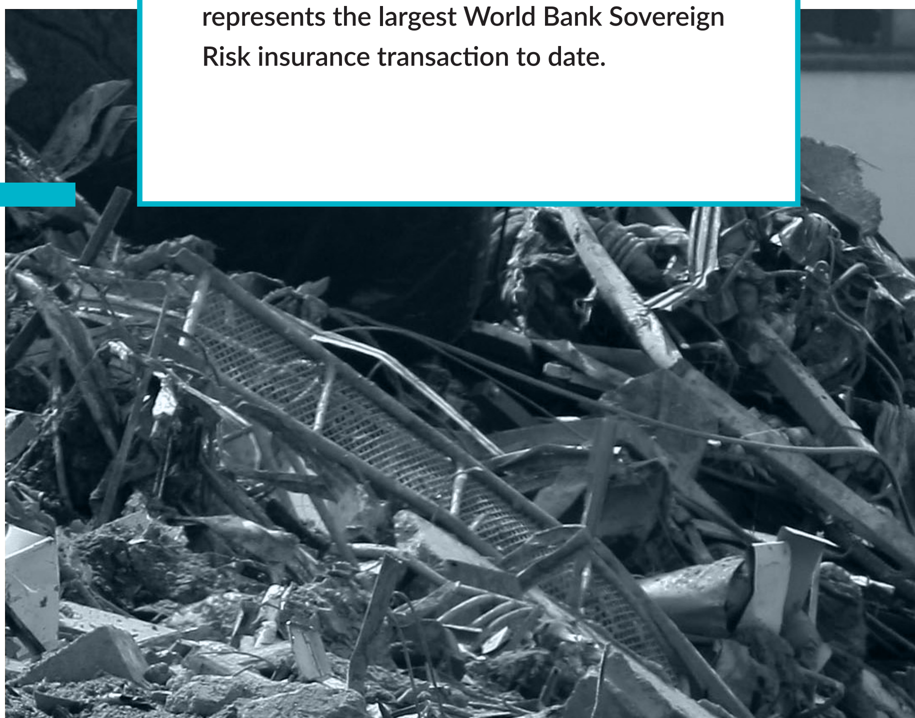
2. Explore parametric risk transfer as a type of re/insurance solution to be applied in the ASEAN context, for instance based on the Philippines province-based protection.

PACIFIC ALLIANCE CAT BOND

In 2018, the International Bank for Reconstruction and Development (IBRD) issued US$1.36 billion of Floating Rate Earthquake-Linked Capital at Risk Notes on behalf of the members of Pacific Alliance: Chile, Colombia, Mexico and Peru. The proceeds will be available for the member nations to access for disaster relief and other funding needs upon a triggering earthquake event. This was the first catastrophe bond transaction for Chile, Colombia and Peru. The joint issuance of this bond allowed the participating countries to benefit from cost savings on legal and other fees.

The transaction demonstrated the resilience of the catastrophe bond market immediately after one of the largest catastrophe loss years in history in 2017. Market demand was exceptional: each tranche of the CAR Notes was upsized and priced under the low end of initial guidance. The order book was significantly oversubscribed: bids were received for US$2.5 billion from over 45 qualified investors and Insurance-linked securities (ILS) specialists, this was twice the amount offered (US$1.36 billion). This represents the largest World Bank Sovereign Risk insurance transaction to date.

"CATASTROPHE BONDS ARE ALSO AVAILABLE FOR SITUATIONS WHERE PROTECTION NEEDS ARE MODEST."

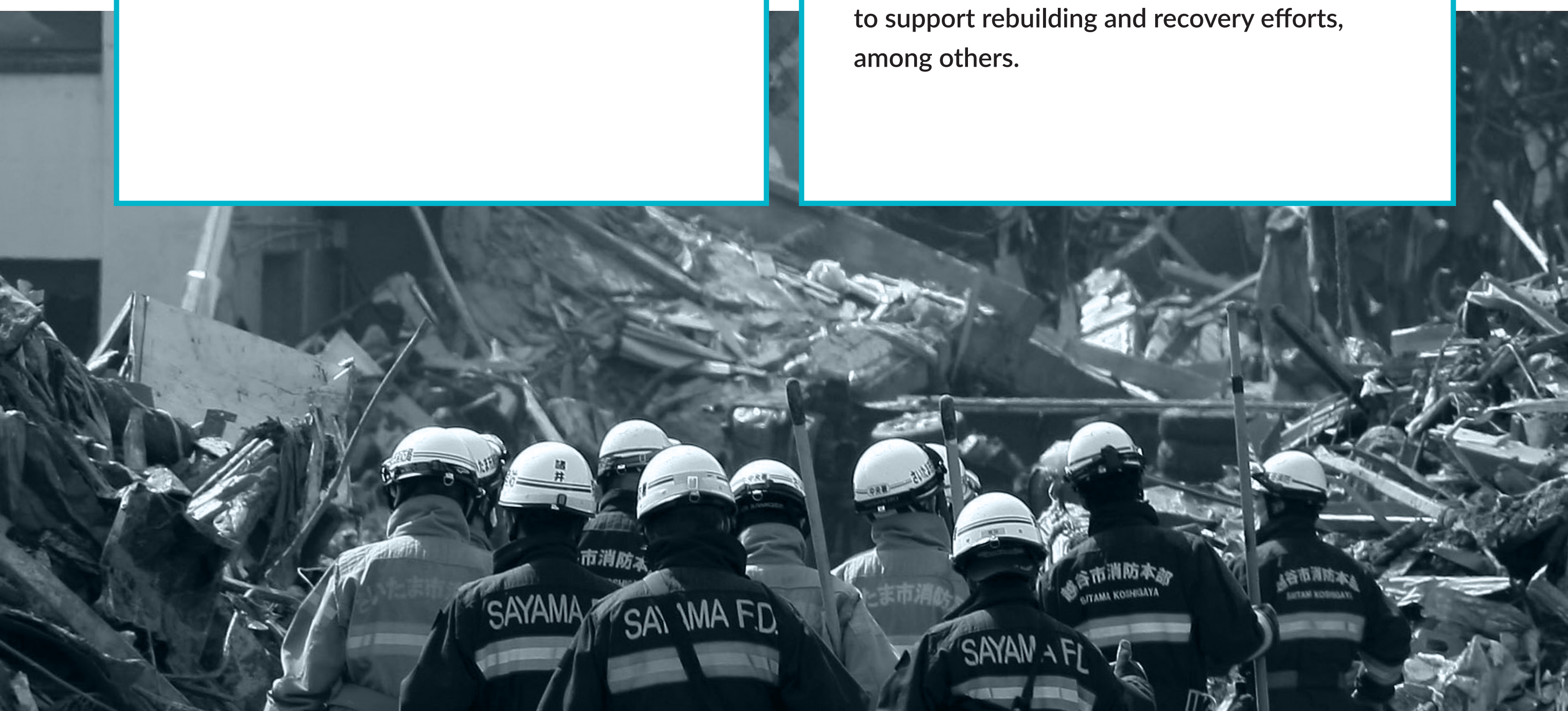


CCRIF CAT BOND

Catastrophe bonds are also available for situations where the protection needs are modest (relative to the Pacific Alliance US$1.36 billion catastrophe bond). The first catastrophe bond (which was for US$30 million) issued by the World Bank from its Capital-At-Risk facility was on behalf of the Caribbean Catastrophe Risk Insurance Facility (CCRIF) in June 2014 using a private cat bond format. CCRIF is a risk-pooling facility that is designed to limit the financial impact on participating governments resulting from catastrophic earthquakes, hurricanes and heavy rain events by quickly providing financial liquidity when a policy is triggered. CCRIF has been expanding its geographical scope by adding participants from Central America to its existing Caribbean sovereign client base. Using the private cat bond, CCRIF complemented its traditional re/insurance capacity by expanding its capacity sources on a multi-year basis.

ILS AND (RE)INSURANCE-SOURCED CAPACITY COLLECTIVELY PROVIDE PHILIPPINES PROVINCE-BASED PROTECTION

Following the success of the initial swap placement (providing protection in PHP; total limit is equal to US$206 million equivalent) in 2017, the Philippines recently renewed in late 2018 its parametric natural disaster insurance cover (approximately US$390 million in size) with ILS investors and re/insurers. The transaction provides 25 provinces in the Philippines with peso equivalent of US$390 million of insurance cover against major typhoon and earthquake events, with the protection structured on a parametric basis. The World Bank facilitated this placement by entering into an agreement with the private reinsurers and ILS investors to provide the coverage to national government agencies and 25 participating provinces in the Philippines. Insurance payouts will be made when the pre-defined parametric triggers are breached, with the parametric insurance provided by the Philippines Government Service Insurance System (GSIS). The product is designed to facilitate rapid payouts and the disbursement of capital as soon as possible after disasters strike to support rebuilding and recovery efforts, among others.



GREEN, SOCIAL AND SUSTAINABILITY BONDS

In 2018, green, social, and sustainability bond issuance totaled close to US$150 billion, with Asia Pacific private and public sector issuance approximately US$47 billion. ASEAN issuance was around USD$4 billion. Moody's predicts 2019 activity could reach US$200 billion. We would like to work with ASEAN governments to encourage greater take up and use of sustainable finance in this region.

The public sector plays an important role in fostering sustainable finance ecosystems. We welcome moves by ASEAN governments to encourage growth and instill investor confidence in this nascent sector by setting up and adopting industry standards. In this regard, we applaud ASEAN's development of the ASEAN GBS, ASEAN SBS, and ASEAN SUS (together, the ASEAN Standards). These standards aim to accelerate development of sustainable finance in the region and each is based on the globally recognized ICMA Green Bond Principles, ICMA Social Bond Principles, and ICMA Sustainability Bond Guidelines. The Philippines' adoption of the ASEAN GBS in August 2018, as well as guidelines promulgated by Thailand and Malaysia regulators based on the ASEAN Standards, provide a good foundation for ASEAN to grow domestic and international sustainable finance. Other initiatives to promote the sector include the Monetary Authority of Singapore's Green Bond Grant Scheme instituted in 2017.

Green, social, and sustainability bonds offer investors opportunities for diversification. These products have become an increasingly regular component of the funding programs for all types of issuers, with sovereigns, corporates, and financial institutions alike benefiting across a wide range of uses of proceeds. Nevertheless, green, social and sustainability bond issuance in ASEAN still lags behind other regions and there is currently no dedicated investment fund for ASEAN green, social, or sustainability bonds (and no dedicated funds in Asia as a whole), mainly due to concern about a lack of green assets. While ASEAN issuers might be debuting in this market at a faster pace, investors remain to be convinced of a strong and stable enough pipeline (i.e., there will not be enough repeat transactions from issuers) to encourage them to dedicate capital to funds that can only invest in these instruments.

> **“GREEN, SOCIAL, AND SUSTAINABILITY BONDS OFFER INVESTORS OPPORTUNITIES FOR DIVERSIFICATION.”**

There is another factor in the region influencing investment in green, social and sustainability products. The relatively nascent understanding of environmental issues and challenges, local issuers and investors may not necessarily appreciate the broader benefits of supporting environmental sustainability and promoting green projects. Currently, there is a lack of clarity about whether there are pricing benefits of issuing green bonds. Education of both these communities will help raise awareness. Support by government agencies such as regional sovereign wealth funds in this asset class might give confidence to investors to invest as well as attract local issuances.

In the U.S. and Europe, the market is supported by supranational and agency issuance, in addition to activity from sovereigns and municipalities. ASEAN governments may be well placed to provide support and/or incentives to promote issuance and the creation of green projects and assets. For example, an increase in sovereign green bond transactions from ASEAN governments may help build a pipeline of repeat issuances, and help stimulate interest amongst the issuer community. Indonesia's green issuance program, with transactions in 2018 - Asia's first from a sovereign - was an important step forward. We would like to see other countries issue sovereign green bonds.

Financial incentives are another measure governments could consider to bolster the sector, such as income or withholding tax breaks, which could be allocated to (1) funds, to incentivize the creation of capital dedicated only to green, social, and sustainability bonds, or (2) issuers of green, social, or sustainability bonds. Tax incentives for investors could also be part of this.

We see further opportunities for ASEAN to work more closely with multilateral agencies and with other partners, particularly ASEAN+3 partners. The Asian Development Bank (ADB) has played a valuable role in promoting such offerings from corporates and financial institutions, especially in the government-linked space, by anchoring offerings and sharing its technical expertise, resulting in a skill transfer component along with the advisory services it provides. International and domestic underwriters of green, social, and sustainability bonds can work together with the ADB (and other multilateral agencies, such as the World Bank, IFC, and the AIIB) to ensure financing frameworks and the transactions themselves are robust and are consistent with best practice for the widest investor appeal.

Globally, work is being done around developing taxonomies and classifications of green bonds. Clarity on what may be labeled “green” will increase investor demand and consequently, issuance. The ICMA Standards (used in over 80 percent of issuance and increasingly in additional guidelines such as the ASEAN Standards) set out a simple and widely understood set of recommendations on the requirements for labeled issuance, simply a specified use of proceeds, a process for project evaluation and selection, a commitment with regard to proceeds not yet allocated to green eligible assets, and a commitment to reporting. While uses of proceeds have expanded over the years beyond renewable energy, for example, a wide-ranging taxonomy is crucial to market growth.

Some argue it is the narrowness of widely accepted definitions of green use of proceeds which is holding back issuance. Issuance needs to be permitted from a broader set of projects and industries, normally considered brown not green, such as aviation, metals and mining, to take in to account technological innovations that make those sectors “greener” or more sustainable. These innovations could include sustainable manufacturing, ships using hybrid fuels, or modern aluminum mining techniques. ASEAN may consider adjusting its taxonomy and standards to account for sectors which are relevant and supportive of green projects in the region.

Any changes to the definition of green bonds must be consistent with global or other international standards, and in consultation with industry and multilateral development banks so as not to put ASEAN out of step with general agreed approaches.

Many financial institutions have drawn up green bonds frameworks to ensure compliance with the Green Bond Standards. These frameworks make clear which assets are eligible, for example: renewable energy (including land acquisition and construction work), energy efficiency (such as commercial or residential energy efficiency projects), sustainable transport (such as electrified public transport and mass transit infrastructure) and water quality (such as water treatment infrastructure installation or upgrades). Consultation between industry and government will be important as ASEAN considers any adjustments to taxonomies and standards.

RECOMMENDATIONS

1. Explore greater sovereign issuance to mobilize the market and instill investor confidence.

2. Consider adjusting existing taxonomies to account for a wider range of projects which are relevant and supportive of green, social and sustainability objectives in the region.

3. Explore using financial incentives as a way to encourage green bond issuance and investment.

ENABLING DIGITAL FINANCE

While digital finance and integration is critical for ASEAN members to compete with other major economies, states have the significant challenge of enabling the financial services ecosystem to flourish while also implementing regulatory processes. Promoting financial innovation is a shared priority of industry and government. ASEAN Finance Ministers and Central Bank Governors in their 2018 Joint Statement recognized the significance of technology in transforming the financial industry. The AFMGM also recognized the benefits of collaboration between the public and private sector to enhance capacity and to facilitate effective and innovative financial technology solutions to address the needs of citizens and business as well as tap new growth and opportunities while also maintaining financial stability. Getting the policy setting right is the key to benefiting from innovation while managing risk. Some suggestions as follow.

INSTANT PAYMENTS

Instant Payments, also known as Faster, Real Time or Immediate Payments, are an increasingly important part of domestic and international payments in ASEAN - and the rest of the world. Currently more than 25 countries around the world have 24x7 instant payments[1] and that number is growing with several countries in ASEANparticipating. As 1.8 billion people across Asia have bank accounts, a number that is expected to increase as a greater number of people are brought into the banking system, instant payments opens up an important payment method for individuals and companies.

We understand that ASEAN member countries are increasingly interested in instant payments. The benefits of instant payments include: a) a reduction in late Business-to-Business (B2B) payments helping businesses get paid more quickly, which is particularly important for individuals and SMEs in their management of cash flows; b) less use of cash, which is a key objective of policymakers due to the benefits this brings in terms of efficiency, transparency, cost, revenue and financial inclusion; and c) enhanced security with tokenization saving the need for customers to share sensitive account information when engaging in transactions, thereby reducing the risk of cyber-attacks or improper use of information. Real time collections such as Request to Pay are also increasingly important, offering real time access to customer bank accounts for merchants creating efficiencies for consumers and merchants. Additionally, enhanced capabilities such as end to end payment visibility, additional information and others allow digitization of corporate workflows via instant payments.

Several factors are important for the development and success of instant payments:

Access: Opening core payment systems to a greater number of direct participants and using APIs in an open banking system.

Functionality: Creating an inclusive architecture to support implementation of capabilities and services for all (existing and newcomer) participants and end-users.

Interoperability: Expanding the degree of interoperability between core infrastructure and other domestic and international payment systems, but also maintain consumer choice, competition and level playing field.

Speed: Developing real-time settlement systems initially for retail payments that can gain wider usage by being designed to eventually serve either business or consumer payments.

Risk management: Upgrading payment systems to enable risk-reduction processes and controls that stem from faster payments including a shift from batch to real-time processing.

Cross-border linkages: Establishing linkages between domestic instant payment systems to allow instant cross-border payments to supplement existing (mainly regional and international) payment systems that are already providing such cross-border payment services.

CHALLENGES

There are several issues for policymakers to keep in mind in developing instant payment systems. Finality of payment is essential. Without this, consumer confidence in the model would be undermined, hindering cooperation. The settlement mechanism and collateral are key parts of the system. A central counterparty and settlement guarantee fund might be necessary in the longer term. As new types of institutions enter the payment space risk management also needs to change.

- **Settlement**
  It is important to build a strong settlement mechanism for instant payments. Most instant payment programs are initially introduced with

1. US, Mexico, Brazil, Chile, UK, Denmark, Sweden, Poland, France, Spain, Italy, Bahrain, Nigeria, South Africa, India, Sri Lanka, China, Japan, South Korea, Hong Kong, Singapore, Thailand, Australia.

interbank settlements taking place during working hours with only a few settlement times in the day as was past practice. Introducing more frequent settlements as the instant payment program matures is critical as this reduces costs and risks for the participants.

- **Collateral**
  It is important to ensure that the right mechanism is in place so that the remitting bank holds enough collateral with a central counterparty or the central bank. On-line monitoring by the operator of the instant payment program is also key to ensure that payments do not exceed such collateral. Easy and online modes of topping up collateral should also be available. Funds should either be debited or earmarked in real time. In the event where the instant payment program cannot establish a pre-funding process, each participant could be given the ability to set up credit limits for all other participants, depending on their credit rating and the credit appetite of each financial institution.

- **Central counterparty and guarantee fund**
  To ensure real customer protection and finality of settlements and to enable non-bank entities to participate in such instant payment programs, the establishment of a central counterparty and a settlement guarantee fund is also recommended.

- **Request to Pay**
  Another key feature, among others, which will greatly enhance consumer experience and therefore adoption and eventually the replacement of cash, is enabling an efficient Request to Pay (RTP) functionality and standard. RTP is an emerging instant collection solution that triggers payments from bank accounts.

  RTP overlays the instant payment capabilities to provide a seamless user experience and increase market adoption of electronic payments from the merchant community. RTP also provides a base infrastructure for Corporates and Non-bank Fintech companies to build on top of instant payment rails.

> **“CONSUMERS WANT CHOICE IN THIS EMERGING PAYMENTS SPACE AS SEEN BY THE PROLIFERATION OF PLATFORMS AND PROVIDERS AND EASE OF USE.”**

It facilitates frictionless wallet top up and merchant payments from bank accounts as a funding source. As RTP is initiated by the merchants or through its portal, full transaction level details will be provided back to the merchants to facilitate reconciliation.

To increase adoption for mobile commerce users either an RTP capability or introducing standards for an “App in App” feature would be beneficial. Either of these ensure that the consumer does not need to exit the mobile commerce app and re-enter through their banking app, but instead lets them initiate a pull payment from the mobile commerce application or invoke their banking app seamlessly from the application.

It is critical for consumer banks to allow the easy registration of consumers to participate in the RTP instant payment program. In addition, when a consumer receives an RTP on their account, their mobile application should support a push notification that allows the user to immediately see the RTP and approve it with minimal friction, while allowing for the necessary user authentication.

Another key adoption enabler is the use of standardized QR code features. International payment companies have continued to drive standardization efforts based on EMVCo across the region, including in Thailand, India and Singapore.

There is concern that domestic instant payment programs are being developed independently of one another and not in a standardized manner. This could present challenges for system interoperability

in cross-border instant payments. Whenever cross-border instant payments programs are developed, they should also be open and interoperable. Consumers want choice in this emerging payments space as seen by the proliferation of platforms and providers and ease of use. From a policymakers' perspective, competition should be encouraged as it promotes innovation and often results in lower costs and a better customer experience.

As outlined above, instant payments should be developed to add on to the diversity of payment options already in the market. Established international payment companies, in addition to newer and emerging players, already offer secure and seamless cross-border payment services to residents of ASEAN. As a form of electronic payments to digitize cash payments, instant payments offer something simple and cost-effective to merchants and consumers alike, though there is certainly still a role to play for the other forms of payments. International payment companies work with their clients and merchants to offer value to consumers to use their cards and other payment instruments instead of cash. This in turn drives greater consumer spending which benefits merchants and promotes economic growth. International payment companies also play an important part in supporting ASEAN's focus on intra-regional travel and tourism by working with major airlines, hotel chains and other stakeholders in the tourism industry.

RECOMMENDATIONS

Consider ways to implement robust instant payment systems that includes:

1. Settlement mechanisms with more frequent intra-day settlement.

2. A collateral system which allows for online monitoring and top up by program operators and real time debiting or ear-marking of funds.

3. Establishing a central counterparty and settlement guarantee fund to ensure customer protection and program participation by non-banks.

4. Allowing consumer choice by ensuring a level playing field and open competition as countries develop their domestic and cross-border instant payment rails.

INDIA CASE STUDY

ASEAN may be able to draw lessons from other markets and regions as it introduces instant payments. India as a leading digital market may provide a useful case study in region.

India's Unified Payment Interface (UPI) instant payment program has several advantages:

- **24/7 and interoperable**
  It is available 24/7, enabling round the clock payments, rather than being restricted to banking hours like other wire transfer instant payment programs (such as NEFT). It is also an interoperable program, allowing consumers to link their bank account to any UPI app of choice (which may be owned by the same bank, another bank or even a third party). This provides consumers complete freedom to choose their desired mobile app with best user experience. They can also easily transact with any entity as long as their bank is live on UPI, unlike close-looped wallets, which allow transfers only within their network.

- **Enhanced security**
  In addition, UPI leverages a tokenized financial identifier, UPI ID (also called Virtual Payment Address), which is linked to the bank account.

"SEVERAL COUNTRIES IN THE REGION CURRENTLY HAVE INSTANT PAYMENTS, INCLUDING THAILAND, SINGAPORE AND MALAYSIA, AND INSTANT PAYMENTS WILL BE PRESENT IN ALL MAJOR ASIAN MARKETS BY 2020."

This is a more secure way of transacting as customers do not need to share their financial details (such as account number or bank identifier). UPI is also compliant with two-factor authentication guidelines of the central bank but also provides the end consumer a single click experience as one factor is a combination of the mobile number and device ID.

- **Request to Pay and QR codes**
  UPI offers Request-to-Pay, providing a seamless customer experience and an easy reconciliation for corporates as well as QR code functionality, making offline digital payments possible through secure account-to-account transfers.

- **Quick and easy registration**
  There is a simple registration process for users – unlike erstwhile payment programs such as IMPS, which in many cases require a more cumbersome registration process and other hurdles like 'add beneficiary' before transacting.

There should also be careful considerations when introducing instant payments, such as suitable transaction limits, internet connectivity and smart phone penetration, and non-onerous registration requirements.

BUILDING TRUST IN DIGITAL PAYMENTS

Payment security is a shared responsibility among all participants of the payment ecosystem including governments, payment networks, financial institutions, merchants and consumers.

Over the years, the industry has had a great deal of success in reducing the threat of counterfeit fraud which was the predominant form of payment fraud in the retail environment. Through EMVCo, the global payment technology standards body, the introduction of EMV chip cards has led to an 82 percent global decline in counterfeit fraud at physical stores. The proven success of chip technology in mitigating counterfeit fraud is well documented and many governments, including those in ASEAN, have mandated the adoption of EMV chip.

However, the proliferation of mobile devices and changing consumer buying behavior have led to a rise in e-commerce fraud. Correspondingly, the trend of payment fraud is shifting away from the physical world to the digital world. Between 2015 and 2017, the percentage of ecommerce attacks on merchants almost tripled, from 27 percent to 76 percent of all merchant attacks.

The way consumers pay is also undergoing an evolution. In 2016, there were an estimated five billion connected devices in the world and experts predict that we will have anything between 25 to 50 billion connected devices by 2020. As consumers become more familiar with using such connected devices, their purchasing patterns will evolve, which will also change the profile of payment threats.

> “THROUGH EMVCO, THE GLOBAL PAYMENT TECHNOLOGY STANDARDS BODY, THE INTRODUCTION OF EMV CHIP CARDS HAS LED TO AN 82 PERCENT GLOBAL DECLINE IN COUNTERFEIT FRAUD AT PHYSICAL STORES.”

From observing the trend of cyber threats, we have seen a dramatic rise in the sophistication of cyber-attacks and the extent of the breaches. Criminals today are not just aiming to steal payment credentials. Sensitive personal data like social media profiles, email addresses with passwords and login credentials are also targets. Beyond significant financial losses and inconvenience to those impacted, every breach also results in declining trust, which undermines the efforts of the industry to keep digital payments secure.

The future of payments is dependent on security being fundamental to every payment innovation. Collectively, the industry continues to invest in technology and step up efforts to spread awareness of the latest in fraud fighting methods to defeat the present and next-generation of payment threats.

Today’s cyber criminals are well organized and well resourced. We are in the new age of criminal enterprise and they are investing in artificial intelligence and computing power the same way as financial institutions and merchants are. As a result, they can remain undetected for longer periods of time which worsens the financial impact of breaches. Technology security firm Kaspersky found that the average cost of a data breach is now US$1.2 million, which represents a 24 percent increase from 2017 and 38 percent increase from 2016.

At the payment industry level, major payment networks are actively promoting and supporting a wide range of initiatives including the adoption of global interoperable standards such as tokenization, biometrics and other technologies to improve predictive analytics that stop fraud from happening. There are also efforts to move away from static data to dynamic data which ensures that data is useless, if stolen.

IMPORTANCE OF PUBLIC-PRIVATE PARTNERSHIP

We need to increase our focus on the sharing of payment threat intelligence to disrupt fraud activity. We each have a duty to share cyber alerts, improve education efforts to present a united, coordinated front in the face of growing cyber threats.

The challenge is immense. Given that the payment ecosystem is large and globally interconnected, with tens of thousands of financial institutions, tens of millions of merchants, and billions of consumers. We need to push cyber awareness, capabilities and information sharing to the far reaches of the ecosystem and reach even the smallest players.

To achieve this, it is important that the industry and government agree on principles that foster healthy collaboration. This may include:

- Maintaining a clear and consistent set of principles for security and reliability.
- Adopting global open standards so all stakeholders can participate and benefit equally to help scale adoption of new technology for digital payments in a safe and reliable way.
- Ensuring no data localization requirements to enable global scalability and better fraud algorithms to identify fraudulent transactions in real time.

Just as in the past, we have enjoyed joint success with chip technology due to effective public-private partnerships, we need to apply the same mind-set to payments in the new era of digital commerce.

RECOMMENDATIONS

1. Maintain a clear and consistent set of principles for security and reliability.

2. Adopt global open standards so all stakeholders can participate and benefit equally to help scale adoption of new technology for digital payments in a safe and reliable way.

3. Enable data to flow and be stored securely while still being accessible to legal authorities, ensuring global scalability and better fraud algorithms to identify fraudulent transactions in real time.

TRUST AND IDENTITY FOR CROSS-BORDER PAYMENTS

Identity is a critical pain point for many financial services companies, as the process of identifying users remains largely physical and verification standards vary widely across ASEAN countries. The absence of an accepted region-wide standard for identification, coupled with continued reliance on paper-based methods, limits the development and delivery of efficient, secure, payment systems. This is especially true in the current climate of increased demands for transparency around transactions, creating a pressure for financial institutions to provide greater granularity and accuracy in the identity information that they capture and are increasingly being held liable for inaccurate or missing identity information.

> "TO BUILD DYNAMIC AND INCLUSIVE DIGITAL ECONOMIES, ASEAN COUNTRIES MUST WORK TOGETHER TO STRENGTHEN TRUST AND SECURITY ACROSS THE REGION."

As economies in ASEAN continue to integrate and the demand for cross-border payments rise, building a common framework for identity across ASEAN that addresses the need for secure and accurate online identification and verification will be critical. This framework will form part of the core foundation or "stack" needed to enhance the efficiency of domestic as well as cross-border payments, and be viewed as one of the central building blocks of the ASEAN single digital market. Recognizing that identity is a complex and multi-layered problem, this "stack" will comprise components that address issues such as security, privacy, as well convenience and usability. These modular components can be provided or managed by different entities but must be integrated to provide identity systems that are effective for cross-border transactions.

As a first step, ASEAN countries should come together to develop harmonized regional standards for identification and verification processes. These standards can be based

on existing national identification programs for accessing public services. They will identify certain critical attributes and streamline exchange processes across the board to promote interoperability. AMS must commit to ensure that they will work across borders and have the same legal status as traditional paper-based processes. To safeguard against financial crimes, this approach will contain risk-based criteria that AMS have to fulfill to be able to recognize as part of the harmonized system. This will gradually establish a “trusted corridor” of harmonized identity standards within ASEAN. AMS can develop protocols determining the methods for exchange of information and create a “Cooperation Network” to facilitate cooperation on the subject.

Once this foundation of common attributes and exchange standards has been built, ASEAN can work on the other components of the “stack” to build a digitalized identity solution that promotes even greater efficiency. Beyond offering new functionality, digital identity has significant benefits over physical-based identity systems, including increased security and privacy features. Unlike physical IDs, digital IDs can be protected by cutting-edge digital security protocols that would prevent against data breach, modification, loss and theft. In addition, digital IDs allow individuals greater control over the sharing of their information, minimize exposure, and shield their information from illicit access. ASEAN can support the development of digital IDs by building a framework for the design of ID systems, that include guidelines on the core characteristics on identity provisioning, parties that can have access to the IDs, and protocols for information transfer.

The benefits of implementing a common digital identity framework are manifold, including enabling the seamless verification for digital payments across ASEAN, providing the means to move towards a cashless society, creating further productivity gains, reducing corruption, theft and leakage, and further improving user convenience. Not only will digital identity allow innovators to perform critical activities with increased accuracy over that afforded by physical identity, but also to streamline and partially or fully automate many processes, with benefits to clients and firms.

Efforts to develop digital identity “stacks” are already taking place in varying degrees across the world. In Febuary 2018, Australia’s Digital Transformation Agency of Australia (DTA) released a framework that paves the way toward building a standard for digital identity in Australia. The Trusted Digital Identity Framework outlines requirements for security, usability, privacy protection, accessibility, fraud protection and risk management. It also outlines the robust accreditation standards organizations must meet to be accredited to provide digital identity services. In the EU, eIDAS, a regulation on electronic identification and trust services for electronic transactions, serves to provide a secure and seamless way for consumers to transfer funds, pay bills and perform other payments tasks online throughout the EU. The system authenticates digital identities using standardized methods including a standardized digital ID, electronic signatures and seals, digital certificates and timestamps.

To build dynamic and inclusive digital economies, ASEAN countries must work together to strengthen trust and security across the region. By helping to assure the identity of parties engaged in an online relationship or transaction, developing a common identity framework can reduce the uncertainty inherent in cross-border transactions across ASEAN, thus fostering trust and helping to reduce fraud, while preserving individuals’ privacy. Furthermore, where digital IDs are interoperable across borders, this expands the sphere of trust and can accelerate economic integration and create opportunities in new markets.

RECOMMENDATIONS

1. Develop harmonized regional standards for identification and verification processes.

2. Work on the other components of the “stack” to build a digitalized identity solution that promotes even greater efficiency.

PROMOTING DIGITAL INNOVATION (FINTECH)

Financial institutions such as banks and payment companies often work with FinTechs and other non-banks to develop innovative solutions to deliver more efficient and effective financial services. Access to regulatory sandboxes, pilot programs with temporary regulatory relief and timely approvals of new products and services are some of the ways governments can assist to spur innovation. Streamlined approvals for products, services and firms that have a proven record in other markets would help to speed the pace of innovation in individual markets and the region as a whole. The use of APIs, cloud technology and open banking are other ways to speed up the pace of innovation and so should be embraced by governments. Cross-border data flows are key to allowing best-in class global innovations in a market in a cost effective and secure way. Updating regulations to take account of innovations such as digital signatures and remote account opening is another policy priority. Digital signatures should also be given the same weight as wet signatures. Wet signature requirements impede end-to-end digital sales.

Enhancing cross-border cooperation through government-to-government agreements, such as MOUs, the ASEAN Financial Innovation Network (AFIN) and the Global Financial Innovation Network (GFIN) should be a priority to help accelerate the pace of innovation in multiple markets while managing potential risks. We note Singapore's strong support for GFIN and AFIN and encourage other ASEAN countries to join these two initiatives. Of particular importance in these cross-border efforts is the reduction of non-essential diversity in national requirements when governments are pursing shared aims (e.g. stringent AML and KYC processes, prevention of terrorist financing, digitization of traditional processes). Domestic as well as regional financial ecosystems – and therefore citizens everywhere – stand to gain from reduced cross-border friction if authorities can work in pursuit of these goals.

> "THE USE OF APIS, CLOUD TECHNOLOGY AND OPEN BANKING ARE OTHER WAYS TO SPEED UP THE PACE OF INNOVATION AND SO SHOULD BE EMBRACED BY GOVERNMENTS."

A few areas need attention from governments to promote innovation. In open banking, care needs to be taken that financial services firms are on a level playing field with new entrants including FinTechs and major firms from other sectors. Under open banking rules, financial services firms are, for example, sometimes required to share customer information but other firms are under no obligation to share information in return. This deprives consumers of the opportunity to put data from all fields of digital life to work for them; puts financial firms at a disadvantage and creates an un-level playing field.

Consumers would also benefit from a system of Enabling Insurance as a Service (IaaS). Some countries require that electronic sales of insurance can only be made by an insurer, broker or bank. However, the act of selling insurance as part of another transaction, i.e., vehicle subscription services or selling mobile phone insurance, is often done by a third party non-insurer. Given this trend, regulation must adapt to this emerging way consumers are demanding their insurance.

In integrating new players into domestic and international financial systems care also needs to be taken to prevent systemic risk. Robust Third Party Management systems frameworks as well as equal application of privacy, security, Anti-Money Laundering (AML) and Know Your Customer (KYC) requirements are important in reducing this risk. There are opportunities to revise AML and KYC processes and utilize technological innovations such as digital ID for the benefit of existing institutions and new entrants. Revision of such processes also support government goals of financial inclusion and SME development. Technology is moving so fast that technology-neutral regulation is, however, important.

SANDBOXES

Developing a sound and pragmatic regulatory environment that provides the space to encourage innovation while appropriately protecting consumers and the financial system will be critical to ASEAN's success in benefitting from new technologies. Regulatory sandboxes are one way to provide such an environment. In developing a fintech sandbox, flexibility is needed on the part of the government, providing companies opportunities to both succeed, and in some cases, fail, without undue pressure.

In drafting the sandbox, governments should provide clarity in the application process, in particular governments should address the fact that while legal conditions may require a presence in a particular market, restricting access to the sandbox could reduce the introduction of innovation. In particular, this provision may discourage companies from participating and in some instances, hamper the talent immigration into the country. We note Singapore's efforts to address these issues via Sandbox Express.

RECOMMENDATIONS

1. Ensure incumbent financial services firms are on a level playing field with new entrants including on access to regulatory sandboxes and customer information sharing obligations.

2. Explore enhancement and participation in cross-border cooperation through government-to-government agreements, such as MOUs and the ASEAN Financial Innovation Network (AFIN) and the Global Financial Innovation Network (GFIN).

3. Aim to reduce diversity in national requirements when governments are pursing shared aims (e.g. stringent Anti-Money Laundering (AML) and Know Your Customer (KYC) processes, prevention of terrorist financing, digitization of traditional processes).

4. Ensure a simple application process for sandboxes and a commitment from regulators to respond to applications within a specified timeframe.

> **"CROSS-BORDER DATA FLOWS ARE KEY TO ALLOW BEST-IN CLASS GLOBAL INNOVATIONS IN A MARKET IN A COST EFFECTIVE AND SECURE WAY."**

GLOBAL FINANCIAL INNOVATION NETWORK (GFIN)

We welcome the launch of the Global Financial Innovation Network (GFIN) on January 31, 2019, a network of 29 organizations committed to supporting financial innovation. We support the goals of GFIN to provide a more efficient way for innovative firms to interact with regulators, helping them navigate between countries as they look to scale new ideas. GFIN has the potential to help multiple-jurisdictions benefit from innovation while mitigating risks. It could help resolve key issues for industry such as AML and KYC processes, counter-terrorist financing, payments and cross-border identity verification. We note that GFIN includes a pilot for firms wishing to test innovative products, services or business models across more than one jurisdiction. GFIN also aims to create a new framework for co-operation between financial services regulators on innovation related topics, sharing different experiences and approaches. As GFIN cannot override national legislation, a separate application is required to each regulator firms would like to test with. GFIN members will then coordinate with each other around the application. Singapore via the MAS is on the coordination group and is participating in the cross-border trials. Encourage others in ASEAN to participate in GFIN as well.

ASEAN FINANCIAL INNOVATION NETWORK (AFIN)

We welcome the launch of the ASEAN Financial Innovation Network, an initiative of the ASEAN Bankers Association with support from the Monetary Authority of Singapore (MAS), International Finance Corporation (IFC) and Japan to facilitate innovation and collaboration with an emphasis on supporting financial inclusion. We support AFIN's objective of establishing a collaborative network of banks, FinTechs and non-banks in which participants can develop common approaches to business, regulatory, and technical challenges. The use of an industry sandbox for participants to integrate and test applications with each other via a cloud-based architecture is also a practical step towards innovation. The launch of the API Exchange (APIX), an online Global FinTech Marketplace and Sandbox platform for financial institutions, on September 17, 2018 was a welcome development. APIX is the first cross-border, open architecture platform which will enable Financial Institutions (FIs) and FinTech firms to connect to one another through a globally curated marketplace. We encourage ASEAN governments to participate in AFIN to promote innovation in member countries and across the ASEAN region. AFIN should open participation to all players, including existing international and domestic financial institutions and networks.

Regulators should also consider ways to share best practices or lessons learned from sandbox programs. Sharing such learnings can help industry gain clarity and insights on what has worked and what has not worked as well as what technology is being tested. The UK Financial Conduct Authority has published findings to this end and we would encourage other regulators to consider doing the same.

CLOUD ADOPTION TO ENABLE FINANCIAL SERVICES TRANSFORMATION

From capital markets and insurance, to global investment banks, payments, and emerging fintech startups, cloud computing can help transform the future of financial services. Cloud Service Providers (CSPs) allow financial services institutions (FSIs) to innovate, modernize, and transform. As a result, these organizations accelerate their go-to-market times, deliver richer customer engagements and experiences, automate and strengthen security, and drive efficiencies, all while lowering costs. Leading Financial Services companies are achieving better business outcomes with cloud solutions including high-performance grid computing, data analytics, digital transformation, security and compliance, disaster recovery, and more. Cloud computing allows FSIs to focus on what truly matters to their business, rather than technology.

Banking and Payments organizations are optimizing critical aspects of their operations – from customer service delivery models to risk management – in order to build a foundation for long-term innovation and growth. The cloud provides access to the largest ecosystem of consulting and technology partners and business solutions to elevate organizations' performance. Banks and payments organizations access as many resources as needed and only pay for what they use, without large upfront investments.

Capital Markets organizations are able to re-think and re-design operating models and implement cost-saving measures that increase performance. The results include accelerated go-to-market, strengthened security, enriched customer experiences, and better data-driven decision making.

> "CLOUD SERVICE PROVIDERS (CSPS) ALLOW FINANCIAL SERVICES INSTITUTIONS (FSIS) TO INNOVATE, MODERNIZE, AND TRANSFORM."

Insurers of all sizes transform their organizations to be more agile and innovative. By working with CSP, insurers will have access to tools and capabilities to enable a scalable infrastructure, reduce total cost of IT ownership, optimize costs with a pay-as-you-go model, implement automated security and compliance protocols, and improve the entire insurance lifecycle – including underwriting, policy, billing, and claims.

In its latest report on Regulatory Landscape impacting the use of Cloud by Financial Services Institutions in Asia, the Asia Cloud Computing Association (ACCA) sets seven policy recommendations to Regulators, which would improve the conditions for Financial Services Institutions (FSIs) adoption of Cloud Services:

1. Regulations should be technologically neutral. There should not be separate regulations for the use of Cloud Services.

2. Regulations should set out a clear process for FSIs to follow when adopting Cloud Services, where the use of Cloud Services should not require regulatory approval.

3. Regulations should have a clear distinction of services deemed material or critical to FSIs, and those deemed non-critical. This is important for FSIs when considering the risk management framework it should adopt for each of its outsourcing arrangements, and can be addressed through "Whitelists".

4. Regulations should have a clear distinction between control vs possession of data, and distinguish the roles and responsibilities for controls of an FSI's data accordingly. As Cloud Service Providers (CSPs) share the responsibility for owning and controlling data with their customers in a model of shared responsibility, the control of data needs to be recognised as a distinct concept from possession of data as it revolves around the ability of a party (the data controller) to exercise stewardship over

data, to be confident that the data is up-to-date, and to access or recover that data in the event that the primary data repository is not available for any reason.

5. Regulations should permit the transfer of Data to other jurisdictions without requiring a local copy, subject to appropriate safeguards (e.g. security, business continuity, access, and audit).

6. Regulations should only identify the key issues that should be addressed in Cloud Contracts. They should not be prescriptive of the terms of Cloud Contracts.

7. Regulations should not require unrestricted audit access rights to FSIs and Regulators. Independent third-party audits should be an allowed option for verifying a CSP's physical security controls. CSPs may operate in a multi-tenant public cloud or a Software-as-a-Service (SaaS) business model, and may not be able to provide customers with unimpeded access to their premises and systems. In these instances, FSIs or regulators are able to extract customers' specific logs, data and other information through an audit process that does not involve access to a CSP's physical premise.

RECOMMENDATIONS

1. Support the use of cloud by domestic and international financial services firms.

2. Draw on the recommendations of the Asia Cloud Computing Association in considering regulation of cloud in financial services.

STRENGTHENING CYBERSECURITY

We note the agreement by Finance Ministers and Central Bank Governors in 2018 on facilitating the sharing of information on cyber threats and incidents within ASEAN to enhance cyber awareness and strengthen cyber resilience in ASEAN's financial sector. We welcome the many efforts in ASEAN to strengthen cybersecurity across the board. We note the endorsement of the 11 voluntary principles under UNGGE in September 2018 at the 3rd ASEAN Ministerial Conference on Cybersecurity and the establishment of the ASEAN-Singapore Cybersecurity Centre of Excellence encompassing a Cyber Think Tank and Training Center, a Computer Emergency Response Team (CERT) center, as well as a Cyber Range Training Center.

Financial services firms are a frequent target of cyber-attacks and so sector specific efforts in cybersecurity are necessary. The establishment of an FS-ISAC Regional Intelligence and Analysis Centre in Singapore in 2017 with a focus on the region is welcome. Originally established in the U.S., FS-ISAC contributes to intelligence sharing and analysis amongst companies as well as skills development and capacity building. The FS-ISAC has also established the Financial Systemic Analysis and Resilience Center (FSARC) in the US in coordination with the CEOs of systemically critical banks, to proactively identify ways to enhance the resilience of critical infrastructure. We encourage more to be done between ASEAN governments and FS-ISAC. The FS-ISAC and the FS-ARC might also serve as a reference point for cooperation as ASEAN considers its own model of information exchange.

We encourage ASEAN's use of other global principles and standards relating to financial services as it develops policy in this area. The G7 Fundamental Elements of Cybersecurity for the Financial Sector is one such standard. In the payments space, regulators could build on the widely adopted Payment Industry Data Security Standards (PCI DSS), a set of 12 mandatory standards for storing, processing or transmitting cardholder data. Unique national standards reduce interoperability and hence the effectiveness of security measures within countries and cross-border (e.g. national chip standards for payment cards). The ISO 27001 and ISO 27103 Information Security Standards are also widely used internationally and a good foundation for ASEAN information standards. The Global Financial Markets Association (GFMA) also released guidelines on Penetration Testing and Financial Data Handling Principles for Banks and Non-Banks and is working on international cybersecurity data and technology principles as well as data principles, on which ASEAN could draw.

OPERATIONAL RESILIENCE

Regulators and standards setting bodies are increasingly focused on operational resilience as part of their supervisory expectations and as a complement to their well-established prudential and markets focus. From a cyber perspective, regulators' shift in focus from security as a zero-sum game to the acceptance that firms will be breached—and thus a need for resilience—marks a maturing supervisory mentality. Due to complex interdependencies, it is critical that operational resilience planning is coordinated broadly within firms, peer-to-peer, cross-sector, and globally. Planning should be holistic and include business continuity, disaster recovery, and planning for terrorism, cyber-attacks, and third-party supplier failure.

The Council seeks to ensure emerging regulatory approaches to operational resilience and any final standards (i) are developed incrementally and under a principle of proportionality, leveraging off and aligned with existing frameworks and governance processes (ii) are harmonized with international approaches, and (iii) avoid significant disruption to firms' global operating models.

Getting regulations right for the financial sector is important. Financial firms protect individuals, and companies but also domestic and international financial systems. The financial services sector is a particular target given the assets it holds and opportunities for systemic disruption if an attack succeeds. An attack on the sector can have negative impacts on confidence in the financial sector and the financial stability of the country with effects internationally and across sectors.

DATA LOCALIZATION

Data localization is a particular problem for financial firms in their efforts to protect national and international financial systems. Firms use regional and global cybersecurity centers to counter increasingly sophisticated, frequent and cross-border attacks. These centers are staffed with highly qualified individuals who are difficult to find. The centers also need advanced IT infrastructure and the ability to work seamlessly with other regional centers. Limits on the pooling of information across borders for processing storage and analysis hinders the ability of firms to address cross-border threats and creates blind spots. Data restrictions on employee monitoring can also be problematic for addressing internal threats. Data localization risks increasing the entry points for cyber-attacks which weaken overall cybersecurity.

DATA MINIMIZATION

The concept that information, especially personal information, collected must be limited to the information that is minimally necessary (do not collect more than is necessary) should be applied. Every organization – public, private and non-government, should review their current policies and apply the data minimization concept to ensure that not more information is collected than what is necessary to do what they set out to do or what they are contractually and legally required to do. This is to ensure that in case of a data breach, the damage is minimized.

CROSS-BORDER DATA FLOWS

Cross-border data flows will be even more important with the move to cloud technology. Global financial institutions as well as SMEs and individuals are utilizing the benefits cloud technology provides. The cloud allows for the rapid expansion of processing and storage capabilities which are necessary as more firms transition to digital. The cloud also allows the use of the latest technology and innovation. Adjustments to outsourcing regulations will be necessary to allow financial institutions to utilize private and public cloud, both onshore and offshore.

Some have proposed data classification as a way of managing what needs to stay on-shore and what can flow across border. As a first step, a particular distinction should be made between national security information and commercial information. Particular care needs to be taken with regard to financial services which need information about identity for Anti-Money Laundering (AML) and Know Your Customer (KYC) purposes to protect national and international financial system from illicit activities. Finding agreement to classifications by governments would be challenging and risk dozens of standards. Complying with such varying standards with no material impact on the goal of security would be very problematic for cross-border institutions. A technological solution to different classifications across over 100 countries is not yet available and likely to be a long way away, particularly if firms transfer data several times in one day.

> “DATA SECURITY AND PRIVACY AND ACCESS TO DATA WOULD SEEM TO BE THE KEY ISSUES REGULATORS NEED TO SOLVE IN REGULATION.”

Data security and privacy and access to data would seem to be the key issues regulators need to solve in regulation. The location of the data does not impact security or privacy. Data can be just as secure offshore as onshore – sometimes even more secure. Additional onshore locations create additional entry points thereby weakening global security efforts. Offshore facilities also provide back-up capabilities for business continuity. As for access, financial services firms which are often regulated and have a license to operate from financial regulators, can provide data within set time periods for legitimate regulatory, supervisory or legal inquiries.

Given the cross-border nature of the threat, inter-agency and cross-border collaboration on cybersecurity is important. As financial institutions become more digital they are often impacted by ICT regulation. Inter-agency consultation would help find a way through this and produce workable consistent regulations.

Involvement of Finance Ministers and Central Bank Governors in the development of ASEAN Digital Data Governance Framework led by ICT Ministers will be key to ensuring the impact of the framework on financial services is considered.

Governments also need to collaborate with each other to confront cross-border threats on cybersecurity. The ongoing ASEAN Cybersecurity Ministerial meetings are important to coordinate policy across domestic agencies and between governments. Divergence of standards and approaches across the ASEAN market weakens the struggle to counter cyber-attacks. The Council would like to see the creation of inter-agency forums at the national level to coordinate policy and the establishment of a permanent cross-border forum to discuss cybersecurity policy between governments to help drive coherent strategic outcomes, harmonized standards, and adoption of international standards and manage threats.

Timely sharing of cyber risk information is pivotal to efforts for risk mitigation and governments have recognized this and promptly implemented incident reporting regimes. It is crucial that regulators in ASEAN seek to adopt a harmonized approach to reporting to make sense of crisis prioritization and compliance cost for companies. As part of this process, it is equally important to develop frameworks for exchanging data on cyber threats with insurers to help them develop insurance products. Cyber-attacks evolve quickly and are highly dynamic by nature, which complicates risk assessment. The growth of this new industry in ASEAN is only sustainable if companies have access to robust data regarding risk controls and loss information, to draw credible correlations between the two.

Some efforts have been taken on cyber insurance. In September 2016, Singapore launched a Cyber Risk Management Project to provide a cyber risk assessment framework to support a better underwriting and pricing of cyber risks. It has focused on developing a standardized taxonomy of cyber incidents, creating a cyber-event loss database and benchmarking cyber loss models to support actuarial pricing. In November 2018, Singapore launched the world's first commercial cyber risk pool which will bring together reinsurance and insurance-linked securities (ILS) markets to provide US$1 billion of bespoke cyber coverage for companies in Asia. Around 20 insurance firms expressed interest in taking part in the pool. Cyber Catastrophe bonds to fund the new risk pool are being explored. More needs to be done in this area.

Besides the necessity of regulations to mitigate the risks, education of the public is important. Private citizens must be trained to be accountable for protecting their personal data. Collective efforts will help counter the danger these increasingly knowledgeable and sophisticated adversaries pose to the security and economy of the countries. The financial services industry encourages governments in ASEAN to collaborate on thought leadership to educate the public, the private sectors and key stakeholders on the severity and mitigation of cyber risks including protection of assets, internet safety and workplace security.

> **“THE COUNCIL WOULD LIKE TO SEE THE CREATION OF INTER-AGENCY FORUMS AT THE NATIONAL LEVEL TO COORDINATE POLICY AND THE ESTABLISHMENT OF A PERMANENT CROSS-BORDER FORUM TO DISCUSS CYBERSECURITY POLICY BETWEEN GOVERNMENTS TO HELP DRIVE COHERENT STRATEGIC OUTCOMES, HARMONIZED STANDARDS, AND ADOPTION OF INTERNATIONAL STANDARDS AND MANAGE THREATS.”**

Governments can also have an active role in confronting threats. While firms have been proactive in developing cyber resilience measures, the integrity of any internal information security defense system will be more easily compromised if the external online environment (i.e. the internet or apps) enable cyber-crime to prevail. Governments and industry can act to clean up threats and force bad actors out of a country. The UK has, for example, targeted malicious actors with effective results through the National Cybersecurity Centre. Firms have also made a contribution. US businesses joined together to address cybersecurity issues in apps. Companies like Microsoft have also established digital crime units to provide real time monitoring of cybercrime.

In the payments sector, the industry is taking the fight to the criminals. Traditional data compromise detection works from bottom up by analyzing fraud to find the source of the breach. The method involves waiting for the target entity to be compromised and fraud to happen, so patterns can be identified. This traditional approach allowed security experts to localize the source of the compromise and then apply advanced protocols later to prevent further fraud from happening. While this has been effective in reducing fraud, we have not been able to prevent fraud from occurring in the first place. Due to advancements in data analytics, artificial intelligence and machine learning, the industry has been able to adopt a more aggressive approach in detecting and preventing fraud from happening.

Developing skills and talent is vitally important. One of the most critical issues facing corporations is a shortage of cyber-trained personnel. Over 1.5 million cybersecurity professionals will be needed globally by 2020, according to the Centre for Cyber Safety and Education. To develop this workforce an increase in primary and secondary education, on-the job training and salaries that reflect expertise are important. A technical grounding in cybersecurity will also create opportunities for employment in a number of different jobs and sectors as the economy becomes more digital. The Council can work with ASEAN to find ways to address these issues drawing on knowledge within firms.

RECOMMENDATIONS

1. **Standards and cooperation**
   - Use global principles and standards relating to financial services such as the G7 Fundamental Elements of Cybersecurity for the Financial Sector and the Payment Card Industry Data Security Standard (PCI DSS) and EMVCo standards for the Payments Sector.
   - Expand existing US-ASEAN Business Council country forums involving host governments, the US embassy and member firms, such as those in the Philippines and Singapore to facilitate cooperation on cybersecurity.
   - Create inter-agency forums to coordinate policy across government agencies.
   - Establish a permanent cross-border forum to discuss cybersecurity policy among governments to help drive coherent strategic outcomes, harmonized standards, and adoption of international standards and manage threats.

2. **Information sharing**
   - Explore additional ways to enable timely sharing of cyber risk information as well as developing a harmonized approach to reporting to allow companies to make sense of crisis prioritization and compliance.
   - Develop frameworks for exchanging data on cyber threats with insurers to help them develop insurance products.

3. **Digital data governance**
   - Input by Finance Ministers and Central Bank governors to the ASEAN Digital Data Governance Framework being led by ICT ministers.
   - For any data classification system, distinguish between national security information and business information and consider its impact on financial services firms, which protect sensitive personal information.

ATTRACTING FOREIGN INVESTMENT

With a growing level of integration within international markets and the region, ease of doing business plays a crucial role in ASEAN's economic growth. Investment regulations, including foreign equity cap requirements, impact the level of investment in a country. The ability to distribute products and services on an equal footing with domestic firms is another important consideration for foreign investors. Policies that promote private equity and venture capital also stimulate investment. An active, well-functioning and predictable IPO regime is also crucial to promoting these types of investments.

IMPROVING THE INVESTMENT ENVIRONMENT IN THE INSURANCE SECTOR

Insurance plays a critical role in many areas that are of a focus to ASEAN. Whether disaster recovery or climate change, infrastructure financing, or economic development, greater insurance penetration is in the economic interest of ASEAN. This is a goal shared by government, regulators and both foreign and domestic industry.

The insurance industry is a major contributor to long-term improvements in the real economy, helping finance infrastructure investments, supporting developers as they improve and construct commercial and other properties, help farmers purchase land, buildings and equipment, and fund a wide variety of business activity. By investing policyholder premiums in anticipation of future claims, insurers deploy capital focused on longer-duration, relatively lower-volatility investments. These investments support businesses, households, and local governments and are an important source of stability to financial markets. In comparison, many domestic shareholders have shorter investment horizons and more immediate demands for return on investment.

Insurance contributes greatly to a more developed financial system, which naturally results in a higher level of financial inclusion. Access to banking, availability of credit, affordability and access to insurance are among the many factors that enable the disadvantaged to harvest opportunities. Without inclusive systems the poor are forced to dip into their future wealth or savings for education, healthcare or entrepreneurial ventures. The persistence of poor financial inclusion contributes to not just poorer growth but is accompanied by inequality.

While the need to increase insurance penetration in ASEAN is indisputable, there are several policies inhibiting this growth. For example, foreign equity caps create serious challenges within the insurance market. They often impede growth as local partners often lack the necessary capital or expertise to fuel growth. Forced partnerships also expose potential rifts in goals, for example, as one partner may be seeking long-term strategic growth while the other is focused on immediate returns. These divergent views can lead to distractions within the insurer, potentially to the detriment of the market and consumers.

> “IN RECENT YEARS SEVERAL ASEAN NATIONS HAVE ALSO INTRODUCED REQUIREMENTS FORCING DOMESTIC RETENTION OF REINSURANCE RISKS, UNDERMINING GLOBAL RISK DIVERSIFICATION.”

The investor limitations also harm ASEAN’s image in the foreign investment community. They could lead to legal issues impinging on company law, foreign investment law, insurance law, and other laws. The equity caps could also lead to other unintended consequences, including the exiting of foreign investors, and penalties against well-run companies. In our view, legislation that imposes unnecessary, inflexible conditions, with the risk of unintended consequences, impedes the development and evolution of a strong and robust private insurance industry within ASEAN states.

In recent years several ASEAN nations have also introduced requirements forcing domestic retention of reinsurance risks, undermining global risk diversification. These actions impede market growth and development. Reinsurance provides a global risk transfer mechanism. Its fundamental purpose is to spread risk to avoid concentration risk with one jurisdiction or company.

Recent catastrophic experiences in Ecuador, Japan, Chile, New Zealand, Thailand and the Philippines illustrate the difference in terms of economic recovery between markets that promote the spread of geographic risk and those that concentrate risks in the local market.

Economic studies by the World Bank and others have shown a net increase in economic activity in markets that allow cross-border reinsurance following extreme events because quick loss-payments that flow from outside the country speed up recovery and prevent economic stagnation.

The expected increase of extreme climate-related events in ASEAN means effective risk diversification is crucial for the financial health of the risk carriers exposed to those events. The claim that restricting cross-border reinsurance results in a short-term improvement in a country's balance of payments is difficult to substantiate and short-sighted.

In the event of a large claim or catastrophic event, the whole market, including local reinsurers, may be affected. In such a case, a fast claim payment protecting the liquidity of those reinsured may not be possible due to the financial stress on both the insurers and the local reinsurers. Disallowing or discouraging the use of international reinsurers creates potential systemic vulnerability in the country.

Forced retention of reinsurance creates unnecessary financial risk for the jurisdiction in question and impedes the growth of the insurance sector. Risk diversification is a key element of an insurance company's prudential capital management. By limiting the ability of an insurer to diversify its risk within a jurisdiction, its ability to grow in the market is artificially impeded.

ASEAN nations and insurers share the same goal of increased insurance penetration given the societal needs in the region. Foreign insurers are eager to play an important role in this development. Addressing these impediments will go a long way in advancing insurance markets in the region to meet the ever-increasing needs of the jurisdictions and markets.

RECOMMENDATIONS

1. Reduce or remove foreign equity caps for insurance on life and non-life products.

2. Remove requirements on domestic retention of reinsurance risks, to enable market growth and development and risk diversification.

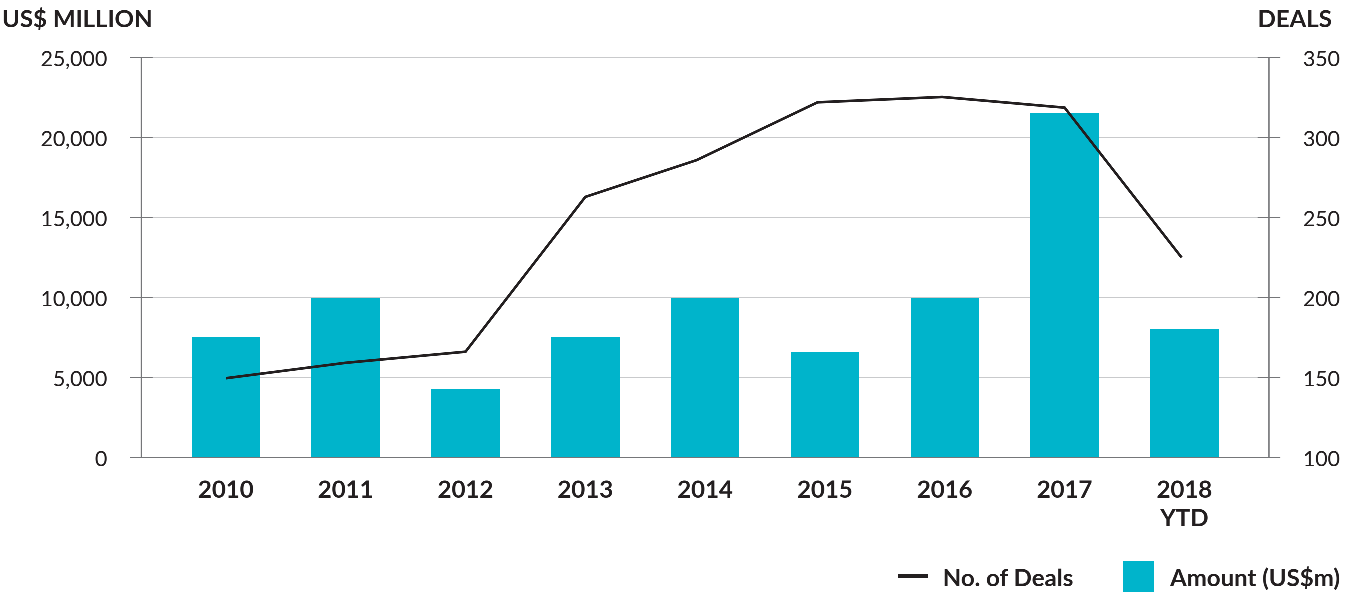
PRIVATE EQUITY/VENTURE CAPITAL/IPOS

Steady progress by ASEAN in creating a single Southeast Asia economic region continues to increase its attractiveness to investors. According to the Asian Venture Capital Journal (AVCJ), private equity (PE) and venture capital (VC) investments into ASEAN have hit the US$7-10 billion range nearly every year for the past 10 years, with 2017 alone delivering a massive US$21.1 billion in PE and VC investment to the region.

These funds provide critical fuel to ASEAN start-up companies and are helping the region build true corporate champions able to compete across the region and beyond. For example, in 2018 ASEAN ride-hailing and delivery start-up Go-Jek held a Series E round that valued the company at more than US$5 billion and has attracted major PE players like KKR from the U.S. and institutional investors such as Tencent from China. According to a November 2018 report by Bain & Company, data show ASEAN's investment ecosystem has developed critical mass and is entering a new phase of growth. Bain & Co. indicated it expects deal value over the next five years will total US$70 billion—double the level of the previous five years—and that ASEAN will produce at least 10 new unicorns by 2024. Bain also found the number of active investors completing private equity transactions with deal values of US$10 million or higher rose to 124 in 2017, a 45 percent increase from the previous five-year average. In addition, more than 1,300 companies in ASEAN have received a first round of seed 'Series A' financing since 2011, including 261 in 2017—five times the level of 2011.

> "THESE FUNDS PROVIDE CRITICAL FUEL TO ASEAN START-UP COMPANIES AND ARE HELPING THE REGION BUILD TRUE CORPORATE CHAMPIONS ABLE TO COMPETE ACROSS THE REGION AND BEYOND."

SOUTHEST ASIA PE AND VC INVESTMENT



Source: AVCJ Research

> "THE US-ASEAN BUSINESS COUNCIL URGES ASEAN TO CONTINUE TO WELCOME PE AND VC AS A VITAL SOURCE OF LONG-TERM INVESTMENT CAPITAL IN THE REGION. WE FURTHER URGE ASEAN TO CONSIDER POLICIES THAT WILL EXTEND THE BENEFITS OF PE AND VC FUNDING, SUCH AS ELIMINATING EQUITY CAPS ON INVESTMENT IN AREAS SUCH AS FINANCIAL SERVICES, BANKS AND INSURANCE COMPANIES."

Along with capital, PE investors bring global linkages and best practices to their investments in ASEAN. Therefore, in addition to helping launch new companies, PE assists mature ASEAN companies and industries to re-capitalize, renew and restructure to better compete. Increasingly, well established companies in ASEAN are facing the challenge of generational change as founders and early leaders look to retire with no clear successor. PE investors provide a path to leadership succession and create more formal institutional structures to ensure great ASEAN companies, many of which were established and built in the 1950s, 1960s and 1970s, will continue to prosper and contribute to regional prosperity for many decades to come. Where ASEAN governments apply funding caps, such as for financial services, banks and insurance companies, the benefits that PE and VC funds could otherwise provide are lost. The list below from AVCJ Research demonstrates that PE funding in ASEAN has cut across a broad range of sectors including: new technology, healthcare, renewable energy, logistics and real estate development.

LARGEST SOUTHEAST ASIA PE DEALS, 2007 - PRESENT

TARGET	US$M	DEAL TYPE	BUSINESS FOCUS
Global Logistic Properties	5,527	Buyout	Warhousing & Logistics
Equis Energy	5,000	Buyout	Renewable Energy
Grab	2,500	Growth	Internet-Enabled Services
Grab	2,000	Growth	Internet-Enabled Services
Go-Jek	1,535	Growth	Internet-Enabled Services
Energy Development Corp	1,277	Buyout	Renewable Energy
Vinhomes	850	Growth	Real Estate Development
Mitra Keluarga Karyasehat	746	Buyout	Healthcare Services
DSM Sinochem Pharmaceuticals	693	Buyout	Pharmaceuticals
MMI Holdings	645	Growth	High-End Manufacturing
AirTrunk	619	Growth	Data Centers
Sea	550	Growth	Internet-Enabled Services

Source: AVCJ Research

The range of sectors and countries represented in this list demonstrates that PE and VC funding help ASEAN diversify its economy beyond historic commodity sectors. In addition, PE can provide capital and management expertise to ensure ASEAN is well equipped to take full advantage if, as some predict, ongoing trade tensions between China and the U.S. and others shifts global supply chains in ASEAN's favor. Along with being growth oriented, PE and VC funding is long-term capital directly invested in the companies and people of ASEAN and provides an important, stable pool of capital that can assist ASEAN through inevitable cyclical downturns in the global economy.

The US-ASEAN Business Council urges ASEAN to continue to welcome PE and VC as a vital source of long-term investment capital in the region. We further urge ASEAN to consider policies that will extend the benefits of PE and VC funding, such as eliminating equity caps on investment in areas such as financial services, banks and insurance companies – there are other ways to ensure prudential, consumer and national interests are protected. Elimination of equity caps will allow PE and VC firms to provide capital and improved business processes that will further enhance the competitiveness of ASEAN's financial service providers, banks and insurance companies in the same way they are already doing for so many sectors across the Southeast Asia region and globally.

RECOMMENDATIONS

1. Remove funding caps on financial services, banks and insurance firms to ensure the benefits of PE and VC can flow into this sector.

2. Consider additional measures to encourage private equity and venture capital investment in ASEAN countries, such as frameworks to establish a well-functioning and predictable IPO market.

ABOUT THE US-ASEAN BUSINESS COUNCIL

For 35 years, the US-ASEAN Business Council has been the premier advocacy organization for U.S. corporations operating within the dynamic Association of Southeast Asian Nations (ASEAN), serving as the leading voice of the U.S. private sector in promoting mutually beneficial trade and investment relationships between the United States and Southeast Asia.

We believe opening and investing in the sustainability of efficient, resilient and competitive markets are critical to the continued growth of our member companies and innovation and job creation in the United States and Southeast Asia.

The Council has offices in: Washington, DC; New York, NY; Bangkok, Thailand; Hanoi, Vietnam; Jakarta, Indonesia; Kuala Lumpur, Malaysia; Manila, Philippines; and Singapore. The Council's Financial Services Committee is made up of over 20 of the world's leading financial services institutions and markets participants operating in Asia's most dynamic regional economic community.