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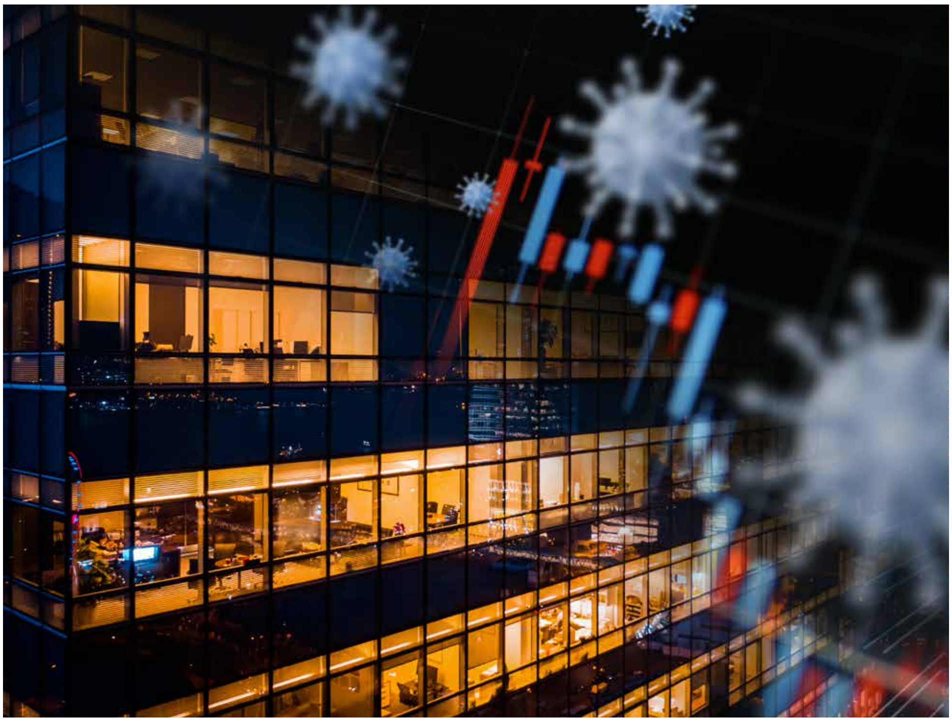
THE RISK OF FRAUD AMID COVID-19 OUTBREAK



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The extent and severity of the novel coronavirus pandemic are unprecedented. In the past few months, every country globally has been intensely focusing their efforts to counter and mitigate the effects of this epidemic. This includes reinforcing medical and healthcare services and also boosting fiscal policies and providing financial aid to those badly affected by lockdowns and the economic downturn. But amid the prevalence of this viral outbreak, will businesses be more susceptible to fraud?

Why does fraud occur (especially during an economic slowdown)?

During economic downturns, it is worth revisiting the Cressey fraud triangle to evaluate the chance of fraud happening. The Cressey fraud triangle says that for a person to commit fraud, there must be three factors simultaneously present. The three factors are **pressure**, **opportunity** and **rationalisation**.

'**Pressure**' refers to the reason forcing or persuading a person to perpetrate fraud. It can be greed (eg desire for more wealth), being too keen for an early achievement (eg to be the top salesperson) or, simply, the need to make more money. In light of the recent pandemic, many economies in the world are suffering from a drastic decrease in demand for many goods and services, especially luxurious and discretionary products. Airlines, hotels, theme parks, retailers and many other businesses particularly in the tourism, food & beverage, events, sports and entertainment industries are struggling just to break even. Shortening of business hours and restrictions on operations for various businesses around the world translate to even less business. The substantial drop in demand and number of customers result in a significant fall in revenue for many businesses. This no doubt generates enormous pressure for business owners, managers and employees to solicit more business, meet revenue targets and do whatever they can to stay in employment or simply to make enough money. For example, under the current stressful circumstances, one might offer illicit rebates or kickbacks in order to try to win a contract or customer. Or a company might offer a bribe to a government official in order for its substandard products to attain certification or to be approved for sale in order to boost revenue. Sales or profits could be illegitimately inflated or manipulated by senior management to obtain further funding from creditors or investors. A sales manager might be thinking of fabricating profit and loss figures so that his or her bonus is secured, or to avoid getting the sack. An employee might be considering stealing from the company's coffers or pocketing a few thousand dollars from the petty cash. Expense claims might be forged by a worker who is trying to make a few hundred dollars more during such difficult times.

'**Opportunity**' is the circumstance or situation where fraud could be easily committed, and often the fraudster considers that he or she would not be easily caught. In light of the outbreak of the novel coronavirus, many businesses are in the process of reducing their manpower in order to cut costs. Some businesses are adopting flexible working hours or home office policies to try to minimise contact among employees and prevent the spread of the virus. Controls and the level of stewardship of some organisations might have become less stringent due to lack of or insufficient resources. Shops normally manned by two persons might now be overseen by only one person. Having more people working remotely means fewer people would be present in offices, and in turn means potentially less supervision and monitorship. For instance, a company might originally have a cashier responsible for disbursing payments and an accountant responsible for recording the disbursements in the books. Due to the recent downsizing of the business, only the cashier remains and is now responsible for both the disbursements and recording of disbursements. As there is no longer segregation of duties, this creates a loophole, or an opportunity, for the cashier to make unsubstantiated payments to himself or herself but recording them as genuine business payments in the books. If there is no higher hierarchy carrying out approval of such payments or other person scrutinising the nature of the payments recorded in the books, the company funds improperly siphoned by the cashier might never get uncovered. Shops being run by fewer employees run a higher risk of pilferage by staff or customers if rotation of duties become impossible. Working alone or in an office with substantially reduced number of staff could also encourage people to commit fraud more easily as they might feel there are fewer people watching them and also fewer people are monitoring the operations.

'**Rationalisation**' refers to the mindset or belief of the fraudster in terms of justifying the fraud. During economic downturns, reduction in salaries or perks are not uncommon for businesses. Employees with grievances might think they should take more from their employers to make up for the reduction in remunerations. Such thinking include ' I work so hard all these years and the company owes me', or 'is no big deal for me to take a little more since no one cares about such a small sum' or 'everyone is doing the same, why not me?'.

In short, businesses will have to be extra vigilant in these troubling times. Apart from staying afloat, they will also have to be mindful of the financial 'pressure' employees might be experiencing, the 'opportunity' to circumvent a compromised or weakened control and the 'rationalisation' employees might adopt to commit fraud.

What if fraud has already happened?

Prevention is always better than cure. However, if fraud is suspected, there are a number of recommended steps to take:

1. Review the essential relevant controls such as payment approvals and bank account authorised signatories. Identify possible loopholes and take rectification steps as needed immediately to try to contain losses.
2. Ensure the key stakeholders are informed in a timely manner so that they are aware of the incident and could consider taking appropriate measures. At the same time, maintain confidentiality as applicable and inform key decision makers solely on a need-to-know basis.
3. Deal with the incident and address all imminent issues immediately by investigating the incident, finding out who might be involved and try to quantify losses and assess potential non-financial impact.
4. Review the terms of relevant insurance policies for fraud coverage. Initiate a claim if appropriate.
5. Document all steps taken so that you can prove to any regulators or authorities the measures implemented in response to the incident.
6. Consider seeking legal advice if necessary. Ensure legal privilege is maintained if required.
7. Evaluate major existing operations, controls, policies and procedures to identify other potential vulnerabilities. Implement changes or enhancements to controls or procedures to prevent or minimise recurrence of the incident.
8. Engage an external investigative specialist team to conduct a thorough investigation and to recommend remedial actions independently and objectively, especially from the perspective of stakeholders and regulators.

If you have any concerns or questions about potential fraud or how to address fraud in your company, please feel free to contact us for further discussion.

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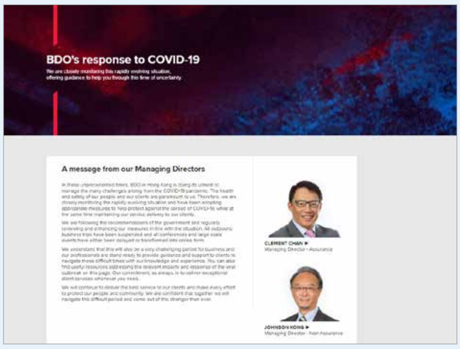
LAUNCH OF BDO COVID-19 HUB

With the current COVID-19 pandemic, many businesses and individuals are experiencing unprecedented challenges at this difficult time. As it is always BDO's focus to support our people and our clients wherever possible, we are doing our utmost to manage the many challenges arising from the pandemic. As always, we are here to support you and your business from time to time.

In order to support you through this time of uncertainty, BDO COVID-19 hub is launched to provide you with useful information addressing the relevant impacts and response of the viral outbreak. As the situation of the pandemic keeps changing rapidly, we will closely monitor the development and share the latest information on this hub.

To view our COVID-19 hub, please visit https://www.bdo.com.hk/microsites/bdo-covid-19-hub



AN ERA OF VIRTUAL ASSETS

On 6 November 2019, the Securities and Futures Commission (SFC) issued a position paper (the Paper) in relation to the regulation of virtual asset trading platforms. The Paper contained a number of sections on such topics as the SFC's regulatory approach, background of the Paper, the framework for the regulations and the way forward. The licensing conditions and terms and conditions for virtual asset trading platform operators is also appended for the public to refer to. The aspects covered by these conditions include financial soundness, custody of client assets, risk management, trading platforms and cybersecurity, conflicts of interest, record keeping, auditors, anti-money laundering and ongoing reporting, among others.

A platform operator must obtain a licence from the SFC if it operates a centralised online trading platform in Hong Kong and offers trading (market or distributed) of at least one security token on its platform. A centralised trading platform must provide trading, clearing and settlement services for virtual assets, and have control over investors' assets. This includes all trading activities related to virtual assets, both on and off the platform, and any activities that are incidental to providing these trading services. The platform operator would also need a licence for type 1 (dealing in securities) and type 7 (providing automated trading system regulated activities). They would also need to meet other licensing requirements, including the 'fit and proper' criteria.

What are virtual assets?
A virtual asset is a digital representation of value. Examples include cryptocurrencies, crypto-assets and digital tokens. Many virtual assets do not meet the current definition of 'securities' or 'futures contracts' provided by the Securities and Futures Ordinance (SFO).

What are security token offerings (STOs)?
Unlike cryptocurrencies, such as Bitcoin (which are an instrument of payment), or utility tokens (which are simply app coins or user tokens), STOs are typically specific offerings that are structured so that they have the features of traditional securities. They involve security tokens, which are digital representations of the ownership of assets (eg gold or real estate) or economic rights (eg a share of profits or revenue). They utilise blockchain technology and do not constitute a payment instrument. STOs fall under the category of 'securities' and are subject to the SFO. Security tokens are normally offered to professional investors only. They are often linked to underlying investment assets, such as stocks, bonds, real estate investment trusts (REITs) or other funds.

Why STOs?
Because the company deals directly with investors, STOs do not involve a middleman, such as banks, brokerages and lawyers. Having said that, the responsibility for performing these functions rests with the issuing company. Smart contracts reduce the reliance on lawyers, while the blockchain reduces the need for paperwork. This makes the whole process not only cheaper, but faster. Fractional ownership and the ability to trade at any time bring additional liquidity to the market, especially with traditionally illiquid assets, such as antiques, property and collectibles.

What risks are associated with investing in STOs?
Apart from the potential volatility of the value of the underlying assets represented by the STOs, investing in STOs may come with risks related to blockchain technology, cyber threats, and the adequacy of the trading platform's risk management and IT governance. Some of these risks include:

- the development of smart contracts is still in its infancy and may not fully protect the rights of ownership of the underlying assets;
- blockchain technology is not perfect, and it may be subject to hard forks and airdrops;
- the platform operator may be exposed to losses if the platform is compromised or hacked;
- there may be unauthorised access to or cyber-attacks on hot, cold or other devices that store virtual assets;
- there may be unauthorised access to cryptographic devices or applications covering key generation, distribution, storage, use or destruction processes at the platform operator's end;
- private keys to virtual assets kept online (hot wallets) are highly vulnerable to external threats, such as hacking and social engineering (for example, phishing);
- an investor could face losses arising from theft, fraud and other dishonest actions, professional misconduct or omissions; and
- a client's assets may not be properly segregated or protected by the platform operator.

Investors should be wary of the risks associated with investing in virtual assets, including tokens related to STOs (security tokens).

How can BDO help?
Our Risk Advisory Services (RAS) team, a dedicated group of experienced and qualified professionals, is capable of providing you with assistance with licence compliance, anti-money laundering and sanctions compliance. Our team can also provide advice on IT issues such as cybersecurity, security operation centres (SOCs), system integration, digital transformation, blockchain operation, fintech, etc. Please do not hesitate to contact our consultants for insights, or you can contact me on (852) 2218 8266 or at rickycheng@bdo.com.hk.

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PAST, PRESENT AND FUTURE TRENDS IN PRIVATE EQUITY INVESTMENT

Private equity (PE) activity in Asia has expanded significantly over the past decade, and it is expected to assume a larger global role going forward. The PE market in Asia had US$883 billion of assets under management in 2018 (compared with US$123 billion in 2008), which accounted for around a quarter of the global PE market. The share of PE in Asia's mergers and acquisitions (M&A) market rose by 6% to 17% in 2018 from the previous five-year average of 11%[1]. China saw a growth of 64% in total PE investment, which was worth US$94 billion in 2018 compared with the previous five-year average. New sectors of the economy, including advanced manufacturing, new energy, internet-plus and high-tech services, were the main drivers of this growth, contributing 16.1% to China's GDP in 2018[2].

In Hong Kong, the number of PE firms has risen considerably over the past decade. According to the Hong Kong Monetary Authority, 560 PE firms were registered in Hong Kong by the third quarter of 2019, including 15 of the world's top 20 PE firms. This was an increase of 50 firms based in Hong Kong when compared with the second quarter of 2019. This increase has mainly been attributed to Hong Kong's unique location, which offers unparalleled access to opportunities in China. The development of the Greater Bay Area, where high-tech firms have emerged, has further fuelled Hong Kong's role as a major Asian PE hub.

The total PE fundraising in Asia, however, has been reducing since 2018, declining to around US$125 billion in 2018 and US$100 billion in 2019 from a record high of US$188 billion in 2017. In addition, investment activity in China declined in 2019, with domestic PE managers investing just US$47 billion in China during the first 11 months of that year. This was around only half of the US$88 billion that was invested in 2018. International investors invested just US$5 billion in China in 2019: a 64% decline from the amount invested in 2018[3]. This decrease in investment activity was mainly a result of (i) an increase in the cost of funding and valuation expectations (eg sellers requesting higher EV/EBITDA multiples of ten, up from around seven previously); and (ii) concerns over trade tensions between China and the US – China's GDP growth for 2019 of 6.1% (compared to an average GDP of up to 9% over the past 20 years[4]) was the country's lowest since 1992. Furthermore, China's corporate debt-to-GDP ratio, a measure of corporate leverage, rose by almost 65% between 2008 and 2018, the fastest increase among the major economies[5].

However, China is still generally considered by PE funds as one of the more favourable investment locations for the future, on the basis of the following metrics and expectations:

i. China's GDP growth rate was twice that of the US, five times that of the European Union and six times that of Japan in 2019. China is expected to generate US$0.8 trillion of incremental GDP per year for the next five years, which is equivalent to the combined

1 Source: *"Asia-Pacific private equity: India and China lead deals but fund-raising slowing"* – https://www.business-standard.com/article/news-ani/asia-pacific-private-equity-india-and-china-lead-deals-but-fund-raising-slowing-119031800280_1.html

2 Source: *National Bureau of Statistics of China*

3 Source: *"Asia in 2019: China's bump in the road"* – https://www.privateequityinternational.com/asia-in-2019-chinas-bump-in-the-road

4 Source: *National Bureau of Statistics of China*

5 Source: *"China's high and rising corporate debt"* – https://www.merics.org/en/china-monitor/chinas-corporate-debt

GDP growth in the US, the European Union and Japan over the same period[6].

ii. China is still considered to be under-developed on a per capita basis. China's GDP per capita is only one-sixth of that of the US and was below the global average in 2019. This is despite China's real GDP and real personal income increasing by multiples of 38 and 24 respectively over the past 40 years[7].

iii. China's consumption per capita was only one-eleventh of that of the US in 2018[8]. However, over the next ten years China is expected to bring around 218 million more people into major cities, which is equivalent to two-thirds of the entire US population[9].

PE firms now refrain from only chasing the current hot market trends or hot investments. Instead, they focus on actively acquiring in-depth industry know-how and expertise from experienced investee company management. PE firms can help develop operational capabilities to assist investee companies to drive operational value, including supply chain management, procurement advice/cost reduction, and in-house capabilities.

Looking forward, the PE market in Asia is expected to strengthen its focus on technology and internet companies, the use of advanced analytics as a tool to improve fund performance, and the enhancement of environmental, social and governance policy in portfolio companies. The introduction of China's new regulations on asset management by the China Securities Regulatory Commission in 2018, which restricted funds from banks[10], has also prompted fund managers based in China to look for alternative sources of capital (eg endowment plans and foundations). The new regulations will also offer more legal protection to foreign investors, which could attract more investments into China from overseas fund managers.

Overall, it is likely that the combined economic fallout of the trade war, the civil protests in Hong Kong and the coronavirus outbreak will change the investment landscape in China (and Asia) in the near-term future. However, for astute investors there will be opportunities. These include the following:

i. Assisting first-generation entrepreneurs who are reaching retirement age with their succession plans; ie in buying control of their companies.

ii. Facilitating China's transformation from an export-dependent economy to a nation powered by domestic innovation. To this end, PE firms can provide expertise, capital and operational capabilities to their investee companies.

iii. Reduced market valuations of Chinese companies. This is evident in the fact that over the past ten years the US stock market grew by 181% while the A-share and Hong Kong markets grew by only 4% and 26% respectively[11].

How BDO can help

BDO Transaction Services team have a very broad experience in buy-side and sell-side deals across a range of sectors involving private and publicly listed targets. Our transaction support services for corporate clients, venture capital firms and PE funds include financial due diligence, business valuations and M&A advice, all of which are tailored to our clients' needs and the requirements of each unique transaction. We deliver bespoke reports that are prepared by due diligence and sector specialists. Our reports provide insights that help our clients to consider and complete a successful transaction.

Our international network operates from more than 1,600 offices across 167 countries and territories, and we have a presence in every major global business centre. This gives us the depth and breadth of experience that is required to provide the advice, analysis and recommendations that matter to our clients on cross-border deals.

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[6] Source: *"Current market environment for private equity investing in China"* – Mr David Liu, Chairman of DCP Capital on 15 January 2020

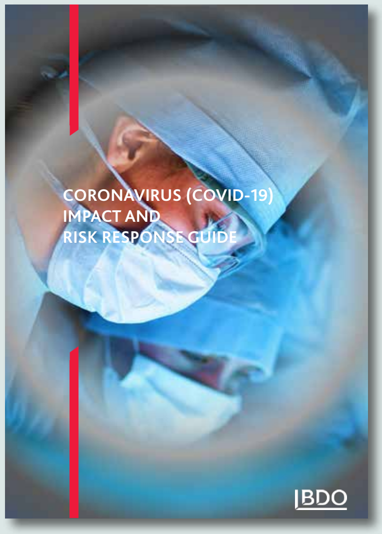
[7] Source: *"Current market environment for private equity investing in China"* – Mr David Liu, Chairman of DCP Capital on 15 January 2020

[8] Source: *"Country comparison China vs United States"* - https://countryeconomy.com/countries/compare/china/usa

[9] Source: *"Current market environment for private equity investing in China"* – Mr David Liu, Chairman of DCP Capital on 15 January 2020

[10] Source: *"Preqin markets in focus: private equity and venture capital in greater China's innovation economy"* - https://docs.preqin.com/reports/Preqin-Markets-in-Focus-Private-Equity-and-Venture-Capital-in-Greater-Chinas-Innovation-Economy-December-2019.pdf

[11] Source: *"Current market environment for private equity investing in China"* – Mr David Liu, Chairman of DCP Capital on 15 January 2020



CORONAVIRUS IMPACT AND RISK RESPONSE GUIDE

Since the outbreak of the coronavirus, the impacts on businesses have progressively been unveiled. Supply chains and labour productivity are interrupted, which businesses failed to meet revenue targets. Without doubt, investors and regulators are concerned about the outbreak's effects on business performance. BDO's Coronavirus impact and risk response guide aims to provide insights into the relevant impacts of COVID-19. It gives general risk response guidance for companies to consider when deploying business continuity planning (BCP) measures to combat the epidemic and, more importantly, to maintain the agility to overcome the difficulties faced.

To view the publication, please visit at: https://www.bdo.com.hk/insights/publications/coronavirus-impact-and-risk-response-guide

FAMILY OFFICE REQUIREMENTS: A TALE OF TWO CITIES

Background

As an international financial and asset management centre, Hong Kong is an obvious choice for many families who wish to set up a family office. Depending on their background, some Asian high net worth families may choose Singapore for their family offices. This article looks at both cities, examining the associated regulations and the regulators' approaches in each.

High net worth families typically set up offices to manage their financial matters for reasons relating to asset management or estate planning, among others. Family offices usually consist of professional asset managers. These managers may serve a single family or multiple families, who are not necessarily connected to each other.

HONG KONG	SINGAPORE

1. General licensing requirements

HONG KONG

- In Hong Kong, there is no specific licensing regime for family offices.
- The licensing regime under the Securities and Futures Ordinance (SFO) is activity-based.
- If the services provided by a family office do not constitute any regulated activity or if they fall within any of the available carve-outs, the family office does not need to be licensed under the SFO.
- However, family offices should take care not to hold themselves out as carrying on a business in a regulated activity without obtaining a licence.

A company or family office set up as a business to manage assets that include securities or futures contracts may be required to hold a licence for type 9 regulated activity (asset management).

The licensing implications of providing asset management services in Hong Kong do not hinge on whether clients are families. If a family office intends to provide other services (such as acquiring financial assets) following instructions made by the family, it should review whether they fall within the definition of any other types of regulated activities (such as type 1, dealing in securities) and whether it needs to be licensed for them.

Note: Carve-outs – Schedule 5 to the SFO provides details of the available carve-outs under the definitions of the various types of regulated activities. Paragraph 1.3 of the Licensing Handbook (Exemptions) provides general guidance on some situations in which the carve-outs may apply.

SINGAPORE

- Licensed or registered fund management companies (FMCs) are expected to engage in substantive fund management activities, such as portfolio management, investment research or sub-advisory services in Singapore.
- Such FMCs can market their funds, either directly to end investors or through fund distributors.
- FMCs that market funds are considered to be dealing in capital markets products that are units in a collective investment scheme (CIS) under the Securities and Futures Act (SFA). Accordingly, these FMCs need to add to their licences the regulated activity of dealing in capital markets products that are units in a CIS.
- In some circumstances, FMCs are exempt from the need to hold a Capital Markets Services (CMS) licence for dealing in capital markets products that are units in a CIS.

2. Single family offices

HONG KONG

The way in which a single family office operates can lead to different considerations regarding licensing requirements.

For example, if a family appoints a trustee to hold the assets of a family trust, and the trustee operates a family office as an internal unit to manage the trust's assets, the family office will not need a licence because it will not be providing asset management services to a third party.

Similarly, if the family office is established as a separate legal entity that is wholly owned by a trustee or a company that holds the assets of the family, it will not need a licence as it will qualify for the intra-group carve-out as full discretionary investment manager of the securities or futures contracts portfolio.

The family office is not required to be licensed for type 9 regulated activity if it provides asset management services solely to related entities that are defined as its wholly owned subsidiaries, to its holding company which holds all its issued shares, or to subsidiaries that are wholly owned by that holding company.

SINGAPORE

The term 'single family office' is not defined under the SFA. A single family office typically refers to an entity that manages assets for or on behalf of one family only and is wholly owned or controlled by members of the same family.

It is not the intention of the Monetary Authority of Singapore (MAS) to license or regulate single family offices. Under the SFA and the Financial Advisers Act (FAA), there are class exemptions from licensing for the provision of fund management and financial advisory services (respectively) to related corporations.

Under paragraph 5(1)(b) of the Second Schedule to the Securities and Futures (Licensing and Conduct of Business) Regulations (SF(LCB)R), a single family office may rely on the exemption provided for a corporation that manages funds for its related corporations. An example would be an ownership structure where a single family office and the fund have a shareholder in common.

3. Multi-family offices

By definition, a multi-family office serves more than one high net worth family.

The type of SFC licence required depends on the services to be provided in Hong Kong.

If a multi-family office provides services to clients who are not related entities as defined in part two above, it cannot make use of the intra-group carve-out.

Where a multi-family office is granted full discretionary investment authority, its asset management activity is usually similar to that of a licensed asset management company. Therefore, it would probably need to be licensed for type 9 regulated activity.

If a multi-family office has not been delegated full discretionary investment authority and it only provides securities investment advice and executes securities transactions, it may still need to be licensed for other types of regulated activities, such as type 1 regulated activity and type 4 regulated activity (advising on securities). Where the assets include futures contracts, it may also need to be licensed for type 2 regulated activity (dealing in futures contacts) and type 5 regulated activity (advising on futures contracts).

Similar to the situation in Hong Kong, a multi-family office would not normally fall within the exemption made available by the MAS.

What's next?

High net worth individuals are always concerned with how their family wealth can best be managed. These concerns include:

- a regulatory framework that protects the assets under the family trust or company
- access to markets that fit the family's risk and return appetite
- access to professional services for:
  - asset management
  - fund administration/trustee services
  - financial reporting for the family trust or company
  - regulatory filing/compliance review of the family trust or company
  - regulatory or tax considerations for the set-up

It is worth analysing from the beginning which jurisdiction and set-up will fit the family best. A professional family office will need to evaluate its position and the services it provides in order to determine whether it needs to be licensed. If necessary, these family offices should seek professional advice.

If you have any questions about family offices or other regulatory matters, please contact the author as shown below.

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BDO SUPPORTS THE CHKLC DIRECTOR TRAINING SERIES FOR THE TENTH CONSECUTIVE YEAR

Running from April to November, the programme comprises six sessions dealing with the important aspects to directorships for a listed company, ranging from corporate governance, risk management to the latest updates in various applicable rules and laws. The programme will also address common issues faced by directors. BDO's Director and Head of Risk Advisory **Ricky Cheng**, Director of Risk Advisory **Peter Pang** and Manager of Risk Advisory **Sampson Tan** are invited to speak on some of the important aspects of directorship for a listed company.

The first session was held on 28 April. If you are interested in attending the remaining sessions, please enroll with CHKLC directly. For more information, please visit their website at www.chklc.org.

The schedule and topics for the forthcoming sessions are:

Date	Topics
26 May (Tue)	Regulatory Development on Family Office
23 June (Tue)	SFC and HKEX's Regulatory Oversight, Enforcement Actions and Directors' Liabilities
9 September (Wed)	Regulatory Development on Virtual Assets
6 October (Tue)	Digital Transformation and Data Management
19 November (Thu)	Annual Regulatory Update 2020

VALUING MACHINERY AND EQUIPMENT

Introduction

Companies that are engaged in manufacturing, production or industrial sector usually hold a significant amount of property, plant and equipment (PPE).

Hong Kong Accounting Standard 16: Property, Plant and Equipment (HKAS 16)

PPE must be reported in accordance with HKAS 16 if it is:

a) held for use in producing or supplying goods or services, for rental to others or for administrative purposes; and
b) expected to be used for more than one financial year.

The carrying amount of PPE is reported in the financial statements. It is the cost recognised for an asset, after deducting any accumulated depreciation and accumulated impairment losses.

According to HKAS 16, cost is 'the amount of cash or cash equivalents paid or the fair value of other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other HKFRS'.

HKAS 16 defines depreciation as 'the systematic allocation of the depreciable amount of an asset over its useful life' and an impairment loss as 'the amount by which the carrying amount of an asset exceeds its recoverable amount'.

A PPE valuation may be required in the purchase price allocation of an entity acquired by a company and in the impairment assessment of an asset held by a company. In the following section, we will focus on valuing machinery and equipment (M&E), which also includes other fixed assets that are not classed as real properties.

Valuation method

Hong Kong Financial Reporting Standard 13: Fair Value Measurement (HKFRS 13)

For the purposes of financial reporting, the valuation of M&E is performed on the basis of fair value. According to HKFRS 13, fair value is 'the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date'.

When valuing M&E, the cost approach is preferred over the market or income approaches. When taking the market approach, HKFRS 13 prefers to use the transaction price of an identical asset in the active market (ie level one input). However, this transaction price might not always be available for every individual asset, and it would be hugely time-consuming to search for the transaction prices of hundreds or even thousands of identical assets. When using the income approach, allocating the incoming cash-flows of an entity to each individual asset is not likely to be practical. Therefore, the cost approach is often adopted in valuing M&E.

According to *Valuing Machinery and Equipment: The Fundamentals of Appraising Machinery and Technical Assets*, published by the American Society of Appraisers (ASA), the cost approach begins with 'the current replacement or reproduction cost new (RCN) of the property being appraised and then deducts for the loss in value caused by physical deterioration, functional obsolescence, and economic obsolescence'.

RCN: Estimating the RCN is the first step in the cost approach. The ASA defines RCN as 'the current cost of reproducing a new replica of the property being appraised using the same, or closely similar, materials'.

Physical deterioration: In financial reporting terms, physical deterioration is equivalent to depreciation.

Functional obsolescence: This refers to any reduction in value due to spending excess capital on low-capacity equipment. It includes any reduction in the value of the equipment when equipment with a higher capacity becomes available on the market for a similar or lower price.

Economic obsolescence: This refers to any reduction in value caused by the equipment's maximum capacity exceeding its required capacity. It also refers to any reduction in the value of the equipment due to its maximum capacity exceeding the production orders actually received. This excess capacity is deemed as surplus.

Whether functional and economic obsolescence are applied depends on the purpose of the valuation and the availability of the relevant information.

According to the ASA, trending is 'a method of estimating a property's RCN in which an index or trend factor is applied to the property's historical cost to convert the known cost into an indication of current cost'.

The ASA goes on to define an index as 'a number used to measure change in prices, wages, employment, production, etc; it shows a percentage variation from an arbitrary base year standard where the index is usually 100, representing the status at some earlier time'.

Using the trending method, the fair value of M&E can be estimated by applying the following formulas as **Fig 1**.

The newness percentage reflects the remaining life of the M&E after considering physical deterioration or depreciation. The newness percentage is estimated by applying an age/life equation. The age/life equation applies a straight-line depreciation pattern to the M&E until it reaches its residual value.

The residual value is the amount that may be obtained for M&E when it is taken out of service for use elsewhere or sold for its material content.

Calculation example

Company A acquired Equipment B for $1,000,000 in 2012. Company A wants to estimate the fair value of Equipment B at the present time (in 2019). Equipment B is estimated to be seven years old. A PPI is required, and a sample PPI is listed as **Fig 2**.

Fig 1

RCN = Historical cost x trend factor

Where:

RCN	=	Reproduction cost new
Trend factor	=	Inflation adjustment with reference to producer price index (PPI)

Fair value = RCN x new %

Where:

New %	=	Newness percentage (ie new % = 1 – depreciation in percentage terms)
	=	Residual % + (1 – residual %) x (RUL/NUL)
Residual %	=	Residual value in percentage terms
RUL	=	Remaining useful life (ie RUL = NUL – age)
NUL	=	Normal useful life

The RCN of Equipment B in 2019 is estimated to be $1,143,000 as **Fig 3**.

Equipment B has a NUL of ten years and a residual rate of 5%. Therefore, the fair value of Equipment B in 2019 is estimated to be $383,000 as **Fig 4**.

Limitations

A limitation of the trending method is that it only applies to M&E that is acquired in a brand new condition. It does not apply to M&E that is acquired second-hand (in a used condition).

Before doing any valuation work, fieldwork should be done to investigate whether the M&E in question was acquired brand new or second-hand/used. If the M&E was acquired second-hand, the management should find out the M&E's original cost and its original manufacturing date.

Further adjustments to the historical costs and acquisition dates (entity-specific) of second-hand M&E will be needed, as the trending method relies on the original cost and manufacturing date of the M&E (M&E-specific).

If you have any questions about valuation methods of machinery and equipment or related topics, please feel free to contact us for further discussion.

Fig 2

Year	PPI	Year	PPI
2010	100	2015	108
2011	102	2016	110
2012	105	2017	113
2013	106	2018	116
2014	106	2019	120

Fig 3

RCN	=	Historical cost x trend factor
RCN	=	Historical cost x (current index/base year index)
RCN	=	$1,000,000 x (120/105)
RCN	=	$1,143,000 (rounded)

Fig 4

Fair value	=	RCN x new %
Fair value	=	RCN x (residual % + (1 – residual %) x (RUL/NUL))
Fair value	=	RCN x (residual % + (1 – residual %) x ((NUL - age) /NUL))
Fair value	=	$1,143,000 x (5% + (1 – 5%) x ((10 – 7)/10))
Fair value	=	$383,000 (rounded)

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BDO EVENT HIGHLIGHTS

BDO seminars and webinars cover a wide range of business topics and hot issues to provide valuable opportunity for our participants to interact with our experienced professionals and to gain insights into today's market update and challenge.

BDO SEMINAR: NAVIGATING THROUGH ACCOUNTING & TAX REPORTING CHALLENGES

15 JANUARY 2020

As the new revenue and leasing standards (HKFRS 15 and HKFRS 16) and the newly effective interpretation HK(IFRIC)-Int 23 may have impact for different businesses in terms of financial and tax reporting, BDO Financial Reporting Advisory and Tax professionals shared their insights with over 130 participants, providing guidance and advice on practical steps that can be adopted to better address the implementation of new accounting and tax requirement as well as transfer pricing development in Mainland China and Hong Kong.

Managing Director of Non Assurance Johnson Kong

Director and Head of Tax Agnes Cheung

Director of Tax Carol Lam

Director of Transfer Pricing Enoch Hsu

Director and Head of Financial Reporting Advisory Simon Riley

Principal of Tax Abigail Li

Principal of China Tax Leo Li

Principal of Financial Reporting Advisory Winnie Chan

Senior Manager of Transfer Pricing Michelle Cheng

Senior Manager of China Tax Shirley Yu

BDO WEBINAR: MANAGING DATA INTEGRITY FOR SFC LICENSEES

28 FEBRUARY 2020

Nowadays, more licensed corporations are using outsourced business application and/or IT infrastructure from different vendors and electronic data storage providers (EDSPs) to make their core business model in a more efficient and cost-effective way. With the launch of the Securities and Futures Commission circular on 31 October 2019, licensed corporations need to retain the responsibility and confidentiality for the services they provide and secure protocols in ensuring data integrity.

Director of Risk Advisory **Peter Pang** and Senior Manager of Risk Advisory **Roger Lo** addressed the requirements of the SFC circular as well as the common implementation challenges by the corporations and their management on how to perform due diligence and monitoring of EDSPs and maintain good IT governance.

Director of Risk Advisory Peter Pang (left), Director and Head of Risk Advisory Ricky Cheng (middle), Senior Manager of Risk Advisory Roger Lo (right)

BDO WEBINAR: GET READY FOR THE NEW PAYROLL YEAR 2020

11 MARCH 2020

A variety of new deadlines arise over 2020 monthly MPF compliance, annual employer's tax reporting, reviewing coverage and renewal of employees' compensation insurance, and many more. It is important to make sure employers are aware of the upcoming deadlines of all payroll related compliance and have everything in place to keep the relevant authorities and employees happy.

Director and Head of Payroll and HR Outsourcing **Joseph Hong** and Senior Manager of Payroll and HR Outsourcing **Vinci Tam** gave advice on challenges of various statutory requirements on new payroll year, and drew on the experience when dealing with various clients for such matters.

Director and Head of Payroll & HR Outsourcing Joseph Hong (left) and Senior Manager of Payroll & HR Outsourcing Vinci Tam (right)

BDO WEBINAR: REVIEW OF RECENT MONEY LAUNDERING CASES & FATF REPORT ON HONG KONG

29 APRIL 2020

Hong Kong Monetary Authority and the Securities and Futures Commission set out the anti-money laundering (AML) and counter financing of terrorism (CFT) regulatory requirements for combating money laundering and terrorism financing in Hong Kong for authorised institutions and stored value facility licensees to follow. In September 2019, the Financial Action Task Force (FATF) and the Asia-Pacific Group on Money Laundering assessed Hong Kong's AML and CFT systems and issued an evaluation report.

In this webinar, Director of Risk Advisory **Peter Pang** covered the regulatory regime on AML/CFT and also shared some recent AML cases, challenges and recommendations for the participants to consider.

Director of Risk Advisory Peter Pang

NEW APPOINTMENT

ANITA OR
Director
Assurance Services

Anita Or has been appointed as Director of Assurance Services with effect from 1 October 2019.

Anita has extensive experience in handling Hong Kong listed company audit assignments over a wide variety of industries, including trading, manufacturing, pharmaceutical and property investment. She is also involved in transaction support assignments, such as initial public offerings and financial due diligence.

Qualifications and professional affiliations
- Hong Kong Certified Public Accountant
- Member of the Association of Chartered Certified Accountants

CALVIN CHAU
Director
Assurance Services

Calvin Chau has been appointed as Director of Assurance Services with effect from 1 October 2019.

Calvin has extensive experience in handling assignments of listed companies and private companies operating mainly in Hong Kong, Mainland China and a number of overseas countries over a wide variety of industries including construction, manufacturing and trading, mining, public utilities services, advertising and property development.

Calvin also has extensive exposure on initial public offerings, especially on A+H shares listing, merger and acquisition exercises, as well as financial due diligence investigations for listed companies.

Qualifications and professional affiliations
- Fellow of the Association of Chartered Certified Accountants

JOANNE HO
Director
Assurance Services

Joanne Ho has been appointed as Director of Assurance Services with effect from 1 October 2019.

Joanne has extensive experience in handling audit assignments of Hong Kong listed company over a wide variety of industries, including manufacturing, property development and investment, financial services, forestry operations, toll road construction and operations. Other than Hong Kong, Joanne has substantial experience in 'B' share audit of Chinese companies listed in the stock exchanges in China. She also specialises in transaction support assignments, such as initial public offerings and financial due diligence in acquisitions of companies.

Qualifications and professional affiliations
- Hong Kong Certified Public Accountant

MARGIE CHOI
Director
Assurance Services

Margie Choi has been appointed as Director of Assurance Services with effect from 1 October 2019.

Margie has extensive experience in handling assignments of listed and private companies operating mainly in Hong Kong, Mainland China and a number of overseas countries over a wide variety of industries including financial services, gaming and hospitality, manufacturing and trading, retail, travel and tourist services, money lending and property development and construction.

Margie also has extensive exposure on initial public offerings, merger and acquisition exercises, as well as financial due diligence investigations for listed companies.

Qualifications and professional affiliations
- Hong Kong Certified Public Accountant

TIMOTHY CHAN
Director
Assurance Services

Timothy Chan has been appointed as Director of Assurance Services with effect from 1 October 2019.

Timothy is mainly responsible for the audit of information systems and the development of techniques and implementation of data analysis in audits. He has many years of experience in providing auditing and IS audit services to clients in various industries including mobile/online games, securities trading, logistics, advertising, telecommunications, catering, manufacturing, construction and trading. He has led in the application and training of audit software in the firm. He was also involved in internal control system reviews and quality assurance of audits.

Qualifications and professional affiliations
- Member of the Hong Kong Institute of Certified Public Accountants
- Fellow of the Association of Chartered Certified Accountants (FCCA)
- Certified Information System Auditor (CISA)

ZONDRA LEE
Director
Corporate Secretarial Services

Zondra Lee has been appointed as Director of Corporate Secretarial Services with effect from 1 October 2019.

Zondra is a qualified corporate secretarial professional with over 25 years of experience. After graduation, she commenced her career in the corporate secretarial profession. She has worked for the private trust division of a major bank in Hong Kong and a leading international law firm before joining BDO in 1994.

Zondra has extensive experience in various aspects of corporate secretarial and statutory compliance matters for companies in Hong Kong and other jurisdictions. She is also involved actively in corporate restructuring.

Qualifications and professional affiliations
- Member of the Institute of Chartered Secretaries and Administrators in the UK
- Member of the Hong Kong Institute of Chartered Secretaries

PETER PANG
Director
Risk Advisory Services

Peter Pang has been appointed as Director of Risk Advisory Services with effect from 1 October 2019.

Peter has extensive experiences in managing corporate governance, risk management, internal control review, internal audit, Sarbanes-Oxley and other assurance projects for local, regional and international clients.

Peter has more than 20 years of risk and assurance experience. Prior to joining BDO, he was the Head of Risk of a listed aircraft leasing company with operations in Asia, Europe and America. He also worked in a large international accounting and advisory firm as head of department.

Peter served clients in various industries with a focus on financial services, including banking, securities, fund and asset management, trust operation, investment banks, aircraft leasing, airlines, regulatory and professional organisations, public services, property development, trading, manufacturing and retailing.

Qualifications and professional affiliations
- Fellow of the Hong Kong Institute of Certified Public Accountants
- Fellow of the Institute of Chartered Accountants in England and Wales
- Certified FRM of Global Association of Risk Professionals (GARP)

ERIC PAT
Director
Specialist Advisory Services

Eric Pat has been appointed as Director of Specialist Advisory Services with effect from 1 October 2019.

Eric has extensive experience in providing valuation services, serving both privately-held and listed companies in Hong Kong and Mainland China.

He leads a team that specialises in the valuation of businesses, financial instruments and intangible assets for the purposes of financial reporting, transaction support, and litigation support.

Qualifications and professional affiliations
- CFA charterholder
- Hong Kong Certified Public Accountant
- Chartered Professional Accountant of Canada
- Chartered Surveyor (RICS)
- Member of the Chartered Financial Analyst Institute
- Member of the Chartered Professional Accountants of Canada
- Member of the Royal Institution of Chartered Surveyors

TONY CHING
Director
Technical and Training

Tony Ching rejoined BDO as Director of Technical and Training Department on 13 January 2020.

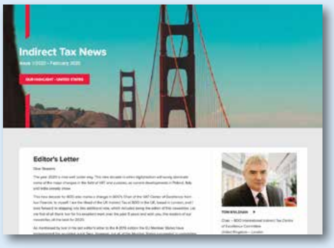
Tony is responsible for the compliance of auditing standards of the firm's audit engagements. He also provides audit and assurance (A&A) advisory services to the firm's A&A practice and delivers related training to the professional personnel.

Tony has over 15 years experience in assurance practice. His portfolio of clientele covers a broad spectrum of business sectors including manufacturing, trading, agriculture, natural resources, education, entertainment, consumer markets and network infrastructure. He has extensive experience in auditing business enterprises listed in Hong Kong. He was also involved in other assignments including initial public offerings and capital market transactions.

Qualifications and professional affiliations
- Fellow of the Association of Chartered Certified Accountants

RECENT BDO PUBLICATIONS

TAX PUBLICATIONS



Indirect Tax News
Issue 1/February 2020

Transfer Pricing News
March 2020 – Issue 33

Hong Kong Tax
January 2020 - 2020 Hong Kong transfer pricing documentation due dates

HORIZONS – BDO'S QUARTERLY GLOBAL MID-MARKET REVIEW

Horizons Q1 – 2020

TRANSPARENCY REPORT 2019

For the financial year ended 30 September 2019

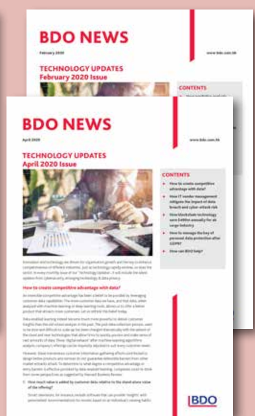
HKFRS/IFRS UPDATE

- **HKFRS/IFRS Update 2020/01**
  IFRIC issues final agenda decision for an assessment of the lease term (IFRS 16)
- **HKFRS/IFRS Update 2020/02**
  Potential effects of the Coronavirus Outbreak on 31 December 2019 year end financial reporting
- **HKFRS/IFRS Update 2020/03**
  Potential effects of the Coronavirus Outbreak on 2020 reporting periods and onward
- **HKFRS/IFRS Update 2020/04**
  Proposed practical expedient for lessees to account for COVID-19-related rent concession

HONG KONG BUDGET HIGHLIGHTS 2020/21

RISK ADVISORY PUBLICATIONS

- **Financial Updates**
  Feburary 2020 Issue
  April 2020 Issue
- **ESG Updates**
  Feburary 2020 Issue
  April 2020 Issue
- **Technology Updates**
  Feburary 2020 Issue
  April 2020 Issue



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