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Careers of Tomorrow: Financial Talents in the Digital, Sustainable Economy of Hong Kong

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Contents

Executive Summary

Digitalisation, pandemic, geopolitical uncertainty, changing perceptions of clients and others are leading financial institutions to reconsider their business models and priorities. Two emerging trends – financial technology (Fintech) and environmental, social, governance (ESG) – are rising to the top of the agenda for various stakeholders and market participants in Hong Kong.

The Financial Services Development Council (FSDC) is pleased to note that, not long before the publication of this paper, the Hong Kong Monetary Authority (HKMA) unveiled its "Fintech 2025" strategy on 08 June[1], laying out five focus areas to take the local Fintech landscape to the next level of development, among which "expanding the Fintech-savvy workforce" has been identified as a key element. It is said that the HKMA will collaborate with strategic partners through various initiatives, including developing Fintech-specific training programmes and qualifications, as well as promoting joint projects between the industry and academia. On the ESG front, the Green and Sustainable Finance Cross-Agency Steering Group announced on 15 July the next steps[2] to take forward the development of ESG in Hong Kong, including the launch of the Centre for Green and Sustainable Finance, which will serve as a "cross-sector platform which coordinates the efforts of financial regulators, Government agencies, industry stakeholders and academia in capacity building, thought leadership and policy development".

Such initiatives are timely in echoing the private sectors' effort to further embrace and integrate ESG and Fintech into their business strategies. While attention appears to be placed more on the business operation implications than on talent development in the past, a majority of financial institutions agree that they will need more talent around Fintech and ESG in the coming three years. However, the reality is, at the moment only the larger players have come up with a more concrete blueprint as to what skillset they – as employers – are looking for from the incumbent and potential employees; and as to how to make sure the overall capabilities of their workforce will remain relevant and competitive.

Sharing the vision that ESG and Fintech are two of the prominent trends reshaping the future of financial services, the FSDC has prepared this paper with a view to calling for concerted efforts by stakeholders to advance Hong Kong's talent strategy collectively. Leveraging the gem of the literature review, the FSDC drew some key observations regarding talent development in Fintech and ESG. With these, we have then conducted a series of one-on-one interviews as well as focus group meetings – with C-suites and senior management of different types of financial institutions; representatives of industry associations and professional bodies; and human resources management (HR) leaders of financial institutions and seasoned recruiters – to understand the skillset that employers are looking for now and in the coming three years. We also conducted a survey with a total of 400 tertiary institution students and incumbent industry practitioners to gauge whether the financial services industry remains appealing to them and whether they find themselves ready for the current and near future industry landscape.

Overall, both employers and employees remain optimistic about the prospect of Hong Kong and its financial services industry. Both Hong Kong and its homegrown talents need to be mindful of the competition though. For Hong Kong, the uncertain economic outlook and high cost of living would potentially affect its attractiveness to non-local talents; as for homegrown talents, if their breadth of knowledge, innovativeness, and motivation for success are not enhanced, they could become less competitive even though they have been long cherished for their prudence, trustworthiness and depth in sector knowledge.

1 Hong Kong Monetary Authority, Press release - The HKMA Unveils "Fintech 2025" Strategy, June 2021.
2 Hong Kong Monetary Authority, Press release - Cross-Agency Steering Group announces next steps to advance Hong Kong's green and sustainable finance strategy, July 2021.

Between the two emerging trends, Fintech is comparatively better known and prepared than ESG among financial institutions in Hong Kong. In terms of Fintech, financial institutions – large and small, and in different sectors – are taking their pace to embrace digitalisation. For example, asset management firms are generally adopting technology in aspects such as enhancing client user-experience, product formulation, data analytics, business efficiency and accuracy, and in some cases, alpha generation. Both employers and employees recognise the importance of tech savviness and have commonly identified big data, cybersecurity and digital marketing as the key trends to note. Some misconceptions need to be corrected though for smoother development of the Fintech ecosystem: some employees remain to think Fintech is only about programming / coding; they also tend to have less-than-realistic expectation on salary. Also, most Fintech employers highlight the vitality of 'application' – on-the-job element and real-life scenario practice should be added to the training modules.

ESG for now is more of a concept understood by larger firms, although most financial institutions of different sizes agree that it will become a mainstream that cannot be understated. Almost half of the firms interviewed are still in the learning process about the essence and value proposition of sustainability. Partly due to the lack of a global taxonomy, a few employers and quite some employees find themselves lacking sufficient understanding of ESG. Indeed, the larger groups in the banking and asset and wealth management sectors are proactively moving towards ESG employment – in roles related to investment management, reporting and disclosure, research and strategy. Dedicated teams have been formed and are adding new headcounts, despite the overall gloomy economic outlook. Knowledge of ESG regulations and integrated analysis will be crucial and more training efforts – both at the tertiary education and professional training levels – are demanded.

Based on the findings derived from these stakeholder engagements, this paper closes with the following policy recommendations for the Government's and other stakeholders' consideration –

i. To develop and update the core competency map for different sectors;

ii. To coordinate and evaluate internship and apprenticeship programmes;

iii. To facilitate Hong Kong professionals' overseas and Mainland placement through subsidy support;

iv. To incentivise private Fintech enterprises to participate in curriculum development and application;

v. To introduce ESG courses as compulsory learning in finance-related disciplines; and

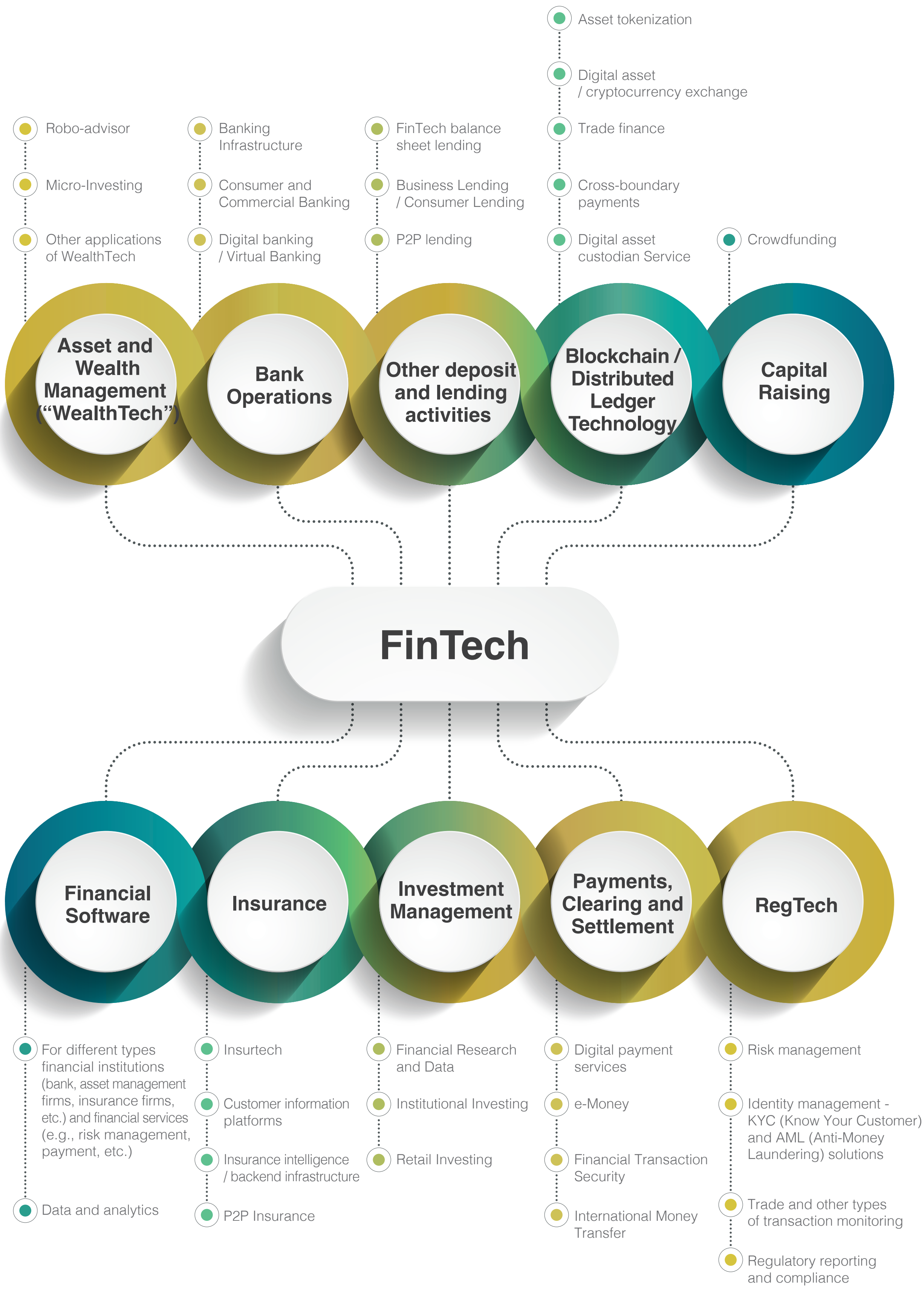
vi. To expand CEF reimbursable courses to cover more professional training in Fintech and ESG.

Introduction

Digitalisation, pandemic, geopolitical uncertainty, changing perceptions of clients and others are leading financial institutions to reconsider their business models and priorities. Of which, as the two emerging trends – Fintech and ESG – are becoming mainstream, financial institutions in Hong Kong are pondering on whether their incumbent professionals and the upcoming breeds of talents are ready to survive and thrive in this new world of economy.

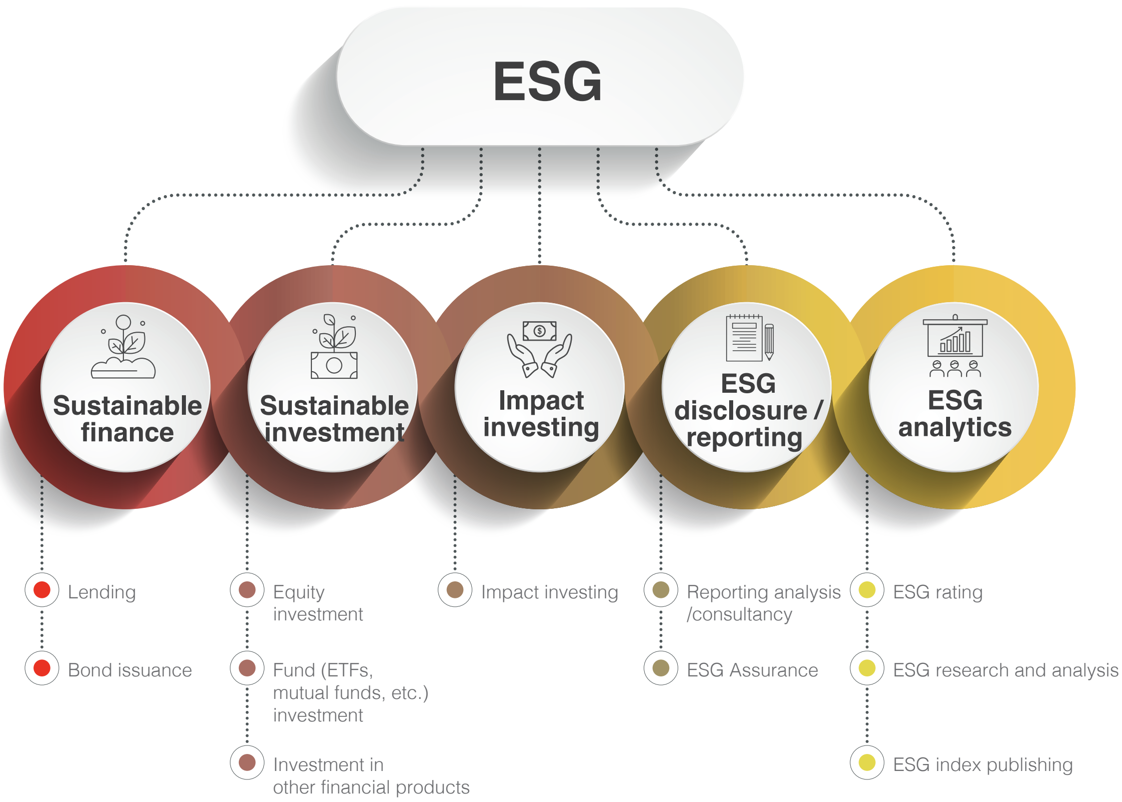
With plenty of discussions around what Fintech and ESG are and what they could mean, the financial services industry appears to be still on the learning curve regarding the implications and impacts of the adoption of technology and sustainability. Meanwhile, incumbent financial professionals and potential talents are rolling up their sleeves for the new opportunities brought about by ESG and Fintech, or digitalisation at large. While the Fintech and ESG landscapes are rapidly evolving, we intend to set out, in principle, the key segments and activities of these two streams within financial services so as to place employers and employees on the same page. With Fintech and ESG being relatively new subjects, successfully articulating their definitions can provide clarity and reference for employers and employees to navigate the multiple definitions that are available on the market.

Some areas of Fintech



See Annex 1 for more detailed definitions

Some areas of ESG



See Annex 2 for more detailed definitions

Why Asset and Wealth Management

To help employers and employees better visualise how Fintech and ESG can be translated into practice in the human capital development process of the financial services industry, this paper will feature the Asset and Wealth Management sector, amongst others, as a major case study.

The Asset and Wealth Management sector has increasing growth potential in Hong Kong – from client base to the product variety. In terms of clientele, asset and wealth managers traditionally tailored high net worth individuals and corporates and have now extended their services to clients such as private trusts and non-professional investors (including retail investors). In terms of products, traditional managers in Hong Kong generally cover assets such as equities, bonds, cash and money markets, etc.; as alternative investment evolves, managers cover assets other than traditional asset classes – common alternative investments include hedge fund, private equity, commodities and real estates. All these transformations are necessarily leading to asset and wealth managers' changing, and potentially additional, demand for talents.

How Did We Gather Stakeholders' Views?

Key trends

Literature review of

20+

talent development studies of Hong Kong, Mainland China and overseas

Employers' perspective

One-on-one interviews and focus group meetings with

20+

C-suites and senior management of financial institutions

10+

representatives of industry associations and professional bodies

10+

HR leaders of financial institutions and seasoned recruiters

Employees' perspective

Survey questionnaire answered by

200

tertiary institution students in Hong Kong across different majors

200

incumbent practitioners in Hong Kong's financial services industry

Literature review as the backbone

Over the years, there have been a swathe of talent trend studies prepared by the public sector and private organisations for Hong Kong, Mainland China and abroad. These studies provide key observations and serve as important references for the planning of talent strategy on a corporate level, on an industry level, or even more broadly for an economy.

With no intention to reinvent the wheel, we started our study by conducting a literature review to learn from the insights. Among some 20 studies reviewed in depth, a large majority adopted a qualitative approach – by gauging feedback from financial institutions and industry practitioners from around the world through interviews and surveys. Over half of the studies focused on skill gaps to fill. Key observations derived from these studies form the backbone of our research, helping to shape whether and, if so, how certain employment trends apply to the context of Hong Kong and its financial services industry.

Understand employment trends and expectations through in-depth interviews and focus group meetings

Leveraging the key observations derived from the literature review, we conducted a series of one-on-one in-depth interviews and focus group meetings[3] with –

(i) 24 C-suites and senior management of financial institutions[4],

(ii) 13 representatives of industry associations and professional bodies, as well as

(iii) 11 HR leaders of financial institutions and seasoned recruiters/headhunters

to understand the skillset that employers are looking for now and in the coming three years.

Gauge employees' perspective through survey with tertiary institution students and incumbent practitioners

We believe it is equally crucial to ascertain (potential and incumbent) employees' perspective, especially in terms of whether the financial services industry remains appealing to them and whether they find themselves ready for the current and near future industry landscape. In this connection, we have engaged an independent market consultancy company to survey a total of 400 tertiary institution students and incumbent industry practitioners, who responded on an anonymous basis.[5]

[3] Interviews and focus group meetings were conducted between October 2020 and January 2021 by the FSDC Policy Research Team together with an independent market consultancy company.

[4] C-suites and senior management of financial institutions with a diversity of backgrounds (Hong Kong, Mainland, multinational), sizes (500+, 250-499, 50-249, <50 employees) and sectors (banking, asset and wealth management, insurance, securities, fintech start-ups, etc.)

[5] Survey data collection started in November and ended in December 2020. The online self-completion survey was responded by 200 financial services industry practitioners in Hong Kong (with 1-3, 4-6, and 7 or more years of working experience across front, middle and back offices of financial institutions of different sectors) and 200 tertiary institution students who are interested in joining the industry (majoring in different disciplines at doctorate, master's, bachelor and sub-degree levels).

How Will the Industry and Its Employment Market Be Like?

More fast-changing than ever and will require 'cross-disciplinary expertise'

Training as an investment in human capital, rather than an expense

What Employers & Employees think in common

Talents in Hong Kong – whether homegrown or from Mainland and overseas – are highly competitive

Prudent, trustworthy and depth in sector knowledge are key qualities Hong Kong talents possess

Gaps to fill

Particularly for entry and middle levels:

- Breadth of knowledge – global perspective
- More innovative
- Can-do spirit and motivation for success

Global competition for talents with cross-disciplinary expertise

Long known for being upbeat and dynamic, the financial services industry will become unprecedentedly fast-evolving. From digital transformation, change of expectation from millennial clientele, geopolitical uncertainty to the impact on the post-pandemic era, different developments are urging financial institutions – large and small – to reconsider their business models and priorities. Whether financial institutions prefer it or not, a plain fact is that the industry will not be segregated and be on its own. The industry will make changes and be changed, through adoption of technology, incorporation of sustainability, and others.

Globally, financial institutions are increasingly looking for talents with cross-disciplinary expertise – for instance, a candidate who possesses solid knowledge in finance and is tech savvy at the same time. These candidates are difficult to recruit, especially when employers often expect 'proven' skills from them. To prepare for the dynamic changes now and ahead, employers are generally more welcoming than before to recruit staff from outside of the financial services industry. Another approach to cope with the urgent need of talents is through reskilling or upskilling incumbent staff. Our literature review suggests that firms are increasingly willing to devote resources to developing broader capabilities of staff. European players generally see staff training as an investment in human capital, although some Asian counterparts tend to still see it as an expense.

Hong Kong: positive outlook but retaining talent is a challenge

Current Status

Hong Kong is one of the leading IFCs and a preferred regional headquarters for many financial institutions

Not difficult to recruit a person but the challenge is often about hiring a 'suitable' one who shares the same vision with the firm

Only when the firm cannot find local talents, it will start looking out for Mainland ones and expatriates, who are usually attracted by Hong Kong

2022-24 Outlook

"Remain optimistic about Hong Kong as an IFC and its status as the regional talent hub, but are conscious about the keen competition in Asia and globally"

Majority of the financial institutions interviewed

"Nearly half of the practitioners feel they are better equipped than others;

tertiary students are less confident, considering themselves similar to others. They will stay in / enter the industry because of:
- Better career prospects
- Better salaries & benefits
- Fast-paced, challenging industry culture"

Survey result indicated

Uncertainty ahead?

Pandemic

Leading to uncertain economic outlook; remote work could enhance talent mobility

Cost

Increasing cost of living adds challenge to expats and Mainland talents in Hong Kong

Emigration

A few mentioned about potential outflow of some talents, who look for better healthcare / education for their kids

Hong Kong enjoys a considerable level of diversity in its talent pool. Whether homegrown or attracted from elsewhere, talents in the financial services industry of Hong Kong have been recognised as outstanding and professional. Roles in the industry are mostly filled by the ample source of homegrown talents; and when there are niche functions that cannot be filled, firms look out to the Mainland and overseas for hiring.

"

In the eyes of employers and recruiters…

	Senior management	Middle management	Junior / new entrants
General status	Generally sufficient, except for some smaller securities firms Takes time to find a good match, so quite often firms look to 'promote from within' or hire by referral The increasingly regulated environment in some sectors may frustrate a few who are considering sector-switching. Should plan ahead for succession	Minor deficiency Firms tend to go after the top 5% of the talents while the rest are not fully attended. The top 5%, in turn, become more jumpy; the rest may struggle to have their high salary justified as their experience might get expired amid the fast-evolving industry development	Minor deficiency in some sectors, such as - Insurance (which is oft-misinterpreted as hiring only sales agents) - AWM sector (e.g., fixed income analysts) - Fintech (especially for start-ups)
Employers focus on…	Track record; strategic thinking	Track record; execution power	Academic background (in some sectors); and ability to apply what is learnt to work
Employees focus on…	Stability	Salaries & benefits; branding of company	Salaries & benefits; Work-life balance and office culture
Qualities possessed (by homegrown)	- **Loyalty** - **Strong understanding of markets** (regulations, customer preference) - **Strategic planning** – to drive the company to the right direction	- **Multi-tasking and problem-solving skills** - **Communication skills** – to exchange ideas with headquarters and stakeholders	- **Solid knowledge in finance and business administration** - **Communication and presentation skills** - **Team spirit**
Areas for improvement (for homegrown)	- A small minority are not proficient in **Putonghua and IT** - **Willingness to try new innovations and make changes**	- Some need better **people management skills** (to strike a balance between delegation and finishing the job by themselves) - **Multi-cultural team-building skills**	- **Loyalty – some sectors see high turnover** - **Global perspectives and understanding of Mainland affairs** - Can-do spirit and motivation for success

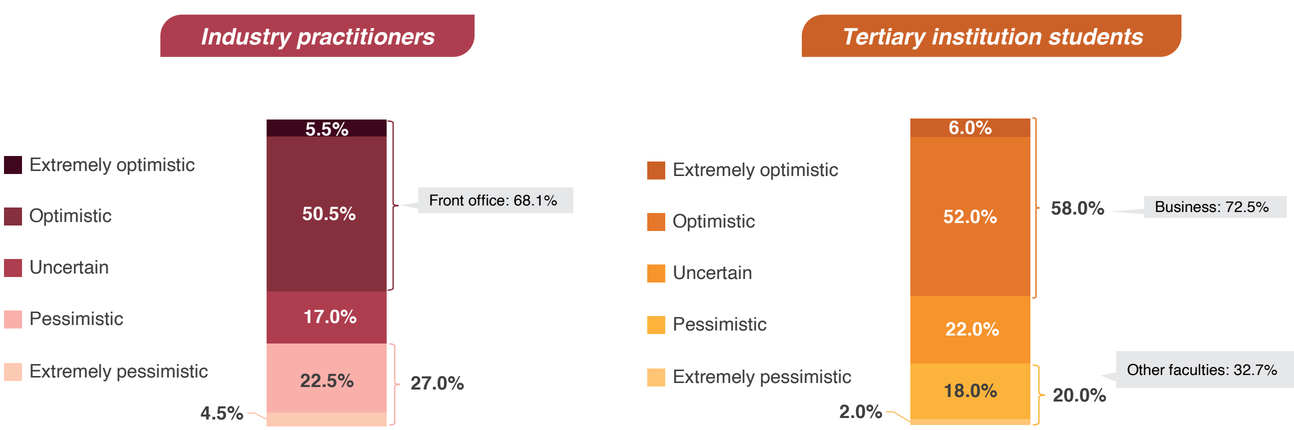
Hong Kong's homegrown talents are mostly recognised by their employers as prudent, trustworthy and possessing depth of knowledge. To equip them further for the upcoming needs of the industry, C-suites and senior management interviewed tend to expect these talents to be more innovative, adjustable, attentive to the breadth of knowledge.

Apart from homegrown talents, Hong Kong has enjoyed success in attracting talents with other diversities. Some multinational financial institutions with regional headquarters here have more than 30 nationalities in their Hong Kong-based workforce. Work visa arrangement is generally easy – all of the C-suite and senior management interviewed state that they have encountered only minimal, or no, difficulty in applying for visas for their Mainland and overseas staff. The relatively low tax rate is a particular appeal to high-earners. The cosmopolitan culture here also makes Hong Kong an attractive place to talents from big cities.

This rosy picture will generally remain within the next three years. Most of the C-suites and senior management interviewed believe that Hong Kong will continue to be one of the leading IFCs and the ample business opportunities will remain attractive to talents from around the world. That stated, over half of the interviewed admit that the competition is becoming keener - both in terms of the quality of homegrown talents and the attractiveness to expats or Mainland talents. It should not be difficult to recruit a person but the challenge is often about whether the firm can find a 'suitable person who shares the same vision'.

Incumbent and aspiring industry practitioners surveyed are also positive about the industry prospect for the coming three years (see **Chart 1**). 56% of the industry practitioners – particularly those in the front office roles – are 'extremely optimistic' or 'optimistic'; while 58% of the tertiary institution students hold the same view. Students are attracted to the financial services industry mainly for its better career prospect, salaries and benefits, as well as the fast-paced challenging culture (see **Chart 2**). Most of the business students have good faith that their major will help them find a job in the industry, while those from non-business faculties (e.g., science) look to be less confident.

Chart 1: Perceived prospect of financial services industry in Hong Kong in the next 3 years

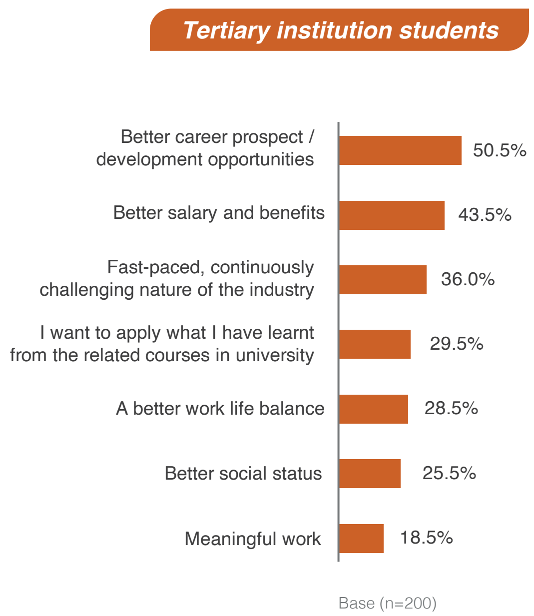


Base (n=200)

Base (n=200)

- 'Business' refers to 'business' and 'economics and finance' faculties
- 'Other faculties' refers to faculties excluding 'business', 'economics and finance', 'science' and 'engineering''

Chart 2: Reasons for having interest in financial services industry



Positive perception aside, Hong Kong is not entirely perfect in the eyes of employers and the workforce. The high cost of living has been an issue, according to headhunters interviewed. Noting also the keen competition for overseas talents by other regional financial markets which are proactive in building their expat communities (for example, through organising regular networking sessions to help expats settle in), Hong Kong may need to explore how to enhance its appeal. The social events a couple of years ago drove a small number of expatriates to consider relocation to elsewhere. Nonetheless, lingering influence on the daily operation is minimal for most financial institutions. For example, a couple of C-suites of multinational asset management firm interviewed said they have not had much change in their investment directions because of what happened in Hong Kong, and Hong Kong with stability being seen in recent times. After all, it is profit and not politics that they go after; and Hong Kong remains a place for their global operations.

What brings more uncertainty to the industry, as most employers cited, is the impact of the pandemic. The pandemic has, positively or negatively, led to a more common adoption of remote work arrangement. That means, Hong Kong can reach out to a wider group of candidates from different places around the world, whilst the city could also lose its talents to other markets more easily. More worrying is perhaps the uncertain economic outlook in the post-COVID era. A large majority of the C-suites and senior management interviewed have reflected that they tend to be conservative during this period, especially in terms of hiring additional staff.

Incumbent practitioners share the same concern about the uncertain economic outlook – more than 44% of the surveyed cite this as a key challenge. Also noteworthy is that over a third are concerned about their salary and benefits. Lack of promotion opportunities is also a difficulty encountered (see **Chart 3**).

Chart 3: Key challenges encountered in the current job

Deeper-dive: Current State and Outlook in Asset & Wealth Management

As a regional AWM hub, Hong Kong has been strong in and will continue to have an advantage in trading and deal-making.

> Very few investment products are originated from Hong Kong. Operational procedure is also often outsourced to another location where labour cost is more affordable. We need to complete the value chain by also demonstrating expertise in areas such as portfolio management.

> Fresh graduates are expected to at least understand what an AWM firm broadly does and how it works. Equities analysts are plenty but not so for fixed income ones. We are paying 20%-30% premium to hire the latter from the peers.

Most of the C-suites and senior management of asset management firms interviewed are keen to recruit and groom fresh graduates but often end up going for experience-hires. While accepting the fact that fresh graduates do not have 'proven skills', the firms would **expect at a minimum some 'proven knowledge'** from these candidates **about the workflow and nature of AWM sector**. In turn, asset management firms tend to hire the experienced from banking and insurance sectors, or from credit rating agencies, to fill their needs. In-house training is usually provided to newcomers to tune their mindset. For example, investment managers previously working in the insurance industry usually adopt a passive asset management strategy and they need to take a more proactive approach in managing portfolio in the asset management role.

Senior management in the sector are abundant, many of whom were trained in leading US and Europe large asset management firms when they were junior. As Mainland Chinese asset management firms are playing an increasingly significant role in the sector, **adapting to the different working style and culture may become a challenge** to these senior management level talents. Even for those foreign-headquartered asset management firms, understanding of Mainland affairs is considered crucial. Almost all of the C-suites at these firms interviewed commonly pointed out that proximity to Mainland China is Hong Kong's key strength as an AWM hub. Wealth Management Connect, as soon as it is launched, will further consolidate Hong Kong's position to serve Mainland AWM clients.

Private wealth management and family office business is also considered part of the AWM sector. This segment was more of a mystery and did not receive sufficient attention until recent years. To better capture the escalating potential brought by (ultra) high-net-worth clients, private banks and family offices are increasing their headcounts pragmatically. They prefer hiring professionals with at least a few years of working experience – to these sophisticated clients, certain level of 'exposure' matters.

> Working in the private wealth management sector requires intelligence – the intelligence to understand and present different complex products and trading platforms, and the intelligence to handle emotions and dynamics of different groups of clients (from the older generation to the younger, from one ethnic background to another).

Off-the-job training is sufficient but less so for on-the-job

From school to work

Tertiary education

- *Quality of Hong Kong business schools is well recognised globally and by employers*
- *Fast-evolving industry becomes a challenge to tertiary institutions in updating their curriculum*
- *Students surveyed feel the need to enhance their skillset*

On-the-job / in-house training

- *Often seen in large financial institutions which can afford the resources*
- *More preferred by practitioners surveyed*

Off-the-job training / self-learning

- *Financial institutions generally subsidise at least a part of the training cost; smaller firms mainly subsidise those related to licensing*

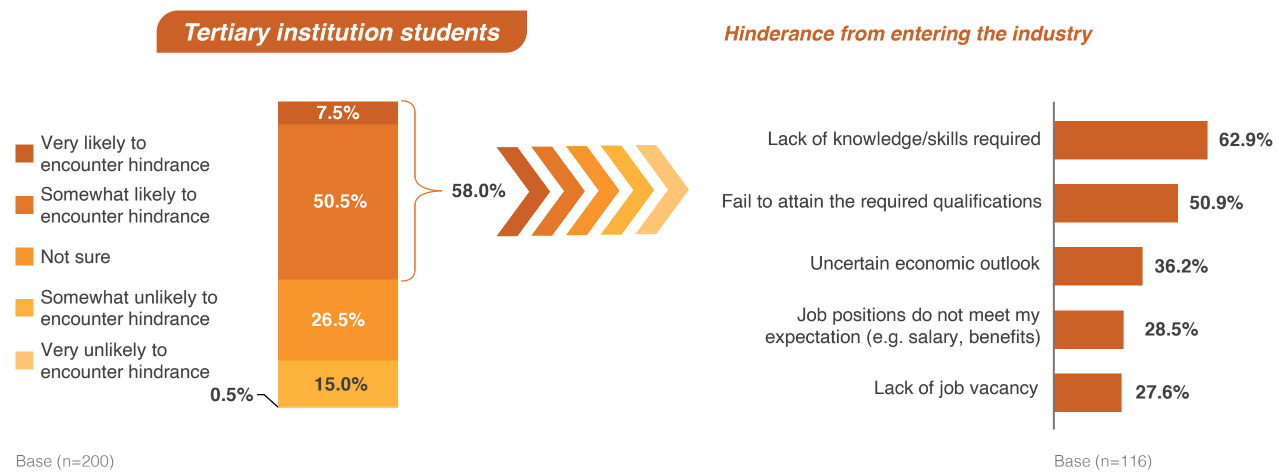
Before joining the industry…

Quite a few tertiary institutions in Hong Kong are world-class: high international rankings aside, it is also not rare to see Hong Kong business school students winning in international business case competitions. Graduates in Hong Kong are generally recognised by employers for the depth of finance and business knowledge acquired. Most of the C-suites and senior management, as well as recruiters, reflected that graduates from Hong Kong tertiary institutions understand well about financial calculations, theories, etc. They highlight, though, the need to enhance skills to put theories into practical use. This is often a factor for employers to differentiate a candidate from another. More on-the-job elements are expected to be incorporated into the curriculum so that fresh graduates can start to perform as soon as they report duty at a firm.

Meanwhile, educators are increasingly aware of the importance of incorporating on-the-job element, by arranging partnerships between tertiary institutions and private enterprises to provide students with internship/apprenticeship opportunities. A couple of professors interviewed share their struggle in keeping the curriculum up-to-date. To launch a new programme or course, it usually takes less than a year of lead time; whereas to launch a new degree, it has to take more than a year. **Although this is already considered efficient and less bureaucratic compared to tertiary institutions in some other developed jurisdictions, it remains challenging for the curriculum to not suffer from some time-lag.** Subject to their own initiative, some professors reach out to the industry to understand the latest trends and include some real-life case studies as sharing in class.

On the part of the recipients, close to 60% of the tertiary institution students surveyed believe they will encounter some hindrance in entering the financial services industry (see **Chart 4**). Among them, about 63% feel it is due to their lack of knowledge/skills required; and about half think they fail to attain the required qualifications.

Chart 4: Likelihood of encountering hindrance in the financial services industry



After having considered both the perspectives of employers and aspiring employees, perhaps a short conclusion is that the need for knowledge enhancement exists, but the focus should be more on the breadth (as opposed to the depth) as well as real-life up-to-date application scenarios.

After joining the industry…

Continuous learning is common in the financial services industry. Large financial institutions usually arrange both in-house training, on-the-job training as well as subsidise staff to take off-the-job self-learning courses to keep their staff's industry knowledge up-to-date. Those HR leaders from the large firms interviewed – particularly banks and asset management firms – do not see material difficulty in finding the right courses for their staff. To the contrary, HRs from smaller firms – especially those in the securities sector – cannot afford granting full subsidy to their staff to take all kinds of training. At most, they can subsidise those courses related to compliance with CPD/CPT requirements.

This corresponds to the sharing of professional training bodies that we talked to. Except for the banking sector (which most, if not all, of the players are relatively large employers), different sectors within the financial services industry see the pattern that smaller firms look externally for staff training while larger firms rely mainly on their internal resources. The merit of the professional training landscape in Hong Kong is that each major sector has a dedicated training provider for certifications and licensing-related curriculum, benchmarked or recognised by the respective financial regulators in Hong Kong. Amongst others, in the banking sector, the Hong Kong Monetary Authority works with The Hong Kong Institute of Bankers to introduce a competency framework – the Enhanced Competency Framework (ECF) for Banking Practitioners – in Hong Kong. In the securities sector, Hong Kong Securities and Investment Institute develops the licensing examinations as approved by the Securities and Futures Commission for meeting the competence requirements as responsible officers and/or representatives. The flip side of the coin is that, **those staff in the roles that do not require a regulatory license may not know clearly how they should upskill themselves as there is not a route per se to follow.**

According to professional training bodies interviewed, the general demand for training continues to increase. Training for senior management is usually preferred to be in the form of conferences, visits (e.g., to the Mainland cities in the Greater Bay Area), being panel judges in industry awards, etc. to broaden their horizons and develop forward-looking insight. As for junior and middle management, technical / professional skills (hard skills) are usually cultivated through traditional / classroom training (e.g., certifications, professional qualifications focused). Building on this strong technical foundation, soft skills will come into play to determine who stands out faster than the others.

Indeed, practitioners reflect their keen interest in upskilling or reskilling themselves. 85% of the practitioners surveyed express interest in doing so, for reasons including maintaining competitiveness, better career prospects, higher remuneration, etc. Close to 75% of the practitioners reckon on-the-job training as an effective way; about 61% (predominantly those from the AWM sector) prefer off-the-job approach. However, their interest to upskill/reskill may get hindered by their lack of time, course fee and limited support from employers (see **Charts 5 and 6**).

Chart 5: Practitioners' level of interest in upskill/ reskill themselves

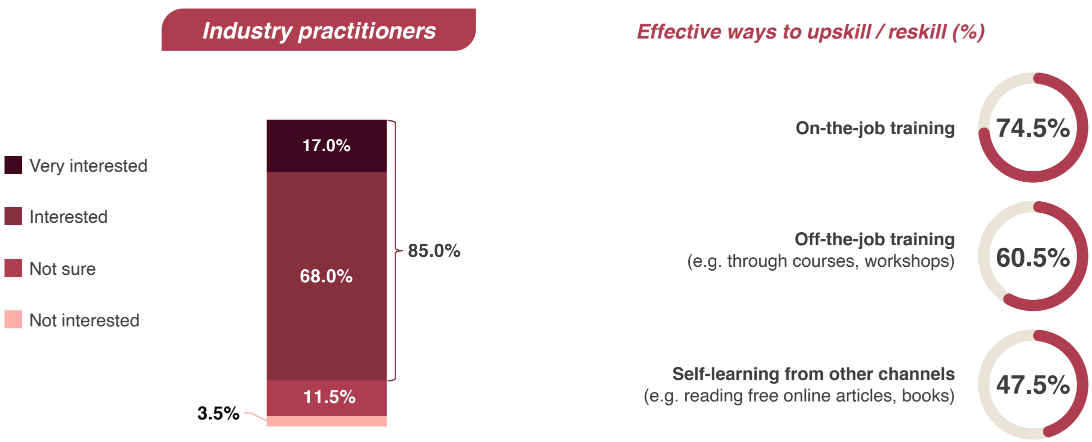
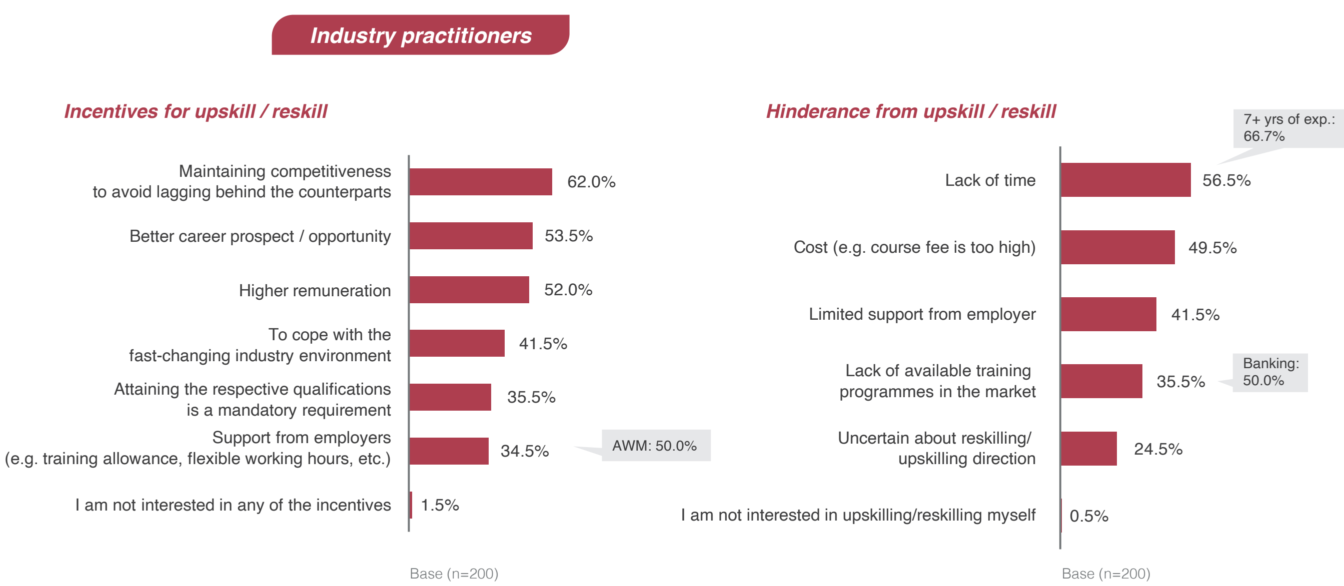


Chart 6: Incentives for and hindrance from upskill/reskill



What Will Fintech Mean to Employers and Employees?

Robotisation may replace some existing tasks, but can create new needs and new roles too

Pre-requisite being that your skills remain up-to-date

What Employers & Employees think in common

Areas on trend: Big data, cybersecurity, digital marketing

Existing and potential practitioners are increasingly tech savvy and they are keen to keep their knowledge up-to-date

Gaps to fill

Expectation Management:
misconception that all Fintech roles offer high pay and companies offer lax culture

Lost in translation:
the ability to translate tech into application in financial services

Understanding relative/competitive advantage of Hong Kong:
project management instead of coding and programming

Technology is globally an inseparable part of financial services

The pandemic is a wake-up call to all financial institutions regarding their level of digital fluency, but even before so there were already waves of development within the industry toward embracing of technology. Prior to the pandemic, some smaller firms remained hesitant when it came to the tech agenda – partly because of the budget concern, and partly due to worries over replacement of human labour. However, ever since the COVID-19 hit, almost every firm has to resort to technology in one way or the other – from the simpler layer of remote working arrangement to the more complex one such as remote trading for clients. Truly, over half of the studies in our literature review point out the new human-machine frontier within existing tasks: robotisation and machine learning are taking up some tedious, repetitive work at firms. Nonetheless, new expectation for products and services also creates job needs and such large-scale growth will likely outweigh the decline in redundant roles.

Fintech covers a spectrum that will only get broader as application scenarios expand. In the Introduction section, we tried to showcase how far-reaching this Fintech universe is. Whether it is a financial institution considering or conducting adoption of technology, or a tech firm focusing on developing solutions and services for financial industry use – roles are being created profusely. Literature review shows that the core hard skills in need include (i) data skills (e.g., data science, blockchain, data management, etc.); and (ii) cybersecurity. As for soft and generic skills, employers are craving for creativity, agility, and analytical skills. From existing and potential employees' perspective, company culture and career path are key motivations when they choose an employer. Cross-border working opportunities are also an incentive.

Hong Kong: clearer industry positioning and talent needs

“

Financial institutions vs. fintech startups

	Financial institutions	Fintech companies / startups
What does technology mean	Adoption, in most cases Technology enhances the provision of financial services	Development and adoption How to provide solutions for different applications – application in the context of financial services is one of the examples
Culture	Corporate culture is universally important Some formality is expected, especially given the industry is highly regulated	More flexibility in general – but hard work matters and one needs to deliver the result; Fewer hierarchies for startups
Remuneration & benefits	Along the average pay scale, except for very niche roles which get to be paid higher	Large fintech giants offer high competitive pay – sometimes higher than what financial institutions offer Startups have limited budget but emphasise more on being a part of the 'change'

Financial institutions in technology adoption…

Like any other emergence of novel trends, the Fintech journey of Hong Kong needs to experience the fact-finding, or positioning, stage. Larger financial institutions look to have completed this process – a significant majority of C-suite and senior management interviewed say their firms are fairly clear about how to deal with digital transformation. While technology keeps evolving, most of these decision-makers have come to a clearer mind that they 'adopt' the technology but not 'develop' it. Some were once wary of the threats that technology can bring – but with more successful use cases in place, together with clarified regulatory guidance and more tech solutions available in the market, the merits of Fintech, or tech adoption, are being felt. Generally, once these firms have identified certain needs, they will communicate their specifications with external consultants or vendors to see how they can make the solution happen. Meanwhile, smaller financial institutions are also increasingly buying into the advantages of tech adoption.

Financial institutions are adopting technology in different aspects, including:

(1) Digital transformation

Firms are migrating different parts of the business operations from traditional means to more digitalised platforms – the use of online meeting tools for client engagement as opposed to face-to-face; the transaction execution process from telephone confirmation to electronic one; the use of tablets to present product features to clients and so on. The transformation pace also takes account of client preference. For instance, individual clients at retail banks tend to use online banking services more than corporate clients as it remains a norm for some B2B transactions to be conducted traditionally in hardcopy format.

(2) Cybersecurity

As more of the client data and firm information are stored electronically or on cloud storage, data security becomes a prominent issue for financial institutions. Where third-party services are engaged, the compliance requirement would be different too.

(3) Digital marketing

Given the prevalence of digital and social media channels, how a product or service is marketed to clients requires a fairly different strategy from before. Digital marketing is increasingly adopted to convey messages more effectively, pitching target clients in a more impactful manner.

Of course, the above is only a part of the technology adoption universe for financial institutions, and there are a multitude of use cases that are and would be in play. What we wish to highlight is that financial institutions now have a clearer plan for their digital transformation or tech adoption journey; and with this, institutions tend to fulfil this by upgrading the overall tech capabilities across different departments.

Some firms – especially banks and asset management firms – are adding more IT or tech staff to each department (such as frontline and middle offices) so that they can understand the needs of the relevant departments and colleagues who can gradually learn to understand the 'tech language / jargons'. **Apart from adding tech staff to existing departments, some large firms also set up a dedicated Fintech team to manage the firm-wide tech-related development directions.** For example, a multinational insurance firm has set up an InsurTech team, comprising experienced tech experts from Israel, Shenzhen and Silicon Valley, to plan for the firm's innovation strategy. These experts have a fairly different mindset from those with finance background – and these new insights are blended into the business setting to make a solution work. Some financial institutions choose to expand their IT department to cover wider functions. In such a department, there are usually the cloud team, the network / security team, the app development / infrastructure building team, as well as the customer services team (e.g., IT helpdesk).

Through the one-on-one interviews and focus group meetings, we have summarised the commonly cited skills as below for reference –

Tech-related roles in financial institutions

Senior management

- *Solid financial knowledge as the industry is highly regulated*
- *Project management skills to keep track of milestones and evaluate performance*
- *Business development skills*
- *Data governance and cybersecurity awareness*

Middle management

- *Innovative and have a vision on applying tech to generate profit for the company in the long term*
- *Understanding of market trend and on how to utilise technology to maximize efficiency*
- *Ensuring compliance with all regulations while developing Fintech strategy*

Junior / new entrants

- *Passion and interests in the financial services industry*
- *Problem-solving mindset*
- *Hard skill on data analytics and open source (e.g., Java, Python), less on visual basics; graduated in Computer Science / Information Technology / Engineering an advantage*
- *Communication skills with external parties and vendors*

Front and middle office roles

General skills

- *Problem-solving skills*
- *Innovative and open to new ideas and challenges*
- *Communication skills*

Technical skills

- *Some knowledge of finance/ FinTech related activities*
- *Understanding of financial services environment and regulations (including cybersecurity)*

Back office roles

General skills

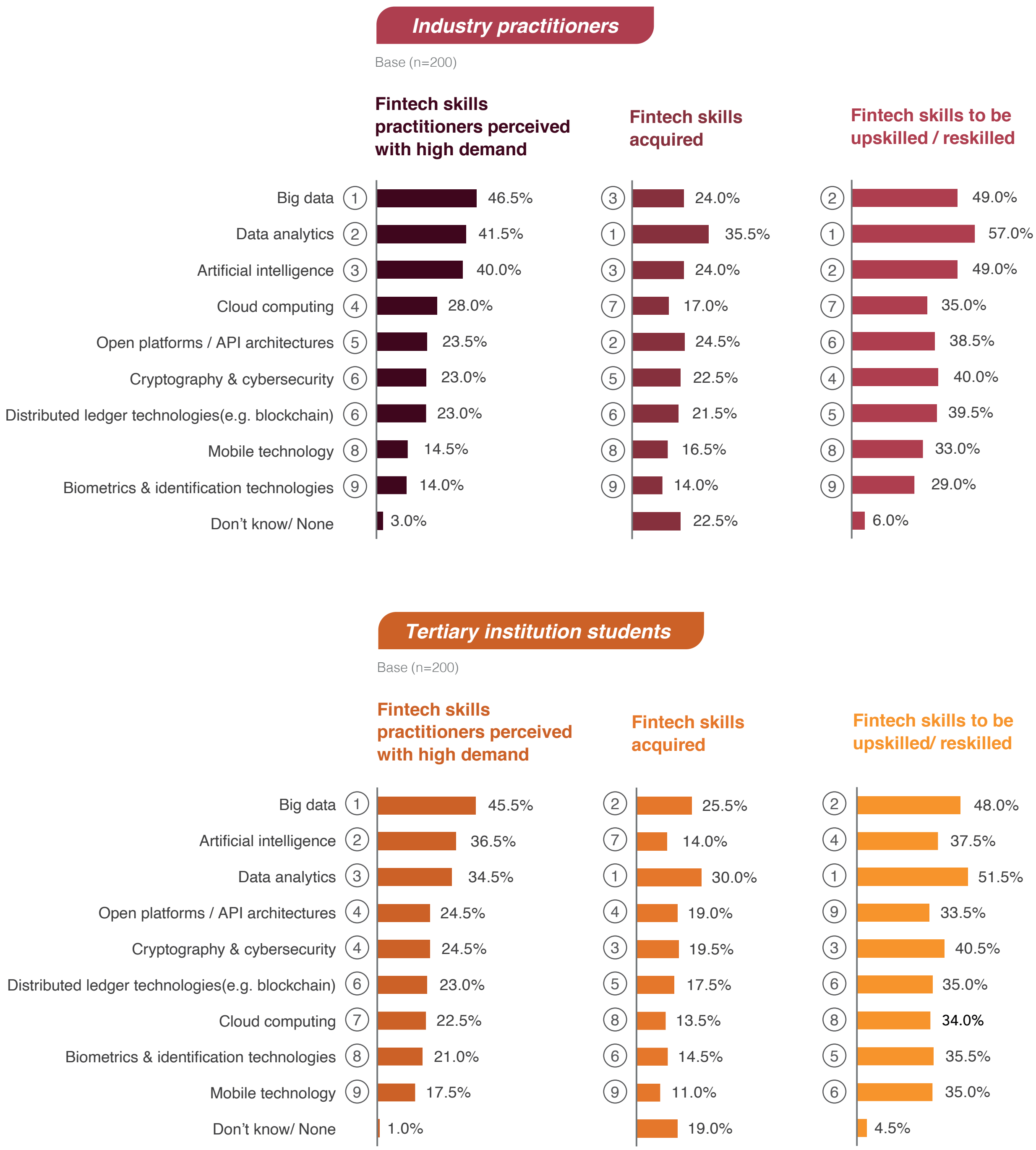
- *Problem-solving skills*
- *Research skills*
- *Innovative and open to new ideas and challenges*
- *Communication skills*

Technical skills

- *Data management and analysis skills*
- *Knowledge of blockchain and cybersecurity*
- *Knowledge of frontend (ReactJS, Redux, SaSS, CSS, JQuery, Bootstrap, Responsive website design, webpack, NPM)*
- *Knowledge of backend (Python, NodeJS, MySQL, Linux, AWS, etc.)*
- *Knowledge of AI and machine learning (Apache Spark, TensorFlow, Scikit-learn, etc.)*

Encouragingly, the skillset in demand largely aligns with what is perceived by the potential employee group. **Chart 7** illustrates what industry practitioners and tertiary institution students perceive as demanded skillset. The Chart also shows what they think they have acquired and the gap to fill. Common areas for improvement include: big data and data analytics; cybersecurity, AI, and blockchain.

Chart 7: Perceived demand and supply of Fintech skills



While different financial institutions are adding headcounts for tech-related roles, not many succeed in making successful hires through open recruitment. Larger firms usually are able to offer better pay to attract talents but some of these employers say their pay cannot be comparable to such offered by the Fintech giants. **The recruitment difficulty faced by smaller firms is more obvious – pay aside, the HR's limited understanding of what tech skills to expect becomes a barrier to hire the right person for the role.** A few of the recruiters at smaller firms are still seeing Fintech as no different from a mere IT helpdesk. With the difficulty in open recruitment, firms are seen to hunt talents from the external consultants or vendors they partnered with as these talents know better what the firm needs. That said, financial institutions well understand that this is a short-term solution to tackle the immediate needs; to cope with the larger upcoming needs, some firms are arranging in-house training to upskill or reskill their staff on tech capabilities. But again, resources is an issue.

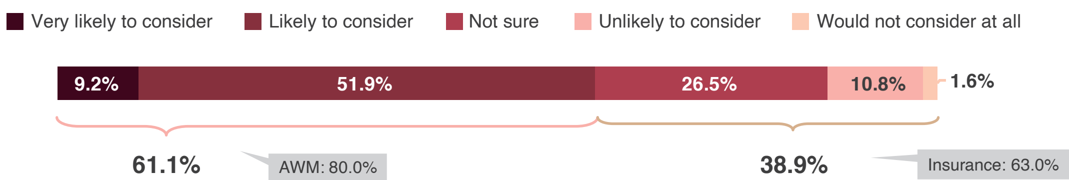
Recruiters and head-hunters interviewed share the same observation. To tackle the immediate needs, a few recruiters acknowledge that it may be more realistic to recruit financial talents and expect them to pick up tech knowledge, than to recruit a computer science talent and feed him/her with financial knowledge. At the end of the day, it is **more important to understand the implications of tech on business operations than to actually develop/build the tech infrastructures by themselves.** Nonetheless, this does not preclude the possibility of talents from non-business background to seize the tech-related roles in financial institutions. 'Data' related role would particularly be a hot area for these talents to enter the financial services industry – most firms are expanding their team in roles such as data management, big data analysis, etc. For example, a bank would be interested in what behavioural pattern the big data of its clients indicates, thus making corresponding adjustments to its loan product features and sales strategy. Knowledge in computer engineering will present a niche. Given the broad and complicated Fintech taxonomy, non-business background talents can also place more attention to areas that Hong Kong has more potential in – for example, payments and blockchain adoption amid the proximity to the critical mass in the Greater Bay Area; digital and crypto assets, etc.

Thankfully, Fintech-related roles seem to have good appeal to existing and potential practitioners. As shown in **Chart 8**, more than 60% of the existing practitioners who are currently not in Fintech roles say they will consider switching to the Fintech universe – more notably, 80% of these practitioners are from the asset and wealth management sector. The talent pipeline is even more promising among the new breeds: more than 80% of tertiary institution students say they will 'very likely' or 'likely' consider starting their careers related to Fintech. To both the practitioners and students, career prospect is a key incentive. Better salary & benefits is the second-attractive factor – this may be a potential expectation discrepancy which employers should be mindful of, as based on our interviews and focus groups, firms do not look to be prepared to pay significantly more than the average for Fintech roles.

Chart 8: Preference for starting or switching career to Fintech

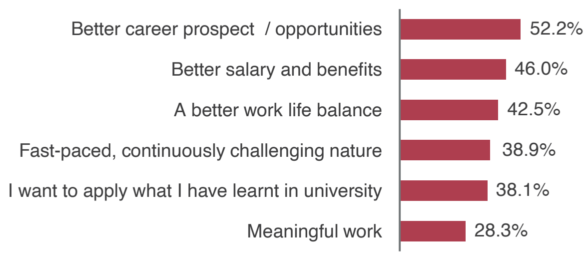
Industry practitioners

Base: Those not working in Fintech sector (n=185)



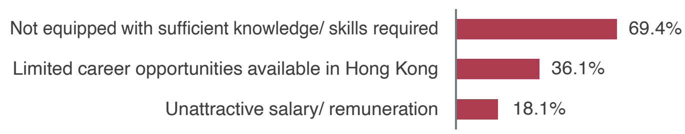
Reason for considering Fintech sector

Base: Those who rate very likely / likely to consider (n=113)



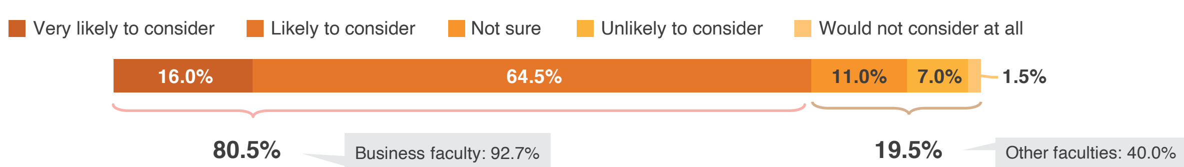
Reason for not considering Fintech sector

Base: Those who are not sure/ do not consider career in Fintech (n=72)



Tertiary institution students

Base: Tertiary institution students (n=200)

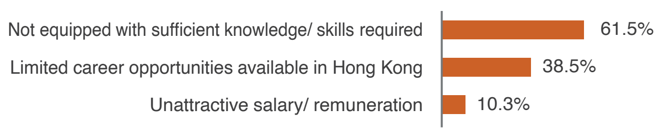


Reason for considering Fintech sector

Base: Those who rate very likely / likely to consider (n=161)

Reason for not considering Fintech sector

Base: Those who are not sure/ do not consider career in Fintech (n=39)



Deeper-dive: application of Fintech in AWM sector

What has been covered may still be difficult to understand for those who are not familiar with tech. To enable them to better understand how tech adoption is happening in financial services, we wish to bring in some examples in the asset and wealth management context.

Technology adoption is generally taking place in these aspects:

- **Client user-experience**
  E.g., online engagement with clients (although it will unlikely lead to a complete replacement of face-to-face engagement); apps/tools development to provide clients with personalised product information; to serve family offices, some bespoke online dashboards are made available to capture real time, holistic data of the families' combined assets

- **Product development**
  Investment appetite is experiencing a change, from 'by regions' to 'by themes' (e.g., HealthTech, RegTech, etc.); tech-themed products are also proliferating

- **Business efficiency and accuracy**
  E.g., discovering the best executed price through tech

- **'Data middle office'**
  E.g., for generating fund fact sheet and other trade information; on daily operations such as cloud storage and data compliance

Technology will facilitate, or replace, some parts of the existing tasks – particularly such tedious and routine ones as data extraction and entry. International asset management firms are developing robo-advisory services but this is unlikely to be in full functioning like what current financial advisors do. The wide, ever-evolving range of products is a barrier; clients also tend to prefer some off-the-shelf products sometimes, which require a great deal of human-tailored analysis. Also, given that fund companies in Hong Kong at present still heavily rely on distributors (for example banks) to sell their products and only a small portion of transactions are solely done online, robo-advisors may not thrive unexpectedly fast.

According to a C-suite of an international asset management firms, not every employee has to be a tech expert, but a basic degree of savviness is expected. Large asset management firms usually have a team specialising in Fintech; meanwhile, more firms have opened Head of Digital positions to manage major digitalisation projects and help upskill senior employees, who are usually less tech savvy than new entrants and junior-level staff. It is crucial for the senior and middle management to understand how tech adoption can translate into business opportunities or efficiency to the firm.

> There's no point to push every staff to become a tech expert, but at a minimum each is expected to maintain an open attitude to tech development and be familiar with the daily use programmes.
>
> ***C-suite, multinational asset management firm***

> I came from a computer science background and took a professional finance-related qualification. Data analysis is perhaps an area that makes me niche – I'm able to do data mining and perform analysis more efficiently than a business-background person.
>
> ***Vice President, Risk, Private Bank***

Tech firms present a different universe

Tech companies – giants or start-ups – present a fairly different landscape from such of conventional financial institutions. Companies that are positioned to serve or transform the financial services industry are generally called 'Fintech' (or tech-fin) companies. Hong Kong is home to more than 600 Fintech companies, with a majority of them focusing on the business-to-business (B2B) market.[6] These companies leverage technologies including big data, AI, blockchain, InsurTech, RegTech, and WealthTech to serve the business and consumer markets with efficient, convenient and cost-effective products and services.

Fintech companies with operations in Hong Kong are of different sizes. Those at the start-up stage are striving to expand and sustain their businesses. With the enhancements introduced to the policy environment, the networking opportunities and business-operating guidance provided by Cyberport and the Science & Technology Park, together with the efforts in the private sector, the Fintech startup ecosystem is developing fast. But like startups in any other markets, they are under a slim budget and tight deadline. While they need labour to operate and deliver results, these startups do not necessarily require, or more realistically are not able to afford, a large team. Every staff matters much so each is expected to have the breadth and depth of skills to contribute. **Problem-solving skill is important as the management at a startup cannot afford the time and resources to handhold or spoon feed the junior.**

The same, if not more, contribution to the firm is expected by sizeable Fintech employers too. Senior and middle management of a Fintech giant are expected to possess rich management experience under both peak and trough of business cycles. They should be proficient in motivating employees to work towards a common goal. **New entrants at a sizeable Fintech firm do not necessarily possess ultra-advanced level of technical knowledge but they must be prepared for the steep learning curve.** In-house training often used for team-building and bringing new ideas to the firms. For example, there is usually a closed-door bootcamp orientation provided for new entrants in which they are asked to comment and criticise one of the company products and suggest ways of improvement to the corresponding project manager. Fresh perspectives are a valuable asset. Since most of the Fintech giants in Hong Kong came from a Mainland background and target to serve the Greater China market, a candidate should possess good understanding of the Mainland market. As a C-suite of a Mainland-headquarter Fintech company emphasises, if a fresh graduate looks to join his company, it is considered a basic to understand the digital way of Mainland daily living style. Fintech infrastructure has covered almost every aspect in daily life of a Mainlander, from dining to transport and from online shopping to mobile payment. Without the direct user experience of these apps, it is almost impossible for a staff at a Mainland-background Fintech firm to survive.

Of course, given the different business sizes, Fintech giants are able to offer more handsome salary than Fintech startups, and sometimes even more handsome than what conventional financial institutions can pay. Yet, both Fintech giants and startups commonly point out, it is pivotal to have the vision than only look at the salary. Most, if not all, of the Fintech companies are established with the vision to 'make a positive change' – may it be in the form of efficiency and convenience, or for financial inclusion. **If a candidate does not have the passion and share the 'purpose of work', he or she will only end up with exhaustion and brain-draining**, which whatsoever salary offered cannot justify.

[6] InvestHK, Hong Kong: From Startups to Regional Headquarters.
https://www.investhk.gov.hk/sites/default/files/RHQ%20and%20Startups%20Surveys%202019_entc.pdf

The so-called ‘hot’ topics change over time - from payments to credits a few years ago, then now to crypto or digital assets. Each topic requires slightly different tech skills (e.g., from data analytics to machine learning). With this, it does not mean older topics have less value or become stale – it is rather that each and every topic is growing, yet at different pace at different time. A candidate should consider which area / topic he or she is most passionate about, and how to continue to refine and innovate. Although each topic / area may require slightly different tech firms, if a person really is passionate about that area, he or she should be very keen to learn new software language.

Most of the C-suites of Fintech giants and start-ups also wish to correct a common misconception. Some junior staff tend to perceive that Fintech companies have a ‘chill’ culture – in the sense that it does not require much effort to be put in. The ‘chill’ part is correct, in the way that Fintech companies do generally have more casual working environments. Most firms allow flexi hours but at the end of the day what one can deliver matters most.

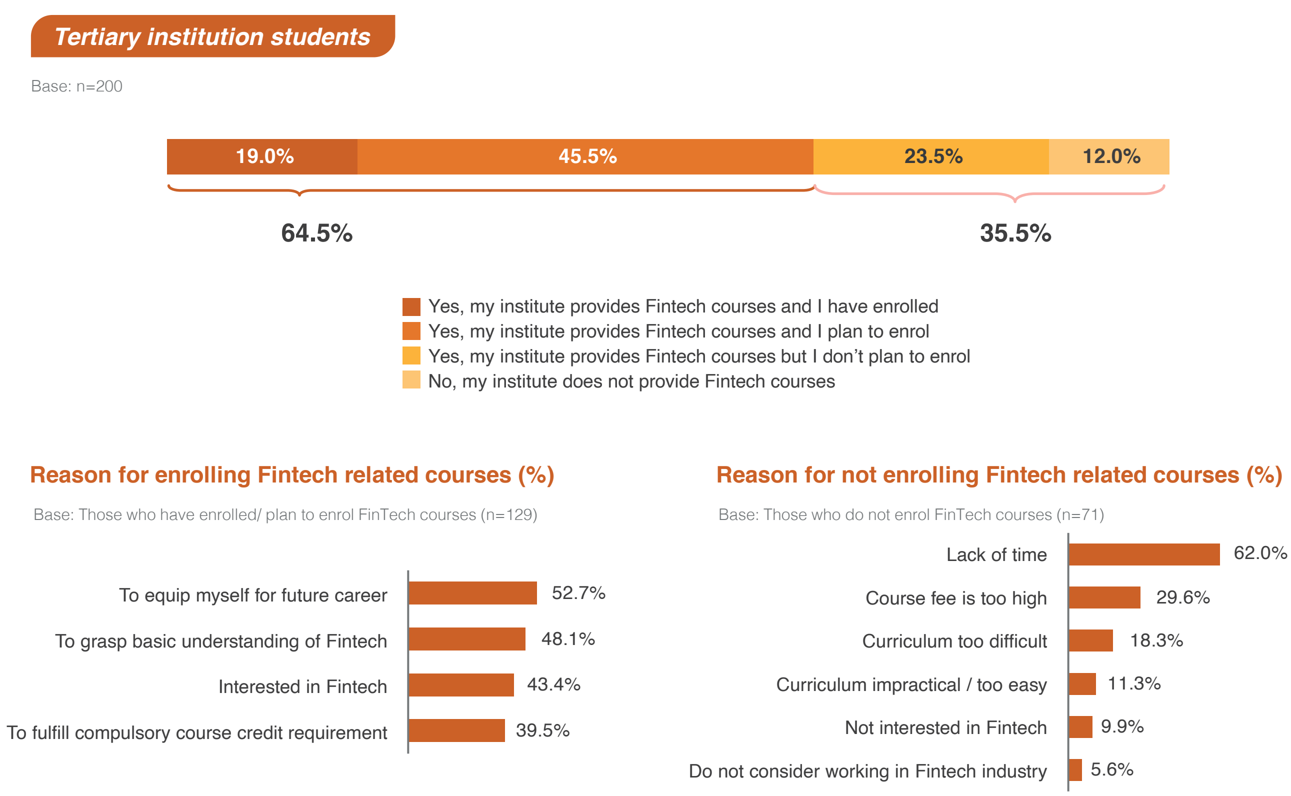
People who aspire to join the Fintech sector are also advised to be clear about their advantages and disadvantages. In an ideal Fintech ecosystem, there should be talents specialising in different areas – from coding and programming, to project management and digital marketing. One needs to be mindful though, a large majority of the coding tasks have been outsourced to places such as Guangzhou and India, where the labour cost is about one-third or half of Hong Kong’s. In other words, it would be more realistic for one who is interested in programming or coding to be clear about the fact and know what competition is ahead. A more obvious advantage that Hong Kong-based talents possess is perhaps the outstanding project management skills. For long, Hong Kong people have had the quality of understanding user requirements and pain points then finding corresponding solutions. The ability to understand the dynamics of different stakeholders – such as investors and regulators – is keenly sought by Fintech companies.

Training landscape: application is key

The Fintech skillset gap is apparent. While employers are craving for talents to cope with their business or digital transformation needs, employees also feel the need to upgrade their tech capabilities. As spelled out in earlier paragraphs, both the incumbent practitioners and tertiary institution students perceive that they need more training to upskill or reskill themselves.

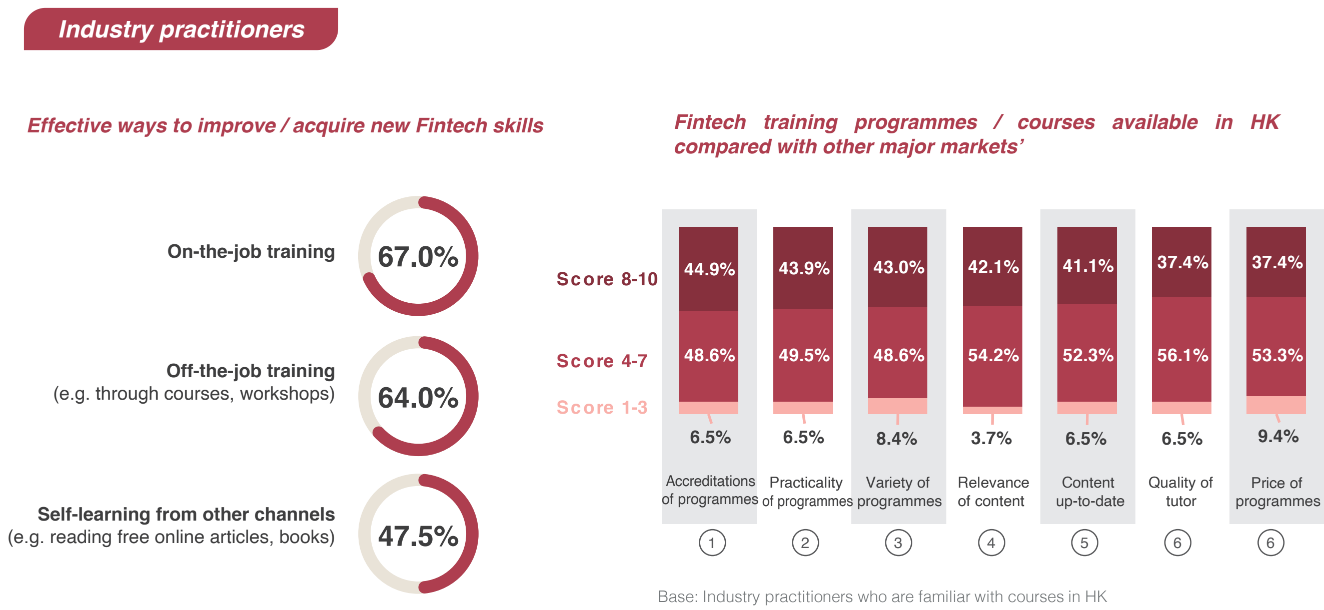
In the university curriculum, we have noted an increasing attention on tech – may it be through a dedicated bachelor's or master's programme, or through a course with Fintech elements. In this regard, Hong Kong is already relatively more advanced than other developed markets but whether students get to feel the keen interest in enrolling in such courses is an issue. Among the 88% of students surveyed who say their institutions provide Fintech courses, only 19% have enrolled (see **Chart 9**). While nearly half say they plan to enrol, we should also see how to motivate the rest. Lack of time, high course fee and difficult curriculum are the most cited reasons for not enrolling in Fintech-related courses. Some students surveyed also reflect that the curriculum and credit transfer system in tertiary education are not entirely flexible for business-major students to study IT or vice versa. Equally crucial is whether these courses can cultivate the skillset needed for the jobs in the market. Over half of the Fintech companies interviewed tell us that they are expecting more of the application ability from the graduates. **These companies are yet to find sufficient candidates who can translate what they have learnt at school into business operations.**

Chart 9: Enrolment for Fintech courses



As for industry practitioners, courses available in Hong Kong on Fintech are plenty and the overall quality is good, from practitioners' perspective. According to **Chart 10**, 67% of the industry practitioners surveyed think on-the-job training is effective – but given the limited human resources a firm has, this channel perhaps is not easy to achieve. Also preferred is off-the-job training (such as courses, workshops, etc.) – 64% of the surveyed opt this as an effective training channel. Further, interviewees generally consider Hong Kong's Fintech training programmes better than those in other markets, in terms of practicality, variety, etc.

Chart 10: Industry practitioners' preference for Fintech courses



According to an experienced trainer interviewed, backend training is relatively easier to organise by private training institutions – computer science background trainers are adequate, but what is lacking is often a 'real-life' platform for practice. Each financial institution – particularly in the banking sector – has its unique platform but the programming skill is transferable. Programming skills can be taught within months or even built up by self-learning, but eventually what matters more is the actual scenario for learners to apply what they learnt by theory into practice.

What Will ESG Mean to Employers and Employees?

ESG per se is cross-disciplinary and so should the mix of talents at financial institutions

Regulatory push and client demand are making ESG mainstream

What Employers & Employees think in common

Knowledge of ESG regulations and integrated analysis are hard skills in need

Communication and stakeholder management skills are crucial

Gaps to fill

Insufficient understanding of ESG and of its implications

Misconception that the talent demand will not increase significantly

Sustainability is relevant and becoming mainstream

For more than a decade, sustainability started to become a key agenda item among European financial institutions. The wave has then swept the American market; and until more recent years, the momentum is taking place in Asia due to regulatory push and increasing client demand. There are mounting studies explaining the value proposition of ESG to a financial institution – from the perspective of risk management, to risk-adjusted investment return enhancement; from brand building to attractiveness to new source of capital; but ESG-related talent development studies are only a handful. Almost every market is indicating a shortage of talents; and within which, the shortage is most acute in Asia. The areas of skillset that are under acute shortage would be pending exploration.

Employers generally feel their existing staff lack ESG knowledge but struggle to offer them training because of the limited suitable course options available or because such training is not a (regulatory) requirement. Based on the limited studies in our literature review, we have summarised the key skillsets in need. In terms of hard skills, baseline technical knowledge, ESG rules and regulations, incorporation of ESG factors into business models are crucial. In terms of soft skills, communication and negotiation skills are key. Financial institutions are open to recruiting candidates with non-traditional backgrounds (e.g., NGOs and consultancies) for ESG-related roles. It remains a discovery process for employers to figure out gradually what sort of skillsets they need most.

Hong Kong: momentum is piling up and more employers are getting ready to expand ESG roles

Hong Kong's success as an international financial centre allows the city to enjoy a combination of first-mover advantages in ESG investment initiatives. Owing to its world-leading capability in capital raising, ample risk management experience and solid expertise in serving international financial actors and investors, Hong Kong attracts a wealth of asset owners and asset managers to explore their ESG investment journey. With green finance being key in the development of the Greater Bay Area, Hong Kong's role in providing financial services support will likely become more prominent. In 2020, green bonds arranged and issued in Hong Kong recorded more than US$12 billion; cumulative green debt issuance amounted to over US$ 38 billion by the end of 2020. Further, following President Xi's pledge for China to be carbon neutral before 2060 is Hong Kong Government's commitment to achieve carbon neutrality before 2050. The financial services industry is, by and large, expecting the opening up of more business opportunities in relation to ESG for the city, and in the region. In short, the ESG momentum is piling up in Hong Kong; and the next to expect is how firms will expand the scope of their ESG journey, which means increasing the need for related talents.

Within E, S, and G, Governance is the tranche that has drawn the most attention while Environmental and Social issues are picking up. As an investment director with 10+ years of experience in ESG describes, there is this **two-tiered understanding of ESG among financial institutions in Hong Kong: the first tier is those global, international investment houses – ESG is already on the top of their priority; the second tier is the regional and local ones – they are still warming up to the ESG trend and yet to understand the disruptive construction that ESG can bring**. As a representative of a professional body remarks, the varying level of interest may be explained by the developing ESG taxonomy – some ESG standards remain inconsistent or unclear.

In turn, some financial institutions are more active than others in terms of hiring. Banks are expanding their ESG workforce comparatively faster – the traction mainly comes from the financing arm of banks in view of regulatory expectation for sustainable banking. Asset management firms also have their ESG force grown fast. Likewise, the asset management arms of insurance firms are also joining the party. For example, a C-suite of a multinational insurance firm tells us that his firm imposes investment ban on some tobacco projects and sees this good for the business. The philosophy is that, if clients live healthier and longer, they would probably make fewer claims on health insurance, which in turn would benefit the insurance firm. Further, credit rating/analysis firms are increasingly aware – and are recruiting people to develop several models to assess ESG risks or scoring. According to recruiters interviewed, there is some demand for E & S talents – and most of such demand comes from large financial institutions and listed companies, while G talents are under more eminent shortage. Demand from smaller institutions has yet to arrive. Recruitment of ESG professionals may involve very technical knowledge that not all HR professionals are familiar with.

Across the larger employers, ESG team composition is experiencing a shift. **Headcounts have mainly been added to middle to back offices, and now gradually to front office as well.** Three years ago, each financial institution added several openings for ESG function and **most were filled internally** (i.e., rotating staff from such departments as marketing and group strategy to take up ESG roles) due to limited talents outside. And now, as the ESG ecosystem has been built up in Hong Kong, there are more candidates in the market to fill in the new roles. **Firms go more for external recruits**; and the team is usually headed by an overseas expert who has years of ample experience in ESG.

Most of the employers emphasise that **there is not a definite requirement for academic background** when they consider candidates. ESG teams comprise professionals from communications, climate change, social issue expertise. It is after all subject to the qualities of individuals and the management's preferences. For example, if the business focuses on real estate sector, it may be easier for an environmental or social person to acquire some basic financial knowledge so as to be capable for the role; while if it is for IPO business, it would be easier for a finance-background person to pick up some basic ESG understanding. What matters more than the academic background is passion and global vision. ESG trends are globally impacting each other – having the keen interest to keep abreast of the international developments is key. **One needs to know how to translate these ESG theories, concepts and developments into actionable agendas/strategies.** Other key skills are summarised as below for reference.

ESG-related roles in financial institutions

Senior management

- *Be visionary and understand the importance of developing ESG*
- *Leadership skills and being supportive to lead the change in the company*

Middle management

- *Understanding of ESG-related regulations*
- *Communication skill is required to deliver messages to different stakeholders (including clients, investors, senior management, etc.)*

Junior / new entrants

- *Basic knowledge of ESG and a sense of sustainability*
- *Coordination skill across different initiatives, events, stakeholder engagements*
- *Report-drafting skills*

Front and middle office roles

General skills

- *Problem-solving skills*
- *Ability to combine specific technical skills and knowledge with an understanding of business processes, practices and cultures*

Technical skills

- *Baseline technical knowledge (e.g., what is the structure of the ESG ecosystem, how is ESG performance measured)*
- *Capable of structuring sustainable products from both a customer, business and wider stakeholder perspective*
- *Skill to assess suitability of sustainable products*
- *Understanding the financial and sustainability of any green financial instruments, specifically Green bond, Green loan and Green fund*

Back office roles

General skills

- *Research skills*
- *Analytical skills*
- *Communication skills*

Technical skills

- *Knowledge of green and sustainable, including the latest issues and finance regulations*
- *Familiarity with major ESG indices, rating and/or other scoring mechanisms*
- *Understanding of reporting standards*
- *Integration of climate-related risks in equities/bonds/government bonds*

Deeper-dive: application of ESG in AWM sector

How ESG is incorporated into the business operations and decision-making process covers a wide spectrum. It is making an impact in different streams within the AWM sector. Most of the international or regional AWM firms in Hong Kong already have their responsible investment policies in place – either to respond to regulatory expectation or client request. Some are considering setting up a dedicated team to look into ESG matters or adding headcounts for ESG-related roles.

- **Investment management**
  E.g., formulation and review of scenario analysis with ESG factors taken into account; internal product design and due diligence (e.g., green bonds, ESG-themed funds, etc.)

- **Research and Strategy**
  E.g., conducting market intelligence and research to understand latest ESG developments, such as carbon-reduction project prospect; conduct benchmark analysis to compare the firm with other peers in terms of ESG practices

- **Transparency & disclosure**
  E.g., sustainability risk reporting to fulfil fiduciary duty and regulatory requirement; defining key performance indicators based on internationally recognised ESG guidance

- **Awareness and sense of sustainability**
  E.g., employee training and client education

ESG, or sustainability, is not merely a short-term theme but is a trend that is going to stay. According to the C-suite of international asset management firms, they are taking a two-facet approach. On the one hand, they are hoping to cultivate the sense of sustainability across different staff as ESG practice should be viewed more holistically – for risk management purposes and others. On the other hand, they are creating headcounts. They used to rotate people to serve the ESG function from within, but as ESG is becoming mainstream, this cannot be a long-term solution. Headcounts become more formalised; and open recruitment becomes the practice. The expansion for now is not aggressive, but most of them foresee the talent need will continue to increase.

> Sell-side, asset management firms and investment banks are creating new roles for ESG. ESG are essentially separate segments and each requires dedicated background, yet together a mix of diversity.
>
> ***Partner, International Pension Investor***

> There is not a clear cut regarding the background. I came from the Mainland with sustainability background; while my team comprises professionals from abroad and Hong Kong, with business, communications, social science backgrounds, etc.
>
> ***Vice President, Asset Management, International Banking Group***

A couple of senior management – one at a European-based capital investment firm and the other at a pension fund –advised young talents to start planning their ESG career early, if they feel the passion and interest. Currently, middle to senior ESG roles are mostly filled by Europeans or Americans, due to the lack of talents in Asia. They foresee, the Mainland China market will present tremendous career opportunities and business opportunities in the coming few years regarding ESG. Hong Kong talent should seize the geographical advantage.

Understanding among practitioners has room to improve

As explained earlier, the demand for ESG talent has been a global phenomenon and is becoming a key trend to embark on in the coming three years. Noteworthy is that incumbent and aspiring practitioners only have some fair understanding of the ESG job market. Only 14% of existing practitioners and 0.5% of tertiary institution students reckon they have ample understanding of the job market (see **Chart 11**). Interestingly though, despite the limited understanding of the market, 46% and 61% of practitioners and students, respectively, say they may consider having their careers in the ESG field (see **Chart 12**).

Chart 11: Understanding of ESG job market in Hong Kong

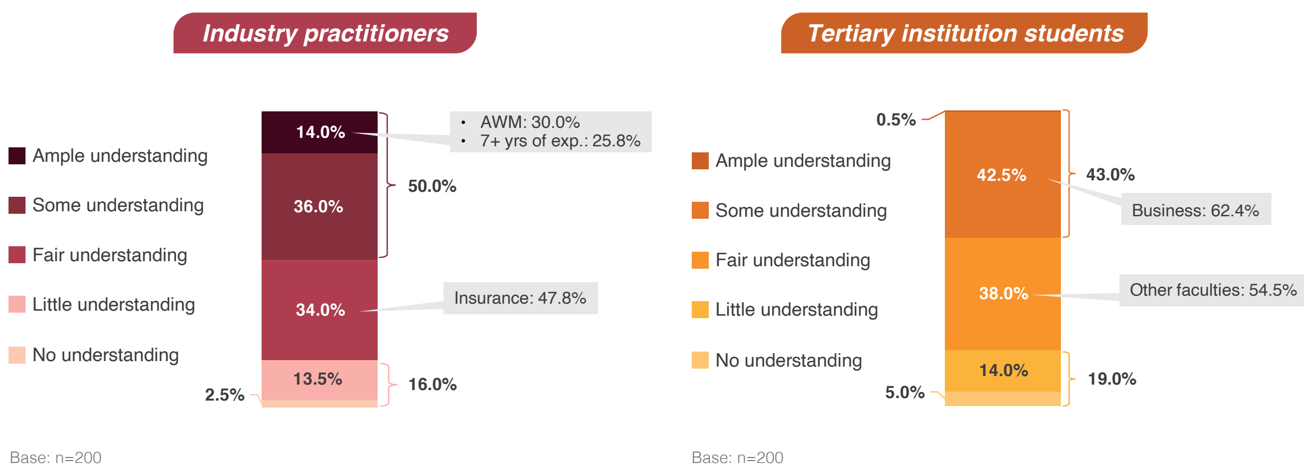
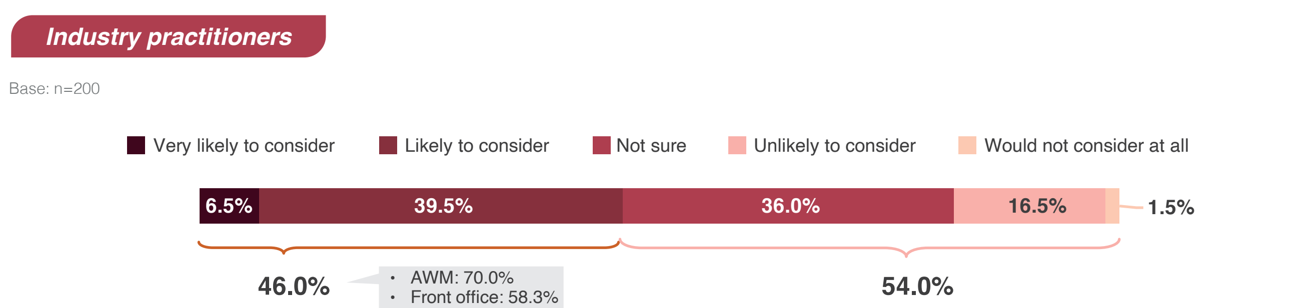


Chart 12: Preference for starting or switching career to ESG sector

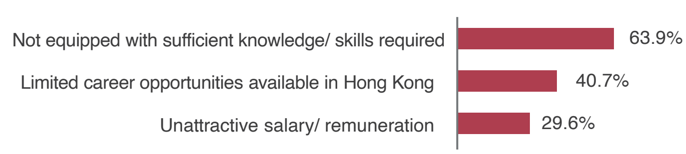


Reason for considering ESG sector field (%)

Base: Those who rate very likely / likely to consider (n=92)

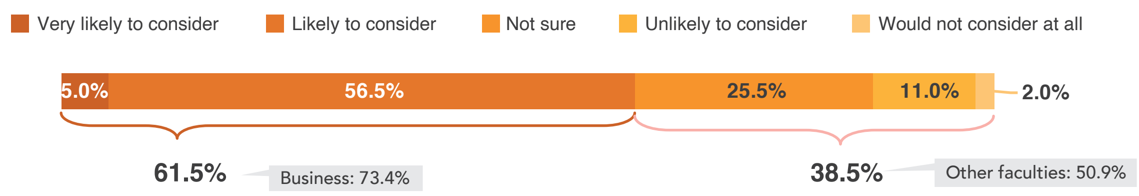
Reason for not considering ESG sector field (%)

Base: Those who do not consider career in ESG (n=108)



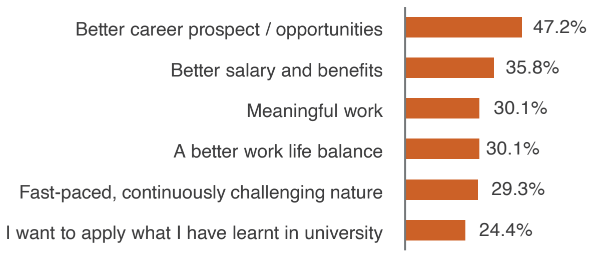
Tertiary institution students

Base: Tertiary institution students (n=200)



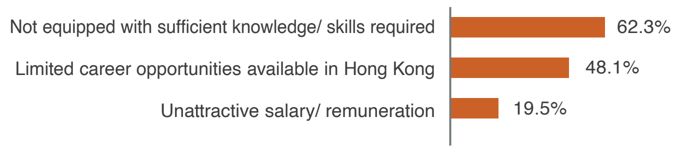
Reason for considering ESG sector field (%)

Base: Those who rate very likely / likely to consider (n=123)



Reason for not considering ESG sector field (%)

Base: Those who do not consider career in ESG (n=77)

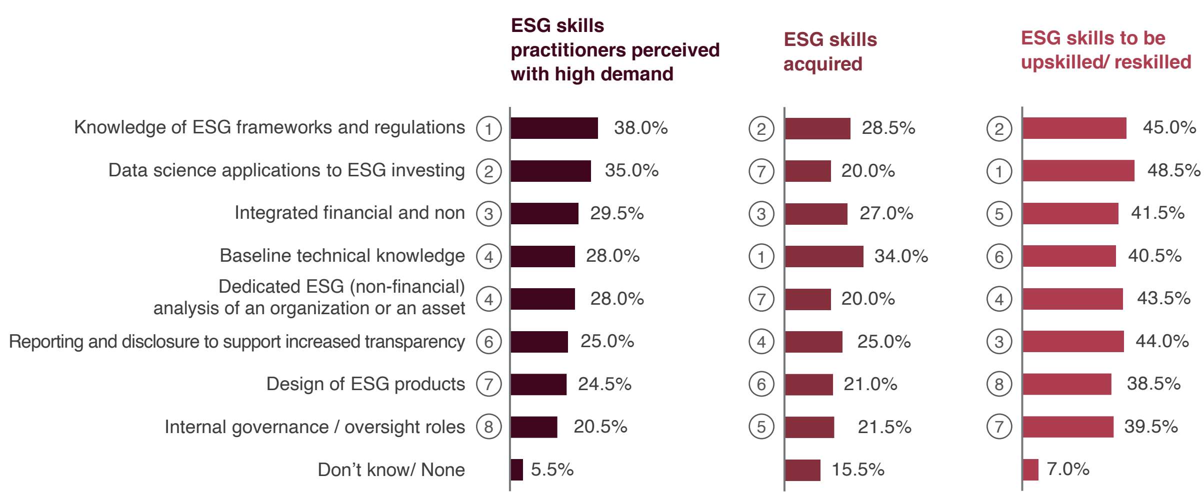


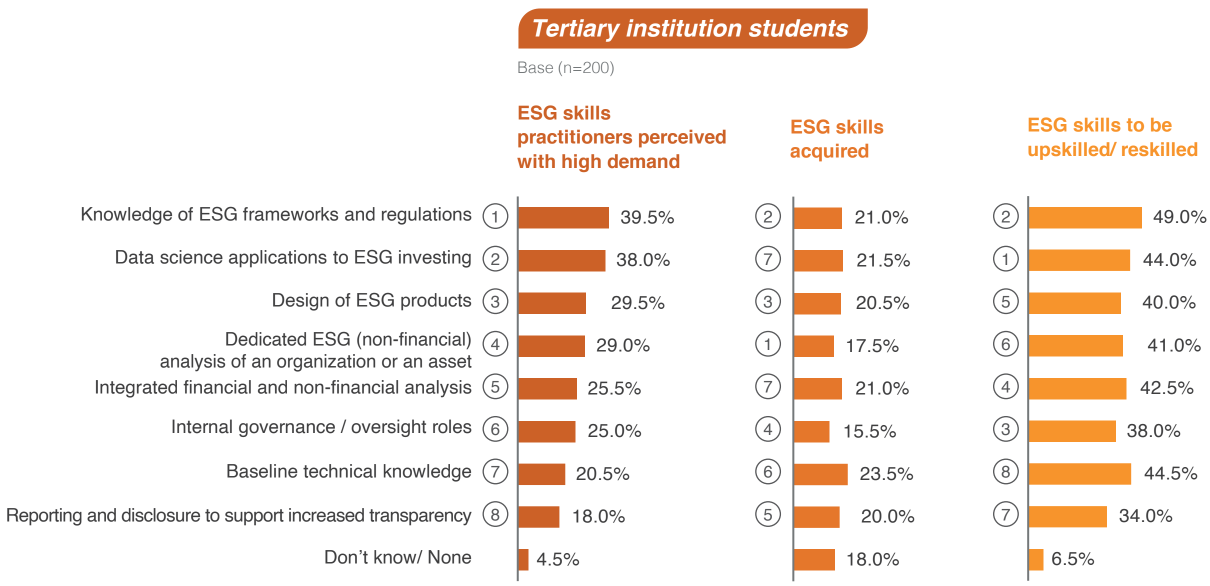
The limited understanding of the ESG job market also goes hand in hand with the related skillset that practitioners and students think they possess. The general level of ESG skills they possess is not high. In plenty of areas – including knowledge of ESG frameworks and regulations, data science applications to ESG investing, reporting and disclosure, etc. – practitioners and students consider they face the need to upskill or reskill (see **Chart 13**).

Chart 13: Perceived demand and supply of ESG skills

Industry practitioners

Base (n=200)





This then leads to the question as to whether the training options available in the market now are sufficient. At the university level, there are some but not many courses in the curriculum that cover governance, even fewer on sustainability. The professors interviewed explain to us that this is mainly because they do not see keen interest from students in these courses. Unlike areas such as Fintech which fosters collaboration between faculties (e.g., computer science and business schools), this cross-disciplinary area ESG does not face the same. The environmental part of ESG is mainly taught in environmental science courses while a few business courses are also adding ESG contents in their curriculum. Most emphasise on business ethics. As for training for practitioners, the landscape remains fragmented. Professional bodies are organising their respective seminars and conferences on ESG – for example on latest amendments on Listing Rules regarding ESG. Joint efforts are not apparent.

Recommendations: Groom, Retain and Attract

	Undergraduates	Junior	Middle to senior management
Overall	#1: To develop and update the core competency map for different sectors		
	#2: To coordinate and evaluate internship and apprenticeship programmes	#3: To facilitate Hong Kong professionals' over seas and Mainland placement through subsidy support	
Fintech	#4: To incentivise private Fintech enterprises to participate in curriculum development and application	#6: To expand CEF reimbursable courses to cover more professional training in Fintech and ESG	
ESG	#5: To introduce ESG courses as compulsory learning in finance-related disciplines		

1. To develop and update the core competency map for different sectors

While the industry is confident that Hong Kong is and will continue to be supported by a sustained pool of financial talents, some are aware of the keen competition from the neighbouring financial centres.[7] Employers – small in size in particular – usually can afford tackling only the current hiring need and yet to plan ahead for the future; junior and aspiring entrants rely more on information available freely on the internet and internship experience to paint a rough picture about what to expect and be expected. Meanwhile, tertiary and professional training institutions are, by and large, followers of the industry trends when or after such have arrived. This is the reality faced not only by Hong Kong, but also by other financial centres.

For a more holistic planning of talent development, Hong Kong needs a core competency map, covering different sectors within financial services. To date, some sectors have clearer competency frameworks than others – for example, Qualifications Framework (QF) launched by the Education Bureau covers banking and insurance sectors, amongst other non-financial-services ones such as catering and fashion. For banking and insurance sectors, the QF laid out in detail the competencies needed in various functional areas within the sector – ranging from the knowledge in the subject area, the applications, to the professional attitude expected. Professional qualifications for the banking and insurance industry are also recognised under the QF. However, such specifications of competencies are not available for other key financial services sectors, such as asset and wealth management.

[7] For instance, see FSDC's paper published in February 2020, Hong Kong as the Regional Wealth Management Hub – Sector Survey Paper.

Apart from the width of coverage, timeliness of the content is equally crucial. Some sub-sectors have experienced changes in work patterns and expectations over time. For instance, private wealth management used to be the overarching category but now has expanded to different tranches (e.g., family offices) which can individually stand solid on their own. These changes prompt the need to keep refreshing the core competency map, where available, so that different relevant stakeholders can refer to from time to time.

In fact, what the QF is offering has provided a sound foundation – and for the industry to benefit further, **it is hoped that Industry Training Advisory Committees (ITACs) set up by the Education Bureau can consider widening the QF scope to cover other sectors within financial services and update it on a regular basis.**[8] To make the content even more easily digestible by readers, the use of interactive tool with progressing routes and guidance can be an option to consider. References can be drawn from the Skills Framework for Financial Services developed by the Institute of Banking & Finance Singapore et al.[9] With a full-embracing, updated core competency map, incumbent and aspiring practitioners can more easily develop necessary capabilities throughout different stages of their careers in Hong Kong; also, training institutions can better plan and implement their curriculum.

2. To coordinate and evaluate internship and apprenticeship programmes

With a well-functioning internship and apprenticeship mechanism, companies can recoup their investments over time by enjoying lower recruitment cost and a better skill and cultural fit, if interns / apprentices are hired for regular employment upon their graduation. Each year, the financial services industry of Hong Kong provides no fewer than hundreds of internship and apprenticeship positions – privately or publicly run, of varied tenures and natures. The ampleness of such programmes, to a certain extent, demonstrates the value of internships and apprenticeships to the firms; but, at the same time, one may question as to whether all of these offerings are necessarily effective – or, how one differentiates from the other.

For private sector-run programmes, individual companies may have their respective parameters to evaluate the value of interns and apprentices to them. As with the programmes run solely or jointly by the Government (or its agencies), it may present further room for a more organised structure in coordination and evaluation.

With reference to Germany, which has a proven track record in its cost-effective apprenticeship system, an important feature in the system is the quality assurance mechanism coordinated by qualified “competent bodies”.[10] Accordingly, the company that offers the apprenticeship programmes needs to prove its suitability as a training place, elaborate an in-company training plan for each apprentice, and assure that the apprentice keeps a record book, amongst others. On the part of the “competent body” that coordinates the programmes, it is expected to maintain a register/directory of apprenticeships, supervise training and retraining preparation, inter alia. Equally important are the employers’ satisfaction with the programme and the apprentices’ incentives to enter and complete the programme.

[8] ITACs, set up upon industry or sector basis, are platforms for stakeholders to put the QF into implementation and to exchange views on the training needs and manpower development for respective industries or sectors. As one of their primary tasks, ITACs have been formulating new and updating existing Specification of Competency Standards (SCSs) as well as developing Vocational Qualifications Pathways (VQP) for selected job streams to ensure the QF is align with the latest requirements of regulatory bodies and keeping in pace with the fast-changing business environments.

[9] Skills Framework for Financial Services, jointly developed by Skills Future SG, Monetary Authority of Singapore, Workforce Singapore and the Institute of Banking & Finance Singapore

[10] ILO Toolkit for Quality Apprenticeships – Volume I: Guide for Policy Makers, International Labour Organisation (October 2017) – According to the Toolkit, Germany has tasked certain ‘competent bodies’ to monitor the in-company training. The Chambers of Commerce and Trade and the Chambers of Skilled Crafts supervise the majority of dual training carried out in the country.

It has taken decades for the German system to mature to its current state; and of course, one should not expect such could be replicated overnight. Nonetheless, the German experience can serve a useful lesson for Hong Kong in enhancing its internship and apprenticeship programmes. At the outset, **the Financial Services and the Treasury Bureau (FSTB) may consider being the coordinator, or delegating a body, to systematise the offerings of the internship and apprenticeship programmes in the financial services industry that are run solely or jointly by the Government (and its agencies).** For better allocation of resources, the coordinator is expected to maintain a record of all related offerings and monitor their respective effectiveness. For those programmes that involve the participation of private financial institutions, the coordinator should devise a framework for these institutions to demonstrate their commitment prior to the programme commencement (e.g., having the institutions to design training plans for interns/apprentices based on the latest operational needs).

Upon completion of the programme, the coordinator should follow up with the respective financial institutions on their level of satisfaction (e.g., through parameters such as how many interns/apprentices dropped out or are retained for regular employment; and the related justifications). To encourage the private sector to participate in the coordinated internship and apprenticeship programme, FSTB may consider providing subsidies to participating employers up to 75% of the honorarium paid to interns, as in line with other talent cultivation initiatives including the Pilot Programme to Enhance Training for the Insurance Sector and the Asset and Wealth Management Sector.

3. To facilitate Hong Kong professionals' overseas and Mainland placement through subsidy support

The need for international exposure will become more eminent in the years to come, according to our interviewees. In addition to the depth of knowledge, firms are expecting their staff to be armed with better breadth of knowledge – particularly, in terms of their global and Mainland perspectives. In Hong Kong, the international experience or exposure of senior management is up to a standard. According to IMD World Talent Ranking 2020, Hong Kong was ranked the 4th globally in this regard. Plenty of the C-suites at financial institutions in Hong Kong either have the experience studying or working overseas[11]; it is also common that they were, at some point, trained in the European or the US styles through taking up different international assignments over the years.

As the global financial markets become more intertwined and to prepare Hong Kong better for a sustained pool of corporate leaders, it is crucial to ensure the successors are equipped with sufficient understanding of the latest international landscape. In order to navigate the changing international environment where non-local stakeholders, politics, cultural differences and others will increasingly impact business outcomes, professionals who aspire to become future leaders should be given adequate opportunities to update their international exposures.

[11] According to the 2019 statistics by Robert Half, almost nine out of ten of Hong Kong's CEOs possessed experience working outside of Hong Kong – in places including Mainland China, the US, the UK and Australia.

To this end, **we recommend the FSTB to consider launching an Internationalised Talent Programme, under which Hong Kong financial institutions can tap subsidy support (for rental and insurance expenses, for instance) to offer their local staff placement opportunities outside of the city.** References can be drawn from the Greater Bay Area Youth Employment Scheme announced by the Chief Executive in the 2020 Policy Address which aims to support young people to work in the Greater Bay Area and help them understand the latest developments of Mainland China. Under this proposed Programme, company participants must have clearly crafted job scopes and development plans with significant overseas exposure devised for the eligible staff, say with at least 3 years of working experience in the industry. **To qualify for the Programme, staff participants should be required to commit to returning to Hong Kong for work for a period of time after the placement. A repayment of overseas placement costs clause could be added to the Programme contract and staff participants would be subject to penalties and have to repay all costs incurred where such commitment is not honoured.** It is hoped that, through the Programme, these professionals can gain a wider diversity of experience, thus preparing them for more senior roles at multinationals.

As a start, the Programme can be operated on a pilot basis, for a tenure of six to nine months, so as to assess the effectiveness and control the budget. Placements can focus on markets which the company has established or plans to expand presence in, including the Mainland markets such as the Greater Bay Area or the overseas markets such as London and Luxembourg.

4. To incentivise private Fintech enterprises to participate in curriculum development and application

Hong Kong, as the premier fundraising centre globally, provides a billion-dollar exit platform for tech firms to be acquired or publicly listed. The city's financial infrastructures, business environment and other attributes have become increasingly appealing to tech (including Fintech) enterprises to operate or even be headquartered in Hong Kong. These firms are the attractive employers who absorb a large number of our tertiary graduates every year. That stated, it is important that our graduates remain competitive and outstanding globally in the eyes of these employers.

When asked how our graduates can stand out among the peers, most of the Fintech employers interviewed highlight the importance of the candidates' ability to 'apply' what is learnt at school to the actual work context. The same observation was shared among some professors interviewed. Although educators usually take the initiative to reach out to the industry to learn about the latest trends, this is not entirely comparable to the helpful, direct input from the industry practitioners themselves since the Fintech landscape is evolving every minute. After all, it is the firms per se which know best what skillsets and calibres they look most for from the candidates.

This important ability can best be boosted if private Fintech enterprises and practitioners can be given a bigger role in the design of relevant tertiary education curriculum.

In this connection, we recommend the University Grants Committee (UGC) to advise its funded universities to consider adding private sector participation into Fintech-related curriculum design. The proposal for encouraging the private sector to offer more placement/ internship opportunities for students is well aligned with the UGC's belief that experiential learning, particularly the opportunities for gaining hands-on experience outside classrooms, would enrich the overall quality of learning experience. While we appreciate the UGC's effort in encouraging and subsidising local students for pursuing further studies in Fintech under the Targeted Taught Postgraduate Programmes Fellowships Scheme (TPgFS) and that the UGC has long cherished academic freedom and reserved a great deal of liberty for UGC-funded universities in their curriculum development, the expected outcome of such a recommendation – that is, a higher degree of practicality and applicability in the curriculum – can benefit both educators and students even further. While there are already a number of self-financed Fintech master programmes taught by experienced practitioners, universities may consider extending the practice to undergraduate courses. Seasoned practitioners can be invited to participate in the curriculum design and, where appropriate, in the teaching process. The pressure of having insufficient number of qualified Fintech teaching staff available could also be relieved by allowing higher involvement of the private sector.[12]

Of equal importance is how private Fintech enterprises can be motivated to participate in such curriculum development process. To make the curriculum practical, enterprises may need to contribute not only their time to advise on the curriculum but also resources to allow practical application – for example by opening short-term or part-time placement for students to learn from the actual working environment (e.g., in the firms' laboratories or offices). **To encourage such contribution, establishing public-private partnerships will be conducive to such efforts. With the above in mind, the FSTB may consider introducing monetary incentives for Fintech firms which are selected (by UGC-funded universities) as curriculum development partners and have offered placement opportunities to university students.** For instance, upon satisfactory contribution, Fintech firms are proposed to be entitled certain monetary incentives, e.g., in the form of an extension of the Fintech Anti-epidemic Scheme for Talent Development (FAST) that subsidises local firms engaged in the Fintech sector to create new jobs. **The subsidy amount can be subject to the number of placements such firms offer on a monthly or project basis.** Taking into consideration that whether Fintech companies would be willing to offer internship opportunities for university students depends on a basket of factors, on top of financial incentives, non-monetary support in areas such as sourcing funds and connection building could also be provided. Incentives might also be provided to professors and students to encourage their participation in the development of such programmes.

Indeed, quite a plenty of Fintech enterprises in Hong Kong are set up with the mission to serve the society and are keen to help Hong Kong groom its ladder of Fintech talent. With such proposed incentives, it is believed that these firms would have the additional impetus to make an impact to the university curriculum development, bringing in more substance from the application context to school. In turn, students can be better equipped with practical know-how and first-hand experience, thus getting well-prepared for their Fintech career journey upon graduation. On top of offering internships and participating in curriculum design, other ways of interaction and collaboration between Fintech companies and tertiary institutions could also be encouraged and explored.

[12] Note though all business schools of UGC-funded universities in Hong Kong are Association to Advance Collegiate Schools of Business International accredited. Universities should consider the extent of practitioner participation taking into account the faculty doctoral requirements.

5. To introduce ESG courses as compulsory learning in finance-related disciplines

As shown in our stakeholder engagement survey, ESG has yet been given sufficient attention as desired in school training. While we understand from educators that students' lack of interest in ESG can hinder the opening of such courses, universities are – at the same time – considered having an important role in equipping students with the knowledge based on industry needs. Employers – including the largest players in the financial services industry – are already on the move in expanding their ESG headcounts; and the momentum is expected to grow. If Hong Kong continues to adopt a laissez faire approach, the city will likely lose in the war for ESG talent.

Given the institutional autonomy they enjoy in curriculum design and academic standards, to better prepare Hong Kong for the upcoming talent need, **universities are recommended to introduce ESG courses as compulsory credits for undergraduates with a major in business-related subjects (e.g. business administration, economics, finance and accounting)**. Such compulsory credits are intended to provide students with the foundational understanding of ESG in the business administration or finance context, covering introductory areas such as the variety of ESG-related financial products, reporting standards, latest ESG regulations and global developments, etc. Where students have developed an interest in the subject matter through the foundation course, they can choose to take more advanced / specialised training in this regard.

There may not be a one-size-fits-all approach in the introduction of such ESG courses, given ESG is such a broad topic that covers different industries, and that universities are suggested to develop the curriculum with the focus on areas which are relevant to their respective schools of students. The result of the survey on ESG skills that practitioners and students perceived with high demand (**Chart 13**) shall provide some insights on the content that the curriculum should cover.

Among others, the curriculum design can make reference to the educational materials developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and resources prepared by professional and standard setting bodies, industry associations and non-governmental organisations, such as the CDP, CFA Institute, GRI Academy, Hong Kong Institute of Directors, Hong Kong Institute of Education for Sustainable Development (HiESD), Principles for Responsible Investment, Sustainability Accounting Standards Board, Task Force on Climate-related Financial Disclosures, among others.

The overarching goal of this recommendation is to arouse students' interest and awareness in ESG, which will prepare them for their engagement in the job market for that all major stakeholders in the financial services industry (e.g., issuers/listed companies, regulators, asset owners and managers, intermediaries, civil society) are giving increasing emphasis on ESG related matters.[13]

[13] Universities may consider, at the outset, introducing these compulsory credits on a non-graded basis (i.e., students are required to take an ESG course but their performance will not be scored to impact their grade-point-average).

6. To expand CEF reimbursable courses to cover more professional training in Fintech and ESG

As laid out earlier, course fee is cited as the second largest hindrance for practitioners and students surveyed from upskilling/reskilling themselves. While these survey respondents have an interest in starting their careers in the Fintech or ESG field, their existing, limited knowledge/skill in these subjects is self-perceived as a constraint. A possibility lies on reviewing the operational framework of Continuing Education Fund (CEF) to cover more professional training courses in Fintech and ESG.

CEF is a scheme offered by the Government to subsidise adults with learning aspirations to pursue continuing education and training. The CEF was last reviewed in 2017 and a series of CEF enhancement measures have been implemented since April 2019 – including doubling the CEF subsidy ceiling, raising the age limit for applicants, expanding the scope of CEF courses, etc. Currently, each eligible applicant can enjoy reimbursement of fees up to a maximum sum of HK$20,000 on eligible courses, before reaching the age of 71.[14] The list of eligible courses covers an array of sectors, including financial services.

As part of the 2017 review, the issue of inflexible and outdated course domains had been flagged[15]; and, as a result, the scope of CEF courses were expanded to cover all eligible courses registered in Qualifications Register. However, based on our study of the latest list of eligible courses[16], the domain remains insufficient in covering emerging topics such as Fintech and ESG. Among the 1,760+ financial services related reimbursable courses, only one concerns sustainability and a handful are related to Fintech; none of these courses are co-organised with overseas training institutions. Without an up-to-date, comprehensive list of reimbursable courses for applicants to benefit from, the subsidy may not be put to effective use despite the heightened ceiling.

Another obstacle for subsidy uptake is on the mode of delivery. In view of the pandemic, CEF course providers are allowed to deliver only a maximum of 70% of the total approved teaching hours of their courses on an online platform.[17] Providers who fail to do so are required to arrange make-up classes, arrange deferment for learners to the next cohort, or refund learners – making the process additionally difficult for both course providers and learners.

[14] The co-payment ratios by learners (i.e., the percentage of fees to be borne by learners) for the first HK$10,000 subsidy is 20% of the course fee and that for the second HK$10,000 subsidy is 40% of the course fee.
[15] Legislative Council Paper on Manpower – Review of Continuing Education Fund and Proposed Funding Injection (LC Paper No. CB(2)321/17-18(05), Labour and Welfare Bureau (November 2017)
[16] Reimbursable Course List by Continuing Education Fund, accessed on 7 April 2021.
[17] Press Releases – LCQ 11: Continuing Education Fund, 3 February 2021

With these observations in mind and to put the CEF to more effective use, **we recommend the Labour and Welfare Bureau (LWB) to bring further flexibility to the course and operational framework of the CEF in a timelier manner**.[18] Flexibility can be injected by allowing better transparency in the course provider application framework. For instance, what is known for now are merely the broad assessment criteria by the Hong Kong Council for Accreditation of Academic and Vocational Qualifications. While course providers are allowed to design and offer courses of various areas and apply for registration under CEF to meet market demand, potential course providers could be deterred from registering without clear application timeline and requirements. Also, more promotion may be needed so that overseas training institutions get to know they can partner with a local institution in order to be eligible as a CEF course provider. This is particularly crucial for the fact that training offerings in Hong Kong on Fintech and ESG are still under development.

As for the operational framework, while we appreciate that the LWB is considering imposing ceilings on online teaching hours, it is hoped that fully-online courses will also be eligible where appropriate, noting that online training is becoming a commonplace internationally, especially in the post-COVID era. Among others, there are also increasing ways to evaluate the quality of a fully-online course, for example by using digital tools to authenticate learners' identities, track their learning progress and undertake 'on-site' class checking. Recognising the adoption of online learning is a natural step for Hong Kong, as a smart city; and it would be deplorable if our CEF framework could not tailor so and remain sticky on in-class training.

[18] Our Hong Kong Foundation shares a similar view in its publication in March 2021 entitled "Applied Education – Pioneering a future-ready generation in a learning society".

Conclusion

Given the evolving changes brought by digitalisation, pandemic, geopolitical situation and others, more financial institutions are seen to be repivoting their business models and priorities. Much attention has placed on Fintech and ESG – not only on their implications to the firms in terms of business operation but also regarding talent development. Despite the general consensus that more talent around Fintech and ESG is needed in the coming three years, perhaps only the larger players have come to a more concrete blueprint as to what skillset they – as employers – are looking for from the incumbent and potential employees.

With a literature review as the backbone, the FSDC has drawn some key observations regarding talent development in Fintech and ESG. Based on these observations, we have conducted a series of one-on-one interviews as well as focus group meetings – with C-suites and senior management of different types of financial institutions; representatives of industry association and professional bodies; and HR leaders of financial institutions and seasoned recruiters – to understand the skillset that employers are pursuing currently and in the upcoming three years. Meanwhile, we have conducted a survey with a total of 400 tertiary institution students and incumbent industry practitioners to gauge whether the financial services industry remains a prime target for them to develop their careers and whether they find themselves ready for the current and near future industry landscape. To summarise, both the employers and employees are optimistic about the prospect of Hong Kong and its financial services industry. Hong Kong's homegrown talents are reminded of the keen competition from the neighbouring financial centres though – especially in such areas as breadth of knowledge, innovativeness and motivation for success. As for the financial services industry as a whole, the uncertain economic outlook and high cost of living would potentially affect the attractiveness to outside talents.

Fintech is comparatively more known and prepared than ESG among financial institutions in Hong Kong. Regarding Fintech, financial institutions of different sizes and sectors are embracing digitalisation. Both employers and employees recognise big data, cybersecurity and digital marketing as the key trends to note. Some misconceptions need to be corrected though – for example, some employees remain to think Fintech is only about programming/coding; some also tend to have overly fancy expectations on the salary that a Fintech firm can pay. Further, most Fintech employers highlight the vitality of 'application' – on-the-job element and real-life scenario practice should be added to the training modules.

As for ESG, it is for now more of a concept well understood by larger firms, while other firms agree that it *will* become a mainstream. Almost half of the firms interviewed are still on the steep learning curve about the essence and value proposition of sustainability. Larger financial groups in the banking and asset and wealth management sectors are more proactive in ESG employment – especially in roles related to investment management, reporting and disclosure, research and strategy. Dedicated teams have been formed and the firms continue to add new headcounts. The overall knowledge of ESG regulations and integrated analysis is considered key and more training efforts – both at the tertiary education and professional training levels – are requested.

With the above findings derived from various types of stakeholder engagements, this paper closes with the following policy recommendations for the Government and relevant agencies' consideration –

i. To develop and update the core competency map for different sectors;

ii. To coordinate and evaluate internship and apprenticeship programmes;

iii. To facilitate Hong Kong professionals' overseas and Mainland placement through subsidy support;

iv. To incentivise private Fintech enterprises to participate in curriculum development and application;

v. To introduce ESG courses as compulsory learning in finance-related disciplines; and

vi. To expand CEF reimbursable courses to cover more professional training in Fintech and ESG.

In view of the global intensifying war for talents, Hong Kong should step up its effort to enrich its financial talent pool. Amongst others, attracting outside talents, especially in retaining non-local students pursuing undergraduate or postgraduate degrees in Hong Kong, could be a possible option to consider.[19] A way to incentivise such talents to stay and contribute to our future development, ESG should be considered a topic under the Theme-based Research Scheme (TRS) of the Research Grants Council ("RGC"), which will attract and retain world-class scholars. This is a key to developing talent for Hong Kong, and maintaining our attractiveness to both local and non-local talents.

The FSDC is encouraged to note that the recommendations set out in this paper share the vision and objectives of what has been identified in both of the recently announced Hong Kong's Fintech and ESG strategies, as stated in "Fintech 2025" released by the HKMA and the next steps announced by the Green and Sustainable Finance Cross-Agency Steering Group, respectively. The FSDC believes the above policy recommendations should facilitate the cultivation of Hong Kong's local talents in Fintech and ESG. These recommendations could be proceeded in parallel in light of the urgency to narrow the financial talent gap in Hong Kong. Looking forward, the FSDC hopes that the Government can provide an overall financial services development roadmap, with growth areas such as ESG and Fintech embedded in clear, integral policy directions, which will serve as a point of reference to universities and professors for developing and allocating education resources; most importantly, these actions will help inspire Hong Kong's next generation of financial talents.

[19] Under the Immigration Arrangements for Non-local Graduates (IANG) launched in 2008, non-local students graduated from a full-time and locally-accredited programme in Hong Kong are allowed to stay in the city up to 6 months after graduation to seek for employment. Yet, comparing to neighbouring cities, such as Shenzhen and Singapore, which are offering direct and indirect financial support to startups, Hong Kong is not the most preferred choice of stay and career development to many non-local students, in particular those who are interested in setting up their companies after graduation.

Annex 1 – Key Segments and Activities in Fintech

Key Segment	Activities	Definition
Asset and Wealth Management (WealthTech)	Robo-advisor	Provision of financial advice on investment products based on technology and automation, with no or limited human intervention. Robo-retirement solutions – a variation on robo-advisors – focuses on retirement savings.
	Micro-Investing	Enabling users to regularly save small sums of money through the removal of traditional barriers to investing, such as brokerage account minimums
	Other applications of WealthTech	A broad range of support from client servicing to investment, customer serving and portfolio management as well as the use of big data for investment research, etc.
Bank Operations	Banking Infrastructure	Companies/solutions to improve the operations of banks, examples include API integration with banks and big data analytics
	Consumer and Commercial Banking	Companies/solutions to facilitate retail clients and SMEs to interface with banking services
	Digital banking / Virtual Banking	The delivery of banking services primarily through electronic channels instead of physical branches
Other deposit and lending activities	Fintech balance sheet lending	Credit activity facilitated by non-commercial-bank internet-based platforms that use their own balance sheet in the ordinary course of business to intermediate borrowers and lenders; such balance sheet lenders do not obtain funding from the "crowd" but rely on other sources, such as their own capital or through debt issuance
	Business Lending / Consumer Lending	Companies that facilitate businesses / retail clients to raise debt financing or obtain personal loans and have their credit risk assessed through innovative ways
	P2P lending	A variety of innovative and direct financial models that connect lenders to borrowers

Key Segment	Activities	Definition
Blockchain / Distributed Ledger Technology	Asset tokenization	The process of converting ownership rights in a particular asset into a digital token on a blockchain
	Digital asset / cryptocurrency exchange	A business that allows customers to trade digital assets / cryptocurrencies for other assets, such as conventional fiat money or other digital currencies; this kind of exchange can act as a market maker that typically takes the bid-ask spreads as a transaction commission for is service or, as a matching platform, simply charges fees
	Trade finance	Solutions/platforms to build new trading partnerships, uncover new pools of liquidity, and create new business models engineered to transform conventional trade finance
	Cross-boundary payments	Solution to expedite global transactions through simultaneously clearing and settling cross-border payments in near real-time
	Digital asset custodian Service	Services to enable companies to protect, store and use their digital assets freely
Capital Raising	Crowdfunding	Equity crowdfunding refers to an activity where investors provide funding to private companies in the form of equity. Some Fintech platform matches investors with investee companies, enabling them to participate in the early capital raising activities; Loan crowdfunding refers to credit activity facilitated by internet-based platforms (as opposed to commercial banks) that match borrowers with lenders
Financial Software	Different types of financial institutions (bank, asset management firms, insurance firms, etc.) and financial services (e.g., risk management, payment, etc.)	Companies that offer a range of software and services to manage internal and external risks, payment services, enterprise workflow of banks and asset management firms, etc.
	Data and analytics	Solutions to facilitate the provision or execution of financial services, e.g., measuring the credit worthiness of companies and individuals through automation

Key Segment	Activities	Definition
Insurance	Insurtech	The adoption of digital technologies in insurance business models emerging in areas such as (i) distribution (e.g., through digital brokers); and (ii) underwriting (e.g., usage-based or technology-enabled parametric insurance)
	Customer information platforms	Companies that serve as a platform for customers to subscribe insurance of any kind, or compare different insurance providers
	Insurance intelligence/ backend infrastructure	Companies that collect, process, and analyse data analytics and business intelligence for the insurance industry, including which that helps insurers with their day-to-day operations (e.g., claim filing tools)
	P2P Insurance	A cluster of policyholders jointly pay for the insurance of an item that they mutually own, share, or rent
Investment Management	Financial Research and Data	Companies that provide information services / market intelligence to enable investors to make better investment decisions
	Institutional Investing	Companies that facilitate wealth manager, hedge fund managers, and professional traders to manage their portfolios and optimize returns
	Retail Investing	Companies that provide new ways for consumers to invest in various securities
Payments, Clearing and Settlement	Digital payment services	The adoption of technology to facilitate payment transactions by transferring money, clearing or settling balances digitally, without the use of physical money
	e-Money	The issuance of debt-like instruments to facilitate payment transactions
	Financial Transaction Security	Companies that provide solution to secure transactions, authenticate users and prevent fraud
	International Money Transfer	Companies that allow businesses and individuals to send money abroad easily and cheaply

Key Segment	Activities	Definition
RegTech	Risk management	Solutions to help detect compliance and regulatory risks for financial institutions, assess their risk exposures and anticipate future threats
	Identity management - KYC (Know Your Customer) and AML (Anti-Money Laundering) solutions	Customer identification is an important part of maintaining compliance. KYC and AML laws/regulations have generally shaped the RegTech arena, prompting the creation of solutions that specifically address these areas
	Trade and other types of transaction monitoring	Solutions for real time transaction monitoring (e.g., identifying potentially malicious or noncompliant transactions) and auditing, for example through blockchain
	Regulatory reporting and compliance	Solutions to keep companies up to date on all relevant regulatory developments and track their current state of compliance, as well as to undertake reporting through big data analytics, real time reporting and cloud

Adapted from Deloitte, EY, IBM, Bank of International Settlement, S&P Global

Annex 2 – Key Segments and Activities in ESG

Key Segment	Activities	Definition / development
Sustainable finance	Lending	Banks are increasingly involved in green loan origination. Eligibility for credit under specific green (and social) credit lines is usually tied to the compliance with detailed technical eligibility criteria. Bankers and other types of lenders integrate ESG factors into their business decision making process, including whether and, if so how much, to do credit lending to their clients. Loans can be classified as green loans, social loans, sustainability, and sustainability-linked loans.
	Bond issuance	Most of the bonds labelled as "green" are in line with the broad and general list of eligible project categories outlined in principles and guidelines such as the Green Bond Principles. Often, the green character of green bonds is verified by external reviewers through second opinions. External reviewers do not usually apply their own definitions of "green", but rather assess whether the bond is aligned with the GBP and whether the expected environmental impacts of green projects are realistic. There are several different types of bonds under the sustainable finance banner: green bonds, social bonds, blue bonds, and sustainable bonds.
Sustainable investment	Equity investment	A range of sustainability and ESG-related risks and opportunities are considered in addition to traditional financial analysis when making investment decisions in equities of companies with satisfactory ESG practices. Sustainable equity investments are mostly made via index investing or equity funds. Commonly adopted sustainable investment strategies include screening, general integration, best-in-class investing, thematic investment, divestment and active ownership.
	Fund (ETFs, mutual funds, etc.) investment	A Green or ESG fund should invest primarily in investments to reflect the particular green or ESG investment focus which the fund represents. Green or ESG funds may adopt common ESG investment strategies such as screening (positive or negative screening), thematic, best-in-class investment, ESG integration and value-based investing.

Key Segment	Activities	Definition / development
Sustainable investment	Investment in other financial products	The incorporation of ESG factors into the investment decision making process of products such as bonds, private equity, real estates, infrastructure, insurance, commodities, etc.
Impact investing	-	Investing in companies with products and services that can generate measurable, beneficial social or environmental impact alongside financial return. Typically, these are investments in small companies or projects with clear social goals, providing them with capital they may not otherwise have accessed.
ESG disclosure / reporting	Reporting analysis /consultancy	Consultancy services to conduct ESG reporting / disclosure for a company and, where needed, advise the company on how it can improve its ESG performance
	ESG Assurance	An engagement in which a practitioner/firm aims to obtain sufficient evidence in order to express a conclusion designed to enhance the confidence of the intended users / readers about the ESG information to be disclosed
ESG analytics	ESG rating	ESG ratings providers calculate scores by generally scoring publicly available information, such as company statements and news as well as industry reports, etc. Each provider has its own rating methodology and data sources, thus sometimes the ratings could vary
	ESG research and analysis	Provision of research reports or analysis to facilitate investors in incorporating ESG factors into their investment decision making process
	ESG index pub-lishing	Indices that incorporate various ESG factors into security selection as investment universe and benchmarks for both active and passive investments

Adapted from European Commission, OECD, SFC, Schroders, Sustainalytics, The Asset

Annex 3 – Summary of Key Findings in Literature Review

Reports	Key findings	Focus	Region
2017 Manpower Surveys[20] of the Accountancy[21], Banking and Finance[22] and Insurance[23] Industries by Vocational Training Council (Dec 2017)	• Manpower demand of the Financial Services Sector (Accountancy, Banking and Finance, Insurance) increased by 12.7% between 2015 and 2017 • "Lack of candidates with relevant experience and training" and "Working conditions/ remuneration package could not meet recruits' expectations" remained to be the two top reasons reported for recruitment difficulties as reported by respondents of the Financial Services Sector	Overall	Hong Kong
Report on Manpower Projection to 2027[24] by the HKSAR Labour and Welfare Bureau (Dec 2019)	• Manpower supply projection: - the local manpower supply: increase at an average annual rate of 0.2% for 2017 to 2022, and to decrease at an average annual rate of 0.6% for 2022 to 2027 - Different supply results, by age, sex, education level • Projected manpower requirements: - total manpower requirements in Hong Kong (excluding FDHs) are projected to increase by 127 000 from 3.61 million in 2017 to 3.74 million in 2027, corresponding to an average annual growth rate of 0.3% for the whole economy during the projection period - Different requirements result by economic sector, occupation group, education level • Projected manpower resource balance: - expected to grow in tandem with economic growth whilst our labour force is expected to shrink due to population ageing and low fertility rate in the projection period, resulting in an overall manpower shortfall of 169700 by 2027	Overall	Hong Kong
Capacity Building for Future Banking 2021 - 2025[25] by The Hong Kong Monetary Authority, The Hong Kong Association of Banks, The Hong Kong Institute of Bankers (June 2020)	• 3 key skill gaps to fill in the banking workforce during 2021 to 2025: technological and data skills, banking knowledge, specific soft skills • Key areas of banking business transformation that would require expertise / new skills: Digital banking, Greater Bay Area and cross-border business, Global connectedness in anti-money laundering and counter-financing of terrorism (AML/CFT) efforts, Climate-related risk management and sustainable finance • Sound practices to help narrow the skill gaps: reskilling and redeploying existing banking practitioners, recruiting required staffing resources from outside the sector	Overall	Hong Kong

[20] Vocational Training Council, Consolidated Summary Report of the 2017 Manpower Surveys of the Accountancy, Banking and Finance and Insurance Industries. https://www.vtc.edu.hk/uploads/files/publications/accountancy_training_board/en/2017%20Consolidated%20Summary%20Report.pdf
[21] Vocational Training Council, Accountancy Sector Manpower Survey Report. https://www.vtc.edu.hk/hqip/mpsac2017.pdf
[22] Vocational Training Council, Banking and Finance Industry Manpower Survey Report. https://www.vtc.edu.hk/hqip/mpsbf2017.pdf
[23] Vocational Training Council, Insurance Industry Manpower Survey Report. https://www.vtc.edu.hk/hqip/mpsin2017.pdf
[24] HKSAR Labour and Welfare Bureau, Report on Manpower Projection to 2027. https://www.lwb.gov.hk/en/other_info/mp2027_en.pdf
[25] The Hong Kong Monetary Authority, The Hong Kong Association of Banks, The Hong Kong Institute of Bankers, Capacity Building for Future Banking 2021 – 2025. https://www.hkma.gov.hk/media/eng/doc/key-information/guidelines-and-circular/2020/20200618e1a1.pdf

Reports	Key findings	Focus	Region
The Future of Jobs Report 2018[26] by World Economic Forum (Sep 2018)	• 12 key findings of workforce transformations: 1. Drivers of change 2. Accelerated technology adoption 3. Trends in robotization 4. Changing geography of production, distribution and value chains 5. Changing employment types 6. A new human-machine frontier within existing tasks 7. A net positive outlook for jobs (i.e. jobs created due to large-scale growth in new products and services outweighs large-scale decline in some redundant roles) 8. Emerging in-demand roles 9. Growing skills instability 10. A reskilling imperative 11. Current strategies for addressing skills gaps 12. Insufficient reskilling and upskilling	Overall	Global
4Q18 Emerging Risks Report and Monitor[27] by Gartner[28] (Jan 2019)	63% of the 130+ surveyed senior executives indicated that a talent shortage is a key concern for their organization and signalling this as one of their top five risks in financial services industry	Overall	Global
Talent trends 2020: Upskilling: Building confidence in an uncertain world[29] by PwC (Jan 2020)	• Employees of right skillsets are scarce: 74% of the 1,500+ surveyed CEOs concerned about the availability of key skills • Progress on upskilling can breed confidence: 38% felt very confident about growth over the next 12 months • Upskilling delivers more than skills: 41% said their upskilling programme has been "very effective" in creating a stronger corporate culture and engaging employees • More talk than action: only 18% have made "significant progress" in "establishing an upskilling programme that develops a mix of soft technical and digital skills • 20% of CEOs said their upskilling programme is reducing skills gaps and mismatches	Overall	Global

[26] World Economic Forum, The Future of Jobs Report 2018. http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf
[27] Gartner, 4Q18 Emerging Risks Report and Monitor. https://www.gartner.com/en/newsroom/press-releases/2019-01-17-gartner-survey-shows-global-talent-shortage-is-now-the-top-emerging-risk-facing-organizations
[28] A global research and advisory firm providing information, advice, and tools for leaders in IT, finance, HR, customer service and support, communications, legal and compliance, marketing, sales, and supply chain functions, and a member of the S&P 500.
[29] PwC, Talent trends 2020: Upskilling: Building confidence in an uncertain world. https://www.pwc.com/gx/en/ceo-survey/2020/trends/pwc-talent-trends-2020.pdf

Reports	Key findings	Focus	Region
Hopes and Fears Survey 2019[30] by PwC (Sep 2019)	• Education matters: 34% of the 22,000+ surveyed adults without school education or training beyond school say they are not learning any new digital skills • Change is coming: 77% are willing to upskill in order to become more employable; 53% believe automation will significantly change or make their job obsolete within the next ten years • Opportunity awaits: 50% believe automation presents more opportunities than risks; 60% think technology will improve their job prospects • Digital skills are key: 61% are positive about the impact of technology on their day-to-day work; 33% are given many opportunities to develop digital skills outside their normal duties	Overall	Global
"Beyond hiring: How companies are reskilling to address talent gaps"[31] by McKinsey (Feb 2020)	• While hiring is the most common tactic, 56% of the respondents think skill building is the second-most common • Half who expect skill gaps in the next five years say skill building will be the most effective (vs. 31% think hiring is the most effective) • Reskilling programmes most often focus on building employees' skills in critical thinking, leadership and management, and advanced data analysis	Overall	Global
Reskilling China by McKinsey (January 2021)	• Up to one-third of global occupational and skills transitions may occur in China • These transitions will require transforming China's education and skills development system. • Pilot projects based on four levers could kick-start the transformation: (i) adoption of digital technologies; (ii) collaborative ecosystem; (iii) enhanced vocational tracks; and (iv) shaping of mindsets and incentives • Implementing the transformation requires an integrated delivery unit approach	Overall	Mainland China

[30] PwC, Hopes and Fears Survey 2019. https://www.pwc.com/gx/en/news-room/press-releases/2019/global-skills-survey-2019.html
[31] McKinsey, Beyond hiring: How companies are reskilling to address talent gaps. https://www.mckinsey.com/business-functions/organization/our-insights/beyond-hiring-how-companies-are-reskilling-to-address-talent-gaps

Reports	Key findings	Focus	Region
Hong Kong Private Wealth Management Report 2019[32] by Private Wealth Management Association & KPMG (Oct 2019)	• 88% of the 250+ surveyed private wealth management institutions and clients think technology enablement will reduce the administrative burden • General Comment: - Address the talent gap and improve lateral hire success rates: ▪ Industrywide approaches to promote RM careers and increase pipeline of potential recruits ▪ Industrywide coordination on approaches to candidate screening to establish shared best practices ▪ Government funding for re-training individuals from other industries ▪ Enhance talent programmes to recruit and retain talent - Invest in technology that drives administrative efficiency, allowing RMs to focus more on higher value activities - Invest in CRM platforms that better equip RMs with the information they need to better serve their clients as a way to retain both clients and RMs	AWM	Hong Kong
"Are Mutual Fund Manager Skills Transferable to Private Funds?"[33] by Ying Sophie Huang, Bing Liang, and Kai Wu	Private fund managers need to deal with sophisticated trading strategies, given less media coverage (and research support) and public exposure compared to mutual funds	AWM	Mainland China
The Impending Advisor Talent Crisis[34] by Fidelity (Sep 2019)	• 68% of the 400+ surveyed financial advisors think there is a talent shortage in the financial advice industry • 58% think the industry must do a better job enticing people to join the profession • Dissatisfaction with the firms - <30% of advisors satisfied with hiring and onboarding processes at their firm - 59% think there is a challenge for my firm to find talent and staff that fits the needs - 73% Dissatisfied with own hiring and onboarding process with current firm	AWM	Boston, Chicago, and San Francisco

[32] Private Wealth Management Association, KPMG, Hong Kong Private Wealth Management Report 2019. http://www.pwma.org.hk/Uploads/5d9dafe96f135.pdf
[33] Huang, Ying Sophie and Liang, Bing and Wu, Kai, Are Mutual Fund Manager Skills Transferable to Private Funds? https://ssrn.com/abstract=3369279 or http://dx.doi.org/10.2139/ssrn.3369279
[34] Fidelity, The Impending Advisor Talent Crisis. https://clearingcustody.fidelity.com/app/proxy/content?literatureURL=/9891883.PDF

Reports	Key findings	Focus	Region
Talent Development Survey 2019[35] by Hong Kong Institute of Bankers (Sep 2019)	• 98% of the 1,000+ respondents (bankers, Fintech companies, professional bodies, academic, regulators, etc.) believe general banking practitioners should develop Fintech skills • 66% think the skills gap issue exists in the local banking industry • ~70% believe banks should reskill or upskill existing staff to resolve skills gaps and enhance the local talent pool • ~70% of respondents think development in the Greater Bay Area will bring business opportunities to the banking sector in Hong Kong in the next two to three years • Key technical skills in need: Today and in the next five years: Technological skills, data skills, and cybersecurity • Key soft and generic skills in need: Today and in the next five years: Creativity, analytical and interpretive, cross border networking	Fintech	Hong Kong
Fintech competency and Manpower Study[36] by HKUST & EY (Jun 2020)	• Most difficult skills to recruit - Traditional banking organizations ▪ Cyber and IT security (46%) ▪ Artificial intelligence (44%) ▪ Blockchain (38%) ▪ Data science (38%) ▪ Design thinking (30%) ▪ Regulatory and risk management (24%) ▪ Process design and automation (20%) ▪ Open API (18%) - Digital-native organizations ▪ Cyber and IT security (50%) ▪ Data science (46%) ▪ Artificial intelligence (32%) ▪ Blockchain (32%) ▪ UX/UI design (32%) ▪ Design thinking (25%) ▪ Open API (25%) ▪ Data management (21%)	Fintech	Hong Kong

[35] Hong Kong Institute of Bankers, Talent Development Survey 2019. https://www.hkib.org/pdf/1587977354_HKIB%20Talent%20Survey%202019%20Full%20report.pdf

[36] HKUST, EY, Fintech competency and Manpower Study. https://www.bm.ust.hk/en-us/media-resources/overview/publications/reports

Reports	Key findings	Focus	Region
Hiring in Fintech: Survey and Dialogue[37] Hong Kong by Michael Page Hong Kong (Sep 2019)	• 95% of the 100+ surveyed clients and candidates of the firm say Hong Kong is in need of Fintech talent • Most crucial factors to the development of Fintech include: quality of talent (28%) & government policy (34%) • Top motivations when choosing an employer: Career path, company culture, technological capabilities and future adoption • 64% surveyed find the talent recruitment process in Fintech challenging, particularly due to shortage of proven skills (47%)	Fintech	Hong Kong
Fintech Talent Survey 2019[38] by PwC and Singapore Fintech Association (Aug 2019)	• Talent shortages appeared to be minimal across the Fintech industry in Singapore: 59% of the 90+ surveyed Fintech practitioners/firms reporting no • talent shortfall and 21% report a talent shortfall of 0%-25% across the 13 unique roles[39] highlighted in the survey • Demand for talent over the next 12-36 months is strong, with 94% report intentions to expand their current work force within the next 12 months and 28% expecting to double their headcount within the next 36 months	Fintech	Singapore
Hiring in Fintech: Survey and Dialogue China[40] by Michael Page (Jul 2018)	• 92% of the surveyed Fintech employers say China is facing a shortage of professional Fintech talent • A growing demand for talent with skills relating to Artificial Intelligence, machine learning and deep learning. These skills are also sought after in sectors outside of Fintech, such as other Chinese Internet companies • Key reason for shortage: the core technologies are too new to be effectively managed by employees • China's employers and professionals see the talent supply as a critical factor in ensuring Fintech's ongoing success • Most crucial factors to the development of Fintech include Quality of talent & Government Policy • Top motivations when choosing an employer: Career path, company culture, salary • Top expectations employers have of Fintech talent: solid technological background, fast learning, strong financial experience	Fintech	Mainland China

37 Michael Page, Hiring in Fintech: Survey and Dialogue Hong Kong. https://www.michaelpage.com.hk/sites/michaelpage.com.hk/files/16785-hk_fintech_brochure_mp.v8.pdf
https://www.michaelpage.com.hk/advice/market-insights/industry-reports/hong-kong%E2%80%99s-fintech-future-2020-and-beyond
38 PwC, Singapore Fintech Association, Fintech Talent Survey 2019. https://www.pwc.com/sg/en/publications/assets/fintech-talent-survey-2019.pdf
39 The 13 specific job categories: software and application development, network, infrastructure, cybersecurity, data analytics, big data, data scientists, AI, machine learning, cognitive, computing, design, UI, UX.
40 Michael Page, Hiring in Fintech: Survey and Dialogue China. https://www.michaelpage.com.cn/sites/michaelpage.com.cn/files/Michael_Page_China_Fintech_Employment_2018_Report_EN.pdf

Reports	Key findings	Focus	Region
2017 Fintech Talent Africa Report[41] by Digital Frontiers Institute[42] (Dec 2017)	• Gender Gap: Similar to current trends in technology and finance industries globally, women are underrepresented at Fintech companies across Africa, both in leadership and operational roles • Skill Gap: lack of business development skills, especially across middle and senior management level • Most needed skills in the next 12–18 months: Strategy creation, business development and tech development, fraud and risk management, product design, leadership skills, technology changes in financial inclusion and insurance	Fintech	Africa
Cyber security skills in the UK labour market 2020[43] by Ipsos MORI, Perspective Economics and Professor Steven Furnell from the University of Plymouth, commissioned by the UK Government Department for Digital, Culture, Media & Sport (Mar 2020)	• Skills gaps: UK businesses lack staff with the technical, incident response and governance skills needed to manage their cyber security - 64% of the cyber firms face technical cyber security skills gaps, either among existing staff or among job applicants - 25% say that such skills gaps have prevented them from achieving business goals - Technical skills gaps relatively high in each of the following areas: threat assessment or information risk management; assurance, audits, compliance or testing; cyber security research; implementing secure systems; and governance and management - 29% say that job applicants lacking non-technical skills such as communication, leadership or management skills has prevented them to some extent from meeting their business goals, and a similar proportion • Qualifications and training: 62% employing staff who have, or are working towards, cyber security-related qualifications (i.e., higher education, apprenticeships or other certified training) • Recruitment and skills shortages: - Sectors most in demand of cyber talent: finance and insurance, information and communications, professional services sectors - Technical skills areas most in demand: network engineering, risk management and technical controls, operating systems and virtualisation, cryptography, programming	Fintech	UK

[41] Digital Frontiers Institute, 2017 Fintech Talent Africa Report. https://www.digitalfrontiersinstitute.org/the-institute/wp-content/uploads/2018/08/DFI-2017-Fintech-Talent-Africa-Leadership-and-Employee-Insights-1.pdf

[42] Digital Frontiers Institute provides online executive education courses, targeted research to the practitioners in the industry. The institute has trained practitioners/-students from over 1000 organizations in over 110 countries. https://www.digitalfrontiersinstitute.org/

[43] Ipsos MORI, Perspective Economics and Professor Steven Furnell from the University of Plymouth, commissioned by the UK Government Department for Digital, Culture, Media & Sport, Cyber security skills in the UK labour market 2020. https://www.gov.uk/government/publications/cyber-security-skills-in-the-uk-labour-market-2020/cyber-security-skills-in-the-uk-labour-market-2020#conclusions-and-recommendations

Reports	Key findings	Focus	Region
The “Deep Sector Analysis of Future Sustainable Finance Skills and Talent Requirements in Ireland[44] by Deloitte, the Sustainable Finance Skillnet and Sustainable Nation Ireland Limited (Nov 2019)	• Baseline technical knowledge (such as what is sustainable finance and why does it matter) is the most important skill required • A list of sustainable finance and responsible investment future skills is identified by the project steering group to help assess future talent requirements • 60% companies would give training and skills development a higher priority if regulation is implemented • 67 % said there is demand for Sustainable Finance skills and talent within their organisations but supply is inadequate and upskilling is required • 87 % said they expect that existing employees will be upskilled with respect to Sustainable Finance Investment within their organisations	ESG	Ireland
The ESG Global Survey 2019[45] by BNP (Apr 2019)	• 29% look to hire new ESG talent from non-traditional backgrounds (i.e., from NGOs or consultancies) (over the next 12 months into 2020) • 34% will hire or increase the number of external ESG consultants/specialists (over the next 12 months into 2020) • Asia Pacific asset owners and managers are more likely to hire new ESG talent from non-traditional backgrounds (38% vs 29% globally), train incumbent teams in ESG principles and best practice (46% vs 40% globally) and hire or increase numbers of external ESG consultants/ specialists (48% vs 34% globally)	ESG	Global
ESG in Asia: The Rise of Responsible Investing in Asia[46] by Asian Private Banker (Oct 2018)	• Overall, research team has the strongest familiarity with ESG concepts than others (investment team, followed by portfolio management team and then sales team). Asia-headquartered asset management firms consistently had the lowest familiarity than their European and American counterparts • Difficulty in recruiting ESG specialists compared to other areas of expertise – difficulty not in lack of candidates but in finding people with combined expertise on a broad spectrum of ESG issues with a solid understanding of investment • 66% of asset management firms respond their ESG team has increased on average by 37% on a YoY basis. Planning ahead, 79% will increase headcount by 19% • Only 28% of the private banks say they have a specialised ESG team in Asia • Lack of training among wealth managers: - 66% RMs received limited or no training in the past 12 months - ~60% private banks, IAMs/FOs not organize any ESG-related training programmes for RMs	ESG	Asia (Mainly HK & SG)

44 Deloitte, the Sustainable Finance Skillnet and Sustainable Nation Ireland Limited, The “Deep Sector Analysis of Future Sustainable Finance Skills and Talent Requirements in Ireland. https://www.skillnetireland.ie/publication/future-sustainable-finance-skills-report/
https://www2.deloitte.com/ie/en/pages/sustainablity/articles/Sustainable-Finance-Skillnet-Report.html

45 BNP Paribas, The ESG Global Survey 2019. https://securities.bnpparibas.com/files/live/sites/web/files/medias/documents/esg/esg-global-survey-en-2019.pdf

46 Asian Private Banker, ESG in Asia: The Rise of Responsible Investing in Asia. https://cdn.asianprivatebanker.com/wp-content/uploads/2018/10/Asian-Private-Banker-2018-ESG-in-Asia-Report.pdf
https://asianprivatebanker.com/insights/2018-research-esg-asia/

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About the FSDC

The FSDC was established in 2013 by the Hong Kong Special Administrative Region Government as a high-level, cross-sectoral advisory body to engage the industry in formulating proposals to promote the further development of the financial services industry of Hong Kong and to map out the strategic direction for the development.

The FSDC has been incorporated as a company limited by guarantee with effect from September 2018 to allow it to better discharge its functions through research, market promotion and human capital development with more flexibility.

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