

Assessing Toronto's financial services cluster

FOR THE TORONTO FINANCIAL SERVICES ALLIANCE

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FOREWORD

Continued success for financial services drives future success of Toronto economy

Toronto's financial services sector is extremely important to the future success of the region's economy and its quality of life.

It is one of Toronto's major employers with over 220,000 individuals working in the sector. It generates 17 percent of its GDP and continues to be one of the region's, not to mention the country's, most profitable sectors. It is the hub for a diverse and closely interwoven series of affiliated business and support services, from law firms and accounting houses to IT professionals and post-secondary institutions. Many social, cultural, charitable and health projects benefit from the financial and volunteer contributions generated by the sector, not to mention the significant tax contributions made to government.

In short, the health of the Toronto financial services sector should be an important priority for all levels of government. Currently the third largest financial hub in North America, measured by employment, and one of the fastest growing, it is not immune to growing competitive pressures from around the world and here at home.

A 2007 report from the Corporation of the City of London, entitled "The Global Financial Centres Index," ranked Toronto 12th out of 46 international financial centres. However, it went on to caution those who might take comfort in this achievement that "cities that are financial centres face greater competitive forces than most, for the financial services industry is at the heart of the global economy, acting as the facilitator of world trade and investment."

Fortunately, the importance of its continued health and global competitiveness has attracted the attention of government policy makers. Unlike some sectors, this is not an industry requiring first aid. But like every other sector, it is an industry that requires advocates to make its case, policies that support and promote its competitive success on local, national and international stages and research and measurement – to assess strengths and weaknesses, identify policy and business priorities, track progress and monitor success.

This study represents another important step in this process. Undertaken by the Institute for Competitiveness & Prosperity, at the request of the Toronto Financial Services Alliance (TFSA) and the Ontario Ministry of Economic Development and Trade (MEDT), it seeks to compare the competitive position of Toronto's financial sector in key areas to competitor jurisdictions.

It will promote a better understanding of how the sector compares on certain indicators, generate measures that could be used to track the sector's future success, and encourage discussion of potential policies to support continued sector growth.

Not everyone will agree with Michael Porter's traded cluster methodology, the basis of the Institute's traditional approach. But that is a claim common to many analytical tools. Some may argue that drawing conclusions based on a competitive market-based framework such as the Porter model may not adequately capture the highly regulated nature of the sector and the impact of government intervention on competitive market forces. While the role of government in affecting sector outcomes in financial services may not be as prominent in the Porter model as some might prefer, analysis on this framework still offers important insights that help improve understanding of sector dynamics.

This study also underlines the need for further research and analysis on the entire financial sector, in order to fully flesh out its diverse and complex nature. To date, not all industries within the sector have been as thoroughly researched and analyzed, as others have been, especially from a Toronto regional perspective. We would like to sincerely thank the Institute for its work and perseverance on this project. It is much appreciated.

The sector's past record of success cannot be taken for granted. If it is to continue in the face of growing international competition, if Toronto is to be one of the pre-eminent financial service hubs in North America and among the top ten in the world, then work that improves understanding and stimulates discussion can only add to our collective ability to protect the sector's strengths and promote its future growth.

Janet Ecker

PRESIDENT

Toronto Financial Services Alliance

Executive summary

TORONTO'S FINANCIAL SERVICES industries are critical drivers of prosperity in the city region, in Ontario and across Canada. The Toronto Financial Services Alliance (TFSA) and the Ontario Ministry of Economic Development and Trade (MEDT) are working to develop a provincial strategy to support continued growth in the sector. In support of this work, the Institute for Competitiveness and Prosperity has assessed the key strengths and weaknesses of the financial services cluster versus its key North American competitors. The TFSA enhances and promotes the competitiveness of Toronto as a premier financial centre. Its membership encompasses core financial services companies and partner sectors.

This project was undertaken to provide guidance in tracking the cluster's development and will guide its efforts in engaging other stakeholders (SLIDE 1).¹ The key outcome of our work is to inform future analytical and collaborative efforts undertaken by the TFSA and the Ministry to develop critical future initiatives for the growth of the cluster.

Overall we conclude with others that Toronto has one of the most vibrant financial services clusters in North America. We have strong and successful Canadian firms in each area of the cluster – banking, insurance, investments, securities dealers, and risk capital. Our banks are world leaders in shareholder returns. Canadian life insurance firms are among global leaders by market capitalization.

Yet the cluster has opportunities for improvement. Wages – an indicator of industry productivity and competitiveness – match US peers in parts of the cluster but trail behind more significantly in higher wage sub-clusters. Our banks are not near the top of lists of global leaders and our securities brokers have not succeeded in working with Canadian firms to meet their financing needs as they expand abroad.

¹ Slide numbers in this report refer to a presentation which can be downloaded from the Institute's website: www.competeprosper.ca

To help understand the performance of Toronto's financial services cluster, we draw on Michael Porter's research into successful industry clusters. Porter concludes that innovative, world beating clusters are the result of the interaction of four elements:

- the availability of high quality **factors** as inputs to the industry. These factors include physical infrastructure and talented human capital
- **related and supporting industries** providing expertise and services to the cluster
- **demanding and sophisticated customers** whose needs and tastes anticipate global developments thereby stimulating innovation in the cluster
- **rivalry** among very capable competitors that stimulates strategies of innovative differentiation in the cluster.

In the area of factor conditions we find that Toronto's financial services cluster benefits from good generalized factors including an advantageous geographic location, comparable input costs and good macroeconomic conditions relative to its US peers. Moreover, Toronto enjoys good performance in some areas of specialized factors. For example, it has well-educated employees and higher incidences of professional designations. On the other hand, the employees in Toronto's financial services have a lower incidence of university educational attainment. Our post secondary institutions offer fewer specialized graduate programs in the region.

Toronto's financial services cluster benefits from solid related and supporting industries, especially in business services, information providers, and computer and communications services. Toronto's financial services cluster benefits from adequate demand and sophistication across segments. Although personal consumption of financial services per capita in Canada is lower than in the United States, it is still among world leaders. Household demand is fairly sophisticated, as indicated by shifts in portfolio mix of household financial assets which demonstrate convergence with the more sophisticated mix in the US. Government demand for financial services, as evidenced by levels and trends in borrowing, matches US experience. On the corporate side, the United States is characterized by more debt and equity per capita than Canada. Canadian firms match US experience in mergers and acquisitions but are less likely to require financing for initial public offerings. It is difficult to match US experience in the sophistication of demand for financial services, but Canada does not experience widespread weaknesses in this regard.

The most significant improvement opportunity for Toronto's financial services cluster is increasing the intensity of rivalry in the cluster, particularly in banking. Our banks compete intensely in the domestic market. However, Canada's regulatory framework has reduced the benefits of external forces to stimulate greater differentiation among our banks. While foreign banks may enter the Canadian market de novo and undertake essentially all of the activities undertaken by domestic banks, the widely held rule for the large banks

prevents foreign financial institutions from acquiring a controlling interest in a large Canadian bank. Limited competition in the domestic market has meant reduced incentive to develop world beating strategies by our banks which can translate to greater innovation and global leadership.

Our findings in each of these areas inform the development process for a strategy to create conditions for the growth of the region's financial services cluster.

In this report we:

- review the importance of clusters to competitiveness and prosperity
- identify key strengths and weaknesses among the performance indicators of the financial services cluster in Toronto
- assess Toronto's financial services cluster across the four elements of Porter's framework
- identify next steps and possible benchmark measures for a strategy (SLIDE 2)

The importance of clusters to competitiveness and prosperity

ECONOMISTS, GEOGRAPHERS, and business strategists generally agree that clustering or agglomeration of industries in specific geographic areas is a key driver of regional and national prosperity. For its part, the Institute for Competitiveness & Prosperity has identified the importance of clusters of traded industries to a region's prosperity. We have concluded that high-performing clusters are an important element of closing our prosperity gap with Ontario's peer group of North American jurisdictions. In Working Paper 1, *A View of Ontario: Ontario's clusters of innovation*,² we described the theory and evidence behind the importance of clusters of traded industries.

Clustering or agglomeration refers to the tendency of some industries to mass together in specific locales. While every town above a certain size has a corner store or a law office, steel mills or movie studios are only found in a limited number of areas. Reasons behind the location of specific clusters could be natural factors, scale requirements, location advantages, and the presence of highly skilled workers.

Harvard professor, Michael Porter is probably the most well known researcher of clusters. Porter classifies all industries into three groups: traded, local and natural endowment dependent clusters. The location of natural endowment industries is based on specific endowments, such as forests or mineral reserves. Most industries are separated into "traded" and "local" based on the degree of industry dispersion across geographic areas. Local industries are those present in most, if not all, geographic areas, are evenly distributed, and hence primarily sell locally. Traded industries are those that are concentrated or clustered in specific geographic areas and sell their output to other regions and nations (SLIDE 3).

In *The Competitive Advantage of Nations*³, Porter sets out the importance of clusters as drivers of a region's economic development. His research led to a useful analytical framework to assess the features of an industry's structure and environment and determine why or why not it produces globally competitive firms.

Clusters increase productivity and efficiency by enabling better access to specialized inputs, services, employees, information, institutions and training

programs etc (SLIDE 4). Clusters improve coordination and transactions across firms and facilitate rapid diffusion of best practices. Clusters also enable firms to conduct visible performance comparisons which provide strong incentives for improvement. Locally available resources enable industries within clusters to be more innovative and the presence of multiple suppliers and institutions assist in knowledge creation. Availability of specialized labour and suppliers also make it easier to commercialize new products and start new companies. All of these benefits are derived from linkages and spillovers across firms and associated institutions within a cluster.

As we look at cluster performance, we see that specialization exists in a limited number of highly related industrial regions and that clusters get stronger as they develop unassailable advantages. We see the importance of two complementary structural factors – specialized support and competitive pressure. Favourable market structures create pressure for firms continuously to upgrade the source and sophistication of their advantage; at the same time they support the upgrading process with the appropriate factor inputs and supporting institutions. The

² Institute for Competitiveness & Prosperity, Working Paper 1, *A View of Ontario: Ontario's clusters of innovation*, April 2002.

³ Michael E. Porter, *Competitive Advantage of Nations*, New York: the Free Press, 1990.

combination of pressure and support is created by the interaction of the four features illustrated in Porter's diamond (*Exhibit 1*). The four features of Porter's diamond work together in a self-reinforcing dynamic to drive the clustering of industries.

No one feature in Porter's framework is sufficient for cluster effectiveness. Instead, the research indicates that successful clusters tend to emerge when all four factors are contributing.

Two of Porter's factors refer to specialized support – factor conditions and related & supporting industries.

Support for innovation and upgrading is provided by an abundant supply of factor (input) conditions, including basic factors such as natural resources and capital resources, as well as advanced and specialized factors such as scientific infrastructure and pools of specialized labour (SLIDE 6). Important factor condi-

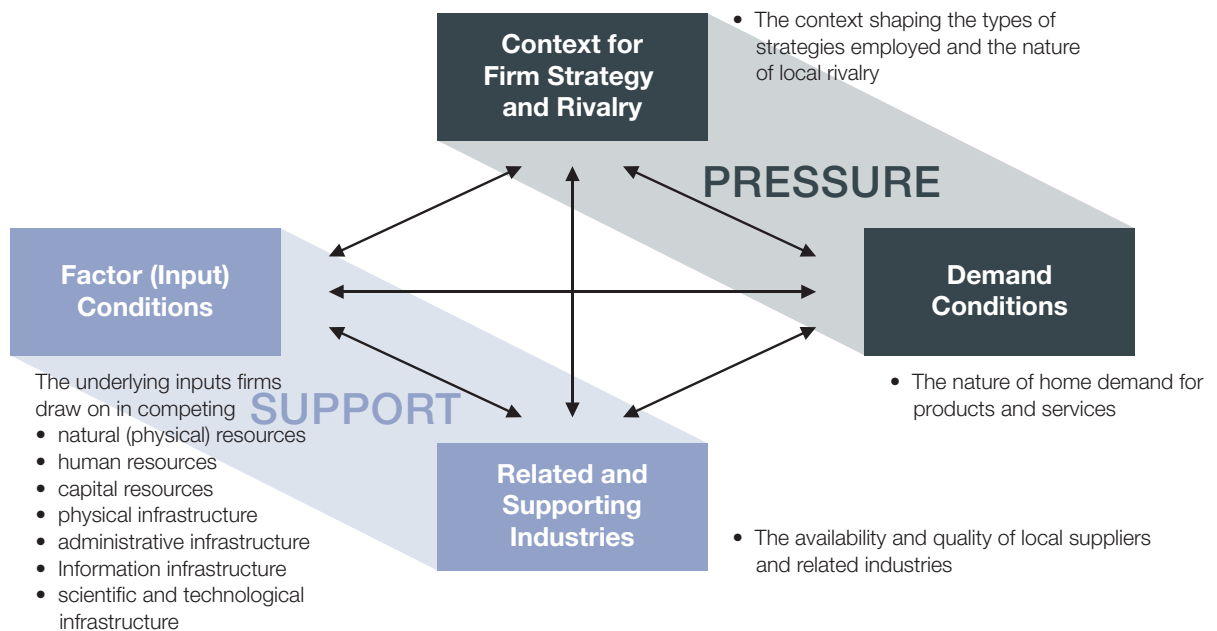
tions have evolved over time from the presence of raw materials or natural resources, like deep water ports, to more advanced and knowledge-based factors. As countries become more advanced, the quality of support is increasingly influenced by advanced (e.g. workers with graduate degrees) and specialized (e.g. research universities) rather than basic factors (e.g. transportation infrastructure) because basic factors can be purchased from abroad or easily replicated.

High quality related and supporting industries also provide important support for upgrading. Examples of these include suppliers of inputs such as venture capital funds in clusters requiring ongoing investments or specialized goods like high quality steel for automotive manufacturers. These related or supporting industries may be complementary to the firms in the cluster rather than suppliers. An example for computer

hardware firms would be specialized software producers, such as value added resellers who sell in conjunction with them, thereby helping them meet customer needs. Highly capable and specialized related and supporting industries help firms in clusters innovate and create unique ways of meeting customer needs without needing to make all the investments themselves.

Complementing the support from factor conditions and suppliers is the pressure to innovate and upgrade that comes from sophisticated customers and capable rivals. Demanding and sophisticated customers create demand conditions that anticipate the nature of demand in the world. Customers who are not easily satisfied relentlessly pressure their suppliers to improve their product and service offerings. But demanding customers are not enough. Customers need to be sophisticated in their understanding of nuances of

Exhibit 1 Cluster strength is the result of four inter-related factors



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

product and service improvements. Sophisticated customers' demands anticipate demands elsewhere in the world and set global trends in the industry. If customers are simply aggressively demanding, focused on driving down price without regard for quality or innovation, they do not contribute to competitive clusters. Examples of sophisticated customers are the Japanese in consumer electronics, the French in wine, and Americans in movies. In these examples, local customers set world standards; suppliers in these home markets find it relatively easy to serve foreign markets. It is helpful to have many customers with varying needs and who are vying with each other to gain advantage. A single buyer can become overly demanding without being very sophisticated.

Pressure is also provided from intense rivalry. If many firms are competing vigorously for the same customers, they will be forced to innovate and upgrade. Firms operating in the same geographical area all benefit from similar factor

conditions and suppliers and related industries. Consequently, they must differentiate themselves on a continuous basis with innovative products and services.

The combination of these four factors creates pressure (demand and rivalry) and support (factor conditions and related & supporting industries) to drive cluster competitiveness. An environment of support and pressure is most beneficial in nurturing and growing globally competitive clusters. The presence of such powerful elements of support tends to attract multiple competitors, which helps create an important element of pressure, which is the rivalry of co-located firms. Rivalry among alternative firms helps customers become more demanding and sophisticated which in turn helps drive the firms towards innovative activities. The presence of rival, innovating firms then produces a benefit that loops back into better support. Social networks get created across the competing firms, their customers, and their suppliers and this creates a rich environment of knowledge spillovers.

Both of these features enhance the supportiveness of the environment for all firms – which serves to attract more firms still, which produces more pressure and more knowledge spillovers, and so on. No one factor drives cluster success by itself – all factors must be present.

Porter's research indicates the importance of government policy and actions across the diamond (*Exhibit 2*). His research indicates that governments have not successfully created clusters; instead governments support the development of existing clusters through:

- supporting the development of **factor conditions**, such as infrastructure, human capital through education and training, and investment in research and development
- developing policies that enhance competitive advantage in **related and supporting industries**

Exhibit 2 Government's role across the diamond

Factor Creation	Related and Supporting Industries	Demand Conditions	Firm Strategy and Rivalry
<ul style="list-style-type: none"> • education and training • investment in research & development • infrastructure • availability of capital • regulation of professions 	<ul style="list-style-type: none"> • policies that enhance competitive advantage in one industry will also benefit related and supporting industries 	<ul style="list-style-type: none"> • government procurement • regulation of products and processes <ul style="list-style-type: none"> > regulating standards > regulating competition • stimulating early or sophisticated demand • buyer information • technical standards 	<ul style="list-style-type: none"> • internationalization <ul style="list-style-type: none"> > currency restrictions, restrictions on inflow and outflow of skilled personnel • corporate governance • domestic rivalry <ul style="list-style-type: none"> > mergers and acquisitions > regulation of competition > new business formation > restrictions on entry • trade policy • tax policy • foreign investment

Source: Institute for Competitiveness & Prosperity based on Porter's diamond.

- establishing regulations that support sophisticated **demand** through a balance between customer protection and stimulation of new products and services; ensuring that government procurement is demanding and sophisticated
- encouraging intense domestic **rivalry** through a regulatory framework that balances the need for adequate stability and innovative competition

As we discussed earlier, Porter classifies the industries across three clusters: traded, local and natural endowment dependent clusters. Within traded, his research in the United States has identified 41 clusters, one of which is financial services (SLIDE 8). These clusters can be defined using the narrow or broad cluster definition. The narrow cluster definition includes industries⁴ that are unique to the cluster. Every US industry is uniquely allocated to narrow sub-clusters which are combined into

one of the 41 clusters.⁵ Under the narrow definition of the financial services sector, these sub-clusters are: depository institutions, securities brokers, dealers and exchanges, insurance products, health plans, risk capital providers, investment funds, real estate investment trusts and passenger car leasing (*Exhibit 3*).

Broad cluster definition allows industries to be assigned to more than one cluster.⁶ If the financial services cluster is defined according to the broad cluster definition it would also include the following sub-clusters: patent owners & lessors, related services, printing services, research organizations, computer & communication services and information providers. In summary, Porter’s research indicates that these sub-groups of industries tend to be co-located with financial services, but they have stronger relationships with other industries.

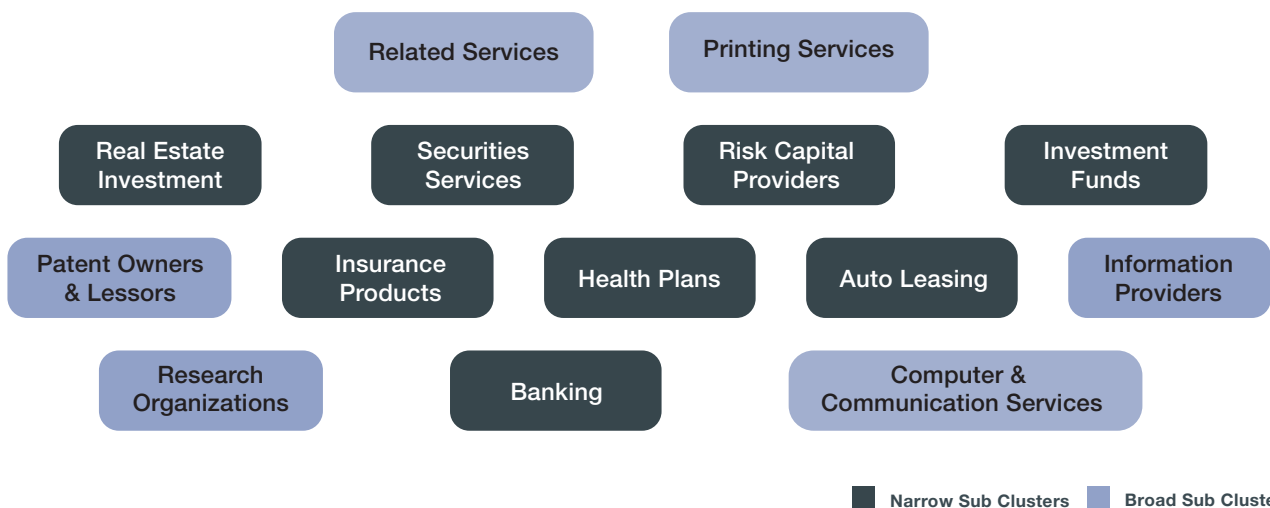
The Institute has applied Porter’s research to Canada’s economy to identify the size and strength of the same 41 clusters and their sub-clusters.

Much of the analysis in this report is based on narrow definitions of traded clusters, but we draw on broad definitions to analyze the support provided by related industries. Using these definitions we assess how our clusters measure up to the United States.

Canada’s traded clusters under perform compared to the United States

In our assessment of Canada’s competitiveness relative to the United States, our prior research has concluded that clusters of traded industries are important contributors to local and provincial prosperity. While Canada has an excellent mix of traded industries, it does not benefit fully from them; their performance in wages falls 27 percent

Exhibit 3 **Components of the financial services cluster**



Source: Institute for Competitiveness & Prosperity; Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

⁴ Porter’s industries are 4-digit Standard Industrial Codes

⁵ Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School. Available online: http://www.isc.hbs.edu/cmp/cmp_data_glossary.html

⁶ *Ibid.*

short of the same clusters in the United States (SLIDE 10). The data also shows that the US and Canadian traded clusters are more productive than local industries, as illustrated by average wages; however the productivity premium is substantially higher in the US. The productivity premium in Canada from its traded clusters versus its local industries is 41 percent⁷ – the difference between traded clusters' wages of \$41,600 and local industry wages of \$29,400. In the United States, this premium is 58 percent.⁸

In summary, we found that Toronto's financial services cluster is a large and important part of the Ontario and Canadian economy (SLIDE 11). Wages within its sub-clusters are average relative to the US peers in depository institutions but the gap widens for other sub-clusters. We see that banks in Toronto perform best in shareholder returns, but have limited global presence. Securities brokers have developed solid positions in the domestic market, but have not been as successful in expanding globally. The largest life insurers perform well and are global players. The domestic property and casualty industry is less well developed and the venture capital industry continues to mature.

Within Porter's framework, we conclude that the financial services cluster has good generalized **factor** conditions related to geography, population and

macroeconomic conditions (SLIDE 12). Toronto has good performance on specialized factors, but lags in educational attainment and specialized graduate programs, even though it has a higher incidence of professional designations. Marginal Effective Tax Rates on corporate investment are high in Ontario which discourages investment by business.

Toronto's financial services cluster has strong **related and supporting** sub-clusters such as business services, information providers, and computer and communication services. However, it lacks support from professional services when compared to our peer group.

On the pressure side, Toronto's cluster faces sub-optimal pressure (SLIDE 13). Within Toronto and Canada, level of **demand** per capita is adequate and we compare well to other countries, but trail behind the United States. Sophistication of demand also trails the United States, but is converging. Among domestic banks, **rivalry** is not conducive to global leadership. This is because our present regulatory framework – ownership limits, merger prohibitions, and restrictions on foreign firms taking control of Canadian banks – has resulted in limited scope for domestic strategy differentiation among Canadian banks.

⁷ Institute for Competitiveness & Prosperity, *Agenda for Canada's prosperity*, March 2007, p. 24.

⁸ The cluster data used in our analysis for Canada is for the year 2002 for employment and the year 2000 for wages, inflated to 2003 dollars. Both employment and wage data for the United States is for the year 2003. US wage data is converted to 2003 Canadian dollars using purchasing power parity. Institute for Competitiveness & Prosperity analysis for Canadian cluster data is based on Statistics Canada - Canadian Business Patterns (employment) and Census (wages).

Toronto's financial services cluster performance indicators

Toronto's financial services cluster has solid domestic performance, but limited global presence

THE FINANCE AND INSURANCE sector is an important contributor to GDP in Ontario. Among Ontario's peer states⁹, the financial services contribution to GDP ranges from 5.3 percent in Quebec to 15.8 percent in New York, with Ontario ahead of the median at 7.7 percent (SLIDE 14). Over the last twenty years, growth in the financial services' contribution to GDP in Ontario has tracked that of the

United States and surpassed the rate for Canada as a whole with an increase of 2.0 percent a year since 1984 (SLIDE 15).

To determine the significance of the financial services sector to Toronto's economy we chose a peer comparison group of the ten North American cities with the highest employment in the traded financial services cluster. The group includes Toronto, and nine US cities – New York, Chicago, Los Angeles, Philadelphia, Boston, Dallas, San Francisco, Hartford, and Atlanta¹⁰.

Our assessment of Toronto's financial services cluster begins with a review of

the general indicators of competitiveness. We focus first on the financial services clusters and sub-clusters, concluding that relative to the peer cities they are generally large and important to Toronto's economy. Among Toronto's large sub-clusters – depository institutions, securities, insurance products, and risk capital – there is an attenuation of wage levels with high-wage clusters when compared to the US peer city average. A review of shareholder returns and the global presence of local firms, for most sub-clusters, reveals good performance but limited global success. Lastly, we conclude that Toronto has a young venture capital industry making

Exhibit 4 Toronto's financial services cluster is large and important to the local economy



*The location quotient is a ratio measure of the concentration of a cluster in a particular location relative to the North American average. Note: Canadian data is for 2002 (the most recent year available); U.S. data is for 2003. Source: Institute for Competitiveness & Prosperity; Institute for Strategy and Competitiveness.

⁹ The Institute compares Ontario to fourteen US peer states and Quebec, chosen by population half Ontario's or greater. See Task Force on Competitiveness, Productivity, and Economic Progress, Fifth Annual Report, *Agenda for our prosperity*, November 2006, p. 7.
¹⁰ In this discussion, Canadian data is based on Census Metropolitan Areas as city regions or CMAs; the US counterpart is Metropolitan Statistical Areas or MSAs.

smaller average investments relative to the peer cities.

Toronto's traded financial services cluster and sub-clusters are generally large and important parts of the Toronto economy. Toronto has the third largest financial services cluster of the peer group, employing 164,200 in the cluster, trailing only New York and Chicago - 451,600 and 167,200, respectively (*Exhibit 4*).¹¹ Not only is Toronto's financial services cluster significant in size, but it also has relatively high importance to its local economy. We define relative importance to a local economy as the over- or under-representation of a specific cluster to overall employment. We use the Location Quotient (LQ) measure.¹² The LQ for a cluster in a city exceeds 1 when it accounts for more employment

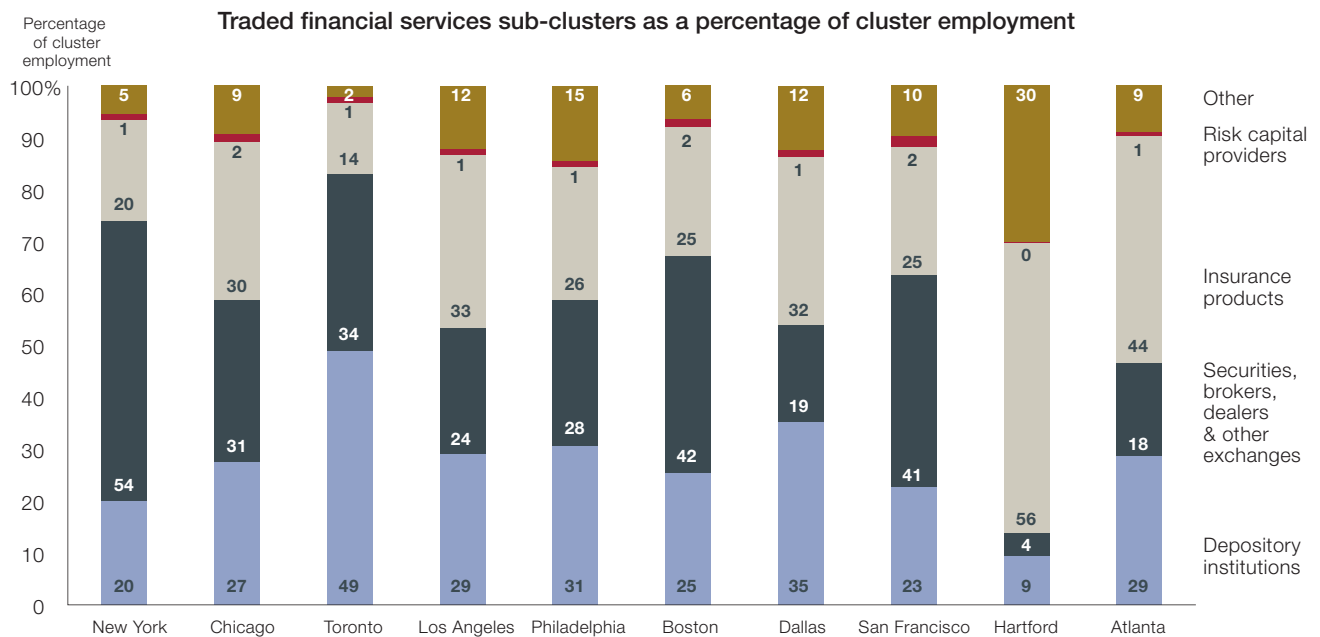
in a city than the average city. The LQ for Toronto's financial services is 2.34, behind Hartford at 3.71 and above all the other peer cities including New York. In other words, the traded financial services cluster is more important to the Toronto region economy than the cluster is to any other regional economy in North America, with the exception of Hartford.

Our cluster employment and Location Quotient data are based on the Cluster Mapping Project at the Harvard Business School and the Institute's adaptation of this analysis to Canadian statistics. The Cluster Mapping Project is based on Michael Porter's research using establishment-based employment data from the US Census Bureau's *County Business Patterns*. Porter assessed 879 industries and

applied statistical techniques to isolate traded industries. The *County Business Patterns* is the best source for detailed industry information at the state- and metropolitan-level. The Institute estimated Canadian results through translation of US industry definitions using Statistics Canada's *Canadian Business Patterns*. Cluster employment results in this study may differ from typically reported industry employment data because Porter has identified the traded portion only.¹³

Nearly half of Toronto's financial services' employment is in **depository institutions** (*Exhibit 5*). In the peer cities, depository institutions make up no more than 35 percent of financial services employment; in Hartford they account for less than 10 percent.

Exhibit 5 Toronto financial services employment is dominated by depository institutions



Note: Canadian data is for 2002 (the most recent year available); US data is for 2003. Securities also include investment funds. Other includes sub-clusters Passenger Car Leasing, Health Plans and Real Estate Investment Trusts. Insurance products does not include agents.
Source: Institute for Competitiveness and Prosperity; Institute for Strategy and Competitiveness.

¹¹ Canadian data is for 2002 (most recent year available); US data is for 2003

¹² The location quotient is a ratio measure of concentration of a cluster in a particular location relative to the North American average. A location quotient of exactly one means employment is represented in the city exactly in proportion to the industry's representation in the North American economy. A location quotient greater than one means employment is higher than would be expected and this indicates importance or concentration of that industry in a city.

¹³ See Working Paper 5, *Strengthening structures: Upgrading specialized support and competitive pressure*, July 2004, p.24 for a more detailed description of the cluster methodology

In absolute numbers, employment in Toronto's depository institutions sub-cluster is 80,200, second to only New York's 90,300 (SLIDE 18). In relative terms depository institutions are of far greater importance to the Toronto economy than to the peer cities - as indicated by the LQ of 3.58 for Toronto's depository institutions, well ahead of the LQ in the peer cities.

Toronto has a larger **securities** sub-cluster than all its peers except New York, which boasts more than four times Toronto's employment (SLIDE 19). With 56,200 employees, securities is the second largest sub-cluster in Toronto's financial services cluster, accounting for 34 percent of the cluster's employment. Accordingly, the securities sub-cluster is also a relatively important part of Toronto's economy, with an LQ of 3.16, just short of New York, the highest, at 4.00.

Employment in the **insurance products** sub-cluster is represented similarly across North America (SLIDE 20). With employment of 22,200 Toronto's insurance sub-cluster is ahead only of San Francisco.¹⁴ New York has the largest insurance sub-cluster – 88,100 employees – followed by Chicago with 50,900 and Los Angeles with 48,600. With an LQ of 1.08, Toronto's insurance products sub-cluster is only slightly more important to Toronto employment as the insurance products industry is to the North American economy. Similarly, all but one of Toronto's peers have an LQ near 1.00 for insurance products. An LQ of 1.00 across the peer cities indicates that insurance employment is represented similarly in these regions and in North America. The exception is Hartford, well-known to be an insurance centre, which has an LQ of 7.06

and 56 percent of its financial services employees in the insurance products sub-cluster.

Risk capital providers account for relatively few jobs in Toronto - about 1 percent of Toronto's financial service employment, but versus peer cities, the sub-cluster is relatively large and important to Toronto (SLIDE 21). To be sure, risk capital is a smaller sub-cluster for all cities in the peer group, where employment ranges between 77 in Hartford and 5,100 in New York. Toronto's risk capital sub-cluster is the third largest in the peer group with employment of 2,100. Silicon Valley, if added to the peer group, would replace Toronto as the third largest risk capital sub-cluster, but only by a margin of 300 employees. Even as a narrow segment of Toronto's financial services cluster, risk capital has a high LQ of 3.27, meaning the sub-cluster is over-represented in Toronto.

Wages in depository institutions are average relative to the peers, but the gap widens for higher wage sub-clusters. Wages in Toronto's financial services cluster lag the average wage of the peers (SLIDE 22). The average wage of Toronto's financial services cluster is \$75,300 compared to an average of \$115,700 in the peer cities in constant 2003 Canadian dollars. In Toronto's largest sub-cluster, depository institutions, wages are on par with the peers at \$74,400 per year. An attenuation of wage levels becomes apparent with higher-wage sub-clusters. That is, the gap in wages between Toronto and its peers widens with higher wage sub-clusters such as securities and risk capital. Toronto wages for the securities sub-cluster are \$85,700, falling short of the peers by \$96,400. The risk

capital sub-cluster wage gap is even greater. Risk capital wages in Toronto are \$74,100 versus \$190,100 in the peers – a \$116,000 difference.¹⁵ Wages are indicative of productivity¹⁶ or value created per worker, and thus this attenuation indicates lower productivity in Toronto's higher wage financial services sub-clusters.

Toronto's banks perform best in shareholder returns, but have limited global presence. Canada's banks have experienced profitable growth, leading all the top performing countries in total shareholder return of banks (SLIDE 23). Between 2001 and 2005, total shareholder return among Canada's banks was 15.5 percent a year, compared to 5.8 percent in the United States, 9.1 percent in Japan, and 4.7 percent in the United Kingdom.

Despite strong performance on shareholder returns, only two of Canada's banks are in the world's top 50 when ranked by Tier 1 capital (SLIDE 24). In 2005, Canada had fewer banks in the top 50 than nearly all countries listed. Of the nine countries with detailed rankings, only Australia and Switzerland have a similar number of global leaders to Canada. Nine US banks are among the top 50; from France there are six, and there are five each from the United Kingdom and Japan. In 1989, Canada also had two in the top 50 – equal to or surpassing the Netherlands, Australia, and Germany in the group of nine. When these results are normalized by population, Canada's performance is better but still only achieves average global presence. In 1989, Canada had 0.07 banks per million people ranking 6th of the nine countries (behind the United Kingdom, France, Japan, Australia and

¹⁴The addition of Hamilton and Kitchener insurance products employees to Toronto, insurance employment increases slightly to 26,100. Adding local insurance agents and brokers to Toronto's insurance products employment increases the total to 36,700, but Toronto remains the second smallest insurance city on this basis.

¹⁵In our calculations we have combined investment funds sub-cluster with securities brokers, dealers and other exchanges sub-cluster.

¹⁶Task Force on Competitiveness, Productivity, and Economic Progress, First Annual Report, *Closing the prosperity gap*, November 2002, p. 27.

Switzerland which led with 0.45 banks per million people). In 2005, Canada ranked 5th of nine behind Switzerland, the Netherlands, the United Kingdom, and France. Because of a decreasing number of global banks in most of these countries through mergers and acquisitions, only the Netherlands had an increase in the number of banks per million people by 2005. In this changing environment, Canada's banks maintain average global presence.

Another measure of performance is operational efficiency, but conflicting evidence makes Canada's position unclear (SLIDE 25). A recent report by the Bank of Canada finds that by some efficiency measures Canada's performance is at least on par with the United States¹⁷. Net operating revenue per employee is similar and assets per employee are higher in Canada, even with the inclusion of off-balance sheet assets. However, Canadian banks are less efficient than US peer banks with

similar business mixes, when measured by expense ratios. Canadian banks also have more efficiency to gain from expanding operations; that is there are unexploited economies of scale (SLIDE 26). An update to the Bank of Canada analysis published in the Canadian Journal of Economics finds that banks "could enjoy cost savings of at least 6% by doubling their scale of production."

Toronto's securities brokers have developed solid positions in the domestic market, but have not been as successful in expanding globally.

Canadian firms dominate domestic debt and equity financing (SLIDE 27). In the corporate equity market, nine of the top ten domestic underwriters were Canadian firms in 2005. On the corporate debt side, eight of the top ten domestic underwriters were Canadian firms. The results differ for international financing sought by Canadian companies. Foreign firms have a significant presence in the international financing

of Canadian companies (SLIDE 28). Seven of the top ten international underwriters for Canadian companies are foreign securities firms.

The lack of Canadian firms in the global securities market is also evident by the nationality of top advisor firms in M&A deals (SLIDE 29). In 2002 and 2005, four Canadian firms ranked among the top ten advisors on any Canadian deals. CIBC World Markets led the group in 2002 with 27 Canadian deals, and in 2005 TD Securities and BMO Nesbitt Burns held the top two positions with 22 and 30 Canadian deals, respectively. Although active on Canadian deals, Canadian securities firms advising on international deals did not make the top ten advisors list in either 2002 or 2005.

International securities firms also dominate large cross border M&A deals (SLIDE 30). In 2005, Canadian firms advised on five of the thirteen largest Canadian cross border M&A deals.

Exhibit 6 Three Canadian life insurers are among the top 10

2006 Global Rank in life insurance sector	Company	Country	Market Capitalization \$Billions
1	ING	Netherlands	87
2	Manulife Financial	Canada	50
3	Prudential Financial	US	38
4	Metlife	US	37
5	Aviva	UK	33
6	Aegon	Netherlands	30
7	Prudential	UK	28
8	Sun Life Financial	Canada	25
9	Great-West Lifeco	Canada	23
10	AFLAC	US	22

Source: Financial Times Global 500 ranking.

¹⁷ Jason Allen and Ying Liu, "Efficiency and economies of scale of large Canadian banks," Canadian Journal of Economics, Vol. 40, No. 1, February 2007.

Canadian securities firms have not been able to translate their domestic strength to the Canadian cross border M&A market.

Toronto's largest life insurers perform well on profitability and three are global players. Canada's life insurance market is served mainly by Canadian firms (SLIDE 31). Eight of the ten largest life insurers in Canada, ranked by total assets, are Canadian firms. Great-West Lifeco, Manulife Financial, and Sun Life Financial have 64 percent market share in almost equal portions. Standard Life, a British firm, controls the fourth largest share – 7 percent of the domestic market.

Canadian life insurers are more profitable than their US counterparts (SLIDE 32). Two of Canada's largest life insurers, Great-West Lifeco and Manulife Financial, out performed the five largest US life insurers on return on equity between 2001 and 2005. The annual average return on equity between 2001 and 2005 was 19.6 percent for Great-West Lifeco and 15.4 percent for Manulife Financial, compared to 13.8 percent for the most profitable US life insurer.

From their solid domestic market presence and excellent financial performance, Canada's largest life insurers have become global players (*Exhibit 6*). Three Canadian life insurers are among the top ten in the world by market capitalization. Manulife Financial ranked second by market value in 2006, Sun Life Financial, eighth, and Great-West Lifeco, ninth.

The domestic property and casualty (P&C) industry is less well developed.

The P&C market in Canada is split between international and domestic firms (SLIDE 34). ING Canada, the largest P&C insurer in Canada by 2005 net premium income, is one of five foreign firms in Canada's top ten insurers. The five Canadian P&C firms range from Cooperators ranking 3rd to Desjardins ranking 8th, generating a combined 43 percent of net premium income among Canada's top ten insurers.

Return on equity by Canada's P&C insurers has generally tracked the performance of the US P&C market between 1996 and 2006 (SLIDE 35). Returns in both countries declined between 1997 and 2001, from 13 percent to 3 percent in Canada and 12 percent to minus 1 percent in the United States. By 2006, both countries' ROEs exceeded 1997 levels with an ROE of 17 percent in Canada and 15 percent in the United States.

While shareholder returns are good, Canada has no internationally dominant P&C firms (SLIDE 36). The United States has ten P&C firms among the world's top twenty by market value; Canada has none.

Toronto's venture capital industry continues to mature. Toronto's total venture capital investment is comparable to other cities in Canada, but behind many of its peer North American cities (SLIDE 37). In 2005, venture capitalists invested \$270 million in Toronto, well behind the \$410 million invested in Ottawa, but far greater than the \$40 million in Waterloo. Among its North American peers, Toronto's venture capital investment levels were the second lowest. Investment in the leading peer city, San Francisco, at \$3.7 billion, was fourteen times larger than in Toronto.

On a per million inhabitants basis, Toronto's venture capital investment is in range of some peer cities, but stands 8th (SLIDE 38). Venture capital investment per million inhabitants is \$50 million in Toronto, just short of the median level, \$60 million, between Philadelphia and New York. Boston and San Francisco are well ahead of Toronto with venture capital per million population of \$610 and \$880 million. Investment levels in Waterloo are almost double Toronto's – \$90 million – and in Ottawa seven times higher – \$350 million.

The size of the average venture capital deal is of more concern for Toronto than the supply of venture capital. Toronto has a relatively high number of venture capital deals (SLIDE 39). In 2005, Toronto had more venture capital deals than five of the nine US peers. Hartford, Chicago, Philadelphia, Atlanta and Dallas completed fewer deals, although most had more total venture capital investment. Compared to the peers, Toronto has very small venture capital deal sizes.

The average venture capital investment per company is lowest in Toronto – \$3.6 million compared to the peer median of \$9.0 million and the highest investment per company of \$15.3 million in New York (*Exhibit 7*). Another measure of investment scale is venture capital investment per risk capital employee (SLIDE 41). On this basis also, Toronto makes very small investments – \$126,000 versus the peer median of \$390,000 and the highest investment per risk capital employee of \$2.5 million in San Francisco.

While returns results are not available at the city level, our research indicates that Canada’s venture capital returns trail those in the US considerably and that small deal sizes are part of the problem.¹⁸ It is quite likely that because Toronto’s venture capital investments tend to be small, returns are poor.

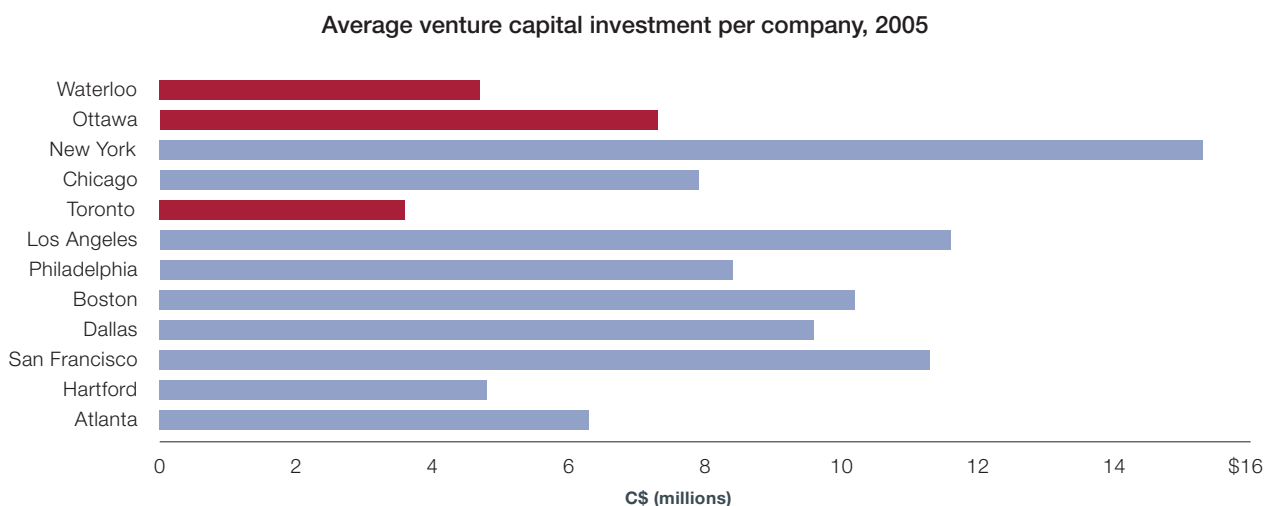
In summary, Toronto’s financial services industry is large and a significant contributor to the Toronto economy, but global success has been limited with the exception of the life insurance industry and wages trail the peers in higher-wage sub-clusters.

To monitor, the strengths of Toronto’s financial services cluster we recommend periodically tracking Toronto’s (or Ontario’s) cluster performance along the following dimensions (*Slide 42*):

KEY BENCHMARKS MEASURES FOR COMPETITIVE PERFORMANCE

- The contribution of Finance and Insurance to GDP to measure the value added by the financial services industry to the economy
- Employment and Location Quotient sub-cluster data to determine the dominance and importance of sub-clusters in the local economy
- Wages in sub-clusters as an indicator of relative productivity performance
- Local firms’ success in global markets to gauge competitive performance relative to the industry’s leaders

Exhibit 7 Average Toronto VC deal is very small



Source: Institute for Competitiveness & Prosperity analysis based on data from Thompson Financial.

¹⁸Institute for Competitiveness & Prosperity, *Agenda for Canada’s prosperity*, March 2007, p. 41-43.

Factor (input) conditions in Toronto's financial services cluster

Generalized and specialized factors together encourage competitiveness and innovation in clusters

AN ABUNDANT SUPPLY of factor (input) conditions foster competitive and innovative clusters in regions (SLIDE 43). Porter distinguishes between **generalized** factors and **specialized** factors. Generalized factors can be deployed in a wide range of industries and "...support only more rudimentary types of advantage. They are usually available in many nations, and tend to be more easily nullified, circumvented, or sourced through global corporate networks " while "specialized factors provide more decisive and sustainable bases for competitive advantage..." which include "...narrowly skilled personnel ... knowledge bases in particular fields, and other factors with relevance to a limited range or even to just a single industry."¹⁹

Our research shows that Toronto's financial services cluster benefits from good generalized factors including an advantageous geographic location, comparable input costs and good macroeconomic conditions relative to its US peers. Moreover, Toronto enjoys good performance in some areas of specialized factors. For example, it has well-educated employees and higher

incidences of professional designations. On the other hand, employees in Toronto's cluster have a lower incidence of university educational attainment; there are also fewer specialized graduate programs in the region. In taxation, Toronto's businesses are burdened by one of the highest Marginal Effective Tax Rates on investment among OECD countries (SLIDE 44).

Toronto has comparable generalized factors relative to other leading clusters. A larger population implies greater potential demand for financial services and products. The Toronto census metropolitan area has an estimated population of 5.3 million, ranking 6th largest out of the 10 peer city regions. New York is the leader with a population estimate of 18.7 million for the annual period of 2004/05 (SLIDE 45).

For Toronto's depository institutions, the top four factor costs, which collectively represent 87 percent of total non-interest cost, are: salaries, pensions and other staff benefits (57 percent); professional services (11 percent); computer and equipment (10 percent); and rental of real estate, premises, furniture and fixtures (9 percent). Toronto's salary costs are comparable to the US peers for depository institutions, but are lower in other sub-clusters (SLIDE 22); professional services costs in the region are

below median; and its rental costs are above. In summary, Toronto's depository institutions seem to have a cost advantage relative to its peers (SLIDE 46).

Toronto's financial services cluster operates in similar macroeconomic conditions as its US counterparts. Over the ten-year period, 1996-2006, the central bank rates for Canada and US have tended to match each other moving in similar directions (SLIDE 47). Since 1961 Canadian and US prime rates have moved together, until 1996, when Canadian prime rates begin to trail US rates (SLIDE 48). Given that inflation-control targeting has been a cornerstone of the Bank of Canada's monetary policy since 1991, it is no surprise that, on average, Canada has enjoyed lower inflation rates since the 1990s (SLIDE 49). Over the period 1981-2005, there has been a widening gap between Canada and US in per capita GDP as measured in constant 2005 Canadian dollars, although GDP growth rates for Canada and the US have been very similar (SLIDES 50-51). What this demonstrates is that small differences in growth rates can have a significant impact on standards of living over the long run. All these observations point to the fact that, by and large, Toronto's financial services cluster enjoys good macroeconomic conditions.

¹⁹Michael E. Porter, *Competitive Advantage of Nations*, p. 78.

A high Marginal Effective Tax Rate on capital discourages business investment in Toronto. One weakness for Toronto is that business investments suffer from one of the highest tax rates in the world. To be sure, in 2006, marginal tax burdens on business investment in Canada dropped to 36.6 percent from 39.1 percent in 2005. This lowered Canada's position in the ranking of tax burdens among OECD countries from the worst to the third worst, below Germany and the United States.²⁰ Ontario's Marginal Effective Tax Rate on capital in 2006 is 42.2 percent which ranks highest when compared to the same OECD countries (SLIDE 52). The main culprits are Ontario's high corporate income tax rates (among Canada's provinces), its levy of the

provincial sales tax on many business investments, and the continuing reliance on the capital tax.²¹ Financial institutions are required to maintain capital for prudential reasons, yet the capital tax produces incentives to minimize the amount of excess capital they hold. By 2010 Ontario's tax rate on business investment will decline with federal corporate tax changes and the province's promised capital tax cuts. But it will still be the highest in Canada – and likely among the highest in the world.

Toronto lacks specialized educational programs relative to its peers. As we have seen, Toronto enjoys favourable generalized factors relative to its peers; however, specialized factors are more

important since they foster competitiveness and innovation for specific industries. Human capital can be highly specialized leading to unassailable advantages for a cluster. Our investigation focuses on two aspects: specialized educational programs and specific industry certifications. For Toronto and its five largest peer cities, we identified the number of universities with accredited MBA programs within a radius of 300 kilometres offering a concentration in finance. Six universities – University of Toronto, University of Western Ontario, McMaster University, York University, Wilfrid Laurier University and Queen's University – meet this criterion. However, this is a small number compared to 16 for New York, 13 for Philadelphia and 13 for Boston. Chicago and Los Angeles

Exhibit 8 Toronto draws on fewer specialized university programs

City	Finance (Accredited)	Financial Engineering (Top 38)
New York	Baruch; Binghamton; Columbia; Fairfield; Fordham; Hofstra; Montclair State; New Jersey IT; NYU; Pace; Rensselaer Polytechnic; Rider; Rutgers; Seton Hall; St. John's; Stony Brook (16)	Baruch; Columbia; NYU; Polytechnic (NY); Princeton; Yale (6)
Chicago	Chicago; DePaul; Loyola University of Chicago; Notre Dame; Northwestern; Purdue (6)	Chicago; Illinois IT; Illinois Urbana Champagne (3)
Toronto	McMaster; Queen's; Toronto; Western Ontario; Wilfrid Laurier; York (6)	Toronto-8th; Waterloo-24th; York-18th (3)
Los Angeles	California State Polytechnic; California State San Bernardino; Loyola Marymount; Pepperdine; UC Irvine; UCLA; USC (7)	Claremont; USC (2)
Philadelphia	Baltimore; Delaware; Drexel; George Washington; Johns Hopkins; LaSalle; Lehigh; Loyola College; Maryland; Penn; Saint Joseph's; Temple; Villanova (13)	
Boston	Bentley; Boston College; Boston U; Brandeis; Clark; Connecticut; Dartmouth; Harvard; MIT; Massachusetts Boston; Northeastern; Quinnipiac; Suffolk; (13)	Boston U; MIT; Worcester Polytechnic; Yale (4)

Note: Finance (Accredited) includes MBA programs offering a concentration in finance and accredited by the Association to Advance Collegiate Schools of Business (AACSB). Financial engineering programs as ranked by Global Derivatives. All programs are within 300 kilometres of the peer city, and due to this classification the Philadelphia and New York clusters may draw from schools in both regions.
 Source: Global Derivatives; Association to Advance Collegiate Schools of Business.

²⁰Institute for Competitiveness & Prosperity, Report on Canada 2007, *Agenda for Canada's prosperity*, March 2007, p. 36.
²¹Task Force on Competitiveness, Productivity and Economic Progress, Fifth Annual Report, *Agenda for our prosperity*, November 2006, p. 41.

have 6 and 7 respectively. By a different measure, Global Derivatives ranks the financial engineering programs offered by universities. Out of the top 38 financial engineering programs, three are in the Toronto region (within 300 km), six in New York, four in Chicago, two in Los Angeles, four in Boston and none in Philadelphia. In summary, Toronto has fewer top specialized university programs in its proximity to benefit its financial services cluster (*Exhibit 8*).

In the Property & Casualty (P&C) insurance industry, we find only ten specialized programs across the country (SLIDE 54). One possible explanation is that more companies in the P&C insurance industry are choosing to have their staff trained in-house; nonetheless, having more post secondary educa-

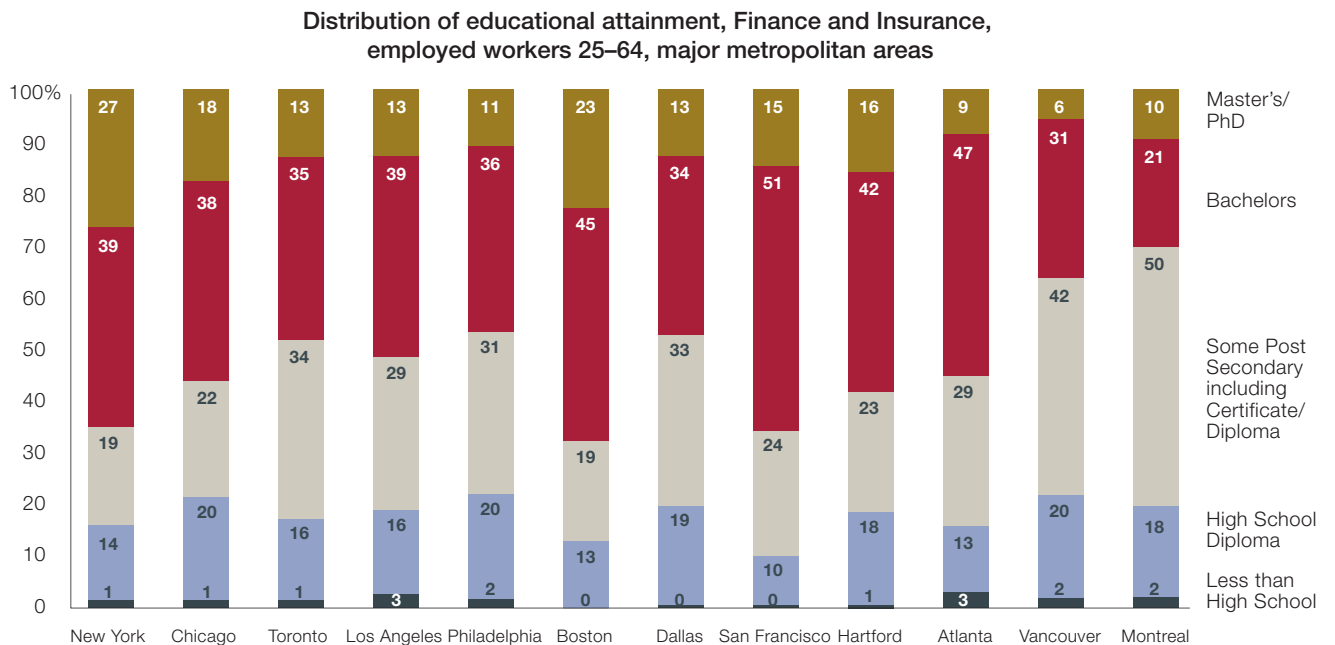
tion institutions offering programs and courses with a P&C focus will benefit the cluster.

Employees in Toronto’s financial services cluster have lower educational attainment. Drawing on educational attainment data from the Canadian Labour Force Survey and the comparable US Current Population Survey, we find that employed workers in the Toronto financial services cluster are less well educated, especially at the university degree level.²² Among employed workers between ages 25 to 64, 48 percent have university degrees, compared to 66 percent in New York. Toronto trails almost all the other cities in our peer group while leading two other big Canadian cities – Vancouver and Montreal²³ (*Exhibit 9*).

Toronto has higher incidence of industry specific designations. On the positive side, measured as the share of employees in the financial services industry, Toronto has a greater incidence of employees with leading financial analyst and planner designations (SLIDES 56–57). In insurance, Toronto has a greater incidence of industry specific life actuarial designations (SLIDE 58).²⁴

Benchmarks help monitor Toronto’s generalized and specialized factors. In summary, Toronto has good generalized factors – advantageous geographic location, comparable input costs, healthy macroeconomic conditions - and some valuable specialized factors, including a greater incidence of employees with industry-specific professional designations. Toronto’s financial

Exhibit 9 Lower educational attainment in Toronto financial services



Note: Canadian data is for 2004, U.S. data is for 2005.

Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada – Labour Force Survey; US Bureau of Labour Statistics – Current Population Survey.

²² Our previous research has indicated that university degree attainment is a driver of productivity. See Fifth Annual Report, *Agenda for our prosperity*, November 2006, p. 28, p. 36.

²³ We show educational attainment data for Vancouver and Montreal for comparison purposes although they are not in the peer group. Our data, based on the *Labour Force Survey*, does not provide information on other Canadian cities.

²⁴ Hartford is added on slide 58 in addition to the other five selected US cities because of its importance in the US insurance industry.

services cluster lags its peers in incidence of university educated staff and has fewer specialized programs. Toronto also has among the highest Marginal Effective Tax Rates on business investment in the world. These benchmarks need to be monitored on an ongoing basis (SLIDE 60). According to Porter, "...it is not mere access to factors but

the ability to deploy them productively that takes on central importance to competitive advantage."²⁵ At the same time, "...human resources, knowledge, and capital factors can be mobile among nations...Factor availability in a nation is not an advantage if the factors leave..."²⁶ Therefore, beyond tracking the measures, TFSA needs

to ask three questions – how to improve the areas that are currently lagging; how to retain the mobile factors e.g. human resources, and attract more; and how to deploy existing factors most productively.

KEY BENCHMARK MEASURES FOR FACTOR CONDITIONS

- Generalized factors – input costs, key macro-economic variables, taxes – which create a basic environment for industries to grow
- Specialized factors – specialized education in financial services; educational attainment of employees; incidence of specialized designations – which foster competitiveness and innovation for particular industries in the long run

²⁵ Michael E. Porter, *Competitive Advantage of Nations*, p. 76.

²⁶ *Ibid.*

Related & supporting industries

TORONTO'S FINANCIAL SERVICES cluster benefits from solid related and supporting industries. In this section we assess the availability and quality of local suppliers and related industries (SLIDE 61). We look at the support provided to the financial services cluster from two perspectives: related traded clusters and supporting local industries.

Within related traded clusters, we look at broad sub-clusters in financial services. As we discussed earlier, broad sub-clusters are not defined uniquely to a cluster and may overlap with other traded clusters. Broad sub-clusters therefore enable us to analyze the support available from industries that are related, but not necessarily part of

the financial services cluster. We also look at another traded cluster, business services. For supporting local industries we look at two sub-clusters within local commercial services which are local professional services and advertising services. These services are essential for the smooth operation of the cluster (SLIDE 62).

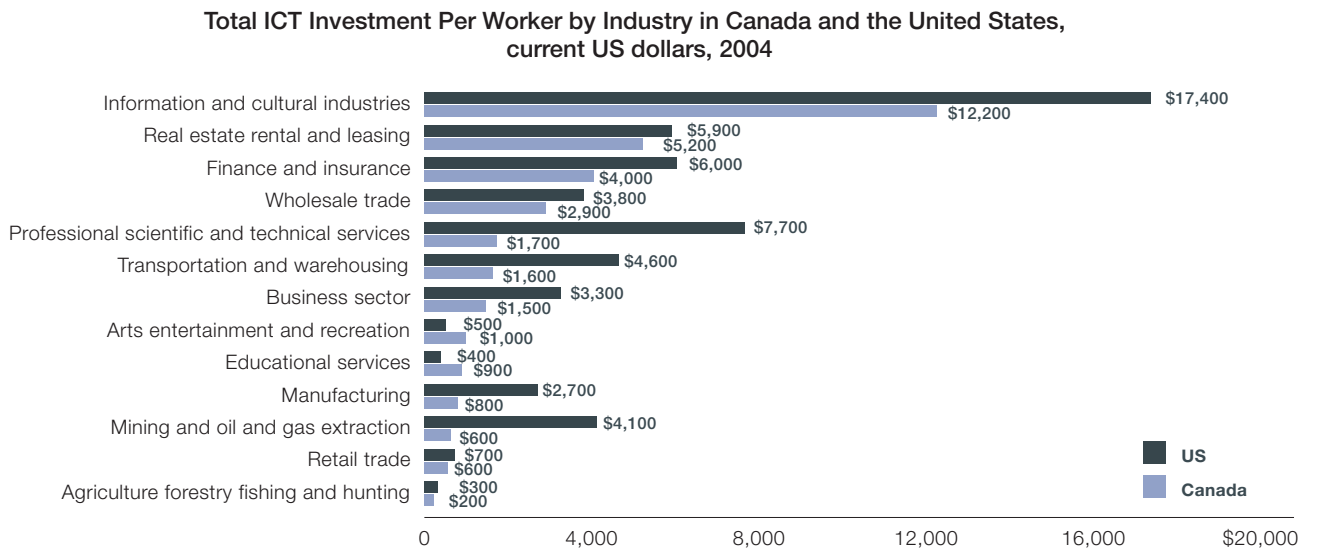
Toronto has strong support from broad sub-clusters in financial services

Clusters can be defined using broad and narrow definitions. Under the narrow definition, industries are unique only to the cluster. Under the broad cluster definition, industries can be

assigned to more than one cluster. This is based on Porter's research into the actual geographic relationships between industries. We have already reviewed the sub-clusters defined under the narrow definition, which includes depository institutions, securities brokers, dealers and exchanges etc (SLIDE 63). In this section we assess broad traded sub-clusters within the financial services cluster. These include computer and communications, research organizations, information providers and printing services sub-clusters.

The computer and communications broad sub-cluster includes: computer facilities management services, information retrieval services and other

Exhibit 10 ICT investment in finance and insurance is higher in United States



Note: ICT stands for Information and Communication Technology.
 Source: Centre for the Study of Living Standards ICT database, Table S17.

computer related services. This broad sub-cluster has high relative importance to Toronto's local economy. Toronto has high employment of 46,200 just behind New York with 47,500. It also has a high LQ (the ratio measure of the concentration of a cluster in a particular location relative to the North American average) of 2.84, just behind San Francisco's 3.18 (SLIDE 64).

Even though Toronto's financial services cluster benefits from access to computer and communications services, ICT investment in the finance and insurance sector lags behind the United States. In 2004, investment in ICT per worker in Canada was 32.9 percent less than the United States (*Exhibit 10*). In this case, Toronto's cluster has the support of these resources, but does not appear to be pressured by competitive forces to invest in them.

In the research organizations sub-cluster, Toronto has the second highest employment and the highest LQ. This broad sub-cluster includes non-commercial research organizations (e.g., economic research). Toronto's employment is 10,400, second only to New York which is 14,800 (SLIDE 66).

The next broad sub-cluster we measure is information providers. Porter's research indicates that financial services clusters are often co-located with industries providing information services. This sub-cluster includes publishing and printing, libraries, news correspondents, and news reporting services for newspapers. In this sub-cluster, New York is significantly stronger than all peer cities. Toronto compares well to the rest, ranking third in employment and achieving an LQ of 1.57 (SLIDE 67). Toronto also has a strong printing services broad sub-cluster with the

highest LQ and with employment of 6,700, ranking fourth amongst its peers (SLIDE 68).

Toronto also has a strong traded business services cluster

The traded business services cluster includes the sub-clusters: management consulting, online information services, computer services, computer programming, marketing related services, professional organizations and services, and engineering services. Toronto has the highest LQ of 1.90 and ranks third in terms of employment behind New York, Los Angeles and Chicago (SLIDE 69).

Toronto lags behind its peers in supporting local industries

To assess the strength of Toronto's supporting local industries we look at two sub-clusters within the local commercial services.

The first is the advertising services sub-cluster. This cluster is above average when compared to our peer cities (SLIDE 70). The second sub-cluster we look at is professional services, which lags behind the peer cities. This sub-cluster

includes accounting, auditing, book-keeping and legal services. Employment in Toronto is 73,500 which is behind all the peers except for Hartford (SLIDE 71).

Furthermore, Toronto has the lowest incidence of law firms and lawyers. It has 0.97 lawyers per 100 employees in the financial services cluster, whereas the number for the peers ranges from 2.27 per 100 employees to 1.4 per 100 employees, for Chicago and Philadelphia respectively (SLIDE 72). Next we looked at the rankings of law firms by value of merger deals in 2005; only one Toronto based firm is on the list of top 25 law firms (SLIDE 73).

In summary, Toronto's financial services sector benefits from good supporting and related industries.

The TFSA should continue to monitor the performance of Toronto's and Ontario's supporting industries relative to its peers (SLIDE 74). They should ensure collaboration with stakeholders in computer and communication services, marketing related services and professional services as they develop strategies for strengthening Toronto's financial services cluster.

KEY BENCHMARK MEASURES FOR RELATED AND SUPPORTING INDUSTRIES

- Computer and Communications services – provide technical support for financial services cluster
- Traded business services – promote the services provided by the cluster
- Professional services – legal, accounting, consulting – are essential for the smooth operation of the cluster

Demand conditions

Demand size and buyer sophistication drive competition and innovation in clusters

DOMESTIC BUYERS are important contributors to the strength of traded clusters (SLIDE 75). As Porter observes, firms can "...gain competitive advantage if domestic buyers are, or are among, the world's most sophisticated and demanding buyers for the product or service."²⁷ A high volume of local demand encourages development of domestic providers of financial services and products; greater sophistication among local buyers drives healthy competition which in turn leads to innovation in products and processes. Therefore, we study the demand conditions from two dimensions – demand size and sophistication of buyers as measured by the mix of products demanded by three customer segments – households, corporate and governments. Toronto's financial services cluster has adequate demand size across all three segments. Although personal consumption of financial services per capita is lower than the US, it is still among world leaders.²⁸ On the corporate side, the United States is characterized by more debt and equity per capita than in Canada. Government demand for financial services, as evidenced by levels and trends in

borrowing, matches US experience. Toronto's households are fairly sophisticated, as indicated by shifts in portfolio mix of household financial assets which demonstrate convergence with the more sophisticated mix in the US; Canadian firms match US experience in mergers and acquisitions but are less likely to require financing for initial public offerings. While it is difficult to match US experience in the sophistication of demand for financial services, Canada does not experience widespread weaknesses in this regard (SLIDE 76).

Toronto has adequate domestic demand size across the three segments. Between 1991 and 2005, Canadian households have lower per capita net worth than their US counterparts, while US households experience higher volatility as measured by annual changes in net worth (SLIDES 77–78). Over the same period, Canadian households also have lower levels of per capita financial assets (SLIDE 79).

Canadian households have lower levels of per capita liabilities between 1981 and 2005 (SLIDE 80). Mortgage debt is probably the single largest liability on an average household's balance sheet. A key factor behind the higher average mortgage debt in the United States is the deductibility of mortgage interest. In 1981, the mortgage balance per capita in US households was 51 percent

higher than in Canada; this differential increased significantly to 150 percent in 2005 (SLIDE 81). Furthermore, there has been greater use of consumer credit in the United States in the same period (SLIDE 82).

Two additional measures of personal demand size are levels of household savings and expenditure on life and health insurance. From 1981 to 2005, on a per capita basis, Canadian and US households have had similar levels and trends of savings starting at \$3,000 in the United States and \$3,300 in Canada and gradually declining in tandem to \$700 and \$300 respectively (SLIDE 83). Available data between 2001 and 2004 suggests that Canadians spend less on life and health insurance (SLIDE 84). This difference is primarily explained by the lack of public health insurance in the US and the corresponding need for private health insurance coverage in the US. In addition, demand for life and health insurance coverage in Canada is reduced by the imposition of sales taxes on group life and health insurance premiums in Ontario and Quebec.

To assess demand size from corporate customers, we compare the levels of corporate equity and bonds in the United States and Canada on a per capita basis. Comparable data are available for 1990 to 2005. During this period, Canada and the United States

²⁷ Michael E. Porter, *Competitive Advantage of Nations*, p. 89.

²⁸ OECD Financial Accounts, available online: http://stats.oecd.org/wbos/default.aspx?DatasetCode=SNA_TableE720

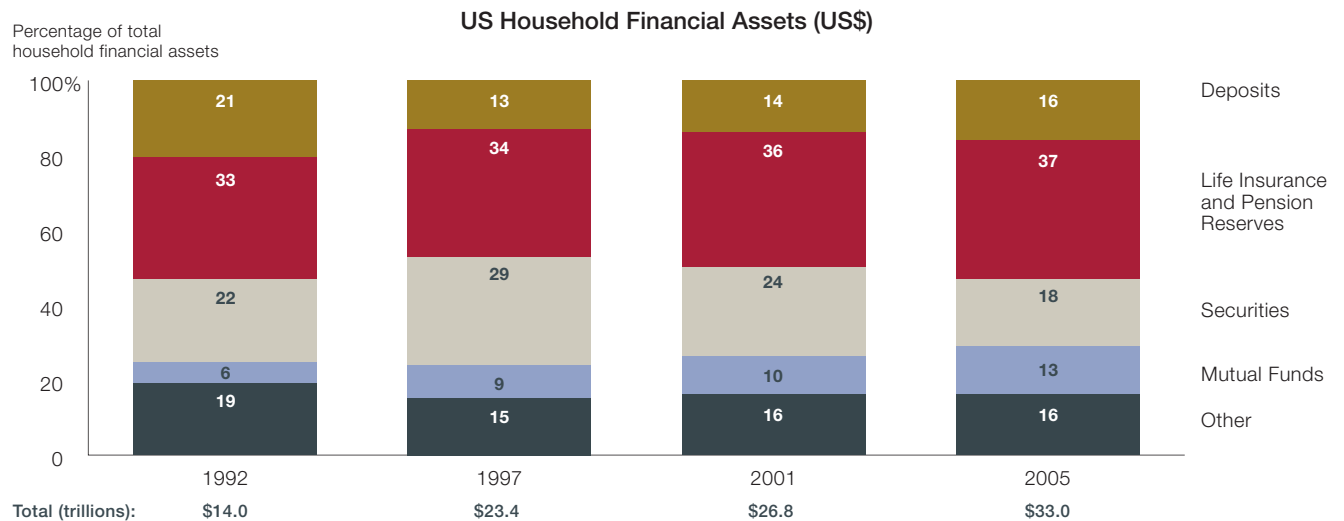
started at a similar level of corporate equity – around \$20,000 per capita. The high-tech bubble beginning in the mid-1990's and the subsequent market crash in 2001 significantly increased the volatility of the levels of corporate equity in the US. It peaked at above \$76,700 per capita in 1999 followed by a drastic downturn to \$36,100 in 2002; Canada has seen a much steadier, albeit flatter,

increase in per capita corporate equity (SLIDE 85). On the debt side, US corporations raise much more capital from the bond market than their Canadian counterparts (SLIDE 86).

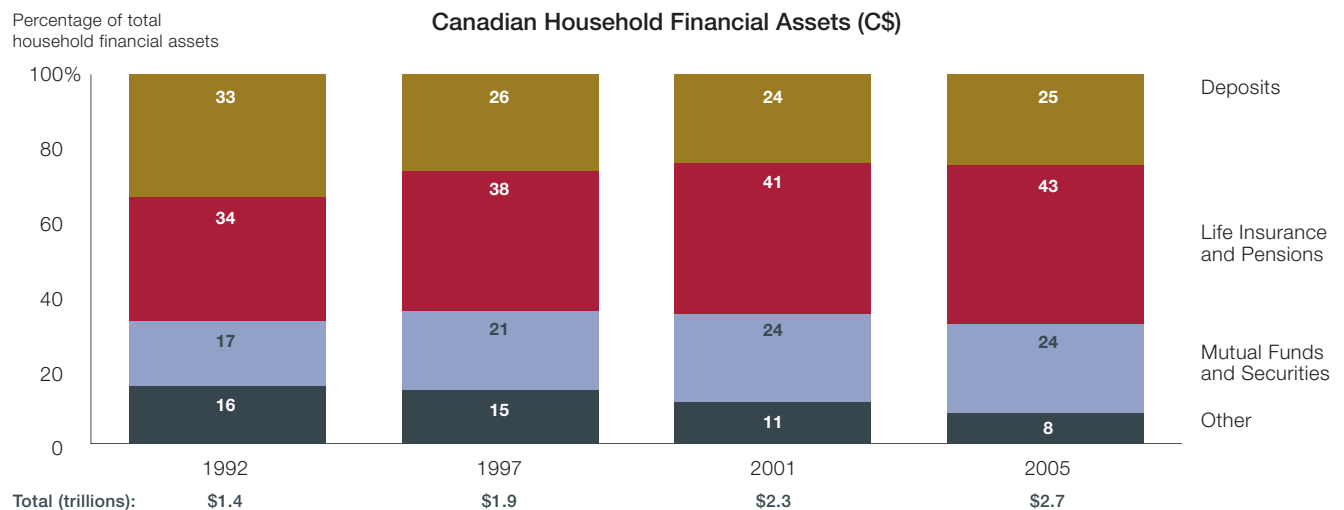
Changes in government debt levels create demand for financial services and products. Between 1982 and 2000, annual changes in federal govern-

ment debt per capita in Canada and the United States moved in a similar overall downward direction. In 2000, the downward trend in US federal government debt reversed while in Canada the downward trend leveled off (SLIDE 87). Canada's provincial and local government debt spiked in the mid 1990's, while US state and local debt was in decline. Since 2000, US state and local

Exhibit 11 US and Canadian households are less likely to own securities and mutual funds



Note: These data do not include non-incorporated businesses' financial assets, which represent between 2.3% and 6% of household's financial assets. Source: Institute for Competitiveness & Prosperity analysis based on data from the US Federal Reserve.



Note: Includes unincorporated businesses. Source: Institute for Competitiveness & Prosperity analysis based on data from Statistics Canada (Table 378-0004).

government debt has been increasing while Canadian debt continued to decrease until 2003 when there was an upturn (SLIDE 88).

Households are fairly sophisticated consumers. Thus far we have been looking at the size of domestic demand for Toronto's financial services cluster; next we examine the level of sophistication of its buyers. In 2005, Canadian households allocated 68 percent of their total financial assets to less risky, less sophisticated deposits and life and pension reserves versus 53 percent in the United States (*Exhibit 11*). US households have traditionally been more likely than Canadians to invest in individual company stocks. However, this gap between the two countries has been closing as US households are less likely to hold stocks since the 2001 market downturn. In asset terms, the share of mutual funds and securities of total household financial assets for Canadians has increased from 17 percent in 1992 to 24 percent in 2005 while in the United States, the percentage grew slightly from 28 to 31 percent (SLIDE 90).

Less sophisticated corporate buyers result in lower levels of industry revenues. One indicator of buyer sophistication of corporate consumers

is the amount of merger and acquisition (M&A) financing. Between 1994 and 2004, the values of M&A activities as a percentage of GDP in Canada and the United States have moved in tandem with Canada remaining slightly above (SLIDE 92); however, on another measure, the Initial Public Offering (IPO) market in the United States is much larger. Values of IPOs as a percentage of GDP are higher in the United States (SLIDE 93).

Larger demand size and higher level of buyer sophistication ultimately translate into bigger revenues for the financial services industries. As a percentage of GDP, the securities industry in Canada has seen continuously lower revenues than its US counterpart from 1990 to 2005. US security industry revenues as a percentage of GDP tripled from 1 percent to 2.9 percent during this period. Canada's security industry revenues also increased significantly, but at much lower levels, growing from 0.4 percent to 1 percent (SLIDE 94).

Government regulation and demand conditions. A key challenge in the regulatory framework relevant to Toronto's financial services cluster is the multi-jurisdictional regulation of securities in Canada. Porter concludes that effective product and process regulation can be helpful to creating good

demand conditions through appropriate standards setting, consumer protection, and as a stimulus to innovative upgrading. But, he adds, "regulation undermines competitive advantage, however, if a nation's regulations lag behind those of other nations or are anachronistic."²⁹ While we did not conduct extensive research into the impact of Canada's regulation of the securities industry, we note that others have determined that the presence of 13 provincial and territorial securities regulators undermines the international competitiveness of our securities industries – with an impact on the customers and industries they serve.³⁰

Key benchmarks on demand size and buyer sophistication help create long term global competitiveness. We conclude that Toronto's financial services cluster benefits from adequate demand size, but overall, demand is less sophisticated than in the US peers. In the household segment, Canadian consumers are converging on US patterns. Going forward, we encourage the TFSA to track developments in this area to monitor how well the cluster is benefiting from sophisticated and demanding local consumers (SLIDE 95).

KEY BENCHMARK MEASURES FOR DEMAND CONDITIONS

- Demand size – levels of household assets, liabilities, net worth; levels of corporate and government debt & equity – which encourage development of domestic providers of financial services and products
- Buyer sophistication – make-up of household financial assets; M&A activity; IPO activity - which drives healthy competition that leads to innovation

²⁹Michael E. Porter, *Competitive Advantage of Nations*, pp. 647–9.

³⁰See, for example, the report of the Wise Persons' Committee to review the structure of securities regulation in Canada (http://www.wise-averties.ca/main_en.html), the report by the Crawford Panel on Single Securities Regulator (<http://www.crawfordpanel.ca/index.html>), and a report on Canada's economy by the International Monetary Fund (<http://www.imf.org/external/np/sec/pn/2007/pn0718.htm>)

Firm strategy and rivalry

Toronto lacks domestic strategy differentiation, especially among its banks

VIGOROUS DOMESTIC RIVALRY creates pressure on firms to improve and innovate (SLIDE 96). The pattern of rivalry in the domestic market plays an important role in upgrading firms' competitive advantages and their prospects for international success.

In assessing the intensity of rivalry we consider two types of competition identified by Porter – rivalry based on operational effectiveness versus strategic positioning (*Exhibit 12*). Firms competing on the basis of operational effectiveness imitate best practices

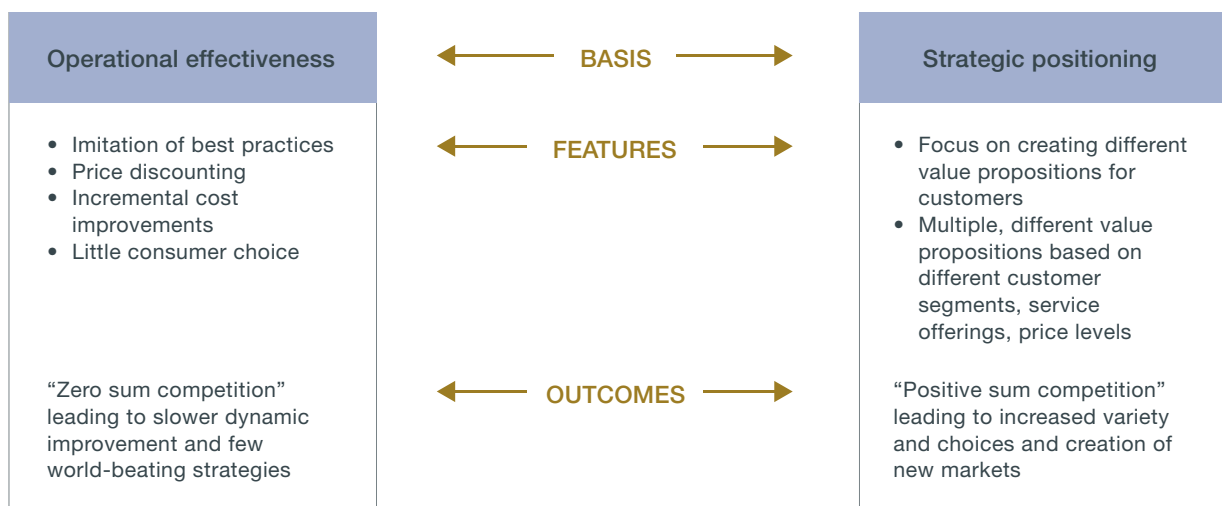
in areas such as service processing and technologies employed. This type of competition leads to similar products and pricing among rivals. Cost improvements in this environment are incremental and the market develops with little true consumer choice. The outcome is slower dynamic improvement of the sector and few world-beating strategies. Porter calls this zero sum competition.

The second type of competition, strategic positioning, Porter identifies as more fundamental to success in an advanced economy. Here competition is focused on creating different value propositions for customers. The intensity of competition is determined by the degree to which companies have distinctive

strategies defined by different customer segments, services offerings, and price levels. Positive sum competition is the outcome, where there is increased variety and choices and new markets are created.

Our analysis of rivalry in Toronto's financial services cluster focuses on the health of competition based on strategic positioning (SLIDE 98). We first determine how concentrated the cluster is among domestic firms and relative to foreign firms in the domestic market. A review of asset growth in Canadian firms measures any success of rivalry among them. We then assess the degree of strategy differentiation among Canadian firms compared to the difference among US firms. The analysis is mainly of the

Exhibit 12 **Two types of competitive rivalry**



Source: Michael Porter, "Competition and Antitrust: A Productivity-Based Approach," May 2002.

banking sector, due to limited data availability for other financial services sectors.

The banking industry remains concentrated in Canada, but the US banking industry is also concentrated at the city level. The top six banks in Canada accounted for 82 percent of total domestic banking assets in 2003 (SLIDE 99). This share is largely unchanged since 1997 where the top six banks held 86 percent. In both years the top six were Royal Bank of Canada (RBC), CIBC, BMO Bank of Montreal (BMO), Scotiabank, TD Canada Trust³¹ and National Bank of Canada (National Bank), but their market shares have become more equal. The first five have traditionally accounted for most of the market share in Canada – and there has been little change in these results. In 1997, the market shares of each of the top five ranged from 13 percent to 20 percent. By 2003, the range narrowed to between 13 percent for BMO to 18 percent for RBC. National Bank falls outside of the top five's market share range – 7 percent in 1997 declining to 5 percent in 2003. Overall RBC, CIBC, BMO and National Bank lost market share to Scotiabank and TD Canada Trust. This is in part due to TD's acquisition of Canada Trust in 2000. As a result, the concentration of the banking industry remains high among the top six.

On a national basis, the US banking industry is less concentrated than in Canada (SLIDE 100). The top six banks' assets accounted for 41 percent of total US banking assets in 2003. Washington Mutual holds the smallest share of the six, 3 percent, compared to J.P. Morgan Chase with the top market share of 11 percent. The picture differs locally.

City-by-city competition in the United States is as concentrated as Canada's (SLIDE 101). We assume the concentration of the Canada's banking industry is similar on a city-by-city basis to the national result. The top two banks in Toronto's peer cities account for at least 29 percent market share when measured by deposits, and as much as 54 percent. Canada's top two banks' market share of 34 percent sits between this range set by Chicago at the low end and Hartford at the high end. Market share of the top three banks in each region shows comparable concentration between Canadian and US cities.

Foreign firms have a small presence in Canadian banking and it has declined slightly. Since 1999, the share of foreign firms in Canada's finance and insurance industry has been constant (SLIDE 102). Foreign firms in Canada accounted for 19 percent of total finance and insurance assets in 1999, falling to 15 percent by 2004. Depository credit intermediation (which includes banks and credit unions) has fewer foreign firms (SLIDE 103). In 1999, foreign firms accounted for only 11 percent of total assets, and this declined slightly by 2004 to 7 percent. Firms from the European Union were responsible for most of the decline, decreasing their share in Canada's banking industry from 8 percent to 5 percent. The share of Canadian banking assets held by US firms has remained unchanged at 2 percent.

Asset growth for Canadian banks is lagging behind US banks. Total asset growth among Canada's banks is below growth of US banks (*Exhibit 13*). Between 2000 and 2006, real compound annual average growth in total assets for Canadian banks was

3 percent, increasing from \$1,600 to \$2,100 billion, compared to 5 percent for all large US commercial banks, whose total assets went from \$8,300 to \$11,100 billion.

We selected a peer group of US banks with similar business mixes to compare to Canadian banks based on a recent report by the Bank of Canada.³² Total asset growth in the six-year period for these US peer banks was four times the Canadian banks' rate or 11 percent compounded annually. This growth in the US was largely driven by acquisitions.

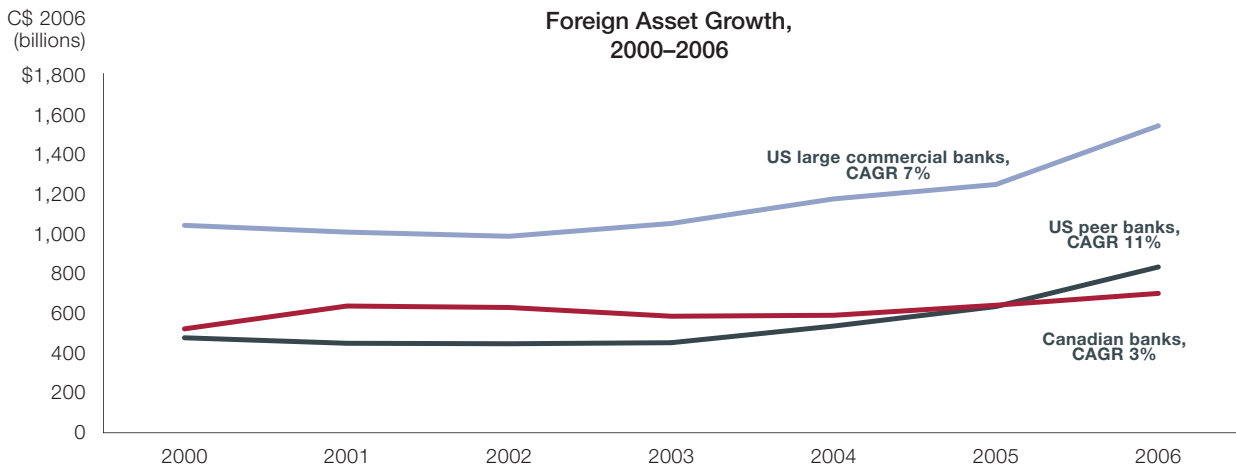
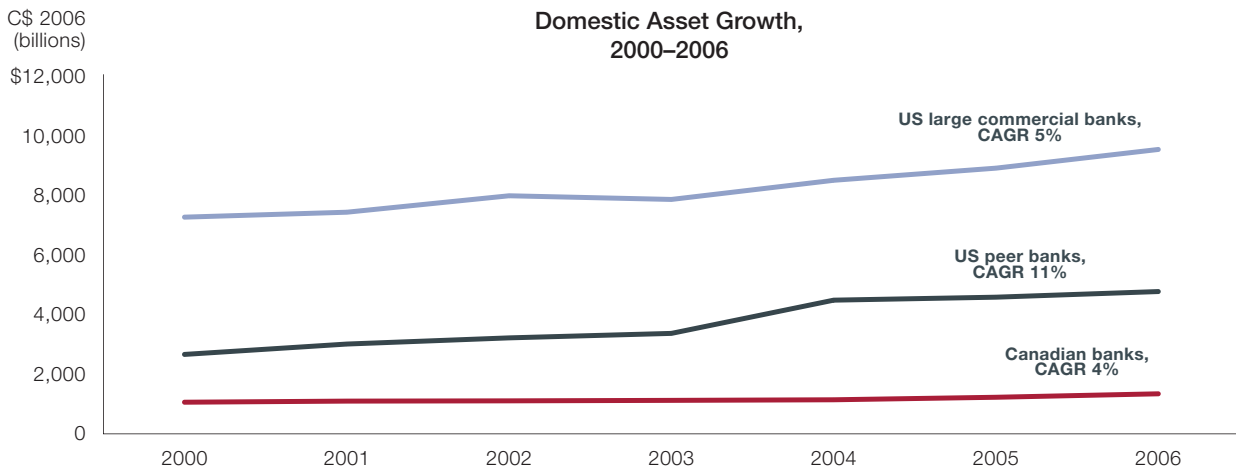
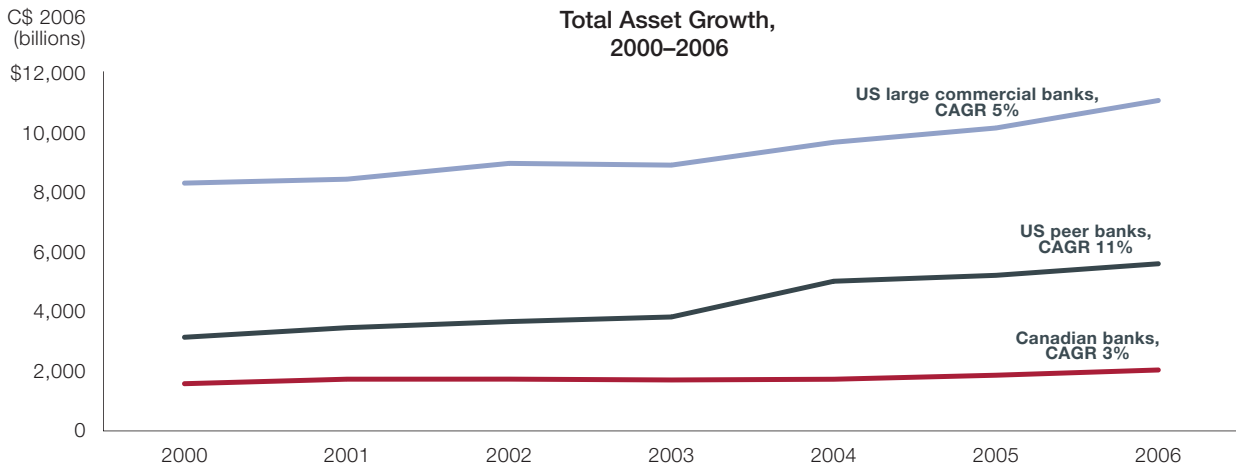
Domestic asset growth in Canadian banks also trails US counterparts' domestic growth. Domestic assets of both US large commercial banks and the group of US peer banks grew faster than Canadian banks' domestic assets – 5 percent and 11 percent a year for the respective US comparators versus Canada's 4 percent annual growth between 2000 and 2006. Over this same period, foreign asset growth of Canadian banks was on average 3 percent a year, slightly lower than their domestic asset growth. In contrast, US large commercial banks grew their global business by 7 percent a year, and US peer banks by 11 percent annually.

While this lag in domestic and foreign growth by Canadian banks might suggest less dynamism in Canada's financial services market, some of this difference is due to the fact that the American sector is consolidating, whereas consolidation in Canadian banking is for the most part prohibited. On the other hand, vigorous domestic rivalry driven by differentiated strategies would result in growth through creation of new markets, meeting new needs and new customers who would be

³¹ TD ranked among the top six banks in 1997, and by 2003 became TD Canada Trust.

³² Jason Allen, Walter Engert, Ying Liu, "Are Canadian Banks Efficient? A Canada-U.S. Comparison", July, 2007, p. 8.

Exhibit 13 Total and domestic asset growth of Canadian banks is lagging behind US and foreign asset growth is limited



Note: PPP is used to convert US dollars into Canadian dollars. Compound Annual Growth Rate (CAGR) based on trend line. US large commercial banks are defined by Federal Reserve Board. 12 US peer banks are Wachovia, Bank of America, Wells Fargo, J.P. Morgan Chase, SunTrust, National City, Fifth Third, PNC, U.S. Bancorp, Keycorp, BB&T and Citizens Financial. US bank's fiscal year ends on December 31, Canadian bank's fiscal year ends on Oct 31. US banks data from Fed dates back to March 31, 2001, therefore CAGR is calculated based on a period of 5 3/4 years.

Source: Institute for Competitiveness & Prosperity analysis based on Canadian data from the annual reports of the six Canadian banks; US data is from Federal Reserve Board.

drawn into the market. We evaluate the degree of strategy differentiation among Canadian banks next.

Bank rivalry in Canada is based on relatively undifferentiated competitive strategies. To measure differentiation in bank strategies we calculated the coefficient of variation³³ for various financial and operational ratios among the top six Canadian banks and their US peer banks identified earlier. The measure is intended to compare dispersion within Canada of a given ratio to dispersion of the same ratio within the United States. The ratios were chosen based on data availability and not to emphasize the level or the importance of one ratio over another. In other words, we measure the differences in strategies irrespective of the types of strategies pursued.

As we would expect, Canadian and US banks operate in a similar range of net interest margins and have similar allowances for bad debt (*Exhibit 14*). The differences between Canadian banks and US banks on the net interest margin ratio, as measured by the coefficients of variation, are similar – 24 percent and 22 percent, respectively in 2005. In other words, variance in profitability on the interest earning business is similarly low within both countries. Also, the ratio of allowance for credit losses as a percent of loans has a coefficient of variation of 23 percent in both countries.

But, Canadian competitors in the banking industry have limited differentiation in nearly all other ratios when compared to the differentiation in the United States. There is greater variation in US banks offering credit card services and residential mortgages. Credit card loans as a percentage of

total loans has a coefficient of variation in the United States of 131 percent versus 28 percent in Canada, and on the residential mortgage ratio 51 percent in the United States versus 19 percent in Canada.

Most notable on the assets ratios is the higher coefficient of variation in the United States for trading accounts as a percent of total assets – 168 percent in the United States versus 21 percent in Canada – and foreign assets as a percent of total assets – 217 percent in the United States compared to 20 percent in Canada. With respect to the trading account ratio, there are some US banks that focus intensively on managing for profit in the near term while others do not. In Canada the average trading account ratio per total assets is 26 percent and most banks operate close to this. Foreign operations also make up a similar share of business for Canadian banks, while the share among US competitors varies significantly.

The ratios for total liabilities also varied more so among the US peer banks than Canada's banks. The variations on trading liabilities per total liabilities are the most different between the two countries. The coefficient of variation in 2005 was 34 percent in Canada versus 179 percent in the United States. This means there are relatively limited differences in short trading position strategies among Canadian competitors.

The extensiveness of branch networks among US banks also varies significantly compared to Canada. On measures of deposits per ATM, deposits per branch, and ATMs per branch, the coefficients of variation are lower in Canada.

The only ratio for which there is more variation in Canada is retail banking and small business banking as a percent of total revenue. Canadian banks pursue more differentiated strategies when it comes to these traditional lines of business – a coefficient of variation of 43 percent in Canada versus 28 percent in the United States.

A review of the same ratios in 2000 provides similar evidence of Canada's banks having relatively undifferentiated competitive strategies (*SLIDE 111*). Again on the ratios for trading account assets, foreign assets, trading liabilities, credit card loans, residential mortgages, and deposits per branch there was much greater differentiation among US competitors. Only on the ratios of ATMs per branch and retail and small business banking revenue were Canada's banks as differentiated as US banks.

World leaders in banking have come from environments of differentiated strategies. Porter's research indicates that nations with leading world positions in specific clusters often have a number of strong local rivals who constantly seek to gain an edge.³⁴ Strong domestic competitors create visible pressures not only to sharpen advantages at home but to sell abroad in order to grow. World leadership for firms in financial services has grown out of vigorous, locally competitive markets where alternative approaches to strategy created distinct advantages, rather than static efficiency. We review the evidence from other countries with global leading financial services firms.

Global leaders from countries besides the United States tend to have come from local environments of differentiated strategies (*SLIDE 112*). Of the top fifteen

³³The coefficient of variation is calculated by dividing the standard deviation of ratios by the mean ratio. A higher coefficient means greater dispersion.

³⁴Michael E. Porter, *Competitive Advantage of Nations*, pp. 117-120 and p. 216.

Exhibit 14 **Domestic strategy differentiation is limited among Canadian Banks****Strategy differentiation among local banks in Canada versus the United States, 2005****Basic lending measures**

Measure	Average		Standard Deviation		Coefficient of Variation*		Variation Result
	Canada	US	Canada	US	Canada	US	
Net interest margin	2%	3%	0%	1%	24%	22%	Similar
% of Loans (net of allowance for credit losses):							
> Allowance for credit losses	1%	1%	0%	0%	23%	23%	Similar
> Credit card	3%	4%	1%	6%	28%	131%	Lower in Canada
> Residential mortgage	41%	20%	8%	10%	19%	51%	Lower in Canada

Asset measures

Measure	Average		Standard Deviation		Coefficient of Variation*		Variation Result
	Canada	US	Canada	US	Canada	US	
% of Total Assets at year-end:							
> Trading account	26%	4%	6%	7%	21%	168%	Lower in Canada
> Securities	7%	15%	2%	7%	33%	43%	Lower in Canada
> Foreign Assets	32%	4%	6%	10%	20%	217%	Lower in Canada
> Loans, net of allowances	49%	63%	8%	13%	16%	21%	Lower in Canada

Liabilities measures

Measure	Average		Standard Deviation		Coefficient of Variation*		Variation Result
	Canada	US	Canada	US	Canada	US	
% of Total Liabilities at year-end:							
> Deposits	69%	68%	4%	8%	6%	11%	Lower in Canada
> Trading Liabilities	14%	2%	5%	4%	34%	179%	Lower in Canada

Branch network measures

Measure	Average		Standard Deviation		Coefficient of Variation*		Variation Result
	Canada	US	Canada	US	Canada	US	
Deposits per ATM (millions)	\$68	\$41	\$14	\$16	20%	39%	Lower in Canada
Deposits per branch (millions)	\$163	\$84	\$33	\$42	20%	50%	Lower in Canada
ATMs per branch	2.5	2.2	0.6	0.8	26%	38%	Lower in Canada
Total assets at year-end per employee (millions)	\$7.4	\$4.7	\$0.8	\$1.1	11%	24%	Lower in Canada
% of Total revenue from retail banking and small business	46%	48%	20%	13%	43%	28%	Higher in Canada

* Coefficient of Variation = Standard Deviation/Mean; higher ration means greater dispersion

Note: Canadian data are based on six Canadian banks; US are based on 12 US peer banks. All US results are in US GAAP and US dollars; all Canadian results are in Canadian GAAP and Canadian dollars.

Source: Institute for Competitiveness & Prosperity analysis based on US and Canadian Banks' historical annual reports; US Federal Reserve Board.

global banking leaders, more than one bank originated in France, Switzerland, the United Kingdom (UK), and the Netherlands (as well as the United States). We assessed the strategies pursued by leading banks in each of those countries.

French banks have the least differentiated strategies between them. Credit Agricole, BNP Paribas, and Société Générale run similar lines of business and have a similar mix of domestic versus international business. Credit Agricole, however, expanded globally from a base of rural market services and majority ownership by 43 credit unions.

The two Swiss global leaders, UBS and Credit Suisse, developed more distinct strategies. UBS became a world leader through private banking services and acquisitions, while Credit Suisse grew from its strengths in investment banking and insurance, until it was sold off recently.

The three global leading UK banks developed from three different models. Barclays operates in most banking segments with a strong domestic focus on banking, while the Royal Bank of Scotland (RBS) grew from a strong domestic insurance business, expanding globally through acquisitions in the United States and Europe. HSBC, the most differentiated of the three, originally built its business on foreign trade in mainly Hong Kong and Asia, and consequently has built leadership in international banking. Unlike RBS, who maintains the local branding strategy of the companies they acquire, HSBC re-brands their acquisitions with the HSBC global brand.

Global leading banks from the Netherlands exhibit the most differentiated strategies. ING and ABN AMRO grew from very different bases. At ING, banking and insurance are at the root of their international success, whereas ABN AMRO's primary focus on banking for mass affluent consumers and mid-size commercial businesses bolsters its global leadership.

In Japan, a leading financial services centre, there is acknowledgement that world leadership comes from vibrant domestic competition and pressure to build distinct advantages. Recently, Japan's financial services minister expressed concern over the international competitiveness of Japanese financial institutions, pointing to a need for greater competition domestically.³⁵ In Japan, regulation and relatively high taxes have limited the international competitiveness of Japan's financial institutions. Mr Yamamoto plans to open up Japan's financial sector to greater foreign competition, recognizing that this "might create difficulties for the management of Japanese banks". However, he believes "there will be major benefits for Japan as a nation".

Canada's securities sector is dominated by domestic firms owned by banks. The top six Canadian brokers in both the retail and institutional securities business are RBC, TD Canada Trust, BMO, CIBC, Scotiabank, and National Bank when ranked by total revenue (SLIDES 113-114). These integrated firms were responsible for 69 percent of the industry's profits in 2005 (SLIDE 115). In contrast, the major players in the US securities industry are specialists (SLIDE 116). The top ten US brokers range from

Morgan Stanley at \$576 billion in assets to Federated Investors at \$179 billion for 2005.

Canada's integrated firms have not developed world beating strategies that position them as global leaders. We concluded earlier that Toronto's security brokers have developed solid positions in the domestic market, but have not been as successful in expanding globally. Even on deals involving Canadian companies seeking international financing and large cross border deals, foreign firms dominate. Further investigation is needed on how differentiated Canada's securities industry is, but it is clear that domestic rivalry among these integrated firms has not created leading Canadian competitors on a global scale.

Life insurer rivalry in Canada has been based on competitive strategies that are as differentiated as in the United States. It is difficult to conduct analysis of variability in strategies of Canada's life insurance companies as we did for banking. There is simply less public information that is comparable between companies and across borders. The Canadian Life and Health Insurance Association analyzed their own data sources to assess variability in types of premium income for the largest four companies in Canada and the largest three in the United States (SLIDE 117). This analysis indicates that the leading Canadian life insurers have had as much variability in their strategies as the leading US insurers. This is in contrast to the situation in banking where we discerned much less variability in Canadian banks' strategies than in the strategies of US banks.

³⁵ John Plender, David Pilling and Michiyo Nakamoto, "Japan 'needs more financial competition'," Financial Times, March 1, 2007.

Canada's life insurance companies were well positioned to take advantage of the growth opportunity provided to them by demutualization. In March 1999, Parliament allowed Canada's large mutually owned life and health insurance companies to convert into stock companies, or "demutualize". Canada's four largest mutual insurance companies demutualized when the legislation was passed.³⁶ They gained greater access to capital, which could be used to compete in new markets, develop new technologies, or fund new acquisitions. This dramatic change in the regulatory framework for life insurance companies allowed them to strengthen their global presence, particularly Manulife and Sun. Both are in the top ten by market capitalization, as is Great-West.

A study by Chugh and Meador³⁷ finds that, post-demutualization, several large life insurers, including Canada's largest three in 1999, have implemented a successful strategy based on higher growth, greater profitability, cost effectiveness and shifts in product mix. The authors attribute success to changes in managerial behaviour, firms' taking more risk managing their portfolio assets, and availability of new securities for investors. Consequently, demutualization has had a positive impact on the industry.

Demutualized companies with over \$5 billion in equity must be widely held (i.e., an individual or firm is limited to 20 per cent of voting shares).³⁸ Thus, large life insurance companies in Canada are still precluded from mergers and acquisition by foreign firms. Large banks are also not permitted to acquire or merge with large demutualized insurance companies and vice versa.

To continue measuring the intensity of rivalry in Toronto's financial services cluster, the TFSA needs to track the following key benchmarks (SLIDE 118):

KEY BENCHMARKS MEASURES FOR RIVALRY

- Trends in competitive shares by sector to assess concentration of financial services
- Identification of differing strategies by sector to assess competition based on strategic positioning

³⁶The four companies that demutualized were Sun, Manulife, Clarica, and Canada Life. Clarica was subsequently purchased by Sun and Canada Life was subsequently purchased by Great-West.

³⁷Lal C. Chugh and Joseph W. Meador, "Demutualization in the Life Insurance Industry: A Study of Effectiveness," November 2006.

³⁸Department of Finance Canada, "Canada's Life and Health Insurers", September 2002, p. 7

Conclusion - Recommendations to strengthen cluster competitiveness

IN PORTER'S WORDS, "The 'diamond' is a mutually reinforcing system. The effect of one determinant is contingent on the state of others" (SLIDE 119).³⁹ In order to strengthen cluster competitiveness and support continued growth in the sector, a strategy should reinforce this "mutually reinforcing system" (*Exhibit 15*).

In **factor conditions**, a strategy for the cluster could include:

- the creation of specialized diploma and degree programs in the Toronto area
- to encourage the creation and retention of critical human resources, identify on an ongoing basis cluster-specific education and training opportunities

- a review of efforts to integrate immigrants in the financial services' workforce
- provision of ongoing information on Toronto's cost performance
- take a leadership role in increasing awareness of opportunities for smarter taxation

Exhibit 15 TFSA's role across the diamond

Factor Creation	Related and Supporting Industries	Demand Conditions	Firm Strategy, Structure, and Rivalry
<ul style="list-style-type: none"> • Catalyst for creation of specialized diploma and degree programs • Ongoing identification of cluster-specific education and training opportunities • Identification of issues related to integration of immigrants in financial services' workforce • Information on Toronto's cost performance • Leadership role in increasing awareness of tax issues 	<ul style="list-style-type: none"> • Ongoing monitoring of the strength of key cluster-supporting industries • Involvement of key players in related clusters and industries in TFSA • Identification of strong interconnections between the IT and financial services sectors 	<ul style="list-style-type: none"> • Tracking of information to determine sophistication of cluster's consumers relative to other leading clusters • Assessment of consumer-related regulation to determine impact on development of consumer sophistication • Identification of best practices in household, corporate and government procurement of financial services 	<ul style="list-style-type: none"> • Encouragement of ongoing discussion on state of rivalry in Toronto's financial services cluster as a key input to regulatory debates • Monitoring of rivalry developments in other jurisdictions and lessons learned for Canadian regulation • Ongoing monitoring of corporate governance issues

Source: Institute for Competitiveness & Prosperity based on Porter's diamond.

³⁹ Michael E. Porter, *Competitive Advantage of Nations*, p. 72. Michael E. Porter, *Competitive Advantage of Nations*, pp. 647-9. See, for example, the report of the Wise Persons' Committee to review the structure of securities regulation in Canada (http://www.wise-averties.ca/main_en.html), the report by the Crawford Panel on a Single Securities Regulator (<http://www.crawfordpanel.ca/index.html>), and a report on Canada's economy by the International Monetary Fund (<http://www.imf.org/external/np/sec/pn/2007/pn0718.htm>)

In **related and supporting industries**, a strategy for the cluster could include:

- monitoring the strength of key cluster-supporting industries and making appropriate recommendations
- encouraging that key players in clusters and industries related to Toronto's financial services cluster to collaborate on initiatives that support sector growth
- building on the strong interconnections between the IT and financial services sectors

In **demand conditions**, a strategy for the cluster could include:

- tracking information to determine sophistication of consumers relative to other leading financial services centres
- assessing consumer-related and business-related regulation to determine the impact on the development of customer sophistication
- identifying best practices in the household and corporate procurement of financial services, in both domestic and foreign markets
- identifying best practices in government procurement of financial services, particularly in new services, such as private-public partnerships, looking to both domestic and international examples

In **firm strategy, structure and rivalry**, a strategy for the cluster could include:

- the encouragement of ongoing discussion on new players, new services, and the state of rivalry in Toronto's financial services cluster as a key input to regulatory debates
- monitoring rivalry developments in Toronto's cluster and lessons learned in other jurisdictions for Canadian regulation
- monitoring corporate governance issues

In addition to the four elements of the diamond which are key inputs to success, further information should be gathered on the competitive performance of the cluster. Specifically:

- measure the contribution of Finance and Insurance to GDP
- update employment, wages and Location Quotient cluster data for Toronto and its peers
- review local firms' success in global markets to gauge competitive performance relative to the industry's leaders (e.g. overall profitability and niche business success)
- identify and monitor financial sector competitiveness beyond the major chartered banks and insurance firms
- assess regulations related to financial services to determine impact on financial institutions' efficiency and effectiveness