Supplemental Material: Country-specific blockchain policies and information sources

Australia

ICO restrictiveness: ICOs are permitted in Australia. The Australian Investments and Securities Commission (ASIC) indicates that ICOs should be conducted in a manner that promotes consumer trust and confidence, and complies with relevant laws. The structure of the tokens issued under the ICO determines their legal treatment under general consumer law and the Corporations Act.

Crypto-exchange restrictiveness: Crypto-exchanges are permitted to operate in Australia. Entities are required to be licensed with the Australian Transaction Reports and Analysis Centre (AUSTRAC), and are subject to AML/CTF obligations. Crypto-exchanges must identify and verify their customers, and report suspicious transactional activity to relevant authorities.

Tax treatment: Cryptocurrencies are defined as "property" under Australian Taxation Office (ATO) guidelines. Sale or disposal of cryptocurrency is subject to capital gains tax, which is considered part of assessable income for an individual (taxation subject to 50 per cent discount if asset held for over twelve months).

General policy treatment: Several blockchain use cases have been trialled in Australia, including digital identity trials for postal services and blockchain applications for transportation and financial services. Under development are the Australian National Blockchain to provide "smart legal contracts," and Australian Securities Exchange (ASX) blockchain. Fintech sandboxing trials have been conducted by ASIC, whereas the New South Wales state government had committed to blockchain sandbox arrangements.

Sources: "Initial coin offerings and cryptocurrency," https://asic.gov.au/regulatory-resources/digital-transformation/initial-coin-offerings-and-crypto-currency/; "New Australian laws to regulate cryptocurrency providers," http://www.austrac.gov.au/media/media-releases/new-australian-laws-regulate-cryptocurrency-providers; "Tax treatment of cryptocurrencies," https://www.ato.gov.au/General/Gen/Tax-treatment-of-crypto-currencies-in-Australia---specifically-bitcoin/; "Blockchain in Government Tracker," https://airtable.com/shreIXQjzluCxam37/tbl7qVDFKKiEcFFrc; "Regulatory sandbox," https://asic.gov.au/for-business/your-business/innovation-hub/regulatory-sandbox/; "NSW govt will offer regulatory sandboxes to test new tech," https://www.itnews.com.au/news/nsw-govt-will-offer-regulatory-sandboxes-to-test-new-tech-443031.

Brunei Darussalam

ICO restrictiveness: ICOs can be conducted in Brunei Darussalam, however the central bank authority – Autoriti Monetari Brunei Darussalam (AMBD) – has publicly advised that cryptocurrencies are not legal tender in Brunei Darussalam and not regulated by the central bank. Accordingly, ICOs are not subject to specific regulatory treatment however they may fall under activities regulated in general legislation under AMBD's purview (e.g. issuance of securities).

Crypto-exchange restrictiveness: Given the publicly stated position of the AMBD, it is assumed crypto-exchanges are not subject to regulatory treatment. The AMBD has indicated that regulated financial institutions must report suspicious transactions to the AMBD's Financial Intelligence Unit. The use of virtual currency or cryptocurrency is regarded as a "red flag indicator" against which transactions are screened.

Tax treatment: There are no taxation provisions applicable to cryptocurrencies in Brunei Darussalam.

General policy treatment: The central bank has issued guidelines with respect to the application of sandboxing arrangements for fintech.

Sources: "Press release: Autoriti Monetari Brunei Darussalam reiterates position on cryptocurrencies", https://www.ambd.gov.bn/Lists/News/DisplayItem.aspx?ID=347; "Guidance Paper to Financial Institutions for the Obligation to Submit a Suspicious Transaction Report (STR) Under Section 15 of Criminal Asset Recovery Order and Section 47 of Anti-Terrorism Order," https://www.ambd.gov.bn/SiteAssets/financial-intelligence-unit/STR%20Guidance%20Paper.pdf; "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/world-survey.php#brunei; "Fintech regulatory sandbox guidelines," https://www.ambd.gov.bn/fintech-office.

Canada

ICO restrictiveness: ICOs are permitted to be undertaken in Canada. The Canadian Securities Administrators (CSA) applies a four-stage test to indicate whether securities law applies to issuing tokens. Under consideration is whether the ICO involves: an investment of money; in a common enterprise; with the expectation of profit; to come significantly from the efforts of others. Businesses issuing tokens must meet securities law obligations with respect to registration and public reporting.

Crypto-exchange restrictiveness: Crypto-exchanges are permitted to operate in Canada, on the provision that AML/CTF regulatory provisions apply to crypto-exchange operations. Regulated as Money Services Businesses (MSBs), crypto-exchanges need to register with the Financial Transactions and Reports Analysis Centre of Canada (FINTRAC) and adhere to reporting requirements.

Tax treatment: The Canadian Revenue Authority (CRA) has assessed cryptocurrency to be property subject to the Income Tax Act. Cryptocurrency is not legal tender. If cryptocurrency is held as a capital asset the profit obtained as part of sale proceeds are taxed as a capital gain.

General policy treatment: The Bank of Canada, Payments Canada and R3, a distributed database technology company, are engaged in experiments to transform the wholesale payments system. Other public sector use cases are being trialled nationally. National financial authorities have conducted fintech sandboxes.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Regulation of cryptocurrency around the world,"

https://www.loc.gov/law/help/cryptocurrency/world-survey.php#canada; "Canada Gazette, Part I, Volume 152, Number 23: Regulations Amending Certain Regulations Made Under the Proceeds of Crime (Money Laundering) and Terrorist Financing Act, 2018,"

http://canadagazette.gc.ca/rp-pr/p1/2018/2018-06-09/html/reg1-eng.html; "Digital currency," https://www.canada.ca/en/financial-consumer-agency/services/payment/digital-currency.html#toc1; "Blockchain in Government Tracker,"

https://airtable.com/shreIXQjzluCxam37/tbl7qVDFKKiEcFFrc; "New regulatory sandbox could boost blockchain tech in Canada," https://bitcoinmagazine.com/articles/new-regulatory-sandbox-could-boost-blockchain-tech-canada/.

Chile

ICO restrictiveness: Whilst ICO operations may be conducted in Chile there is no explicit regulatory framework applicable to ICOs in that country.

Crypto-exchange restrictiveness: While crypto-exchanges are not officially regulated by the Chilean government, there have been attempts by financial institutions to close down crypto-exchange accounts. It is reported that the head of Chile's central bank (Banco Central de Chile) is in favour of formal regulation for the industry.

Tax treatment: Cryptocurrencies are not presently subject to taxation in Chile.

General policy treatment: The National Energy Commission (CNE) is pursuing an energy sector blockchain use case. It was reported in May 2018 that Chile was considering draft regulations covering fintechs, including the availability of sandbox trials.

Sources: "ICOs and token sales: Regulatory framework in various jurisdictions," https://www.legalink.ch/xms/files/PUBLICATIONS/Legalink_ICOS_and_Token_Sales.pdf; "Chilean central bank president considering regulation of cryptocurrencies," https://news.bitcoin.com/chilean-central-bank-president-considering-regulation-cryptocurrencies/; "Blockchain and energy regulation – Chile's CNE launches data management use case," https://www.engerati.com/energy-management/article/blockchain/blockchain-and-energy-regulation-%E2%80%93-chile%E2%80%99s-cne-launches-data; "Fintech regulations: Chile follows Mexico's lead," https://www.bnamericas.com/en/news/ict/fintech-regulations-chile-follows-mexicos-lead1.

China

ICO restrictiveness: In a statement issued in 2017 several Chinese regulators jointly issued a statement banning ICOs in China. Given anecdotal evidence that China's regulatory stance has not deterred ICO activities, there have been reports that government authorities have considered lifting the ban on activities.

Crypto-exchange restrictiveness: Local crypto-exchange operations are also banned in China. Legacy crypto exchanges operate on the margins of the Chinese financial system, having remodelled their operations to avoid acting as a central counterparty in accordance with regulatory directives issued by financial authorities.

Tax treatment: There is no official treatment of cryptocurrencies under Chinese taxation law.

General policy treatment: The Central Bank of China has investigated the possibility of a central bank-issued cryptocurrency. In July 2017 a fintech regulatory sandbox was established in Ganzhou.

Sources: "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/world-survey.php#china; "Cryptocurrency laws and regulations in China," https://www.vantageasia.com/cryptocurrency-law-china/; "Chinese official: New regulations for 2018 may end ICO ban," https://bitcoinist.com/chinese-official-new-regulations-2018-may-end-ico-ban/; "Blockchain in Government Tracker," https://airtable.com/shreIXQjzluCxam37/tbl7qVDFKKiEcFFrc; "Will Ganzhou's new

regulatory sandbox dictate the future of fintech in China?" https://www.kapronasia.com/china-banking-research-category/will-regulatory-sandboxes-dictate-the-future-of-fintech-in-china.html.

Chinese Taipei

ICO restrictiveness: ICOs are permitted in Chinese Taipei, although the government has indicated it does not encourage, prohibit or take responsibility for ICOs. ICOs are subject to anti-fraud regulatory provisions.

Crypto-exchange restrictiveness: Crypto-exchanges are permitted to operate in Chinese Taipei. It has been reported the Financial Supervisory Commission is implementing AML rules for crypto-exchanges, with guidelines expected in November 2018.

Tax treatment: There is no official treatment of cryptocurrencies under Chinese Taipei's taxation law. However, the classification of cryptocurrency as "virtual commodity" by the Central Bank of the Republic of China (Taiwan) (CBC) and Financial Supervisory Commission (FSC) could entail the imposition of tax liability, however this position remains speculative.

General policy treatment: Chinese Taipei authorities have expressed an eagerness to establish their country as a hub for blockchain businesses. The central banking authority has indicated that blockchain technology will be incorporated into its operations. In late 2017 the government announced its intention to host a regulatory sandbox, established in September 2018 as FinTechSpace and supervised by the FSC.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Legal risks of launching an Initial Coin Offering (ICO) in Taiwan,"

https://zhongyinlawyer.com.tw/legal-risks-of-launching-an-initial-coin-offering-ico-in-taiwan-a-look-at-taiwans-banking-act-securities-exchange-act-money-laundering-control-act-2/?lang=en; "Taiwan eyes November deadline for Bitcoin AML regulation,"

https://www.coindesk.com/taiwan-eyes-november-deadline-for-bitcoin-aml-regulation/; "Blockchain & Cryptocurrency Regulation 2019 Taiwan,"

https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/taiwan; "Nascent blockchain technology to be incorporated in Taiwan's Central Bank Operations," https://ambcrypto.com/nascent-blockchain-technology-incorporated-taiwans-central-bank-operations/; "Taiwan shines a light in the darkness with fintech sandbox," https://international.thenewslens.com/article/87071.

Hong Kong, SAR China

ICO restrictiveness: ICO operations are allowed in Hong Kong. The Securities and Futures Commission (SFC) gave advice to the effect that digital tokens offered or sold are potentially defined as securities under the appropriate regulations. This advice is expressed in a statement issued in September 2017.

Crypto-exchange restrictiveness: Crypto-exchanges are allowed to operate in Hong Kong, with AML/KYC guidelines previously issued by the government. It has been reported that additional licensing and conduct requirements for parties trading cryptocurrencies are being explored by the SFC.

Tax treatment: Cryptocurrencies in Hong Kong are treated as "virtual commodities" under tax guidelines. Capital gains are not subject to taxation in this jurisdiction.

General policy treatment: The Hong Kong Monetary Authority (HKMA) and several banks announced plans to launch a blockchain-enabled trade finance platform, scheduled for commencement in September 2018. The HKMA has also established a "Fintech Supervisory Sandbox" system for banks and partnering technology firms.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Statement on initial coin offerings," https://www.sfc.hk/web/EN/news-and-announcements/policy-statements-and-announcements/statement-on-initial-coin-offerings.html; "Regulation of cryptocurrency around the world,"

https://www.loc.gov/law/help/cryptocurrency/world-survey.php#hongkong; "Hong Kong Bitcoin regulation," https://www.bitcoin.org.hk/hong-kong-bitcoin-regulation/; "Taxation of Bitcoin, Cryptocurrencies and Tokens in Hong Kong," https://www.bitcoin.org.hk/hong-kong-bitcoin-taxation/; "Complete list of Bitcoin friendly countries for cryptocurrency businesses in 2018," https://99bitcoins.com/bitcoin-friendly-countries/; "Hong Kong regulator, banks launch blockchain-based trade finance platform," https://www.reuters.com/article/us-blockchain-trade/hong-kong-regulator-banks-launch-blockchain-based-trade-finance-platform-idUSKBN1K70AP; "Fintech Supervisory Sandbox (FSS)," https://www.hkma.gov.hk/eng/key-functions/international-financial-centre/fintech-supervisory-sandbox.shtml.

Indonesia

ICO restrictiveness: Official regulations restrict the application of ICOs in Indonesia, and also prevent the use of cryptocurrencies as legal tender in that country.

Crypto-exchange restrictiveness: The Indonesian monetary authority has issued warnings against the trading of cryptocurrency. In June 2018 the Bappebti (Future Exchange Supervisory Board) granted regulatory approval for cryptocurrency to be traded on the futures exchange as a commodity.

Tax treatment: There is no official treatment of cryptocurrencies under Indonesian taxation law.

General policy treatment: The Indonesian government has investigated using blockchain to improve the accuracy and security of taxation data. The central bank of Indonesia has established a fintech sandbox to facilitate start-ups within the sector.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/world-survey.php#indonesia; "What Ban?

Cryptocurrency cleared for trading as commodity by Indonesian regulator," https://www.ccn.com/what-ban-cryptocurrency-cleared-for-trading-as-commodity-by-indonesian-regulator/; "Indonesian government considering blockchain technology for better data management," https://cryptovest.com/news/indonesian-government-considering-blockchain-technology-for-better-data-management/; "BI's regulatory sandbox to nurture startups," http://www.thejakartapost.com/news/2018/04/03/bi-s-regulatory-sandbox-nurture-startups.html.

Japan

ICO restrictiveness: ICO operations are allowable in Japan, however it is noted that there are plans to formalise regulatory controls over the issuance of new tokens. It has been reported that the

regulations will include the need for KYC verification by ICO operators, as well as consumer protection disclosures.

Crypto-exchange restrictiveness: Crypto-exchange businesses are allowed to operate in Japan. In the wake of security breaches and collapses of several crypto-exchanges over the past few years, several regulatory provisions are now applicable to crypto-exchanges: exchanges must be registered under the Payment Services Act; AML/KYC provisions are applicable to crypto-exchanges; and businesses must keep records of transactions and submit reports to financial regulators. The Japanese Virtual Currency Exchange Association, a self-regulatory body, has been charged with monitoring crypto-exchanges, promoting regulatory compliance and providing advice to unlicensed exchanges.

Tax treatment: Under Japanese tax law cryptocurrencies are considered a method of payment, wherein the sales of cryptocurrency are considered "miscellaneous income," rather than capital gains, under the Income Tax Act. An official taxation panel has recently called for the simplification of tax arrangements pertaining to cryptocurrencies.

General policy treatment: There is present consideration to apply blockchain to land-use registries. The Ministry of Economy, Trade and Industry (METI) indicates it is providing assistance for certain use-case demonstrations. At the end of 2017 the Japanese government introduced a new sandboxing arrangement for fintech services.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Japan proposes guidelines to legalize ICOs," https://www.ccn.com/japan-proposes-guidelines-to-legalize-icos/; "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/japan.php; "Japan grants cryptocurrency industry self-regulatory status," https://www.reuters.com/article/us-japan-cryptocurrency/japan-grants-cryptocurrency-industry-self-regulatory-status-idUSKCN1MY10W; "Japanese government to simplify cryptocurrency taxation process," https://www.ccn.com/japanese-government-to-simplify-cryptocurrency-taxation-process/; "Blockchain in Government Tracker," https://airtable.com/shreIXQjzluCxam37/tbl7qVDFKKiEcFFrc; "The Japan FSA regulatory sandbox," https://medium.com/tokyo-fintech/the-japan-fsa-regulatory-sandbox-b7e9f38e962e.

Korea, Republic of

ICO restrictiveness: In September the Republic of Korea instigated a ban on ICO offerings in September 2017. There have been political discussions to lift the ICO ban, with reports to the effect that the government will decide in November 2018 on its position on ICOs.

Crypto-exchange restrictiveness: There are significant restrictions on the operations of crypto-currency exchanges, including the condition that trades can only be conducted through real-name (not anonymous) bank accounts. Cryptocurrency dealers must have contracts with banks concerning cryptocurrency trades. AML/KYC provisions apply to banks engaging in cryptocurrency transactions.

Tax treatment: It is reported the Ministry for Finance considers cryptocurrency to be capital gains or miscellaneous income. In a revision to tax law announced in August 2018, the South Korean government announced its intention to eliminate corporate tax deductions for crypto-exchanges.

General policy treatment: The government made a budget announcement in August 2018 to encourage the development of a "platform economy" using blockchain. The Financial Services Commission (FSC) announced plans in March 2018 to commence a fintech sandbox regime.

Sources: "South Korea to decide on ICO legality in November, official says,"

https://www.coindesk.com/south-korea-to-decide-on-ico-permission-in-november-official-says/; "Regulation of cryptocurrency around the world,"

https://www.loc.gov/law/help/cryptocurrency/world-survey.php#korea; "South Korea plans to end major tax benefits for Bitcoin exchanges," https://news.bitcoin.com/south-korea-tax-bitcoin-exchanges/; "South Korea budgets a trillion won for blockchain tech in 2019," https://www.ccn.com/south-korea-budgets-a-trillion-won-for-blockchain-tech-in-2019/; "Regulator to launch fintech 'sandbox',"

http://english.yonhapnews.co.kr/news/2018/03/20/0200000000AEN20180320007000320.htm l.

Malaysia

ICO restrictiveness: ICO are permitted to be undertaken in Malaysia, but are subject to securities regulations. Fundraising, fund management and dealing in capital market products must obtain approval or authorisation from the Securities Commission of Malaysia (SC). In January 2018 the SC and the central bank, Bank Negara Malaysia (BNM), issued a media statement warning about the risks associated with ICO participation.

Crypto-exchange restrictiveness: Cryptocurrency exchanges are permitted to operate in Malaysia, but are subject to AML/KYC obligations similar to those imposed on financial institutions. Crypto-exchanges are also required to be registered with BNM.

Tax treatment: No income tax applies for individuals, but some taxation applies if the holder of cryptocurrency maintains a business.

General policy treatment: The Malaysian government is coordinating efforts with industry to promote blockchain integration into Islamic finance, renewable energy and agriculture. The BNM has issued a framework for participating in sandboxes under the Financial Technology Enabler Group (FTEG).

Sources: "Cautionary statement on initial coin offerings,"

http://www.bnm.gov.my/index.php?ch=en_press&pg=en_press&ac=4600&lang=en; "Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) – Digital Currencies (Sector 6)", http://www.bnm.gov.my/index.php?ch=57&pg=538&ac=680&bb=file; "Malaysian government initiates blockchain integration drive,"

https://www.financemagnates.com/cryptocurrency/news/malaysian-government-initiates-blockchain-integration-drive/; "Financial Technology Enabler Group," https://www.myfteg.com/.

Mexico

ICO restrictiveness: Cryptocurrency users are permitted to undertake ICO operations within Mexico, although cryptocurrencies themselves are not recognised as legal tender.

Crypto-exchange restrictiveness: A guidance note issued by the Bank of Mexico (BoM) in September 2018 indicates that crypto-exchanges must receive a permit to conduct operations in Mexico. As

a condition of receiving a permit, a crypto-exchange must provide a business plan detailing the scope of operations, fees and charges, and mechanisms they will use to verify customer identity.

Tax treatment: There is, to date, no formal treatment of cryptocurrencies under existing taxation rules.

General policy treatment: There have been reports that the Mexican government have been trialling the use of blockchain to monitor and track public contractual bidding processes, and has been planning public procurement procedures via blockchain technology.

Sources: "ICO regulations by country," https://www.bitcoinmarketjournal.com/ico-regulations/; "Regulation of cryptocurrency around the world,"

https://www.loc.gov/law/help/cryptocurrency/mexico.php; "Mexican state bank announces stricter rules for crypto exchanges," https://cointelegraph.com/news/mexican-state-bank-announces-stricter-rules-for-crypto-exchanges; "Mexico tests blockchain to track public contract bids," https://www.coindesk.com/mexico-tests-blockchain-track-public-contract-bids/; "Mexico launches first public blockchain tender," https://wolfcone.com/mexico-launches-first-public-blockchain-tender/.

New Zealand

ICO restrictiveness: ICOs are permitted to be conducted in New Zealand. The Financial Markets Authority (FMA) issued guidance to the effect that it considers ICOs as securities vehicles, however on a case by case basis ICOs may be alternatively classified according to their characteristics.

Crypto-exchange restrictiveness: Crypto-exchanges are allowed to operate in New Zealand, but are subject to several regulatory provisions. Crypto-exchanges must register on the Financial Service Providers Register to become financial service operators, and must comply with "fair dealing" legislative provisions in accordance with the Financial Markets Conduct Act.

Tax treatment: The Inland Revenue Department (IRD) defines cryptocurrency as property, with ordinary tax rules applicable. Capital gains taxes are applicable at the seller's marginal income tax rate.

General policy treatment: The New Zealand government instigated an internal trial of blockchain technology for its administrative operations.

Sources: "Regulation of cryptocurrency around the world,"

https://www.loc.gov/law/help/cryptocurrency/world-survey.php#newzealand; "New Zealand regulator: Cryptocurrencies are securities," https://www.coindesk.com/new-zealand-cryptocurrency-securities/; "Cryptocurrency services,"

https://fma.govt.nz/compliance/cryptocurrencies/cryptocurrency-services/; "Questions & answers: Cryptocurrency and tax," https://www.ird.govt.nz/income-tax-individual/cryptocurrency-qa.html; "NZ gov't begins pilot of blockchain data management platform," https://www.ethnews.com/nz-govt-begins-pilot-of-blockchain-data-management-platform.

Papua New Guinea

ICO restrictiveness: There is no formal regulatory treatment of ICOs. The Bank of Papua New Guinea (Bank of PNG) issued a warning in July 2018 about the risks of investing in cryptocurrencies.

Crypto-exchange restrictiveness: In 2018 the Bank of PNG outlined a AML/CTF regulatory regime applicable to the general financial services industry, however it is unclear if such provisions extend to crypto-exchange services operating in Papua New Guinea.

Tax treatment: There are no formal arrangements, to date, imposing taxation upon cryptocurrency holdings or transactions.

General policy treatment: The Bank of PNG has supported trials of blockchain-enabled digital ID services to promote financial inclusion. The Papua New Guinean government has publicly expressed strong support for blockchain applications, including a "special economic zone" to encourage experimentation and usage in the country. Plans were announced in 2017 to establish a regulatory sandbox initiative.

Sources: "Public notice: Cryptocurrencies and blockchain technology," https://www.bankpng.gov.pg/wp-content/uploads/2018/07/Cryptocurrency_half-page-portrait-1.pdf; "AML/CTF – Anti-Money Laundering & Counter Terrorist Financing," https://www.bankpng.gov.pg/about-us/amlcft-anti-money-laundering/; "How e-commerce can thrive in places with no power or internet," https://www.apec.org/Press/Features/2018/0613_cti; "Plans for blockchain-focused economic zone gain traction Papua New Guinea," https://oxfordbusinessgroup.com/news/plans-blockchain-focused-economic-zone-gain-traction-papua-new-guinea.

Peru

ICO restrictiveness: There appears to be no specific regulatory arrangements which pertain to the issuance of tokens for ICO purposes, however representatives from the Banco Central de Reserva del Peru (CBP) warned of transactional risks in December 2017.

Crypto-exchange restrictiveness: Crypto-exchanges are permitted in Peru, as evidenced by the launch of SurBTC in 2017. The CEO of SurBTC has indicated that the regulatory environment in Peru is similar to that of its neighbour, Chile.

Tax treatment: There is no formal treatment of cryptocurrencies under existing tax regulations. It is noted that CBP has indicated that cryptocurrency is regarded as a financial asset.

General policy treatment: There do not appear to be any significant blockchain use cases by the Peruvian government. There is considerable interest by private and community interests to apply blockchain technologies in Peru to promote financial inclusion and services availability.

Sources: "South America: central banks in Peru and Brazil warn against the bitcoin bubble," http://www.brazilmonitor.com/index.php/2017/12/14/south-america-central-banks-in-peru-and-brazil-warn-against-the-bitcoin-bubble/; "Cryptocurrency exchange SurBTC expands to Peru," https://blocktribune.com/cryptocurrency-exchange-surbtc-expands-peru/; "South American country Peru sees growth in cryptocurrency trading volumes," https://bitcoinexchangeguide.com/south-american-country-peru-sees-growth-in-cryptocurrency-trading-volumes/.

Philippines

ICO restrictiveness: ICOs are permitted to be undertaken in The Philippines. The Securities and Exchange Commission (SEC) issued guidelines in August 2018 declaring ICO to be default-treated at securities, unless ICO proponents could establish their tokens are not equivalent to securities.

Crypto-exchange restrictiveness: Crypto-exchanges are permitted. In September 2018 the SEC released regulatory guidance indicating that crypto-exchanges are to be treated as trading platforms subject to licensing and other provisions. The central banking authority (Bangko Sentral ng Pilipinas – BSP) earlier declared that crypto-exchange operators must register with anti-money laundering authorities.

Tax treatment: The Bureau of Internal Revenue (BIR) has not released official guidance with respect to the taxation treatment of cryptocurrency. There is discussion within business and legal circles that the declaration of cryptocurrencies as securities by other regulators may have taxation implications.

General policy treatment: There has been recent media discussion concerning the applicability of blockchain for public sector administrative and other services. The Philippines government has allowed for the creation of special economic zones, including the Cagayan Economic Zone (CEZ) which will allow ten blockchain-enabled exchange platforms. The BSP is presiding over a fintech sandbox solution.

Sources: "SEC releases proposed rules on initial coin offerings," http://www.sec.gov.ph/wp-content/uploads/2015/10/2018PressRelease_Draft-ICO-Rules-August-02-2018-1.pdf; "Philippines prepares to regulate cryptocurrency exchanges as trading platforms", https://www.ccn.com/philippines-prepares-to-regulate-cryptocurrency-exchanges-as-trading-platforms/; "The Philippines just released new rules for Bitcoin exchanges," https://www.coindesk.com/philippines-just-released-new-rules-bitcoin-exchanges/; "Philippines on cryptocurrency," https://businessmirror.com.ph/philippines-on-cryptocurrency/; "Blockchain in gov't offices to spur technology growth," http://www.pna.gov.ph/articles/1036833; "Philippine special economic zone grants licenses to three crypto exchanges," https://cointelegraph.com/news/philippine-special-economic-zone-grants-licenses-to-three-crypto-exchanges.

Russian Federation

ICO restrictiveness: ICOs are currently permitted in Russia, despite previous threats to ban cryptocurrency use more generally. However, ICOs are soon to be subjected to more stringent regulation. In January 2018 the Ministry of Finance issued draft legislation to apply to new (and not existing) ICOs, which were later approved by the Russian legislature (Duma). The draft legislation specifies that ICO issuers must provide detailed information about the ICO, including an investment memorandum, to the appropriate regulatory authorities. KYC provisions will also be applicable to ICOs, with issuers to credit tokens purchased by qualified investors to approved digital wallets. It has been reported the "digital financial assets law" would take effect in 2019.

Crypto-exchange restrictiveness: The Russian Federation does not currently impose restrictions upon crypto-exchanges that extend beyond general legal provisions. The pending legislation on digital financial assets proposes to introduce AML/KYC, licensing and other obligations upon crypto-exchanges.

Tax treatment: There is no clear and definitive tax framework existing for cryptocurrency holding, mining and trading. In advice issued by the Russian Ministry of Finance it is stated, "currently, the legislation of the Russian Federation, including the legislation of the Russian Federation on taxes and fees, does not define the legal status of cryptocurrencies." The same guidance indicated that profits gained from cryptocurrency transactions are potentially taxable. It has also been stated that Russian citizens should expect to pay 13 per cent tax on their cryptocurrency-related incomes.

General policy treatment: Numerous blockchain projects are being trialled and implemented, particularly relating to the financial system, realty and document management. The Bank of Russia launched a regulatory sandbox for fintech in April 2018.

Sources: "Bill No. 419059-7: About digital financial assets," http://sozd.parliament.gov.ru/bill/419059-7; "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/world-survey.php#russia; "Russia's 'disappointing' cryptocurrency legislation: Why experts consider the bill a failure," https://cointelegraph.com/news/russias-disappointing-cryptocurrency-legislation-why-experts-consider-the-bill-a-failure; "Law on digital financial assets can take effect in 2019", https://finopolis.ru/en/news/?news=4430; "Letter from 17.05.18 N 03-04-07 / 33234," http://mvf.klerk.ru/nb/605_08.htm; "Russians owe 13% tax on their crypto incomes," https://news.bitcoin.com/russians-owe-13-tax-on-their-crypto-incomes/; "Russian government announces first blockchain project," https://themoscowtimes.com/articles/russian-government-announces-first-blockchain-project-for-moscows-property-registries-59321; "Russia's c-bank launches regulatory sandbox," https://financefeeds.com/russias-c-bank-launches-regulatory-sandbox/.

Singapore

ICO restrictiveness: ICOs are permitted to be undertaken in Singapore. The Monetary Authority of Singapore (MAS) confirmed that ICO tokens may conform to the structure and characteristics of existing securities, and be regulated under existing provisions.

Crypto-exchange restrictiveness: General AML/KYC obligations are currently imposed on crypto-exchanges. Crypto-exchanges that trade what are deemed to be securities tokens must be authorised by MAS as an approved exchange. Recently, MAS proposed a new regulatory framework for payment services – under this framework, crypto-exchanges could be legally recognised as approved exchanges, or recognised market operators, under relevant legislation.

Tax treatment: The Inland Revenue Authority of Singapore (IRAS) has recognised cryptocurrencies, such as Bitcoin, as "goods" rather than currency. No capital gains taxes are imposed on individuals.

General policy treatment: MAS has been trialling an inter-bank clearance and payment settlement system, and the Singaporean customs authority has launched a national trading platform based on blockchain technology. It is notable that numerous prominent blockchain projects are headquartered in Singapore. The MAS FinTech Regulatory Sandbox system commenced operations in August 2017.

Sources: "Regulation of cryptocurrency around the world," https://www.loc.gov/law/help/cryptocurrency/world-survey.php#singapore; "MAS clarifies

regulatory position on the offer of digital tokens in Singapore," http://www.mas.gov.sg/News-and-Publications/Media-Releases/2017/MAS-clarifies-regulatory-position-on-the-offer-of-digital-tokens-in-Singapore.aspx; "Being taxed on cashing out cryptocurrency in Singapore," https://medium.com/@Numoney/being-taxed-on-cashing-out-cryptocurrency-in-singapore-fd6b93ebc1ed; "How Singapore is using blockchain outside of cryptocurrencies," https://www.cio-asia.com/article/3291758/blockchain/how-singapore-is-using-blockchain-outside-of-crypto-currencies.html; "FinTech Regulatory Sandbox," http://www.mas.gov.sg/Singapore-Financial-Centre/Smart-Financial-Centre/FinTech-Regulatory-Sandbox.aspx.

Thailand

ICO restrictiveness: ICOs are permitted to be issued in Thailand. In regulation which took effect in July 2018 the Securities and Exchange Commission (SEC) indicated that tokens issued to Thai investors would fall under securities legislation. ICO issuers cannot issue tokens directly to the public, but must channel them through "ICO portals" (a registered company in Thailand with minimum registered capital of 5 million baht), and they must file a registration statement and draft prospectus with regulators.

Crypto-exchange restrictiveness: Digital asset business operators, including crypto-exchanges, must comply with regulatory requirements including attaining a license to operate from the SEC. AML provisions are also applicable to crypto-exchange operations. As at 23 October 2018, seven exchanges have been approved.

Tax treatment: The Thailand Revenue Department (TRD) has classified cryptocurrencies as intangible assets. The capital gains tax rate is 35 per cent for individuals.

General policy treatment: The Thai government permitted the Thai Bond Market Association to create a "BondCoin," whereas the Bank of Thailand (BOT) is investigating the development of a central bank digital currency initiative. A regulatory sandbox for fintech services was launched in 2016.

Sources: "The state of ICO regulation in Thailand,"

https://www.bangkokpost.com/business/news/1510938/the-state-of-ico-regulation-in-thailand; "A complete guide to regulations on cryptocurrencies and ICOs in Thailand," https://www.bakermckenzie.com/-

/media/files/insight/publications/2018/09/bk_thailand_completeguidecryptoicos_sep18.pdf?la =en; "A list of persons who can operate a digital asset is currently in compliance with transitional provisons," https://www.sec.or.th/mpublish/digitalasset/digitalasset_listintermediaries.html; "Seven statements on crypto taxation in Thailand," https://pugnatorius.com/bitcoin-taxation/; "Thailand is becoming a critical country for blockchain,"

https://techcrunch.com/2018/08/31/thailand-blockchain/; "Thailand launches regulatory sandbox for fintech services," https://www.vantageasia.com/thailand-launches-regulatory-sandbox-for-fintech-services/.

United States

ICO restrictiveness: ICOs are permitted to be used in the United States. The US Securities and Exchange Commission (SEC) have issued advice as to whether ICO tokens are securities based on the token use. Should ICO tokens be classified as securities, issuers bear various regulatory obligations under the Securities Exchange Act.

Crypto-exchange restrictiveness: Crypto-exchange platforms must be registered with the SEC in order to transact "security tokens." AML/KYC obligations are imposed upon financial institutions by the Financial Crimes Enforcement Network (FinCen), which potentially extends to crypto-exchanges.

Tax treatment: The Internal Revenue Service (IRS) treats cryptocurrency as property for taxation purposes, and is subject to capital gains taxation.

General policy treatment: Several agencies within the U.S. federal administration are experimenting with blockchain in applications such as border management data, food safety standards, and transportation and logistics. The Consumer Financial Protection Bureau (CFPB) announced plans in July 2018 to introduce a blockchain-enabled sandboxing arrangement. The US Commodity Futures Trading Commission oversees LabCFTC, a regulatory sandbox.

Sources: "Anti-money laundering regulation of cryptocurrency: U.S. and global approaches," http://www.allenovery.com/publications/en-gb/Documents/AML18_AllenOvery.pdf; "US cryptocurrency regulation: policies, regimes & more," https://unblock.net/us-cryptocurrency-regulation/; "The tax rules for crypto in the U.S. simplified," https://cryptocurrencyfacts.com/2017/12/30/the-tax-rules-for-crypto-in-the-u-s-simplified/; "Developments and adoption of blockchain in the U.S. federal government," https://www.forbes.com/sites/forbestechcouncil/2018/01/25/developments-and-adoption-of-blockchain-in-the-u-s-federal-government/#6837a61a3d99; "Bitcoin and blockchain among fintech innovation to receive "regulatory sandbox" in USA," https://coingape.com/bitcoin-fintech-innovation-receive-regulatory-sandbox-in-usa/; "LabCFTC," https://www.cftc.gov/LabCFTC/index.htm.

Vietnam

ICO restrictiveness: ICO operations have been effectively disallowed in Vietnam in recent months. The State Securities Commission of Vietnam (SSC) has formally requested that financial institutions not to participate in operations related to issuance and other cryptocurrency transactions, pending a new legal framework. In September 2018 it was reported that Vietnamese government authorities were preparing a regulatory framework to accommodate cryptocurrencies.

Crypto-exchange restrictiveness: The effective ban on ICOs extends to the supply and use of cryptocurrencies for payment.

Tax treatment: There is no formal taxation treatment of cryptocurrencies in Vietnam.

General policy treatment: There are no known public sector blockchain use cases in Vietnam. The Vietnamese government is reportedly considering the creation of a regulatory sandbox.

Sources: "It's official: Vietnam rules against cryptocurrency," https://coindoo.com/its-official-vietnam-rules-against-cryptocurrency/; "Notification to the operations on investment and business in the field of financial technology,"

http://ssc.gov.vn/ssc/faces/en/enlinks/endetail/investor/investorguide/enchitiet168;jsessionid =RJThbS6G5TgMhWQWJb0BQlcr9l0RpbCFG3pLWTWLhVyNpLTShQJ1!-740823037!-1685361718?_afrWindowId=null&_afrLoop=39061452534302794&dDocName=APPSSCGOV VN162118119&_afrWindowMode=0&_adf.ctrl-

state=qw5c7yrbn_91#%40%3F_afrWindowId%3Dnull%26_afrLoop%3D39061452534302794 %26dDocName%3DAPPSSCGOVVN162118119%26_afrWindowMode%3D0%26_adf.ctrl-state%3Djzycuxw3c_4; "Vietnam blockchain law – dawn of a new era," https://blogs.duanemorris.com/vietnam/2018/09/13/vietnam-blockchain-law-dawn-of-new-era-13-sep-2018/; "SBV says bitcoin banned in Viet Nam," https://vietnamnews.vn/economy/416480/sbv-says-bitcoin-prohibited-in-vietnam.html#kDhJ7x3lUf6VlCSj.97.