Financial Services Talent Pipeline Report 2020
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>The Talent Pipeline for Financial Services</td>
<td>7</td>
</tr>
<tr>
<td>· Early Talent</td>
<td>8</td>
</tr>
<tr>
<td>· International Talent</td>
<td>13</td>
</tr>
<tr>
<td>· Transition Talent</td>
<td>15</td>
</tr>
<tr>
<td>Broader Ecosystem Trends</td>
<td>18</td>
</tr>
<tr>
<td>Recommendations</td>
<td>20</td>
</tr>
<tr>
<td>Conclusion</td>
<td>23</td>
</tr>
<tr>
<td>Methods</td>
<td>24</td>
</tr>
<tr>
<td>Endnotes</td>
<td>27</td>
</tr>
</tbody>
</table>
Introduction

Canada is home to one of the strongest financial services sectors in the world. It has some of the largest banks by market capitalization and is consistently rated as having one of the most stable banking industries, globally. Combined with banking - strong insurance, wealth management, fintech, and securities markets contribute to a robust, diversified financial services ecosystem. Adding 6.6% to the country’s total GDP, and employing over 831,000 people, the sector has a significant influence on the Canadian economy.

The financial services sector is also critical to Ontario’s economy, directly employing over 400,000 people and generating approximately $68 billion in GDP, the second largest contribution to the province’s total GDP.

Toronto is the second largest financial centre in North America and ranks as a top 10 global financial centre. From 2008 to 2018, employment in Toronto’s financial services sector grew at the fifth highest rate in the world. The city had the fastest-growing financial sector in North America over that period.

In its article, The Dawn of Banking in the Post-Digital Era, Accenture explores the four DARQ technologies - distributed ledgers, artificial intelligence (AI), extended reality, and quantum – that could potentially reshape the banking industry globally. The article explains that 90% of banks are already experimenting with at least one or more DARQ technologies. A global Accenture study further validated this statistic, finding that 41% of financial institutions either currently or plan to invest in artificial intelligence, while 34% either currently or plan to invest in cloud-based technology. With business cases demonstrating improved operational efficiencies, and the potential to grow $1.2 trillion worth of Gross Value Added (a proxy for GDP) across the sector, it is clear why financial institutions are embracing a digitally-enhanced future.

As Canada’s financial institutions navigate towards this digital future, jobs are changing dramatically and new skills are needed to drive initiatives such as payment disintermediation, data analytics, artificial
Of global financial services executives believe they lack the skilled employees needed for new technologies

intelligence and distributed ledger technology forward. Accenture research reveals that in 2019, 42% of global financial services executives found they lacked employees with the skills to manage these new technologies\textsuperscript{10}. The ability to attract, recruit and retain top talent is essential to the sector’s continued success. To remain competitive, financial institutions require access to a strong and digitally-fluent workforce who can effectively utilize new technologies and leverage the vast amounts of data now available.

Ontario boasts a workforce characterized by high levels of post-secondary education attainment, as well as robust immigration rates and a rapidly growing technology market. On the one hand this would appear to create a strong potential talent pipeline for financial services, comprised of early talent, newcomers and talent transitioning from other sectors. However, industry associations and government projections point to skills shortages in some key occupations\textsuperscript{11}, and a lack of job readiness in the early talent pool.

Another factor to consider when examining the talent pipeline is overall industry demand; Toronto ranks as the third most significant technology hub in North America\textsuperscript{12}, and is striving to become a global fintech hub. While this brings increased innovation to the financial services sector, it also places added pressure on its talent pipeline.

Against this backdrop of a changing demand landscape, 2020 has brought additional challenges to Canada’s economy and talent pipeline. COVID-19 has increased uncertainty in all sectors. A Conference Board of Canada survey published in the spring revealed that business confidence has dropped to its lowest level on record. Additionally, the Conference Board is projecting a 3.2% decrease in GDP for Ontario this year\textsuperscript{13}. Beyond these pure economic forecasts, COVID-19 is also having an impact on immigration and international students; and on some tech start-ups, who are forecasting layoffs in sector as a result of limited access to capital\textsuperscript{14}.

It is within this environment that this report examines the current state of the financial services talent pipeline, attempts to make sense of the impact of the global pandemic on the talent pipeline, and uncovers opportunities for stakeholders to attract in-demand skills essential for the future of work in the financial services sector.
Future Skills Needed

Toronto Finance International (TFI) published a talent report that identified the key skills that financial services workforces will require, to support the shift to a digital platform and leverage the four DARQ technologies critical to their organizations' digital transformation. These “future-proof” skills are organized into four categories - Future Currency Skills, which focuses on hard skills; and Human Experience, Reimagination and Pivoting Skills, which recognize the soft skills that are and will remain key to succeeding in the world of work (see Figure 1).

Demand

Given the current uncertainty due to COVID-19, demand is difficult to project, and forecasts are changing regularly. While the nature of the skills needed now and into the future are not likely to change dramatically, the rate of growth in the job market is predicted to decrease to reflect revised economic growth forecasts.

Until March of 2020 labour demand in Ontario continued to grow. Statistics Canada predicted that at current levels of annual employment growth, the province could add up to 390,000\textsuperscript{15,16}, jobs by 2021. The Conference Board of Canada’s 2018 report predicted that Toronto’s financial services sector could be reasonably expected to contribute approximately 16,000\textsuperscript{17} of those jobs.

BY 2021*

390K+ Ontario Job Growth
15.6K Financial Services Jobs

*Pre-COVID Forecast
In the spring of 2019, Canadian employers reported 550,000 job vacancies nationally – the highest level of labour shortages since the recession in 2009. Then COVID-19 hit the economy in early 2020, and the Canadian unemployment rate began to rise significantly, starting with an increase from 5.6 per cent in February to 7.8 per cent in March. While the pandemic may alter the magnitude of the labour shortage in the near term, it is unlikely to change the nature of in-demand roles, or the perceived mismatch between available and in-demand skills. Along with “hard” technical skills, employers also seek “soft” skills, such as creativity, emotional intelligence and communication skills, which are necessary in the modern workplace, but currently in short supply.

In general, a shortage of a well-rounded skill set that includes both role-specific hard (technical) and in-demand soft skills needed by today’s organizations represent a threat to the health of the talent pipeline for financial services. Adding to the complexity of the challenge is the fact that increasingly, financial institutions will be competing across industries and with other sectors for the same skills to build their future workforces. Accordingly, they are seeking to gain a more specific understanding of the types of skills that will be essential to acquire, develop and retain in their talent base moving forward.
The talent pipeline is comprised of three primary segments: Early Talent or recent graduates; International Talent comprised of skilled newcomers to Canada and international students; and Transition Talent including individuals who are reskilling within financial services, as well as those from different sectors who possess skills and experience that are relevant and in-demand within financial services. Each group has their own unique opportunities and challenges, and all are affected to some degree by the pandemic that is currently impacting the global economy.

University & College Graduates 2017

Total Ontario Graduates
Architecture, Engineering and Engineering Technology
Mathematics and Computer or Information Science
Business, Management and Public Administration

Figure 2 - Subset of 2017 University & College Graduates who Possess Desirable FS Skills
Early Talent

New college and university graduates, “Early Talent”, will continue to act as the foundation upon which the future of Ontario’s financial services talent pipeline is built; particularly the subset of graduates (see Figure 2) who possess the skills that are most important to the sector’s digital future.

In this report we study the early talent pool from three perspectives: 1) TECHNICAL (DARQ-related), those in-demand skills commonly developed in science, technology, engineering, and mathematics (STEM) programs; 2) BUSINESS, the more traditional recruiting target for financial services; and 3) INITIATIVES, other programs or considerations that improve the quality and quantity of candidates in the early talent pool.

Technical (DARQ-related)

Science, Technology, Engineering and Mathematics (STEM) graduates generally possess key technical skills needed for the future of work in financial services, such as mathematical reasoning, analysis, numeracy, computer science, digital and data literacy, and increasingly, AI. While the number of STEM graduates in Ontario is robust, certain graduates are particularly attractive to financial services organizations looking to fill roles in emerging fields, including those using DARQ technologies. In this section, we focus on this subset of graduates.

Post-secondary institutions in Ontario graduated just over 222,000 students in 2017 across all university and college programs\(^24\). About 17\(^%\)\(^25\) were from STEM disciplines (see Figure 3). If we focus specifically on the skills most directly relevant to financial services - technology, engineering and mathematics (TEM):

- 29,085 students graduated from architecture, engineering and engineering technology programs (12,594 from universities and 16,491 from colleges)\(^26\), and
- 8,931 graduated from mathematics and computer or information science programs (5,112 from universities and 3,819 from colleges)\(^27\).

The discipline of engineering itself covers a broad range of specializations. Perhaps the most relevant or directly applicable programs for financial services are computer and software engineering. To that end, of the 7,100+ engineering students that Ontario universities graduated in 2017, approximately 11\(%\), or 787, were from computer and software programs (see Figure 4)\(^28\).
Given the pace of technological change and related opportunities in the financial services sector, these graduate numbers suggest that we need to see growth in the size of the early talent pool with a focus on the smaller subset of relevant STEM skills - mathematics, computer science, and computer and software engineering - which are required for in-demand roles such as data scientists, analysts, programmers, and software engineers across Ontario’s economic sector.

A Focus on AI

TEM skills are also critical to leverage Artificial Intelligence (AI), a technology of significant importance to the financial services sector given its potential to fuel innovation and positively impact both productivity and the customer experience. Efforts to educate students in AI and related technologies are still in early stages but gathering momentum. Between 2017 and 2019 for example, Canadian universities such as the University of Waterloo, the University of Toronto, and York University added artificial intelligence specializations as part of their engineering programs. As AI students continue to graduate, we should see a positive impact on the financial services talent pipeline.

In 2017, Canada adopted the Pan-Canadian AI Strategy and set aside $125 million to support the initiative. Over the past few years promising investments have been made to grow our AI ecosystem (see Figure 5).

The University of Toronto is constructing a new innovation center to connect researchers, students, businesses and startups with a focus on artificial intelligence.

The Vector Institute provided 66 scholarships in 2018 and 78 in 2019 for an AI-related Master’s program

University of Waterloo launched the Waterloo Artificial Intelligence Institute in 2018. It is dedicated to solving problems brought to them by “partners in business, government and the non-profit sector”.

Figure 5 - Examples of AI Investments in Ontario
Beyond Traditional STEM Programs

Of interest to this discussion is the number of post-secondary programs in Ontario that are evolving to include more multi-disciplinary learning, to build a broader skill set in their students.

McMaster University offers two examples of this forward-looking approach. By the fall of 2020, students in its new engineering program, The Pivot, will benefit from a redesigned curriculum that builds the kinds of in-demand skills identified by TFI in its recent future skills research, including design thinking, developing an innovation mindset, and entrepreneurial thinking. This multi-disciplinary approach will help students to build creative thinking, business and entrepreneurial skills, with the goal of developing a global mindset, and social consciousness. Another McMaster program embracing this philosophy is Integrated Science (iSci), which builds knowledge and skills from each of the fundamental scientific disciplines and teaches students to think critically, creatively, and collaboratively about complex problems.

Some specialized arts and science degrees provide a strong base in data analysis that may be supplemented with on-the-job learning or post-graduate education to add to the talent pipeline. Potential programs include bioinformatics, health informatics, and geography with computer science and/or Geographic Information Systems (GIS).

Business School

There is growing awareness of the value of entrepreneurial and innovative thinking skills to the future of work. In addition to shifts in traditional degree programs, schools are introducing entrepreneurship offerings through certificates, master’s programs, innovation institutes, and campus-linked incubators/accelerators. For example, in 2015, the Smith School of Business at Queen’s University launched a Master of Entrepreneurship and Innovation program that aims to graduate 50 students annually. There are 20+ programs or offerings focusing on entrepreneurship and innovation in Ontario.

The development of campus-linked incubators and accelerators contributes to growing education in entrepreneurship, and financial institutions frequently partner with them to drive innovation. Notable programs include University of Waterloo’s Velocity and Accelerator Centre, University of Toronto’s Hatchery and Creative Destruction Lab, and Wilfrid Laurier’s Launchpad. These programs can help build key future-proof foundational or soft skills including resiliency, creativity, and pivoting.
Bridging the Gap Between Technology and Business

Business skills continue to be critical in financial services, and Ontario graduated 47,800 business students in 2017 alone providing for a healthy early talent pipeline. These programs are adapting to the digital future with curriculum changes in several undergraduate business programs in the province focusing on data analysis, IT management and entrepreneurship skills.

Top business schools in Ontario have identified a need in the marketplace for managers who can bridge the gap between technology and business.

To that end, newly-developed graduate-level programs such as the Master of Business Analytics (MBAN) at York University’s Schulich School of Business, and the Master of Management in Artificial Intelligence (MMAI) at Queen’s University’s Smith School of Business receive over 1,000 applications each year and admit between 80-220 students annually. Graduates of these programs may move into technical roles or go on to lead analytics, business intelligence, data science, and artificial intelligence teams. Along with a more technical focus, foundational skills are an important part of the curriculum. For example, in addition to building technical competence, the programs at the Smith School of Business include courses and workshops on communication, cultural competence, teams, storytelling, and leadership.

This evolution in business programs at both the undergraduate and graduate levels is another encouraging development for the financial services pipeline, as more graduates enter the workforce with a future-proof skill set grounded in business skills and supplemented with technical acumen.

College Programs Drive Innovation

Entrepreneurship initiatives and technology-focused programs are not exclusive to universities. Campus-linked incubators and accelerators thrive on college campuses as well. These include incubators such as Fanshawe College’s LEAP Junction and George Brown College’s startGBC. Since formally including research as part of their mandate, colleges have demonstrated significant outcomes vis-à-vis “economic development and commercialization impact, innovation, job creation and the development of highly-skilled personnel.”

Other Considerations

Leveraging Work-Integrated Learning to Build Job Skills

Employers report that new graduates often lack important “work-ready” skills that are typically learned on-the-job. One way for students to address this gap is to enhance their academic education with practical experience. In 2016, the Business + Higher Education Roundtable (BHER) announced a goal to ensure that all post-secondary students have an opportunity to participate in some form of work-integrated learning (WIL) over the course of their academic career. BHER’s focused efforts have had a significant impact on the federal government’s WIL and skills development agenda. The Government of Canada has been increasing its investment in students, including more than $798M in funding in its 2019 budget to support the creation of up to 84,000 new WIL opportunities per year; and other measures that will help prepare early talent to enter the workforce. Federal funding helps to support TF1’s own work-integrated learning program, ASPIRE, which aims to improve students’ transition from school to the workplace and grow the pipeline of in-demand skills needed in the financial services sector.

Figure 6 - Innovation Overlap Between Traditional Programs
COVID-19 is creating challenges for both students and employers alike, with fewer roles available in the summer of 2020 than expected pre-pandemic, causing anxiety for post-secondary students relying on the completion of co-op placements to graduate. Co-operative Education and Work-Integrated Learning Canada (CEWIL Canada) hosted a webinar to help employers shift their WIL programs to the new virtual reality. Financial institutions in Canada have long been leaders in promoting work-integrated learning, and co-op and internship positions are common in the sector. This year is no exception despite the impact of COVID-19. In a survey conducted by TFI with employer participants in ASPIRE, 85% of respondents indicated that they were maintaining their levels of student placements for the summer of 2020.

Student Perceptions of Financial Services Careers

Our early talent pipeline overview concludes with an important consideration. As sectors across Ontario and Canada continue to vie for the same pool of in-demand skills, a sufficient supply of graduates is not enough to ensure a robust talent pipeline for financial services. Sought-after graduates need to consider financial services as a career destination. The data suggests that there is still work to do. In a 2017 report by Engineers Canada, 9% of engineering students indicated that they would consider a career in finance or banking - up 2% from the previous year’s result, but still a relatively low number. Universum’s 2019 annual student employer rankings report confirms this gap. Canadian business students predictably considered financial services as a career destination - naming 6 financial institutions in their top 25. However, engineering and technology graduates did not rank financial institutions in their top 25 employers, at all. They did rank high future earnings, innovation and a creative and dynamic work environment as the top three attributes they value in an employer, which is data that can help to inform a student attraction strategy for financial services employers.

LEADING THE WAY

A TFI survey revealed that 85% of financial institutions maintained their levels of student placements for summer 2020.
The Federal Government has recognized the long-standing importance of immigration to Canada’s success through several key programs targeting both early talent and skilled immigrants.

### International Students

Increasing the rate of international graduate retention is an area of opportunity for the financial services pipeline. In 2018, nearly 17% of students enrolled in Ontario universities and colleges were international students, and this number was projected (pre-COVID) to reach 20% by 2022. However, only 20-27% of international students in Canada become permanent residents, representing an outflow of early talent developed within our borders. COVID-19 has been especially hard on international students who in some instances can not travel home, are struggling to find jobs and are not eligible for federal student programs. Others have headed home; and with many classes moving online in the fall, they may not be returning to Canada. The impact of this shift will not be fully realized until the new school year, but many schools are bracing for lower numbers of international students.

### Newcomers

Ontario is an attractive destination, drawing 37% of all newcomers to Canada in 2016. The newcomer population is highly educated, with skills in-demand in the financial services sector, and therefore represents an important source of talent for our pipeline considering that:

- Approximately 450,000 immigrants in the Ontario labour force hold STEM degrees, a higher number than their domestic counterparts;
- 348,000 or 77% of these newcomer STEM skills are specifically in technology, engineering and mathematics (TEM), the fields most relevant for the financial services sector; and
- 354,000+ newcomers, or 16% of the total newcomer pool have a business education.

---

**Figure 7 - Highly Educated Newcomers**

![STEM and Business Graduates by Immigration Status](image)
Considerations for Expanding the Pipeline of International Talent for Financial Services

The ability to compete effectively and efficiently for in-demand international talent is an important consideration for the growth of our talent pipeline. In 2017, the federal government introduced the Global Talent Stream - a program that processes work permits from targeted and skilled global talent within a two-week timeframe\(^6^8\). It received over 1,500 applications in the first two years of the program\(^6^9\), and financial services companies were active early participants\(^7^0\). Most recently, the program added more eligible occupations including engineering managers, mathematicians, and statisticians\(^7^1\).

The Global Talent Stream represents a positive development for the financial services sector to access highly skilled technical talent, and Toronto Finance International will continue to advocate on behalf of and in partnership with financial services employers for the expansion of occupations/skill categories relevant to our sector.

In April of 2019, the Ontario government introduced a similar pilot program specifically focused on fast-tracking key talent for technology companies\(^7^2\).

It is unclear at this time what the implications of the current global pandemic will be on the international talent stream. Global travel restrictions are changing daily, and visa applications are temporarily on hold pending the lifting of those travel restrictions. Both factors make a once fluid workforce much more stationary. Additionally, the sudden increase in domestic unemployment may impact the willingness of governments to promote international talent. In a January 2020 blog post, the Conference Board of Canada explored the implications of decreasing immigration and the negative effect it may have on the economy\(^7^3\); however, they also posited that politicians may lean towards promoting a talent version of “buy local”. Higher domestic unemployment related to COVID-19 since this blog publication increases the likelihood of this scenario.

Another consideration for growing the pipeline of international talent in financial services relates to successful integration. Once newcomers have arrived, it is critical that their transition into the workforce is successful, so that they can be productive contributors, as soon as possible. Common transition issues with which financial services employers could perhaps assist include language and soft skills gaps, difficulty in gaining recognition for the value and relevance of international experience, and uneven verification of foreign education credentials\(^7^4\).
Transition Talent

In a recent (pre-pandemic) survey conducted on behalf of human resources software company, Ceridian, nearly three-quarters of respondents indicated that they were currently looking for a new job or would consider a new opportunity if the right one was presented to them⁶⁶. This finding is indicative of the risk/opportunity paradigm that all sectors face in a tight labour market for skilled workers. Toronto Finance International research indicates that a specific cohort of the workforce - mid-career professionals - have a minimum base of future-proof skills critical to the ongoing success of financial services organizations, combined with an interest in embracing new technologies and learning new skills⁶⁷. To grow a robust talent pool, employers should regard both external and internal talent - with either direct or indirect in-demand skills - as potential “transition” talent; and consider investment in programs that focus on successfully attracting, re-training and retaining this talent to fill emerging roles within their digitally-driven organizations. This includes retention and re-skilling strategies that minimize the risk that current employees will leave; as well as effective attraction strategies that seize the opportunity to draw individuals with in-demand skills working in other industries and sectors, to their own. Financial institutions are already experiencing success with attraction strategies. For example, approximately 70% of new hires in one Canadian bank were sourced from outside of financial services⁶⁸.

A recent survey by the Canadian Council of Innovators found that 40% of Canadian tech CEOs surveyed have already laid off employees since the beginning of the pandemic, and 82% of Canadian tech CEOs are planning layoffs⁷⁰.

A 2019 report by the Brookfield Institute for Innovation + Entrepreneurship indicated that in 2016, one in 20 workers in Canada - or approximately 935,000 - were employed in technology occupations (both digital and high-tech); and almost 280,000 or 30% worked and lived in the Toronto-Waterloo corridor⁷¹. These workers represent a potential source of talent for financial services employers with targeted attraction and recruitment strategies that differentiate the advantages of working in the financial services sector - which is increasingly focused on innovation and driven by technology; and underpinned by the stability and opportunity afforded by Canada’s large and successful financial institutions.

Recruiting from the Technology Sector

The technology sector is an attractive source of transition talent for financial services employers seeking to address a growing demand for technical skills in their workforces; and workers in the tech sector may benefit from the opportunity amidst the current pandemic environment. Canadian tech companies, many located in Ontario, are unfortunately feeling the crunch of the economic impacts of COVID-19. With the majority of small businesses seeing severe cuts to revenue, many have already made the decision to lay off employees⁶⁹.
Continuing Education: Building Data and Job-Ready Skills

Another source of transition talent worthy of consideration are the non-traditional providers of technical training programs that offer options for mid-career workers and other individuals looking to reskill or upskill for the digital economy. Examples of these training providers include continuing education programs at post-secondary institutions, and private career colleges. Research indicates that 65% of all jobs require further training after high school or post-secondary education\(^7^2\); and many workers continue to build their skills throughout their career. Continuing education programs target individuals who are seeking to expand their skill set to be more effective in their current roles, or to pivot to new roles or careers. Typically, these programs are built with industry consultation to ensure that the learning outcomes are aligned with market needs - so that the new skills and competencies developed match those sought by employers.

For example, Durham College recently introduced a graduate certificate in Artificial Intelligence Analysis, Design and Implementation\(^7^3\). Seneca College launched a graduate certificate in Cybersecurity and Threat Management in the fall of 2019 (classes began in January 2020) that was developed in collaboration with Toronto Finance International and our members. Continuing education programs in a number of universities and colleges have launched or are introducing certificates in data science (Figure 8).

Given the industry- and market-focused approach to skill-building, and the additional work experience that continuing education students generally possess, these programs represent an important source of talent for financial services employers looking to expand their workforces with digital, data and other future-proof skills.

Figure 8 - Representative List of Universities and Colleges Offering Certificates in Data Science
Private Career Colleges: Alternative Pathway for In-Demand Skill Development

Private career colleges offer certificate and diploma programs targeted towards individuals looking to build market-ready skills and/or gain new professional qualifications before rejoining the workforce, either in their current profession or in a new job. Toronto has seen a surge in programs related to full stack web development, UI/UX design, data science, data analytics, language-specific programming (i.e. Javascript, Python), and digital marketing.

Many individuals who pursue these professional courses are building upon their existing education and skill sets. For example, BrainStation, an established technology bootcamp, reported that 84% of students who graduated from their full-time web development and user experience design programs between 2015 and 2017 in Toronto and Vancouver had previous post-secondary education.

In addition to continuing education, people are expanding their skills through self-directed learning via massive open online courses (MOOCs) like Coursera, EdX and Udemy.

As the number of options and pathways for skill attainment increase, employers may want to review the skills and assessment criteria embedded in recruitment processes to ensure that motivated career-shifters with newly-acquired skills and a growth mindset are not inadvertently screened out.

Figure 9 - Representative List of Private Career Colleges Offering Data Science Programs
Developing strategies to expand the financial services talent pipeline requires an understanding of the overall talent and economic landscape. Ecosystem trends such as continuous changes in required skill sets, brain drain threats and increased competition for skills place pressure on organizations in the financial services sector, and across sectors, searching for talent. At the same time, catastrophic events such as the global response to COVID-19 can upend the best planning. According to the Bank of Canada, the economic outlook was softening even before the pandemic took hold in Canada, and while it is too early to understand the complete effect of the pandemic on the Canadian labour market, we can make some reasonable assumptions going forward.

The Skills Landscape is Changing

Toronto Finance International talent research found that as a result of key trends impacting the future of financial services (FS), 87% of Canadian FS executives believe that at least 20% of roles will change in the next 3-5 years, and 50% believe that at least 40% will. Additionally, 30% of CEOs in banking and capital markets and 29% of CEOs in asset and wealth management believe the availability of key skills is a major threat to their growth prospects. In its 2018 Future of Jobs report, the World Economic Forum proposes that in the wake of the Fourth Industrial Revolution, technological change and shifts in roles and occupations across industries and regions of the world are transforming the demand for skills at a faster rate than ever before. Accordingly, as competition for scarce skilled talent continues to factor heavily in talent attraction and recruitment strategies, financial services employers should also focus on upskilling their current employees with required skills, and developing a continuous learning culture within their organizations, to build a future-ready workforce.
Brain Drain

A threat to Canada’s financial services talent pipeline is the emigration of new graduates and highly-skilled workers to other countries, commonly referred to as a brain drain. One study examined the LinkedIn profile data of STEM graduates from the Universities of Toronto, British Columbia and Waterloo, and found that 66% of software engineering students and 30% of computer engineering and computer science graduates leave Canada after graduating. Most head to the United States to work for large technology giants for better pay, employer reputation and scope of work. Accordingly, the report’s mitigation recommendations for Canadian employers include market-driven, innovative salary and compensation packages; a communication strategy that emphasizes an organization’s plans, potential and success; and growth in co-op and other work-integrated learning options to engage students early and to help them uncover opportunities and work available domestically. Given the effect that COVID-19 is having on the United States economy and unicorns in the Silicon Valley, these mitigation recommendations are even more compelling. Venture capital firms warn of a trend - in decreasing revenue and increasing capital scarcity. While this trend began to hit the market last fall, COVID-19 has accelerated it; and its impact may be felt in Canada as well. As start-ups tighten their belts in response, the demand for new recruits will ebb, providing potential opportunities for Canadian financial services firms to attract talent that might otherwise flow south of the border.

Toronto Tech Competition

Toronto is North America’s fastest growing technology market. It added 80,100 tech jobs in the five-year period ending 2018, representing a 54% increase. This growth places increased pressure on the talent pipeline, as financial institutions find themselves competing with technology and start-up companies for much of the same talent. For example, a report revealed that while more than 80% of Canadian start-ups planned to grow their workforce in 2019, 89% indicated that was extremely or somewhat challenging to find the skilled talent they need - an indication of the high level of competition for in-demand technical skills that financial services employers are up against.

However, in 2020 this landscape has shifted somewhat as a result of the global pandemic that has unfolded. In an open letter to the federal and provincial governments in Canada spearheaded by the CEO of MaRS, 230 tech CEOs called on the two levels of government to provide emergency relief to their sector to help stave off further layoffs. As of April 30, 2020, there were more than 1,600 registrants in a database of out-of-work start-up employees. Some of these workers represent potential new talent for the financial services sector, if they can be attracted.
Recommendations

Ontario’s financial institutions have been at the forefront in addressing talent shortages. Existing efforts include student engagement activities, partnerships with post-secondary institutions; upskilling programs for existing workforces; and participation in immigration initiatives targeting key skills. This work is strong and foundational, and should continue. Additionally, the current economic landscape presents some new challenges and opportunities to expand on these existing strategies. When considered together, key recommendations emerge for financial institutions as they continue to redefine and reshape their workforces and their talent pipeline:

Extend the Good Work

There are opportunities to expand the talent pool by extending existing talent initiatives that increase access to in-demand skills. Program extensions to consider include:

- Increasing the number of high-quality work-integrated learning opportunities for students, and expanding the types of roles available
- Leveraging talent initiatives such as Toronto Finance International’s ASPIRE program to expand student recruitment activities to a broader range of post-secondary institutions across Canada, and to help students build work-ready skills
- Engaging in partnerships with continuing education schools and private career colleges to access mid-career professionals who are adding future-proof skills to their toolkit
- Expanding partnerships with incubators, accelerators, and innovation labs in universities and colleges to grow the potential pool of candidates further
- Advocating for the retention and expansion of fast-track immigration programs such as Canada’s Global Skills Strategy, including the continuous updating of skills covered to stay relevant to market needs
Attract Early Talent

Competition for new graduates with in-demand STEM-based skills is fierce, with financial institutions competing directly with each other, as well as with technology firms, financial technology (fintech) companies and other organizations for talent. Attraction programs can serve to feed the talent funnel well in advance. Two Toronto Finance International-led student talent initiatives include:

- An annual sector-wide Financial Services High School Open House designed to help younger students to better understand the breadth of roles, current innovation and use of technology across today’s financial institutions; and to ignite a spark that could lead to a future career in financial services.

- ASPIRE's sector re-branding activities which includes messaging that has helped to change post-secondary students’ perceptions of financial services careers.

Attract Transition Talent

Today’s talent may view the financial services sector with old perceptions of financial institutions as large, formal, inflexible, slow-moving workplaces. Showcasing modern financial institutions as technology-centric, innovative, world-class employers will serve to attract talent that might otherwise gravitate towards the technology industry or others. As hard as COVID-19 has been on Canada’s economy, our financial institutions are uniquely positioned to pivot during this tough time to selectively grow their skilled workforces. Mass layoffs at tech firms such as Airbnb and Uber for example, as well as in the Canadian start-up world may provide some necessary skills. Attraction initiatives might include:

- The creation of campaigns similar to TFI's ASPIRE re-branding program to highlight the sector’s many partnerships and involvement in the Ontario technology and innovation ecosystem

- The development of international promotional and repatriation strategies targeted at tech talent in hubs such as Silicon Valley and the Toronto-Waterloo corridor. Global turmoil and economic uncertainty make the stability of Toronto’s financial institutions more appealing than ever.
Broaden Recruitment Filters

Recruiting programs typically involve the review of high volumes of data. Applying automation and filters has helped employers to manage this volume but may inadvertently screen out many of the candidates who they are seeking to attract. To lessen this risk, financial institutions are encouraged to review and update their recruiting systems to ensure that they are responsive to the changing nature of skills and experience. For example:

- Promote the recognition of international qualifications and global experience, as a means of growing and leveraging the advantages of a diverse workforce.

- Consider non-traditional learning experiences as valid upskilling and reskilling sources, such as continuing education, bootcamps, badges, and MOOCS.

- Configure recruiting systems to flag these skill-building activities, and to capture newly up- and re-skilled candidates.

- Encourage a broader cross-section of candidates to apply for roles by decreasing the length and heavy detail often found in formal job postings, and by clarifying skills that applicants “must have” versus those they would be “willing to develop”.

- Consider adopting modern assessment tools to gauge competency levels vis-à-vis future-proof and foundational skills. Formal learning and certifications do not tell the full story. Effective assessment tools can contribute valuable data to support a hiring decision.

Double-down on Upskilling and Reskilling

Toronto Finance International’s talent report, Unlocking the human opportunity: Harnessing the power of a mid-career workforce indicates that mid-career workers (those generally with 12-30 years of work experience) comprise over half of the workforce of Canadian financial institutions. Mid-career professionals working within a financial institution have good knowledge of the business and of internal processes, and “know how to get things done”. Accordingly, financial institutions are encouraged to:

- Expand the learning and development opportunities offered to internal candidates to upgrade their skills and/or to develop new ones; which has the added benefit of increasing employee engagement and commitment.

- Consider recruiting motivated external candidates who may have been laid off due to COVID-19 and re-skilled themselves, and/or those who have highly sought-after soft and transferable skills and may just need minor skill upgrades.
Conclusion

Ontario is predicted to have one of the smallest pandemic-related declines in GDP of all the provinces in 2020\(^8\) as a result of several factors. For example, the province continues to have a well-educated labour force, much of which is in professional services industries and can continue to work amidst physical distancing restrictions. Additionally, many firms within Ontario's manufacturing sector have adapted to a new pandemic-influenced world by re-focusing their production to high-demand personal protective equipment (PPE) supplies\(^8\).

However, uncertainty remains. Ontario's reliance on a large inflow of newcomers to feed its economic engine may face challenges in the coming years as the full impact of COVID-19 on immigration and international students remains unknown. Having said that, financial institutions may be able to leverage unique domestic and cross-border recruiting opportunities in the coming months. Ontario's financial services sector has a strong stable foundation to build upon at a time when many tech firms in both Canada and the United States are facing layoffs due to changing demand or lack of access to capital\(^8\), presenting an opportunity to target key talent resources.

Furthermore, the existence of strategic partnerships with post-secondary institutions, the rise in continuing education and other non-traditional training programs, a continued and expanded focus on upskilling current employees, and an openness to consider reskilled candidates from a growing available labour force all combine to have a positive net impact on the talent pipeline in financial services.

As Canada’s financial services sector navigates an increasingly digital future, we will continue to experience significant change fuelled by the increasing pace of technological innovation, evolving consumer demands, globalization, changing demographics and more. The ability to attract, recruit and retain top talent is essential to the sector’s continued success.
Methods

Demand

In order to project demand for the Ontario tech labour market, researchers used two articles from Statistics Canada – 1) Ontario’s Labour Market Survey Growth Rates, and 2) January to March 2019 Ontario Employment Report. Using MS Excel, researchers took the total number of employed Ontarians in 2019, 7.4 million, and multiplied it by a growth rate of 2.6% resulting in an estimate of 7,592,400 employees in 2020. This 7.5+ million was then multiplied by 2.6% again resulting in 7,789,802 employees for 2021. Finally, the 7.4 million from 2019 was then subtracted from the 7,789,802-projection resulting in approximately 389,802 additional jobs in the two-year span.

<table>
<thead>
<tr>
<th>Ontario Labour Market</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Labour Market</td>
<td>7,900,000</td>
</tr>
<tr>
<td>Employment</td>
<td>7,400,000</td>
</tr>
<tr>
<td>Full Time Employees</td>
<td>5,994,000</td>
</tr>
<tr>
<td>Finance &amp; Insurance</td>
<td>417,500</td>
</tr>
<tr>
<td>Professional, Scientific and Technical Services</td>
<td>665,100</td>
</tr>
<tr>
<td>2020</td>
<td>7,592,400</td>
</tr>
<tr>
<td>2021</td>
<td>7,789,802</td>
</tr>
<tr>
<td>2019 - 2021</td>
<td>389,802</td>
</tr>
</tbody>
</table>


The Accenture research team used Table 37-10-0012-01 - Postsecondary graduates, by field of study, program type, credential type to establish the total number of Ontario, STEM, and TEM graduates. From the table, it was determined that there were 222,063 graduates from colleges and universities in 2017. The table noted that there were 38,013 STEM graduates. The research team then divided the 222,063 Ontario graduates by the 38,013 STEM graduates which equaled 17.1%.

**Formula:** 38,013 STEM Graduates / 222,063 Total Ontario Graduates = .0171 STEM Graduates per Ontario Graduates * 100 = 17.1% STEM Graduates per Ontario Graduates

To breakdown STEM graduates, researchers set the “Geography” to “Ontario” and the “Institution Type” to either “University” or “College. Then the table was used to determine that 12,594 students graduated from Architecture, Engineering and Related Technologies university programs and 16,491 from college programs for a total number of 29,082 graduates. Additionally, the table noted that there were 8,931 Mathematics, Computer and Information Sciences graduates in 2017 which can be broken down into 5,112 from universities and 3,819 from colleges.

**Formula:** 29,082 Architecture, Engineering and Related Technologies Graduates = 12,594 University Graduates + 16,491 College Graduates

**Formula:** 8,931 Mathematics, Computer and Information Sciences Graduates = 5,112 University Graduates + 3,819 College Graduates

In order to determine the number of 2017 Ontario engineering graduates, researchers used Table UD.2.1 Total undergraduate degrees awarded by province: 2013 to 2017 from the Trends in Engineering Enrolment and Degrees Awarded 2013-2017 report. The table shows that there were 7,126.5 engineering graduates from Ontario in 2017. The team then used Table UD.1.2 Total undergraduate degrees awarded to female students by discipline: 2013 to 2017 from the same report to determine that there were 787 graduates from computer and software programs – this number was then divided by the total to arrive at 11.04%.

**Formula:** 787 Computer and Software Program Graduates / 7,126.5 Ontario Engineering Graduates = 0.1104 Computer and Software Program Graduates per Ontario Engineering Graduates * 100 = 11.04% Computer and Software Program Graduates per Ontario Engineering Graduates

Link to source: Statistics Canada. (June 8, 2020). Table 37-10-0012-01 Post Secondary graduates, by field of study, program type, credential type, classification of instructional programs, primary grouping (CIP PG), and sex. Accessed on June 8, 2020, from: [Table 37-10-0012-01 Postsecondary graduates, by program type, credential type, Classification of Instructional Programs, Primary Grouping (CIP_PG) and sex](https://www.statcan.gc.ca/pub/87-576-x/2021001/article/00516-eng.htm?st=ts)

International Students

Researchers used Table 37-10-0086-01 Postsecondary enrolments, by status of student in Canada, country of citizenship and gender to determine that 16.71% of students enrolled in Ontario colleges and universities were international students. The number of international students enrolled in Ontario colleges and universities in 2017/18 was 140,115, which was divided by the total number of students enrolled in Ontario, 864,798.

Formula: 140,115 International Students / 864,798 Total Students Enrolled in Ontario = 0.1671 International Students per Students Enrolled in Ontario * 100 = 16.17% International Students per Students Enrolled in Ontario

In order to determine the number of immigrants with STEM degrees in the Ontario labour force, researchers used the STEM and BHASE (non-STEM) Groupings, Major Field of Study - Classification of Instructional Programs (CIP) 2016 (36), Labour Force Status (8), Immigrant Status and Period of Immigration (11), Highest Certificate, Diploma or Degree (15), Location of Study (5), Age (9) and Sex (3) for the Population Aged 15 Years and Over in Private Households of Canada, Provinces and Territories, 2016 Census - 25% Sample Data Table from the 2016 Census. First, the filter for Geography was set to “Ontario”, then the Immigrant status and period of immigration was set to “Immigrants”. With the filters in place, researchers used the 450,225 STEM degree holders noted in the “STEM” row.

Next, researchers collected the data necessary to calculate the TEM statistics. Within the same table, researchers used the figure 226,535 from the Engineering and Engineering Technology row and added it to the 121,860 figure from the Mathematics and Computer and Information Science row to arrive at the sum of 348,395.

Formula: 226,535 Engineering and Engineering Technology Graduates / 121,860 Mathematics and Computer and Information Science Graduates = 348,395 Graduates

Finally, using the same table, researchers used the Business and Administration figure (354,375) and divided it by the total number of total immigrants in the labour force (2,232,225) to arrive at 15.9%.

Formula: 354,375 Business and Administration Graduates / 2,232,225 Immigrants in Labour Force = 0.159 Business and Administration Graduates per Immigrants in Labour Force * 100 = 15.9% Business and Administration Graduates per Immigrants in Labour Force

Link to source: STEM and BHASE (non-STEM) Groupings, Major Field of Study - Classification of Instructional Programs (CIP) 2016 (36), Labour Force Status (8), Immigrant Status and Period of Immigration (11), Highest Certificate, Diploma or Degree (15), Location of Study (5), Age (9) and Sex (3) for the Population Aged 15 Years and Over in Private Households of Canada, Provinces and Territories, 2016 Census - 25% Sample Data https://www150.statcan.gc.ca/n1/en/catalogue/98-400-X2016251
Endnotes

3 IBID
4 IBID
6 IBID
13 https://www.conferenceboard.ca/e-library/research/ibc/2020/10696_
14 IBID
24 Statistics Canada. (June 8, 2020). Table 37-10-0012-01 Post Secondary graduates, by field of study, program type, credential type, classification of instructional programs, primary grouping (CIP PG), and sex. Accessed on June 8, 2020, from: Table_37-10-0012-01 Postsecondary graduates, by program type, credential type, Classification of Instructional Programs, Primary Grouping (CIP PG) and sex


https://cdn2.hubspot.net/hubfs/4372260/Talent/TFSA_PwC_Unlocking_human_opportunity_Future-proof_skills_2018_FF.pdf


IBID.


IBID.

IBID.


ABOUT TORONTO FINANCE INTERNATIONAL

Toronto Finance International is a public-private partnership between Canada’s largest financial services institutions and government. Our organization is the lead voice for the international promotion of the Toronto Financial Centre and the global prominence of our financial services sector. TFI also acts as a hub for Toronto’s financial sector and works with our stakeholders on initiatives which drive the growth and competitiveness of the industry. For more information visit www.tfi.ca

ABOUT ACCENTURE

Accenture is a leading global professional services company, providing a broad range of services in strategy and consulting, interactive, technology and operations, with digital capabilities across all of these services. We combine unmatched experience and specialized capabilities across more than 40 industries — powered by the world’s largest network of Advanced Technology and Intelligent Operations centers. With 513,000 people serving clients in more than 120 countries, Accenture brings continuous innovation to help clients improve their performance and create lasting value across their enterprises. Visit us at www.accenture.com.

CONTACTS

Sashya D’Souza
Senior Vice President, Talent Initiatives, TFI
sdsouza@tfi.ca

Julie Bryski
Senior Director, Talent Initiatives, TFI
jbryski@tfi.ca

Tracy Chambers
Senior Manager, Talent and Organization/Human Potential
Accenture
Tracy.l.Chambers@accenture.com

Janet Krstevski
Managing Director, Canadian Lead Talent and Organization/Human Potential
Accenture
Janet.krstevski@accenture.com