TORONTO REGION BOARD OF TRADE

TORONTO AS A GLOBAL CITY:

Scorecard on Prosperity – 2013

Certified Management Accountants™

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Certified Management Accountants of Ontario

Created with the research support of
The Conference Board of Canada

Founded in 1845, Toronto Region Board of Trade is the chamber of commerce for Canada's largest urban region. We connect over 10,000 Members and more than 200,000 business professionals and influencers throughout the Toronto Region. The Board advances the success of its Members and the entire Toronto Region by facilitating opportunities for knowledge sharing, networking, business development, and city building. The Board plays a vital role in elevating the quality of life and global competitiveness of Canada's largest urban centre.

Involvement with Toronto Region Board of Trade delivers valuable professional and personal advantages for Members. Equally important, the Board fuels the economic, social and cultural vitality of the entire Toronto Region by fostering powerful collaborations among business, government, thought leaders and community builders.

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FOREWORD & ACKNOWLEDGEMENTS

On behalf of our 10,000 Members of the Toronto Region Board of Trade (the Board), we are pleased to present our fifth edition of the annual global benchmarking report, *Toronto as a Global City: Scorecard on Prosperity 2013*.

Since the first *Scorecard* in 2009 was launched, the global economy has been coping with the consequences of a crushing recession and its lingering after effects. Unlike eras past, where western economies rebounded strongly from recession, this time, underlying challenges have been exposed, leaving tepid growth and continuing weakness and uncertainty around the globe.

Scorecard's research based on data through the recession and into the recovery, is very timely. It is uncovering the trends and underlying conditions that are, positively or negatively, anchoring our economy. We must understand the fundamental strengths and challenges facing our economy in order to better guide its future. How is the Toronto economy faring against other global cities? What economic fundamentals need improvement to increase our competitiveness?

Scorecard 2013 seeks these answers in a variety of ways. As it always has, it ranks the liveability and economic performance of 24 global metropolitan areas. Our report uses analysis of 33 indicators from both domains to provide a detailed understanding of how the Toronto Region and four other Canadian cities measure up against others around the world.

A past trend remains in the fifth year of *Scorecard* reporting. The Toronto Region ranks well in labour attractiveness but only mediocre in economic performance.

Another consistent outcome from all *Scorecards* has been Toronto's middling economic and productivity-related performance, particularly with regard to its U.S. counterparts. Our past analysis showed that underinvestment in transport infrastructure and weak venture capital markets have contributed to our weak productivity.

In this year's *Scorecard*, we examine the quality of human capital and its effect on our region's productivity performance, and economic success. Where once, cities competed mainly to attract companies and investment, they now also aim to attract a highly educated and skilled workforce. The race to attract new talented workers is fuelled by the prospect of looming labour shortages as baby boomers reach retirement age.

In our comparison of human capital, Toronto ranks fourth out of 12 North American competitors. Through our analysis of 13 related indicators, we conclude that human capital cannot be viewed as the main cause of Toronto's relatively low productivity performance. Nevertheless, the excellent overall score hides some troubling underlying weaknesses that leave no room for complacency.

The Toronto Region needs to attract more skilled immigrants, more university and college graduates, and it needs to make better use of the employment potential of its female population. Considering the continuing economic uncertainty, business, educators, and all levels of government have a role to play in addressing this and other underlying economic challenges.

The information contained in *Scorecard* would not be possible without the substantial contributions of The Conference Board of Canada and the Certified Management Accountants of Ontario. Their research and funding support, respectively, have been invaluable in the creation of all five *Scorecard* reports.

We would also like to thank the members of our Board of Directors, Policy and Advocacy Committee, and Economic Development Committee. They are business people who give their time and expertise to the Toronto Region Board of Trade in the service of creating a better and more prosperous Toronto Region for all — goals which form the core mission of the *Scorecard on Prosperity*.

Bill MacKinnon, FCPA
Chair
Toronto Region Board of Trade

Carol Wilding, FCPA
President & CEO
Toronto Region Board of Trade

PREFACE

This year, Certified Management Accountants of Ontario graduated more Certified Management Accountants (CMAs) than any accounting body in any jurisdiction across Canada. While we are proud of this significant achievement, the high demand for CMAs is more of a testament to the needs of our employers and the community. To support long term sustainable growth both regionally and nationally, it is critical we know and understand the drivers of success. With this knowledge we can develop solutions that create prosperity. This is what CMAs do.

CMA Ontario is pleased to be a partner with the Toronto Region Board of Trade and The Conference Board of Canada to produce the annual *Scorecard on Prosperity*.

As a blueprint for the way forward, the annual *Scorecard* sets the tone for renewed inspiration, policy discussion, critical thinking and achievable solutions. Leveraging this rich data, we are able to develop a clear picture of our region's strengths and weaknesses, and then develop integrated and holistic strategies for improvement.

With the scorecard results in hand, we now expect government, business, academics and citizens to discuss how best to improve our competitiveness, prosperity and the economic quality of our region.

Merv Hillier, MBA, CPA, FCMA, C.Dir., CMC
President and Chief Executive Officer
Certified Management Accountants of Ontario

CMA Certified Management Accountants™

1 | EXECUTIVE SUMMARY

Toronto as a Global City: The Fifth Scorecard on Prosperity

In this fifth edition of the *Scorecard on Prosperity*, Toronto Region Board of Trade (the Board) continues its examination of Toronto's economy and labour attractiveness, benchmarking the Toronto Census Metropolitan Area (CMA) against 23 other metropolitan areas around the world. As the global competition for talented workers and capital investment intensifies, urban regions strive to improve local environments and strengthen regional economies.

The Board continues to play a vital role in elevating the quality of life and global competitiveness of the Toronto region by building on its legacy of public policy advocacy. The economic development of the Toronto region is central to the mandate of the Board, and we recognize that Toronto's continued success depends on continuous improvements. We cannot afford complacency. The 2012 report from the Jobs and Prosperity Council of Ontario reminds us first and foremost that "the status quo is not an option. Emerging economies in Asia, South America, and Africa are racing ahead, driving a new era of intense global competition."[1]

Benchmarking Toronto against other key Canadian CMAs and the world's great metropolises is one way that we can better understand the entire Toronto region's strengths and weaknesses. Like the previous reports, we use a scorecard to measure and monitor the Toronto CMA's performance and its potential for success based on 33 indicators grouped into two domains: Economy (18) and Labour Attractiveness (15). We have reported on these results by ranking and grading each of the benchmarked metropolises. Over the course of the past five years, Toronto's overall rankings have shifted very little, positioning Toronto as one of the world leaders in Labour Attractiveness, but underperforming in the Economy.

In order to better understand the benchmarking results, we have added a special feature to each edition of the *Scorecard*, offering in-depth analysis on the following:

1. the geo-political economy of the region, looking at the City of Toronto compared to the suburban municipalities (2010);
2. the metros' performance on attracting and undertaking capital investment ("The Capital Lens" - 2010);
3. how the Toronto CMA's economy weathered the most recent North American recession (2011);
4. spotlight on Boston vis-à-vis Toronto over the past 20 years (2011);
5. the quality of Toronto's transportation infrastructure ("The Transportation Lens" - 2011);
6. an update on the North American economy, based on the most current data available (2012);
7. the North American metros' performance on ten economic clusters (2012).

1 Jobs & Prosperity Council, "Advantage Ontario", 2012, p 1.

Each of these featured analyses contributed to our understanding of the factors underpinning Toronto's disappointing grades on the economy, and the potential threats to Toronto's labour attractiveness. At the same time, Toronto's potential for improvement comes into sharper focus, allowing the Board to consider policy initiatives for actions by governments and the private sector.

Scorecard 2013 advances the economic update of North American metropolitan regions introduced in last year's edition. By focusing on North America, we have access to the most recent data (2012 Q2) for the following eight indicators:

- Gross Domestic Product (GDP) per capita and GDP growth
- Productivity and productivity growth
- Income per capita and income growth
- Employment growth
- Unemployment rate

The Economic Update rankings are generated using all 18 indicators included in the Economy domain, combining the new results (eight indicators with more recent data) with the results from the ten other economic indicators.

The featured new section in this year's *Scorecard* is the "Human Capital Lens", which sets out to benchmark Toronto's human capital against the eleven other North American metro regions. The introduction of the "Human Capital Lens" complements the work of earlier *Scorecards*, when capital investment and transportation infrastructure were examined in depth. Human capital is another critical component of productivity. In light of Toronto's persistently weak productivity levels, it is important to assess the quality of human capital.

Thirteen indicators are used to benchmark Toronto's human capital against the other North American metro regions. They identify aspects of human capital that describe either: 1. labour force characteristics; 2. workforce health; or 3. workforce skill sets. In keeping with the methodology set in previous years, the overall and domain rankings do *not* incorporate the results of the Economy Update and the Human Capital Lens.

The Big Picture: Toronto Ranks Sixth Overall

Ranking	Metro Area
1	Paris
2	Calgary
3	London
4	Oslo
5	Madrid
6	**Toronto**
7	San Francisco
8	Seattle
9	Sydney
10	Tokyo
11	Boston
12	Stockholm
13	Dallas
14	Vancouver
15	New York
16	Barcelona
17	Montréal
18	Halifax
19	Hong Kong
20	Milan
21	Berlin
22	Chicago
23	Los Angeles
24	Shanghai

Toronto finishes sixth, a strong position among all 24 metro areas, but one spot down from last year's fifth place ranking. For the first time since the *Scorecards* were introduced, Toronto ranks higher than all other U.S. metros. This is due, in part, to deepening economic problems in the U.S., and in part, to overall weak results on Labour Attractiveness for the formerly dominant U.S. metros (Boston, Seattle, San Francisco, Dallas). Year after year, Toronto's best results come from the Labour Attractiveness domain, where Toronto maintains its top ranking as the most diverse metro with the highest share of foreign-born residents. Overall, Toronto ranks fifth on Labour Attractiveness, and 12th on Economy.

For the third year in a row, **Paris** is the top-ranked metro region, consistently outshining the field in the Labour Attractiveness domain while demonstrating continued and surprising strength in the Economy. Paris earns a top third spot on six of 15 Labour Attractiveness indicators, including top-ranking on: air quality, and cultural occupations. Although Paris is not dominant on the Economy domain like San Francisco or Boston, it shows particular strengths in three areas: market size (#1), professional employment (#4) and this year for the first time, high-tech employment (#1).

Calgary earns the second spot — its highest ranking ever. Good, but not spectacular, results on both the Economy and Labour Attractiveness combine to lift Calgary past London. Calgary's consistent economic performance keeps it near the top on many indicators, with best results on income growth, where it outperforms all 24 metros, and on employment growth, where it is second, behind the rapidly-growing Shanghai economy. On Labour Attractiveness, Calgary ranks sixth overall (just behind Toronto), but earns high marks for its low crime rate, relatively low commuting time, and young labour force. Calgary, while growing faster than any other metro in the 2006-2011 period, remains a liveable and attractive metro region.

Just as in *Scorecard 2012*, **London** ranks third overall, again drawing on strengths in Labour Attractiveness to keep it high in the rankings. London stays as the number one destination for international visitors, attracting nearly 15 million annually, 40 percent more than the second-highest metro, Hong Kong. London's young labour force and solid record on non-automobile commuting contribute to its attractiveness. When compared to top-ranked Paris, London is a far more diverse metropolis (34 percent foreign-born). On the other hand, London's economic results are weak, pushing it into the bottom quarter of all metros overall, well below Paris.

Focus on the Economy: Toronto Stays in the Middle

Economy

Rank	Metro Area	Grade
1	San Francisco	A
2	Boston	A
3	Seattle	A
4	Tokyo	B
5	Paris	B
6	Dallas	B
7	Oslo	B
8	Calgary	B
9	New York	B
10	Stockholm	B
11	Hong Kong	C
12	**Toronto**	**C**
13	Milan	C
14	Sydney	C
15	Halifax	C
16	Vancouver	C
17	Montréal	C
18	Madrid	C
19	London	C
20	Berlin	C
21	Los Angeles	D
22	Chicago	D
23	Shanghai	D
24	Barcelona	D

Toronto stays as a "C" performer on the Economy, dropping slightly to 12th place, after two consecutive 11th place rankings in *Scorecards 2011* and *2012*. Moreover, Toronto's progress in closing the gap with Calgary (as highlighted in *Scorecard 2012*) has been reversed. Toronto is now four places behind Calgary, Canada's perennial top performer. Toronto remains ahead of Halifax, Vancouver, and Montréal, although, unlike Toronto, they improved their rankings from last year.

Similarly, Toronto gained no ground against the leaders, with results on key indicators such as real GDP, productivity, income, and venture capital continuing to weaken. In total, Toronto's rankings went down on ten of the 18 Economy indicators, although in most instances by only one or two places. The steepest drop came on productivity growth as Toronto dropped from 19th to 22nd place, continuing a slide begun last year with the drop from 14th to 19th.

Amidst these weaknesses, some hopeful signs emerge. To begin with, Toronto's strengths in high-tech and professional employment are still evident, and Toronto keeps its North American advantage in market size. Furthermore, improvements in three areas nudged Toronto up in the rankings on indicators relating to: per capita income growth, residential building permit growth, and corporate tax burden (TTI). Firstly, per capita incomes increased on average by 5 percent, compared to 4.6 percent in the previous period; putting Toronto ahead of all U.S. metros except Seattle on income growth. This is in keeping with all other Canadian CMAs, who fared well on this indicator, although no one did better than Calgary with 9.1 percent five-year average income growth.

Ever since the inaugural *Scorecard* in 2009, U.S. metros occupy at least half of the top ten rankings on the Economy. Consistently strong results on measures of productivity, GDP, income, and patents have contributed to their dominance. For the fourth consecutive year, **San Francisco, Boston and Seattle are the top three metro regions** on the Economy, and once again, the only three to merit an "A" grade. Employment growth continues to be the most vulnerable part of the economy for U.S. metros, with all seven experiencing slower growth than in the previous period. And for the first time, some U.S. metros are showing signs of steep drops in productivity growth.

For the fifth year in a row, Calgary is the top Canadian metro (#8), and the only "B" metro among the Canadian CMAs. Unlike the other Canadian CMAs, Calgary does reasonably well on measures of GDP and GDP growth, and shines when it comes to income growth (#1) and employment growth (#2).

North American Update: Toronto's Modest Signs of Improvement

Scorecard 2012 introduced the Economic Update, drawing on the most recent data available. In this current edition, we draw on data up to the second quarter of 2012, to update eight of the 18 economic indicators. Rankings are developed using all of these 18 indicators by combining the new results with those from the other ten indicators in the Economy domain.

Economic Update for North America

Rank	Metro area	Grade
1	Boston	A
2	San Francisco	B
3	Dallas	B
4	Seattle	B
5	Calgary	C
6	Halifax	C
7	**Toronto**	**D**
8	New York	D
9	Montréal	D
10	Vancouver	D
11	Los Angeles	D
12	Chicago	D

Toronto moves up from ninth to seventh overall on the Economic Update, with progress on income growth, real GDP growth, and residential building permit growth. Compared with the results of the Economy domain overall (based on 2009 data), Toronto has gained some ground against at least one U.S. metro — New York, which had ranked six places ahead of Toronto and now is one place behind. Nonetheless, Toronto stays as a "D" performer, falling further behind the top performers: Boston, San Francisco, Dallas, and Seattle. In the 2007-12 (Q2) period, Toronto had negative average annual productivity growth — the worst of all 12 CMAs.

Like last year's Update, Canadian CMAs outdo their U.S. counterparts on employment growth, while U.S. metros dominate on real GDP per capita and productivity. Dallas continues to be the only U.S. metro with any employment growth. But the advantage enjoyed by Canadian CMAs on employment growth is more than offset by U.S. metros' advantage on productivity. For example, the weakest performing U.S. metro on productivity is Chicago, where productivity levels ($95,272) are 40 percent higher than Toronto's. At the same time, the struggles of some U.S. metros to rebound convincingly from the economic slowdown continue, particularly in Los Angeles and Chicago, ranked 11th and 12th.

Boston, on the other hand, emerges as strong and confident — the top metro and only one with an "A" grade. Boston was one of the few U.S. metros to see rising productivity growth go hand in hand with falling unemployment. **San Francisco** has come back to claim second place, outperforming Seattle (#2 last year and now #4). San Francisco has held on to the top ranking in productivity since *Scorecard 2011*, including Economic Updates. San Francisco also ranks first on per capita income, as it did in the Economy domain.

Labour Attractiveness: Toronto Stays Competitive in Fifth Place

Labour Attractiveness

Rank	Metro Area	Grade
1	Paris	A
2	London	A
3	Madrid	A
4	Barcelona	A
5	**Toronto**	**B**
6	Calgary	B
7	Sydney	B
8	Oslo	B
9	Vancouver	C
10	Stockholm	C
11	Montréal	C
12	Halifax	C
13	Tokyo	C
14	New York	D
15	Seattle	D
16	Dallas	D
17	Berlin	D
18	Hong Kong	D
19	Shanghai	D
20	Chicago	D
21	Boston	D
22	San Francisco	D
23	Milan	D
24	Los Angeles	D

As in the Economy domain, there are few big surprises. Overall results follow a similar pattern to *Scorecard 2012*. **Paris** and **London** are ranked first and second for a third year in a row. Among the top ten performers, eight remain the same. Vancouver and Stockholm moved up at the expense of Montréal (#11) and Tokyo (#13). Again just as in *Scorecard 2012*, only eight metros earn "B" grades or better.

Once again, **Paris** is best, maintaining a top-three score on six of the 15 indicators, defining Paris as a metro region with a strong cultural sector, low homicide rate, favourable travel mode, healthy air quality, and of course, very attractive to international visitors. On the other hand, Paris is plagued with long commute times; and is characterized by a population with relatively low diversity.

London keeps its second place ranking on Labour Attractiveness; but once again outscores Paris as the top destination for international visitors. London also has a young labour force and a good record on non-automobile commuting. Compared to Paris, London is a far more diverse metropolis (34 percent foreign-born compared to only ten percent). However, London's overall score drops due to low population growth (only one-third of Toronto's rate), very poor commuting times (only Shanghai is worse), and relatively high homicide rates.

European metro regions continue to dominate at the top, claiming the top four spots; **Madrid (#3)** and **Barcelona (#4)** follow Paris and London at the top of the leader board. Six of the eight metros in Europe are in the top ten. For metro regions like Barcelona and Madrid, success comes from having a young labour force, relatively low income inequality, decent transportation results, and the good fortune of a pleasant climate.

From the very first *Scorecard* in 2009, **Toronto** has been among the leading metros in Labour Attractiveness, maintaining its high ranking on the strength of its diversity and population growth. Toronto ranked fifth, the same as in *Scorecard 2012*, earning "A" or "B" grades on ten of 15 indicators. Toronto's ranking on eight of the indicators remained exactly the same, and among the other seven, shifts were minor except for 1. an increase in homicides; and 2. a drop in the teacher-pupil ratio. Toronto's most outstanding attraction comes from the diversity of its population. With over 45 percent of the population foreign-born, Toronto tops the field. Population growth in Toronto, fuelled by immigration, continues to be strong, although five metro areas grew faster, including Calgary, which outpaced all other metros. Toronto's other top results come on the environmental indicators.

In *Scorecard 2012*, one of the highlights for Toronto was the improvement in education; specifically with regard to the teacher-student ratio. Last year, Toronto ranked third with 73.8 teachers per 1000 school-age children — good enough for a "B" grade. This year, based on 2011 data, Toronto fell to seventh place and a "C" grade. The teacher pupil ratio dropped to 67.8, about 9 percent. Apart from teachers, Toronto's biggest one-year change occurred in the homicide rate, rising from 1.8 per 100,000 to 2.1. Although not a dramatic change, such a rise is clearly unwelcome. Compared to San Francisco (7.5), Chicago (6.7), and Los Angeles (6.4), Toronto, nonetheless, remains an "A" grade metro.

Spotlight on Human Capital: Toronto Among the Best

Scorecard 2013 introduces the "Human Capital Lens" to complement the work of previous *Scorecards*, where capital and infrastructure were examined in depth. A consistent outcome from all *Scorecards* has been Toronto's middling economic and productivity-related performance, particularly with regard to its U.S. counterparts. The quality of human capital greatly affects productivity growth in a metropolitan region. Where once cities competed mainly to attract companies and investment, they now also aim to attract a highly educated and skilled workforce. Furthermore, the race to attract new talented workers is fuelled by the prospect of looming labour shortages as baby boomers reach retirement age.

Accordingly, *Scorecard 2013* sets out to benchmark Toronto's human capital against the eleven other North American metro regions. In establishing 13 indicators to measure human capital, this *Scorecard* helps us understand the make-up of a productive and prosperous society. However, in keeping with the purpose of benchmarking, this analysis of human capital enables us to grade Toronto's performance, but does not address the determinants of that performance.

For example, in comparing Toronto's female labour force participation rates with other metros, we discover Toronto is relatively weak, but the data is silent on "why." Research beyond the scope of this report would be needed to assess whether better daycare, better education, or other factors could improve the female participation rate.

Key Human Capital Characteristics

Labour Force Employment Characteristics	Workforce Health	Workforce Skill Set
Unemployment rate	Population health index: • Cancer • Arthritis • Heart disease • Diabetes • Obesity • Suicides	Proportion of adults with high school education or less
Youth unemployment rate	Unintentional work-related injury deaths per 100,000 population	Proportion of adults with post-secondary degrees or diplomas
Proportion of females in management occupations		Proportion of adults with a Bachelor's degree or higher
Female participation rate		Proportion employed in high-skill occupations
Female-male incomes		Proportion of highly-skilled immigrants
Proportion of population 65+		

The selected indicators aim to capture some of the most critical characteristics of human capital: employment, diversity, health and safety, and education.

- **Employment** opportunities typically top the list of reasons for individual and family relocation; therefore these opportunities become a critical component of the attractiveness of a metropolitan region.
- **Diversity** in the population is a hallmark of a successful society, and it is critical that the labour force reflects the make-up of the population across all job classifications, accounting for skills and education. Failing to recognize the qualifications and experience of new immigrants is costly; in the Toronto region, the cost to the economy is approximately $1.5-2 billion per year.[2]

  According to Catalyst, Inc., a highly respected non-profit organization, gender diversity matters because increased diversity can lead to increased innovation and productivity, diversity of thought and collective intelligence, better employee satisfaction, and better financial performance, among others.[3]
- **Health and safety** correlate strongly with productive and attractive workplaces and regions. The composite health index developed for this *Scorecard* takes into account six key health risk factors; of which several can be mitigated by environmental or lifestyle changes. Furthermore, recent research has exposed significant economic risks associated with an unhealthy labour force.
- **Higher education** is widely accepted as a predictor of strong economic performance, critical to success in a global innovation-driven economy. Studies have demonstrated the links between education and GDP, based on post-secondary educational attainment. *Scorecard 2013* offers a comprehensive look at all levels of educational attainment, from high-school or less through to advanced university degrees.

2 Toronto Board of Trade, "Lifting All Boats: Promoting Social Cohesion and Economic Inclusion in the Toronto Region", June 2010, p 8.
3 Catalyst, Inc., "Why Diversity Matters, Catalyst Research Studies, 2005-10.

Human Capital Lens

Rank	Metro area	Grade
1	Calgary	A
2	San Francisco	A
3	Boston	A
4	**Toronto**	**A**
5	Vancouver	B
6	Halifax	B
7	Seattle	B
8	Montréal	C
9	New York	D
10	Dallas	D
11	Los Angeles	D
12	Chicago	D

When it comes to human capital, **Toronto** ranks among the best, in fourth place with an "A" grade. Calgary takes the top spot, with San Francisco in second place, and Boston in third. With the exception of Montréal, all Canadian CMAs score relatively well, outperforming the remaining five U.S. metros. New York, Dallas, Los Angeles, and Chicago all earn "D" grades, occupying the bottom four positions.

Calgary edges out San Francisco for top spot due to robust employment. Calgary earns two other first-place rankings: 1. accidental work-place deaths, with the fewest per 100,000 population; and 2. female participation rates. Calgary's overall excellent human capital results are somewhat tarnished by poor outcomes on females in management occupations and female-male income ratios.

San Francisco (#2) and **Boston (#3)** are both dominant on the indicators linked to education; namely, 1. the proportion of adults with a bachelor's degree or higher; and 2. the proportion of the employed workforce in high-skill occupations. Both also earn "A" grades on the share of the population with post-secondary education, and have smaller shares of their population with less education (high school or lower). The link between educational attainment and the strong performance of San Francisco and Boston on the Economy domain is no accident. There is a body of evidence pointing to the correlation between post-secondary education and the economic success of metropolitan areas.

As every *Scorecard* has emphasized, **Toronto** is a "winner" in Labour Attractiveness, and Toronto's strong results on Human Capital help cement that reputation. Toronto's strengths emerge in the areas of health and safety, employment in high-skilled occupations and post-secondary education. However, the excellent overall score hides some troubling weaknesses that leave no room for complacency. Specifically, these are:

1. Toronto's population is not as highly educated as many of its competitors. On the proportion of population with high school education or less, the CMA scores a "C" grade, well down in the rankings. While the proportion of the population with a post-secondary degree or diploma is at the top of the rankings with an "A" grade, the proportion of the population with a bachelor's degree or higher is very low, with a "C" grade. These results contribute to Toronto's low productivity performance, which contrasts sharply with that of the education leaders, San Francisco, Boston, and Seattle. Enhancing the educational attainment of Toronto's population from high-school to post-secondary levels will improve the economic performance of the Region.
2. Toronto's third-place ranking on the indicator for high-skill occupations is a strong "A" grade, but is out of step with the higher education results. Toronto's mediocre score on the education indicators raises doubts about the qualifications of Toronto's managers, which could in turn impact the CMA's productivity.
3. In terms of the skills of its immigrants, the Toronto CMA ranks in seventh place, behind every other Canadian CMA. Furthermore, as previous *Scorecards* have discussed, those newcomers who arrive in Toronto with a university education are often under-employed, particularly when compared to their Canadian-born counterparts. Toronto has a significant challenge in attracting and retaining higher numbers of university-educated immigrants.

4. Toronto has only a “C” grade on female participation in the workforce and ranks near the bottom of the pack on the proportion of females in management positions (along with most other Canadian CMAs). Even though Toronto scores relatively well on gender income equality (ranking second behind Los Angeles), female incomes are only 72.7 percent of males — an unacceptable gulf. Toronto must make better use of the employment potential of its female population, especially in the context of its relatively older population.
5. Although Toronto ranks around the middle of the pack on the overall unemployment rate and on youth unemployment (with a “B” score on each of these indicators), these unemployment rates remain troublingly high.

Looking ahead, it will be more critical than ever to attract new skilled immigrants, young employees, and women in management positions. Experts agree that regions with a sizeable population of baby boomers will be scrambling to fill labour shortage gaps within the near future. Enhancing educational attainment levels from high-school to post-secondary completion is a critical first step to achieving success in a global innovation-driven economy. Toronto faces three major policy challenges in order to ensure that its fundamentally strong human capital asset continues as a comparative advantage for the region:

1. Toronto needs to attract more university and college graduates to help lift productivity and GDP, as well as to ensure that the skills of its labour force match the skills demanded by the market place;
2. Toronto needs to attract and retain more highly skilled immigrants; and
3. Toronto needs to make better use of the employment potential of its female population.

2 | INTRODUCTION

In this fifth edition of the *Scorecard on Prosperity*, Toronto Region Board of Trade (the Board) continues its examination of Toronto's economy and labour attractiveness, benchmarking the Toronto Census Metropolitan Area (CMA) against 23 other metropolitan areas around the world. Differing greatly in their history, politics, and culture, all these great urban metropolises aspire to a similar future — one marked by prosperity and a high quality-of-life. As the global competition for talented workers and capital investment intensifies, urban regions strive to improve local environments and strengthen regional economies. As they climb out of the global recession, these metropolises face even greater challenges in attracting much-needed capital and skilled labour.

The Board continues to play a vital role in elevating the quality of life and global competitiveness of the Toronto Region by building on its legacy of public policy advocacy. The economic development of the Toronto Region is central to the mandate of the Board, and we recognize that Toronto's continued success depends on continuous improvements. We cannot afford complacency. The 2012 report from the Jobs and Prosperity Council of Ontario reminds us first and foremost, that "the status quo" is not an option. Emerging economies in Asia, South America, and Africa are racing ahead, driving a new era of intense global competition."[4]

Each year, the importance of maintaining a *regional* focus for economic prosperity becomes more compelling. Benchmarking Toronto against other key Canadian CMAs and the world's great metropolises is one way that we can better understand the entire Toronto region's strengths and weaknesses.

Like the previous reports, we use a scorecard to measure and monitor the Toronto CMA's performance and its potential for success, based on 33 indicators grouped into two domains: Economy (18) and Labour Attractiveness (15). We have reported on these results by ranking and grading each of the benchmarked metropolises. Over the course of the past five years, Toronto's overall rankings have shifted very little, positioning Toronto as one of the world leaders in Labour Attractiveness, but underperforming in the Economy.

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4 Jobs & Prosperity Council, "Advantage Ontario", 2012, p 1.

Each of these featured analyses contributed to our understanding of the factors underpinning Toronto's disappointing grades on the economy, and the potential threats to Toronto's labour attractiveness. At the same time, Toronto's potential for improvement comes into sharper focus, allowing the Board to propose policy initiatives for actions by governments and the private sector. Toronto needs to position itself to benefit from Forbes' much-heralded report that names Canada as the number one country in the world for business.[5]

Scorecard 2013 advances the Economic Update of North American metropolitan regions introduced in last year's edition. By focusing on North America, we have access to the most recent data (2012 Q2) for the following eight indicators:

- Gross Domestic Product (GDP) per capita and GDP growth
- Productivity and productivity growth
- Income per capita and income growth
- Employment growth
- Unemployment rate

The Economic Update rankings are generated using all 18 indicators included in the Economy domain, combining the new results (eight indicators with more recent data) with the results from the ten other economic indicators.

The featured new section in *Scorecard 2013* is the "Human Capital Lens", which sets out to benchmark Toronto's human capital against the 11 other North American metro regions. The introduction of the "Human Capital Lens" complements the work undertaken for the 2010, 2011 and 2012 *Scorecards*, when capital investment, transportation infrastructure and economic clusters were examined in depth. Human capital is another critical component of productivity. In light of Toronto's persistently weak productivity levels, it is important to assess the quality of human capital.

Thirteen indicators are used to benchmark Toronto's human capital against the other North American metro regions. They identify aspects of human capital that describe either: 1. labour force characteristics; 2. workforce health; or 3. workforce skill sets.

Labour Force Characteristics

- **Unemployment rate:** As in the Economy domain, the unemployment rate indicates which metropolitan areas have the most engaged workforce and the best potential for job-seekers; the lower the rate, the better the ranking.
- **Youth unemployment rate:** Similarly, the lower the youth unemployment rate, the better the ranking, indicating a metropolitan area with more opportunities.
- **Females in management occupations:** Along with the next two indicators, this signals a more diverse, equitable, and balanced workforce. The indicator measures the percentage of women employed in all management occupations.
- **Female-Male income:** This measures median female income as a percentage of median male income as a way to assess equity in the labour market.
- **Female participation rate:** High female participation rates indicate a balanced and more diverse labour force.
- **Population aged 65 and over:** While the Labour Attractiveness domain benchmarks the younger labour force population (25-34 years of age), this Human Lens indicator measures the senior population. A metro area with a high percentage of 65+ indicates an older labour force much closer to retirement, suggesting potential labour shortages in the near term.

5 http://www.forbes.com/lists/2011/6/best-countries-11_Canada_CHI019.html, accessed February 23, 2012.

Workforce Health

- **Population health (index):** The health index is based on the incidence of six key health risks within the metro area's population: arthritis, diabetes, obesity, cancer, heart disease and suicides. A healthier population signals an attractive region, as well as a more productive labour force.
- **Unintentional work-related injury deaths:** The lower the number (per 100,000 population), the safer the workplace. As with health, metro regions that provide safer work environments are more productive and attractive.

Workforce Skill Set

- **Adult population with only high school or less:** The metro areas with the highest percentage score lowest. With only a high school education or less, prospects for employment are lower, and jobs are generally less productive.
- **Adult population with a post-secondary degree:** This measures the percentage of the adult population with a college degree, diploma, or bachelor's degree and higher. The higher the percentage, the better educated and trained the workforce.
- **Adult population with a Bachelor's degree or higher:** As in the Labour Attractiveness domain, this measures the percentage of the adult population with a Bachelor's, Master's, or Doctoral degree. A highly educated population is the foundation for a productive and innovative metropolitan economy.
- **Employment in high-skill occupations:** High skill occupations include those normally requiring university education as well as all senior and specialized management occupations. Metro areas with high levels of employment in these fields have the fundamentals for a creative and productive economy.
- **Highly-skilled immigrants:** This measures the share of new immigrants with at least a university education. They have greater chances for successful integration and employment in a metropolitan area, and offset labour shortages in areas with a sizeable older labour force.

In keeping with the methodology set in previous years, the overall and domain rankings do not incorporate the results of the Economy Update and the Human Capital Lens.

Map of the Toronto CMA

Source: Statistics Canada

3 | METHODOLOGY

The Board seeks to ensure Toronto remains a competitive and vibrant city, contributing in a significant way to the prosperity of Ontario and the country as a whole. To find out just how competitive is Toronto, the Board commissioned The Conference Board of Canada (CBoC) to develop a scorecard on prosperity for the Toronto Census Metropolitan Area (CMA), benchmarking the CMA against 23 metropolises around the world.

Drawing on the success of the 2009, 2010, 2011 and 2012 editions of the *Scorecard on Prosperity*, CBoC has replicated the methodology for the 2013 edition of the report. Thirty-three indicators were chosen to measure Toronto's success in: 1. the global economy; and 2. its ability to attract and retain workers from around the world. As well, 12 indicators were selected to rank the performance of Toronto's human capital. For more information on how Toronto stacks up relative to other cities, see the detailed data tables in the Economy and Labour Attractiveness chapters, as well as in the section that focuses on North American human capital.

Metropolitan Area Selection Process

A key starting point for this benchmarking project was the decision about which metropolitan areas to include. Although the number of metro areas remained the same as the 2010, 2011 and 2012 reports, those cities were determined using the following criteria:

1. Comparably-sized to Toronto: Barcelona, Boston, Dallas, Madrid, Berlin, San Francisco, and Seattle;
2. Toronto's main Canadian competitors: Montréal, Calgary, and Vancouver;
3. Global cities to which Toronto is sometimes compared: Chicago, London, Los Angeles, New York, Paris, Tokyo, and Sydney;
4. Metro regions within North American to allow for a regional comparison: Halifax and Dallas;
5. Metro regions with progressive social and environmental policies: Oslo and Stockholm; and
6. Metro regions in rapidly emerging economies: Hong Kong and Shanghai.

The comparator metropolitan areas used in this report will be reviewed for future editions of the annual *Scorecard*. The possibility remains that cities currently excluded will be included in future years (if better data becomes available), and/or that some cities currently included will be removed in future years (if it becomes clear that their relative value as a comparator is not high).

Indicator Selection Process

The search for indicators began with a commitment to find measures that showed the degree of economic strength, the degree of labour attractiveness, and the level of human capital.

The selection of indicators for each domain evolved over a period of weeks, to allow for consultation with the CBoC and to enable a test run for data availability and reliability. The indicators that were selected provide valuable information on the performance or status of a metropolitan area within a particular domain, either as a direct output (e.g., disposable income) or a proxy measure (e.g., number of teachers per 1,000 people of school age as a proxy for access to education). In the end, a total of 33 indicators were chosen for the Economy and Labour Attractiveness domains.

Unfortunately, it was impossible to collect data on all 33 indicators for every metropolitan area due mainly to data incomparability. But all 33 indicators were available for the Toronto CMA. We screened all data sources rigorously to ensure that each indicator for the international cities had the same definition as its Canadian counterpart. In other words, we wanted to avoid an "apples-to-oranges" comparison. But there were a couple of exceptions. Some vital indicators, like housing affordability, were included despite slight differences in definitions across countries. In these cases, we standardized the data by dividing each city's indicator by its national average.

Benchmarking studies use annual historical data as a means of comparison[6]. Given that this study was launched in the fall of 2012, data beyond the year 2011 was unavailable for all indicators. This does not imply, however, that the results of this study are compromised. A benchmarking analysis, by definition, is a relative comparison. Therefore, it is reasonable to assume that if 2012 full-year data were included in this study, the overall rankings would remain fairly stable.

However, to get a clearer picture of recent economic performance, we included a section that ranks each North American metropolitan area up to the second quarter of 2012 so comparisons could be made using the latest available data.

Ranking Method

This study uses a report card-style ranking of A-B-C-D to assess the performance of metropolitan areas for each indicator. We assigned a grade level to performance using the following method: for each indicator, we calculated the difference between the top and bottom performer and divided this figure by four. A metropolitan area received a scorecard ranking of "A" on a given indicator if its score was in the top quartile, a "B" if its score was in the second quartile, a "C" if its score was in the third quartile and a "D" if its score was in the bottom quartile. A metropolitan area was assigned an N/A if the data was unavailable for that indicator.

For example, on the labour attractiveness indicator "proportion of the population that is foreign-born," the top performer (Toronto) had 45.7 per cent of its population foreign-born in 2006 and the bottom performer (Shanghai) had only 1.1 per cent. Applying the method for scoring yields the following ranges for each grade:

"A": 45.7 — 34.6 per cent

"B": 34.5 — 23.4 per cent

"C": 23.3 — 12.3 per cent

"D": 12.2 — 1.1 per cent

(Note: In this example, a high score indicates a high level of performance. For indicators where a low score signifies a high level of performance — such as the homicide rate — the ranking levels are reversed, i.e., the highest result receives the lower grade.)

It must be emphasized that two cities getting an "A" grade do not necessarily perform equally according to this methodology. In the example above, a city scoring 36 per cent would get an "A" grade in the same way that a city scoring 40 per cent would. However, when we establish a ranking of cities, the city getting a result of 40 per cent would be placed higher than the one scoring 36 per cent even if they both get an "A" grade. Thus, in the tables below, when looking at cities with the same letter grade, the one with the higher score is listed first.

It must also be emphasized that the rankings for each indicator are relative. A city receives an "A" grade because it outperforms all other cities in our sample, not because it achieves an excellent absolute score. This is especially important when looking at the Female-Male Income differential indicator in the Human Capital Lens. Los Angeles receives an "A" grade and is ranked number one, but women make about 73% the income of men, on average. This is clearly not an exceptional result in absolute terms, but Los Angeles is best when compared with other North American cities in the *Scorecard*.

6 All international data was converted to U.S. dollars using OECD purchasing power parity exchange rate estimates for the given year.

The overall domain rankings are based on a composite index (an average of the normalized scores for each indicator in the specific domain). In other words, the top-ranking metropolitan area for a given indicator will receive a one, while the bottom-ranking metropolitan area will receive a zero.

Normalization Formula
Normalized value = (indicator value – minimum value) ÷ (maximum value – minimum value)

To use the example above, a score of 1 would be attributed to Toronto given that it leads with 45.7 per cent of its population foreign-born — (45.7-1.1) ÷ (45.7 -1.1). Meanwhile, a zero would be attributed to Shanghai given that it ranks last with 1.1 per cent of its population foreign-born — (1.1-1.1) ÷ (45.7-1.1). A metropolitan area with a 25 per cent foreign-born population, for example, would get a score of 0.54 — (25.0-1.1) ÷ (45.7-1.1).

To calculate a domain ranking, the metropolitan areas were then ranked according to their composite index scores. No attempt was made to give explicit differential weights to indicators according to importance: we are implicitly giving equal weight to each indicator. We assigned a grade level to the overall domain performance using the following method: we calculated the difference between the domain composite index of the top and bottom performer and divided this figure by four.

A metropolitan area received a scorecard rating of “A” for the domain if its score was in the top quartile, a “B” if its score was in the second quartile, a “C” if its score was in the third quartile and a “D” if its score was in the bottom quartile. The Overall ranking is determined using the scores from the Economy and Labour Attractiveness domains only. The rankings created from the human capital lens do not affect the Overall ranking. Even though we generate an Overall score that ranks each metro area based on the scores from the Economy and Labour Attractiveness domains, we do not create an Overall composite letter grade. The Economy and Labour Attractiveness domains cover entirely different sets of indicators, so assigning an overall grade would falsely assume that the two domains can be aggregated.

4 | THE BIG PICTURE

Population of Metro Areas 2011*

Metropolis	Population
Tokyo	35,200,000
New York	19,015,900
Shanghai	18,665,000
London	15,010,295
Los Angeles	12,944,801
Paris	11,797,021
Chicago	9,504,753
Milan	8,071,274
Hong Kong	7,112,400
Dallas	6,526,548
Madrid	6,369,162
Toronto	**5,838,838**
Barcelona	5,375,774
Berlin	5,055,116
Sydney	4,627,345
Boston	4,591,112
San Francisco	4,391,037
Montréal	3,908,723
Seattle	3,500,026
Vancouver	2,419,733
Stockholm	2,054,343
Oslo	1,144,883
Calgary	1,265,119
Halifax	408,198

*2010 for: Paris, London, Shanghai and Tokyo

The "big picture" provides an overall comparison of 24 global metropolises, based on the combined results of the economic and labour attractiveness indicators. The results contribute to our understanding of what makes some cities prosperous and attractive, while others struggle. The 24 metro regions represent a global picture, stretching from Australia and the Asian Pacific to Europe and North America. They range in size from less than half a million to more than 35 million — making Tokyo an urban region with more people than all of Canada. The Toronto Census Metropolitan Area (CMA) includes 5.84 million people, placing Toronto in the middle of the group, as the 12th largest.

For the third consecutive *Scorecard on Prosperity*, Paris is the top global metro region, while Calgary breaks through to second place, jumping from fourth in 2012. Eight of the top ten metros are the same as last year's, although there have been moderate shifts up or down. Sydney and Tokyo move into the top ten for the first time, pushing Boston and Barcelona down in the rankings. Toronto maintains a place among the top ten, dropping down one place from fifth to sixth.

Overall Ranking

Ranking	Metro Area
1	Paris
2	Calgary
3	London
4	Oslo
5	Madrid
6	**Toronto**
7	San Francisco
8	Seattle
9	Sydney
10	Tokyo
11	Boston
12	Stockholm
13	Dallas
14	Vancouver
15	New York
16	Barcelona
17	Montréal
18	Halifax
19	Hong Kong
20	Milan
21	Berlin
22	Chicago
23	Los Angeles
24	Shanghai

Paris holds onto its number one ranking, consistently outshining the field in the Labour Attractiveness domain while demonstrating continued and surprising strength in the Economy. Paris earns a top three spot on six of 15 Labour Attractiveness indicators. They describe:

- a low homicide rate (#3)
- healthy air quality (#1)
- low income inequality (#3)
- a strong cultural occupation sector (#1)
- a favourable travel mode (non-auto commuting) (#3)
- its attractiveness to international visitors (#3)

Although Paris is not dominant on the Economy domain like San Francisco or Boston, it shows particular strengths in three areas: market size (#1), professional employment (#4) and this year for the first time, high-tech employment (#1). At the same time, Paris has shown steady gains on a number of indicators, when compared to *Scorecard 2012*. They point to stronger economic growth over the 2004-09 period, particularly in: real Gross Domestic Product (GDP) per capita, income, productivity, and employment. Together, these results combine to keep Paris in fifth place in the Economy domain.

Calgary earns the second spot, its highest ranking ever. Good, but not spectacular, results on both the Economy and Labour Attractiveness combine to lift Calgary past London. At the same time, San Francisco made room at the top, tumbling from second to seventh place, due to deepening problems in the Labour Attractiveness domain. Calgary's consistent economic performance keeps it near the top on many indicators, with best results on income growth, where it outperforms all 24 metros, and on employment growth, where it is second, behind the rapidly-growing Shanghai economy. On Labour Attractiveness, Calgary ranks sixth overall (just behind Toronto), but earns high marks for its low crime rate, relatively low commuting time, and young labour force. Calgary, while growing faster than any other metro in the 2006-11 period, remains a liveable and attractive metro region.

Just as in *Scorecard 2012*, **London** ranks third overall, again drawing on strengths in Labour Attractiveness to keep it high in the rankings. London stays as the number one destination for international visitors, attracting nearly 15 million annually, 40 percent more than the second-highest metro, Hong Kong. London's young labour force and solid record on non-automobile commuting contribute to its attractiveness. When compared to top-ranked Paris, London is a far more diverse metropolis (34 percent foreign-born). On the other hand, London's economic results are weak, pushing it into the bottom quarter of all metros overall, well below Paris.

Oslo (#4) and **Madrid (#5)** have made the biggest gains overall, and rank among the top five metros for the first time. Oslo's rise comes from a combination of successes in both the Economy and Labour Attractiveness domains. With the lowest unemployment rate, second-highest real GDP, and third-fastest employment growth, Oslo has a solid economic footing — a good basis for attracting labour. In addition, Oslo has a relatively young labour force, good commute times, and a well-educated population.

Madrid, like London, earns its overall rank due to strong Labour Attractiveness results. Madrid ranks first among all metros when it comes to a young labour force, and is among the top five on: non-automobile commuting, homicide rates, Gini coefficient, and climate. Tracking London's path to the top, Madrid's economic indicators are generally weak, although two bright spots emerge. Madrid had the third-highest real GDP growth, and fifth-best productivity growth.

Toronto finishes sixth, a strong position among all 24 metro areas, but one spot down from last year's fifth place ranking. For the first time since the *Scorecards* were introduced, Toronto ranks higher than all other U.S. metros. This is due, in part, to deepening economic problems in the U.S., and in part, to overall weak results on Labour Attractiveness for the formerly dominant U.S. metros (Boston, Seattle, San Francisco, and Dallas). Year after year, Toronto's best results come from the Labour Attractiveness domain, where Toronto maintains its top ranking as the most diverse metro with the highest share of foreign-born residents. Overall, Toronto ranks fifth on Labour Attractiveness, and 12th on Economy.

In past *Scorecards*, Boston and San Francisco have ranked among the top flight of metro areas, yet both have stumbled in this year's edition. San Francisco, ranked second for two consecutive years (2011 and 2012), has dropped to seventh, while Boston fell to 11th place, on a steady slide from first in 2010, fourth in 2011, and seventh in *Scorecard 2012*. For both San Francisco and Boston, the drop in ranking is attributed to *relatively* weaker scores on the Economy, compared to the previous *Scorecards*. Specifically, San Francisco's 2013 score of 0.61 falls below the 2012 score of 0.65; similarly, Boston's score dropped from 0.63 to 0.57. In fact, among the top ten metros in this year's Economy domain, only the four U.S. metros (including Seattle and New York) show lower normalization scores than *Scorecard 2012*.

Despite the drop, San Francisco and Boston still emerge as the top two metros in the Economy, but the gap between the top and the next eight metros has narrowed. Two indicators stand out as particular trouble spots for San Francisco: unemployment rate (rose four points), and employment growth (fell to -0.1). Boston also saw decreasing growth in employment, alongside declines in the size of Initial Public Offerings (IPOs), per capita income, and income growth.

This "Big Picture" overview reflects the combined results of the 33 indicators used in the Economy and Labour Attractiveness domains. As in *Scorecard 2012*, this edition also includes an Economic Update for the 12 North American metro regions, offering a snapshot of the economy using more recent data. And for the first time, *Scorecard 2013* includes a new section that benchmarks human capital for all North American metros. Thirteen indicators were selected to shed light on the quality of human capital and its relationship to a productive and prosperous economy. They are discussed in subsequent sections of this report.

5 | ECONOMY

Economy Overall

Rank	Metro Area	Grade (normalization score)	
1	San Francisco	A	0.61
2	Boston	A	0.57
3	Seattle	A	0.55
4	Tokyo	B	0.52
5	Paris	B	0.52
6	Dallas	B	0.52
7	Oslo	B	0.52
8	Calgary	B	0.51
9	New York	B	0.49
10	Stockholm	B	0.48
11	Hong Kong	C	0.48
12	**Toronto**	**C**	**0.47**
13	Milan	C	0.46
14	Sydney	C	0.45
15	Halifax	C	0.45
16	Vancouver	C	0.45
17	Montréal	C	0.44
18	Madrid	C	0.44
19	London	C	0.43
20	Berlin	C	0.42
21	Los Angeles	D	0.41
22	Chicago	D	0.40
23	Shanghai	D	0.35
24	Barcelona	D	0.35

Introduction

The overall picture emerging from the Economy domain shows little change from previous years at the top of the rankings, but some important shifts towards the middle and bottom of the pack. Toronto falls to 12th place, after two consecutive 11th place rankings in *Scorecard on Prosperity 2011* and *2012*.

Data for the key economic indicators are, for the most part, drawn from a base year of 2009 to allow for comparability among all metro regions. Where dollar values are used, they are reported in $US PPP (purchasing power parity). More recent data is available for North American metros, enabling a comparison of U.S. and Canadian metros in a more current economic context. This analysis is presented at the end of this Section.

Ever since the inaugural *Scorecard* in 2009, U.S. metros occupy at least half of the top ten rankings on the Economy. Consistently strong results on measures of productivity, GDP, income, and patents have contributed to their dominance. For the third consecutive year, San Francisco and Boston rank first and second. Employment growth continues to be the most vulnerable part of the economy for U.S. metros, with all seven experiencing slower growth than in the previous period. And for the first time, some U.S. metros are showing signs of steep drops in productivity growth.

Nine of the top ten metros are the same as last year, with slight variations in individual rankings. For the first time, Stockholm (#10) ranks among the top ten, with fundamentally solid results in Gross Domestic Product (GDP), productivity, and employment growth, and a second-ranked position on high-tech employment. Stockholm's rise came at the expense of Hong Kong, which fell out of the top ten. Hong Kong's slide can be attributed to a number of modest declines, but a dramatic drop in per capita income growth and productivity were the primary reasons it fell to 11th in the rankings.

For the fifth year in a row, Calgary is the top Canadian metro (#8), and the only "B" metro among the Canadian Census Metropolitan Areas (CMAs). Unlike the other Canadian CMAs, Calgary does reasonably well on measures of GDP and GDP growth, and shines when it comes to income growth (#1) and employment growth (#2). Halifax, Vancouver, and Montréal fall below Toronto, ranking 15th, 16th, and 17th and report similar economic weaknesses on real GDP, productivity and productivity growth. Milan and Sydney interrupt the continuous string of Canadian CMAs.

Apart from Hong Kong and Stockholm, a few other shifts in the overall rankings merit a closer look. Tokyo, Milan, Montréal and Halifax all jumped up in the rankings (Tokyo, Milan and Halifax kept the same grade). On the other hand, Los Angeles and Chicago did worse, dropping down in the rankings and letter grade). Tokyo's jump to fourth in the rankings came from progress in Initial Public Offerings (IPOs). Meanwhile, Milan's rise from 18th to 13th came with strong improvements in three growth factors: GDP, income, and productivity offset modestly by a drop in employment growth. Montréal and Halifax advanced primarily as a result of weakening fortunes in the U.S., specifically Chicago and Los Angeles. Chicago experienced the steepest fall, going from 12th to 22nd, as growth in GDP, income, and productivity faltered. Chicago had zero productivity growth and negative GDP growth over this 2004-09 period; the worst figures for a U.S. metro reported in any *Scorecard*. The downturn in Los Angeles (from 16th to 21st place) may be attributed to a similar set of factors: lower GDP growth, income growth, and productivity growth compared to *Scorecard 2012*.

Who's Best?

For the third straight year, San Francisco, Boston and Seattle are the three best metropolitan regions in the Economy. But Dallas forfeits its number four spot to Tokyo, which convincingly moved up from seventh place. Paris rounds out the top five, the exact same ranking as last year. Boston and San Francisco continue to enjoy outstanding performance on key markers of innovation, ranking in the top four on patents, venture capital investment, income per capita, real GDP per capita and productivity.

San Francisco proves why it deserves the reputation as a world leader in technology and innovation. With over 198 patents per 100,000 population, San Francisco is the only metro with an "A" grade; thus continuing a pattern begun in the *Scorecard 2010*. Second place Boston had only half as many patents. Again this year, San Francisco enjoys the most success in attracting venture capital investment. At $21,918.6 (per $1 million GDP), the value of venture capital investment rose 14 percent between 2010 and 2011, and has returned to the peak levels reported in the 2007-08 period. San Francisco's venture capital investments are three times that of New York (#4) and nearly 20 times that of Toronto.

San Francisco kept its number one ranking on five indicators; in addition to patents and venture capital investment the other three are: real GDP per capita, income per capita, and productivity. Like the previous year, high productivity levels and personal incomes (both more than 45 percent higher than Toronto's) were achieved at the expense of employment growth. For the first time, San Francisco lost employment, recording -0.1 percent average growth between 2004 and 2009; thus continuing a downward trend noted in last year's *Scorecard 2012*. San Francisco was not the worst; Chicago and Los Angeles also lost employment, and rank just below San Francisco.

Mirroring San Francisco's success, number two **Boston** excels on innovation and wealth indicators: patents, venture capital, per capita income, per capita GDP, and productivity. *Scorecards 2010* and *2011* examined Boston's achievements in more detail, citing excellence in its 35 universities and colleges and resilient economic sectors, particularly health care and science. *Scorecard 2011* concludes that "Boston can likely lay claim to the strongest post-secondary education sector in the world. Boston has been able to successfully leverage this advantage to achieve strong economic growth..."[7] Boston also ranks fourth on high-tech employment, which accounts for 7 percent of total employment. But as we have documented with San Francisco and other U.S. metros, productivity and incomes have flourished at the same time that employment growth has stagnated. At an average of only 0.1 percent per year in the 2004-09 period, Boston's five-year average employment growth was down sharply from the 2003-08 time period (0.7 percent).

7 Toronto Board of Trade, "Toronto as a Global City: Scorecard on Prosperity-2011", p. 31.

Seattle retains its third place position, rounding out the list of CMAs with an "A" grade. With strong real GDP per capita, productivity, and income results, Seattle is right behind Boston and San Francisco. Even though Seattle's ranking went from tenth to 15th as unemployment rose from 5 percent in 2008 to 8.7 percent in 2009, they managed to have the best employment growth of any of the U.S. metros. Generally, the fundamentals of success are robust enough to keep Seattle near the top. Seattle ranks second on income per capita, third on real GDP per capita, fourth on productivity, and third on venture capital investment/ firm. And Seattle stays at the top of all North American metros when it comes to high-tech employment (Paris and Stockholm are higher).

Tokyo jumped three positions to fourth place in this version of the *Scorecard*, but still hangs on to its "B" grade. Tokyo maintained its outstanding results on productivity growth (#1), unemployment rate (#3), high-tech employment (#5) and patents (#4). Tokyo's big step up can be attributed in large measure to the seven-fold increase in the value of IPOs. At $998 million, Tokyo far exceeds all others — very close to double the value of second-place Milan. However, Tokyo is kept out of the top spot because it is still an expensive place to do business, with bottom-of-the-pack rankings on TTI and office rental costs.

Paris is the second "B" metro, maintaining its position from *Scorecard 2012*. Paris has shown steady gains on a handful of indicators, highlighting stronger growth over the 2004-09 period, particularly in: real GDP per capita, income, productivity, and employment. But Paris' outstanding strengths come on market size (#1), professional employment (#4) and this year for the first time, high-tech employment (#1). Paris, on the other hand, is an expensive place to do business, ranking last on the total tax index (TTI) and 21st on office rents. In assessing Paris' strong performance in the Economy domain, comparisons are invariably made with London, whose 19th place ranking positions it in the bottom quarter of the pack. London's strong financial centre was hit particularly hard in the recession and recovery period, contributing to London's poor performance. This is particularly evident when looking at GDP, employment, and income growth. For example, in 2009 (at the peak of the recession in Europe), real GDP in London fell by 2.25 percent (Organization for Economic Cooperation and Development OECD), while in Paris the decline was only 0.98 percent.

After Paris, five other metro areas earn "B" grades: **Dallas (#6), Oslo (#7), Calgary (#8), New York (#9)** and **Stockholm (#10)**. With Tokyo moving up to fourth place, Dallas slipped from fourth to sixth. However, Dallas maintained strong results on per capita income, and cemented its number one ranking on venture capital investment/firm with an average of nearly $20 million per venture capital firm, about $7.6 million more per firm than in second-place Chicago. In addition, the level of venture capital investment relative to GDP more than tripled, pushing Dallas up from seventh to third place on that indicator. But Dallas lost ground on a number of indicators with the two sharpest declines appearing in productivity growth (#6 to #14) and real GDP growth (#10 to #17).

Seventh-ranked **Oslo** has also improved in the Economy domain, moving up from ninth place and from a "C" to a "B" grade. Oslo has made gains on a number of key indicators, including per capita income, per capita income growth, and employment growth. At the same time, Oslo has stayed as the second-best metro on real GDP per capita, and maintained its stronghold on unemployment; ranked first, unemployment in 2009 was only 3.6 percent (San Francisco's was 9.7 percent).

Calgary maintained its eighth place ranking, outperforming all other Canadian CMAs. Calgary has been a consistent winner on employment growth over the course of each successive *Scorecard*. In addition, Calgary tops all 24 metros on per capita income growth, with a five-year average growth of 9.1 percent between 2006 and 2011, even improving on the previous period's impressive 7.4 percent growth. The biggest change for Calgary, compared to last year, is the rise in the unemployment rate from 3.5 to 6.7 percent, leading to a big dive in the rankings from second to eighth.

Due to a worsening performance on real GDP growth and employment growth, New York fell three spots to ninth place in this version of the *Scorecard*, but still holds on to a "B" grade. To remain in the top ten, New York improved on its average venture capital investment (#5). Rounding out the top ten is Stockholm, whose strong performance on high-tech employment (#2) and improvement on employment growth (#5) overshadows middling results on most other Economy indicators.

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Real gross domestic product (GDP) per capita # cities ranked: 24	Overall value of goods and services produced within the metro region. Real GDP is divided by total population to get real GDP per capita. Data is from 2009.	Real GDP per capita is commonly used to compare relative wealth among regions.	**Toronto**, 18th out of 24, persists in falling below all U.S. metros. At $34,526 Toronto's real GDP per capita is just 55% of the value of 1st place San Francisco. Calgary continues to have the highest per capita GDP in Canada and the only "B" metro; however it stays below all U.S. metros, except Chicago.	1. San Francisco A ($62,710) 2. Oslo A ($56,371) 3. Seattle A ($55.322) 4. Boston A ($53,982) 5. New York A ($53,628) 6. Los Angeles B ($47,139) 7. Stockholm B ($46,894) 8. Dallas B ($47,722) 9. Paris B ($46,369) 10. London B ($45,658) 11. Calgary B ($45,212) 12. Hong Kong B ($44,638) 13. Chicago B ($44,525) 14. Tokyo B ($40,031) 15. Milan B ($38,264) 16. Sydney C ($35,301) 17. Madrid C ($35,079) **18. Toronto C ($34,526)** 19. Barcelona C ($31,062) 20. Halifax C ($29,971) 21. Vancouver C ($29,780) 22. Berlin C ($28,829) 23. Montréal C ($28,496) 24. Shanghai D ($12,602)
Real GDP growth # cities ranked: 24	The average annual increase in real GDP over a five-year period, from 2004-2009.	Stronger growth generates, among other things, more employment opportunities.	**Toronto** ranks 18th among the 24 comparator regions. Just as in previous years, Toronto's 5 year average annual growth rate (1.5%) is far below that of 1st place Hong Kong (5.4%). Toronto is the weakest of all Canadian CMAs. Calgary, Halifax, and Vancouver all ranked among the top 10 with "B" grades. Compared to previous *Scorecards*, U.S. metros struggled the most, except Seattle.	1. Hong Kong A (5.4%) 2. Berlin A (4.3%) 3. Madrid B (3.5%) 4. Calgary B (3.0%) 5. Barcelona B (2.9%) 6. Halifax B (2.8%) 7. Tokyo B (2.7%) 8. Seattle B (2.7%) 9. Vancouver B (2.6%) 10. Milan B (2.6%) 11. Stockholm B (2.4%) 12. Paris B (2.4%) 13. Oslo C (1.9%) 14. Montréal C (1.7%) 15. Sydney C (1.7%) 16. San Francisco C (1.6%) 17. Dallas C (1.5%) **18. Toronto C (1.5%)** 19. New York C (1.5%) 20. London C (1.3%) 21. Los Angeles D (0.6%) 22. Boston D (0.6%) 23. Chicago D (-0.1%) 24. Shanghai D (-0.9%)
Productivity # cities ranked: 24	Productivity is the level of real GDP divided by employment, measuring total output per worker. Data for all metros is 2009.	High productivity levels generate wealth, allowing businesses to pay higher salaries and wages.	**Toronto** ranks 19th, below all U.S. metros, and 7 of the 8 European cities. San Francisco stays as the #1 metro in productivity, with values nearly double that of Toronto. Nine of the top 10 metros remain the same as in last year's *Scorecard 2012* Tokyo moved up and London slipped to 11th. Shanghai remains the weakest of the 24 metros, well below the others.	1. San Francisco A ($133,086) 2. New York A ($118,086) 3. Boston A ($109,692) 4. Seattle A ($109,467) 5. Los Angeles A ($104,812) 6. Dallas B ($103,146) 7. Paris B ($102,436) 8. Oslo B ($101,995) 9. Chicago B ($97,299) 10. Tokyo B ($90,464) 11. London B ($90,219) 12. Stockholm B ($86,168) 13. Milan B ($85,499) 14. Hong Kong B ($84,735) 15. Calgary B ($77,419) 16. Madrid C ($73,585) 17. Barcelona C ($71.071) 18. Sydney C ($68,523) **19. Toronto C ($68,248)** 20. Berlin C ($61,295) 21. Vancouver C ($57,809) 22. Montréal C ($57,123) 23. Halifax C ($54,464) 24. Shanghai D ($16,583)

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Productivity growth # cities ranked: 24	Productivity growth shows how quickly a CMA is gaining in wealth, measured over the 2004-2009 period.	Strong productivity growth allows for economic growth without inflationary pressures, fostering greater purchasing power for households.	**Toronto's** productivity growth of only 0.1% positions it in 22nd place, down 3 places compared to *Scorecard 2012*, and 8 places compared to *Scorecard 2011*. All other metros are well behind the strong Asian performers, although the gap is narrowing, compared to previous years. U.S. metros experienced steep drops, especially Dallas. However, they continue to outperform Canadian CMAs, except Vancouver, which saw a significant improvement.	1. Tokyo A (5.4%) 2. Hong Kong A (4.2%) 3. Barcelona A (2.7%) 4. Milan B (1.9%) 5. Madrid B (1.9%) 6. Berlin B (1.9%) 7. San Francisco B (1.8%) 8. Paris B (1.5%) 9. Los Angeles B (1.2%) 10. Seattle B (1.2%) 11. New York B (1.2%) 12. Vancouver B (1.0%) 13. Oslo B (0.9%) 14. Dallas B (0.7%) 15. London B (0.7%) 16. Boston B (0.5%) 17. Halifax B (0.4%) 18. Stockholm B (0.4%) 19. Montréal B (0.3%) 20. Calgary B (0.2%) 21. Sydney B (0.2%) **22. Toronto B (0.1%)** 23. Chicago B (0.0%) 24. Shanghai D (-6.6%)
Employment growth # cities ranked: 24	Five-year average annual percentage growth in total employment is measured for 2004-2009.	Strong employment growth means better opportunities for securing work. A high growth CMA is more attractive.	**Toronto's** 5-year annual average employment growth fell from 2% to 1%, compared to *Scorecard 2012*, leading to a drop in the rankings from 9th to 12th. Apart from Seattle, U.S. metros continue to struggle with job growth. Shanghai's leading growth rate of 4.9% continues, making it the only "A" metro area for the third year in a row. Calgary is still #2, with a strong average job growth rate of 3.3%, although less than the 4.1% reported in *Scorecard 2012*.	1. Shanghai A (4.9%) 2. Calgary B (3.3%) 3. Oslo B (2.8%) 4. Berlin B (2.4%) 5. Stockholm C (2.0%) 6. Vancouver C (1.8%) 7. Halifax C (1.6%) 8. Seattle C (1.5%) 9. Madrid C (1.5%) 10. Sydney C (1.5%) 11. Hong Kong C (1.2%) **12. Toronto C (1.0%)** 13. Paris C (0.9%) 14. Montréal C (0.8%) 15. Dallas C (0.8%) 16. London D (0.6%) 17. Milan D (0.6%) 18. Tokyo D (0.6%) 19. New York D (0.3%) 20. Barcelona D (0.2%) 21. Boston D (0.1%) 22. San Francisco D (-0.1%) 23. Chicago D (-0.2%) 24. Los Angeles D (-0.6%)
Unemployment rate # cities ranked: 24	The percentage of the labour force not working, based on 2009 data.	A metropolitan area with a lower unemployment rate indicates a more engaged work force. In turn, such places are more likely to attract people.	With an unemployment rate of 9.6%, **Toronto** ranks 18th, the weakest of all Canadian CMAs. With the exception of Berlin, all metros had higher unemployment rates than reported in *Scorecard 2012*. Oslo remains as the top metro, with only 3.6% unemployment. Madrid, Barcelona, and most U.S. metros had the sharpest increases. Five metros reported rates at 10% or higher.	1. Oslo A (3.6%) 2. Shanghai A (4.3%) 3. Tokyo A (4.8%) 4. Hong Kong A (5.4%) 5. Milan A (5.5%) 6. Sydney A (6.4%) 7. Halifax A (6.4%) 8. Calgary A (6.7%) 9. Stockholm A (6.8%) 10. Vancouver B (7.1%) 11. London B (7.7%) 12. Boston B (7.8%) 13. Dallas B 7.9%) 14. Paris B (8.4%) 15. Seattle B (8.7%) 16. New York B (8.8%) 17. Montréal B (9.5%) **18. Toronto B (9.6%)** 19. San Francisco B (9.7%) 20. Chicago C (10.0%) 21. Los Angeles C (11.0%) 22. Berlin C (12.3%) 23. Madrid D (14.0%) 24. Barcelona D (16.2%)

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Disposable income per capita # cities ranked: 24	Average after-tax income of the metro area* is divided by total population, adjusted for cost-of-living. Data is based on average after-tax income in US$ in 2009.	Metro regions with high average incomes are likely to draw in more people.	**Toronto**, and most Canadian metro areas, continues to lag behind the U.S. At just under $25,000, Toronto incomes are only 55% of the value of top-ranked San Francisco ($45,347). Calgary remains the best Canadian metro for income, at $34,705, although it is the only Canadian metro with a reported lower income than last year. Shanghai remains an outlier and sits in last place with incomes at $5,547 – just one-third of the next-lowest metro, Hong Kong.	1. San Francisco A ($45,347) 2. Seattle A $45,277) 3. Boston A ($43,656) 4. Dallas A ($37,388) 5. Chicago B ($34,901) 6. Calgary B ($34,705) 7. New York B ($32,647) 8. Los Angeles B ($30,503) 9. Sydney B ($30,455) 10. Oslo B ($25,795) 11. Halifax B ($25,451) **12. Toronto C ($24,998)** 13. Tokyo C ($24,938) 14. Vancouver C ($24,922) 15. Montréal C ($23,376) 16. Stockholm C ($23,355) 17. Paris C ($21,695) 18. London C ($20,343) 19. Milan C ($19,278) 20. Madrid C ($18,983) 21. Barcelona C ($17,956) 22. Berlin C ($17,435) 23. Hong Kong C ($15,620) 24. Shanghai D ($5,547)
Disposable income growth # cities ranked: 24	Percentage changes in disposable income are measured over a five-year period. A higher ranking shows how quickly a CMA is improving its standard of living. This covers the period from 2006-11.	Strong income growth boosts a metro region's attractiveness.	With 5.0% income growth over a 5-year period, **Toronto** stays in 8th place, but has improved from a "C" to a "B" grade, compared to *Scorecard 2012*. While all Canadian CMAs showed stronger income growth *Scorecard 2012*, top-ranked Calgary set the pace with an impressive 9.1% growth over the period. On the other hand, most U.S. metros did worse. London fell two places to end up last.	1. Calgary A (9.1%) 2. Shanghai A (8.7%) 3. Vancouver B (6.2%) 4. Madrid B (6.0%) 5. Barcelona B (6.0%) 6. Halifax B (5.4%) 7. Seattle B (5.0%) **8. Toronto B (5.0%)** 9. Montréal C (4.8%) 10. Dallas C (4.7%) 11. Oslo C (4.5%) 12. Sydney C (4.3%) 13. New York C (4.2%) 14. Milan C (4.2%) 15. Boston C (4.0%) 16. Hong Kong C (4.0%) 17. Paris C (3.9%) 18. San Francisco C (3.7%) 19. Berlin C (3.3%) 20. Chicago C (3.2%) 21. Stockholm C (3.1%) 22. Los Angeles C (3.0%) 23. Tokyo D (2.6%) 24. London D (0.7%)
High-Tech employment # cities ranked: 24	This indicator measures the share of total employment in the information and communications technology sector, expressed as a five-year average. Data for Canada, U.S. and Shanghai is from 2006-2011 Europe, Hong Kong, Tokyo: 2005-2010, and Sydney: 2002-2006.	In line with the "creative cities" theory, high levels of employment in this sector signal an attractive metro region.	With 5.7% employment in the high-tech sector, **Toronto** stays in the top ten, with a "B" ranking. Paris leads the pack, with over 9% of total employment in the high-tech sector. Stockholm follows with 8%. Four U.S. metros led by Seattle are ahead of Toronto, but Toronto continues to top all Canadian CMAs.	1. Paris A (9.3%) 2. Stockholm A (8.0%) 3. Seattle A (7.3%) 4. Boston B (7.0%) 5. Tokyo B (7.0%) 6. San Francisco B (6.5%) 7. Dallas B (5.9%) **8. Toronto B (5.7%)** 9. London B (5.5%) 10. Montréal B (5.4%) 11. Madrid B (5.1%) 12. Oslo C (5.0%) 13. Vancouver C 4.5%) 14. Calgary C (4.2%) 15. Halifax C (4.0%) 16. Los Angeles C 4.0%) 17. Milan C (3.7%) 18. New York C (3.4%) 19. Chicago C (3.2%) 20. Sydney D (3.0%) 21. Berlin D (2.5%) 22. Barcelona D (2.0%) 23. Hong Kong D (1.8%) 24. Shanghai D (1.2%)

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Residential building permit growth # cities ranked: 13	The percentage increase in the number of residential building permits was calculated for the five year period from 2006-11 for all metros except Sydney (2005-2010).	Residential building permits growth indicates the rate of investment activity in the residential sector. As an important sector of the economy, housing is a proxy for confidence in the growth of the metro region.	**Toronto**, ranked 2nd, showed strong gains over the past two *Scorecards*, climbing from -3.7% to 0.4% to this year's average of 3.1%. Similarly, Montréal climbed to the top spot with 4.2% growth. As with the previous two *Scorecards*, Canadian CMA outperformed all U.S. metros, which continue to be plagued by negative growth.	1. Montréal A (4.2%) **2. Toronto A (3.1%)** 3. Halifax A (2.0%) 4. Sydney A (0.2%) 5. Vancouver A (-1.5%) 6. Calgary A (-2.2%) 7. Boston B (-9.0%) 8. San Francisco C (-12.6%) 9. Los Angeles C (-12.9%) 10. Dallas C (-13.5%) 11. Seattle C (-13.7%) 12. New York C (-15.5%) 13. Chicago D (-28.3%) Data unavailable for Barcelona, Berlin, Hong Kong, London, Madrid, Milan, Oslo, Paris, Shanghai, Stockholm, Tokyo.
Professional employment** # cities ranked: 23	Based on the Statistics Canada definition, the share of total employment in 40 occupations, including but not limited to: engineers, physicians, judges, and professors. Comparable data are based on the following years: Canada, U.S., Sydney, Hong Kong: 2011 Europe, Tokyo: 2010.	Again, this is included as part of the "creative cities" agenda. High levels of employment in knowledge-driven professional occupations are correlated positively with an attractive metro region.	**Toronto** stays in a strong position, but slips from 3rd to 5th place and loses its "A" grade. Sydney and Paris move ahead of Toronto. With over 21% of the local workforce employed in professional occupations, Toronto stays ahead of all other North American metro areas. Hong Kong claims the #1 spot from London, which drops to #3.	1. Hong Kong A (26.1%) 2. Sydney A (25.5%) 3. London A (22.7%) 4. Paris A (21.8%) **5. Toronto B (21.2%)** 6. Montréal B (19.9%) 7. Calgary B (18.9%) 8. Stockholm B (18.8%) 9. Boston B (18.7%) 10. San Francisco B (18.3%) 11. Halifax B (18.5%) 12. Tokyo B (17.9%) 13. New York B (17.8%) 14. Vancouver B (17.7%) 15. Seattle C (16.5%) 16. Oslo C (15.6%) 17. Chicago C (15.6%) 18. Madrid C (15.6%) 19. Los Angeles C (15.5%) 20. Dallas C (13.8%) 21. Berlin D (10.6%) 22. Milan D (10.2%) 23. Barcelona D (8.6%) Data unavailable for Shanghai.
Total Tax Index (TTI) # cities ranked: 19	The total taxes paid by similar corporations in a particular location and industry, calculated as a percentage of total taxes paid by similar corporations across the United States. Data is for 2011.	The index is designed to compare the total tax burden faced by companies in each city, including: income taxes, capital taxes, sales taxes, property taxes, miscellaneous local business taxes, and statutory labour costs. Metro regions with lower tax burdens are more attractive to new business and investment.	**Toronto** is the 4th of 5 Canadian CMAs to top the rankings and earn "A" grades. Toronto's corporate tax burden is 56% of the U.S. average; by contrast, Paris – ranked last – is 187% of the U.S. average.	1. Vancouver A (49.2) 2. Halifax A (49.4) 3. Calgary A (50.7) **4. Toronto A (56.0)** 5. Montréal A (62.1) 6. Shanghai B (68.0) 7. London B (79.8) 8. Boston B (91.9) 9. Seattle B (92.6) 10. Chicago B (95.0) 11. Dallas B (98.6) 12. New York B (101.3) 13. Los Angeles B (105.1) 14. San Francisco B (106.6) 15. Berlin C (118.2) 16. Sydney C (126.8) 17. Milan C (150.8) 18. Tokyo D (162.6) 19. Paris D (187.1) Data unavailable for Barcelona, Hong Kong, Madrid, Oslo, Stockholm.

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Average office rents # cities ranked: 24	This is a measure of the total rental cost of downtown Class A office space, based on U.S. dollars per square foot. Data is for 2011.	This indicator is a measure of the cost of doing business. Metro regions with lower office rents are more attractive to new business and investment.	**Toronto** became the most expensive metro in North America, ranked 16th just behind New York. At $71.13 per square foot, rent for office space in Toronto is more than double that of Dallas – the cheapest place to rent space. Due to the extremely high rents paid in the Tokyo ($186.49) and London ($220.15), 18 of the 24 comparator regions score "A" grades on this indicator.	1. Dallas A ($31.48) 2. Halifax A ($32.50) 3. Barcelona A ($36.27) 4. Berlin A ($37.85) 5. Seattle A ($40.71) 6. Boston A ($40.80) 7. Los Angeles A ($46.17) 8. Chicago A ($48.55) 9. Montréal A ($48.82) 10. Madrid A ($54.57) 11. San Francisco A ($57.68) 12. Vancouver A ($63.70) 13. Oslo A ($65.15) 14. Calgary A ($65.32) 15. New York A ($69.85) **16. Toronto A ($71.13)** 17. Stockholm A ($75.44) 18. Milan A ($76.80) 19. Shanghai B ($116.35) 20. Sydney B ($117.88) 21. Paris B ($123.82) 22. Hong Kong C ($158.72) 23. Tokyo D ($186.49) 24. London D ($220.15)
Number of patents per 100,000 population # cities ranked: 24	Using utility patents from the U.S. Patents and Trademark Office, total patents are divided by population to measure the degree of new product development or product improvement. Data is for 2010.	This is a proxy for the amount of creativity taking place in a metro area.	With 18.8 patents per 100,000 population, **Toronto** ranks 9th, three places higher than last year but still a "D" performer. San Francisco dominates, with twice the number of patents as second-place Boston. Toronto lags behind all U.S. metro areas as well as Tokyo.	1. San Francisco A (198.3) 2. Seattle B (102.2) 3. Boston C (99.0) 4. Tokyo C (56.2) 5. Los Angeles D (40.8) 6. Dallas D (34.5) 7. New York D (32.8) 8. Chicago D (31.0) **9. Toronto D (18.8)** 10. Sydney D (18.1) 11. Vancouver D (17.9) 12. Calgary D (16.6) 13. Stockholm D (16.5) 14. Montréal D (13.8) 15. Oslo D (10.9) 16. Paris D (8.5) 17. Berlin D (7.1) 18. Halifax D (7.0) 19. Hong Kong D (5.9) 20. Milan D (5.1) 21. London D (3.4) 22. Barcelona D (2.4) 23. Shanghai D (1.4) 24. Madrid D (1.4)
Venture Capital Investment per million $ of GDP # cities ranked: 12	This measures the average investment in new start-ups per $1 million GDP (U.S. dollars). Data is for 2010.	In line with the "creative cities" theory, high levels of Venture Capital Investment signal an attractive metro region.	**Toronto** does poorly here, along with all other Canadian CMAs. Ranking 11th among the 12 comparator regions, Toronto scores a "D" grade. San Francisco continues to dominate as the only "A" metro. At more nearly $22,000 per million GDP, San Francisco investments are three times that of New York (#4) and nearly twenty times that of Toronto.	1. San Francisco A ($21,918.6) 2. Boston B $12,191.9) 3. Dallas C ($8,304.2) 4. New York C ($7,238.7) 5. Chicago D ($3,825.6) 6. Seattle D ($3,592.5) 7. Los Angeles D ($3,049.6) 8. Montréal D ($2,458.4) 9. Halifax D ($2,380.5) 10. Vancouver D ($2,353.9) **11. Toronto D ($1,255.5)** 12. Calgary D ($1,158.2) Data unavailable for Barcelona, Berlin, Hong Kong, London, Madrid, Milan, Oslo, Paris, Shanghai, Stockholm, Sydney, Tokyo.

Economic Indicators	Definition	Significance	What About Toronto?	The Grade
Average investment per Venture Capital Firm # cities ranked: 12	This indicator is a measure of the average investment of companies involved in venture capital financing. The unit of measure is thousands of U.S. dollars. Data is for 2011.	In line with the "creative cities" theory, high levels of venture capital investment signal an attractive metro region.	Ranked 9th, **Toronto** is well below all U.S. metro areas in the field. All Canadian CMAs score "D" grades. Toronto's average investment of $4.2 million per venture capital firm is less than one-quarter that of first place Dallas at $19.6 million, and less than half of the weakest U.S. metro, Los Angeles. Among Canadian CMAs, Vancouver attracted slightly more investment than Toronto.	1. Dallas A ($19,582) 2. Chicago B ($11,898) 3. Seattle B ($11,275) 4. San Francisco C ($10,181) 5. New York C ($9,807) 6. Boston C ($9,402) 7. Los Angeles C ($9,096) 8. Vancouver D ($4,359) **9. Toronto D ($4,196)** 10. Montréal D ($3,039) 11. Calgary D ($2,738) 12. Halifax D ($2,529) Data unavailable for Barcelona, Berlin, Hong Kong, London, Madrid, Milan, Oslo, Paris, Shanghai, Stockholm, Sydney, Tokyo.
Average size of IPOs # cities ranked: 24	A measure of the monetary value of initial public offerings (IPOs) in 2011. Generally, IPOs are issued by smaller companies seeking capital to expand. But large companies can also issue an IPO. Data is average of 2005-06 and 2009-11.	Though it can be seen as a risky investment, the size of an IPO typically appraises the net worth of smaller companies.	The average size of an IPO in **Toronto** at $61 million (measured in millions of US$), is only one-fifteenth the size as top-rated Tokyo. Toronto falls just behind Montréal, the highest ranking Canadian CMA. Canada lags behind most of the world when it comes to the size of IPOs.	1. Tokyo A ($998) 2. Milan B ($508) 3. Madrid C ($436) 4. Shanghai C ($321) 5. Boston C ($284) 6. Paris C ($262) 7. Chicago D ($240) 8. Berlin D ($235) 9. New York D ($227) 10. Barcelona D ($227) 11. San Francisco D ($168) 12. Oslo D ($161) 13. Dallas D ($136) 14. Hong Kong D ($117) 15. London D ($114) 16. Sydney D ($106) 17. Los Angeles D ($101) 18. Seattle D ($80) 19. Montréal D ($64) **20. Toronto D ($61)** 21. Calgary D ($60) 22. Stockholm D ($43) 23. Halifax D ($31) 24. Vancouver D ($12)

Economic Indicators	Definition	Significance	What About Toronto?	The Grade					
Market size # cities ranked: 24	This is a measure of the total income of the population within a 500-mile radius of the metro area (measured in trillions of U.S. dollars). Data is for 2010. Data and rankings remain unchanged from *Scorecard 2012.*	The greater the purchasing power of the broad regional market, the more attractive the metro region is as a place for new business and investment.	**Toronto** ranks 5th overall with a market value of $5.17 trillion. Paris, London, and Milan make up the top three metro markets, within range of the dense relatively wealthy European population. Smaller and more remote places like Sydney and Calgary fall to the bottom.	1. Paris 2. London 3. Milan 4. Berlin **5. Toronto** 6. New York 7. Montréal 8. Boston 9. Chicago 10. Tokyo 11. Barcelona 12. Shanghai	A A A B **B** B C C C C C C	($8,143) ($6,368) ($6,297) ($5,543) **($5,170)** ($4,421) ($4,038) ($3,623) ($3,364) ($3,127) ($2,602) ($2.471)	13. Hong Kong 14. Los Angeles 15. San Francisco 16. Dallas 17. Stockholm 18. Madrid 19. Oslo 20. Halifax 21. Vancouver 22. Seattle 23. Calgary 24. Sydney	D D D D D D D D D D D D	($1,992) ($1,893) ($1,664) ($1,638) ($1,505) ($1,417) ($1,226) ($925) ($657) ($643) ($480) ($262)

Sources: Conference Board of Canada; Statistics Canada; Bureau of Labor Statistics; Moody's Economy.com; Organisation for Economic Co-operation and Development; Eurostat; International Monetary Fund; KPMG; Science-Metrix; CB Richard Ellis; Australian Bureau of Statistics; Shanghai Statistical Yearbook; Government of Hong Kong; Thomson Reuters; Euromonitor International.

*Disposable income from Eurostat is only available at the regional level. The boundaries of these "regions" are not strictly defined and vary greatly across European metro areas.

**Occupational data from the Bureau of Labor Statistics was partially secure for some metro areas. Data was either missing or not available for various occupational categories. Therefore, the ranking for U.S. Metropolitan Statistical Areas is under-estimated.

Focus on Toronto's Economy

Ranked 12th, Toronto stays as a "C" performer on the Economy, but fell one place in the rankings — its lowest ranking since the inaugural *Scorecard* in 2009. Where *Scorecard 2012* showed Toronto narrowing the gap with Calgary, Canada's perennial top performer, this year marks the return of a wider gap. Instead of being three spots behind Calgary, Toronto is now four places behind. Toronto remains ahead of Halifax, Montréal, and Vancouver, although, unlike Toronto, they improved their rankings from last year.

Similarly, Toronto gained no ground against the U.S. leaders, with results on key indicators such as real GDP, productivity, and income continuing to weaken. In total, Toronto's rankings went down on ten of the 18 Economy indicators, although in most instances by only one or two places. Clearly, Toronto has headed in the wrong direction.

Even with overall poorer results, there is some good news for Toronto. These are found in:

- **Income growth:** In relative terms, Toronto stays the same, in eighth place. But compared to the previous five-year period, average income growth increased from 4.6 percent to 5.0 percent, keeping Toronto ahead of all U.S. metros except Seattle. All Canadian CMAs generally fared well on this indicator, ranking among the top ten. Calgary's stunning 9.1 percent five-year income growth makes it the best of all 24 metros, while Vancouver impresses with a 6.2 percent average growth rate. On measures of income per capita, Toronto fares less well, but stays above the middle of the pack. Toronto drops from 11th to 12th, as Halifax nudges up two places.
- **Residential building permit growth:** Toronto has been on a steady upward climb — now ranked second, behind first-place Montréal. Residential building permits increased by 3.1 percent on average each year between 2006 and 2011, a big improvement compared to the previous 5-year period at only 0.4 percent, and an impressive turnaround since the downturn of 2004-09 (-3.7 percent average annual growth). Even in this 2006-11 period, nine of 13 metros continued to have negative average growth, including Vancouver and Calgary and all U.S. metros.
- **Professional employment and high-tech employment:** Toronto continues to be a metro with a strong base of professional employment, despite slipping from third to fifth place. Sydney and Paris have surpassed Toronto, while Hong Kong has moved to the top. With 21.2 percent of the local workforce employed in professional occupations, Toronto stays ahead of all other North American metro areas. Boston (18.7 percent) is the top-ranked U.S. metro.

  Toronto remains the best Canadian CMA in high-tech employment and keeps its eighth place ranking. Within North America, Seattle, Boston, San Francisco, and Dallas remain as powerhouses, but Paris (#1) and Stockholm (#2) surpassed them all. Paris' labour force is employed in the high-tech sector (9.3 percent).
- **Total Tax Index (TTI):** Toronto's fourth place ranking is the same as in *Scorecard 2012*, but with a much more favourable TTI, down to 56 from 67.6. In other words, Toronto's corporate tax burden is only 56 percent of the U.S. average. All Canadian metros are strong, ranking in the top five spots with Vancouver at the top.
- **Market size:** Toronto ranks fifth on this indicator, best of all North American metro regions (data for this indicator remains unchanged; hence the rankings are the same as last year). The Toronto CMA benefits greatly from a location with access to large and wealthy markets in the U.S. north-east and mid-west. Toronto draws from a catchment area of about 120 million people.
  Four European metros draw similar (but even stronger) advantages from their respective locations: Paris, London, Milan, and Berlin.

In *Scorecard 2012*, Toronto's **employment growth** was cited as an economic bright spot for Toronto. Unfortunately, average annual employment growth has dropped, and while not an absolute weakness for Toronto, this has contributed to Toronto's overall slide in the Economy rankings. In the 2004-09 period, Toronto's annual employment growth averaged only one percent half that of the previous period. Although most metros experienced declining job growth, Toronto did drop in the rankings, from ninth to 12th. Meanwhile, Calgary is still second, with a strong average job growth rate of 3.3 percent; again lower than the previous five-year period (4.1 percent).

Toronto's weaknesses in the Economy domain were identified in the earliest *Scorecards*, and they persist. On several indicators, the gap between Toronto and the leading metros has widened, as seen by the drop in rankings in: real GDP per capita, real GDP growth, productivity, productivity growth, income per capita, office rents, and venture capital/GDP. The drop in employment growth is documented above. The summary below highlights Toronto's areas of vulnerabilities; except for office rents, all have been flagged in one or more previous *Scorecards*.

- **Real GDP per capita and real GDP growth:** In *Scorecard 2012*, it was noted that Toronto's real per capita GDP ranking had fallen steadily since *Scorecard 2010*, going from tenth to 16th to 17th. A year later and Toronto has dropped one more ranking to 18th. At $34,526, Toronto's real per capita GDP is 55 percent of San Francisco's at $62,710 (again ranked first). At the same time, Calgary improved in the rankings but stays below most U.S. metros.

  Average growth in Toronto's real GDP was only 1.5% over the 2004-09 period, down from 2.2 percent previously. All but five metro regions experienced a slowdown in real GDP growth, including every U.S. metro. Calgary continues to have strong growth as a stand-out in the Canadian field. With real GDP growth averaging 3 percent, Calgary ranks fourth. During this most recent period, Vancouver rebounded the strongest, with a real GDP five-year annual growth rate averaging 2.6 percent, compared to only 0.6 percent reported in *Scorecard 2012*.

- **Productivity and Productivity growth:** Productivity remains the biggest challenge common to all Canadian CMAs, consistently below all U.S. metros. Toronto ranked 19th on productivity, down two places from *Scorecard 2012*. At $68,248, productivity levels were higher than in *Scorecard 2012* but only just equal to the values of *Scorecard 2011*. Toronto falls below seven of eight European metros.

  Toronto's results on productivity growth are even worse, putting Toronto in 22nd place — three places lower in the rankings. In the 2004-09 period measured by this *Scorecard*, Toronto grew by only 0.1 percent per year on average — worse than the previous two periods (0.3 percent and 0.9 percent). Vancouver is the only Canadian CMA to make any progress, but did so in spectacular fashion. Vancouver moved from 22nd to 12th place, turning around a period of negative growth to achieve an average of 1 percent annual productivity growth. Calgary has been unable to recover from losses in the previous periods, continuing to slide from ninth to 16th to 20th place. Outstanding productivity growth continues in Tokyo (#1) and Hong Kong (#2). In the U.S., all metros had slower productivity growth than the previous period, but still did better than Toronto (except Chicago).

- **Unemployment:** Toronto's unemployment rate reached 9.6 percent in 2009, compared to 6.6 percent in 2008. Toronto's 18th place ranking stays the same, as unemployment rose in most metros in 2009. Nonetheless, Toronto reported the highest unemployment rate of all Canadian CMAs, but Calgary experienced the sharpest change, going from 3.5 percent to 6.7 percent unemployment in one year. All metros except Berlin had higher unemployment during this period, and in five metros, unemployment rates were 10 percent or higher. Oslo stays on top with a low unemployment rate of 3.6 percent; and all three Asian metros do relatively well.

- **Office rents:** Toronto's drop from 15th to 16th place is not of itself alarming. However, for the first time, Toronto emerges as the most expensive metro for downtown office space in North America, surpassing New York. At $71.13 per square foot, rent for Toronto office space in 2011 is more than double that of Dallas — the cheapest place to rent space. Rents increased by 19% in one year.

- **Size of IPOs:** Toronto's 20th place ranking is two notches down from last year (and the year before). Even so, the story remains exactly the same. The value of Toronto's IPOs at $61 million is inconsequential compared to the leaders; Tokyo at $998 million, Milan at $508 million, and Madrid at $436 million. The best city in North America is Boston, ranked fifth with IPOs valued at $284 million.

- **Venture Capital Investment:** Toronto continues to be a weak centre for attracting venture capital investment, and falls one spot in the rankings on the measure of venture capital investment measured against GDP. Toronto drops from tenth to 11th place (out of a total of 12 metros for which we have data) with investment levels just over $1,255 per million GDP — a stark contrast to the consistently top-ranked metro, San Francisco at $21,918. In fact, investment in San Francisco grew by 19 percent between 2010 and 2011, bringing it back up to levels not realized for more than four years. No Canadian CMA gets close to the U.S. leaders, but Montréal had the best results, netting about double the amount of venture capital investment as Toronto.

  Toronto stays in ninth place when it comes to average investment per venture capital firm. At about $4.2 million per firm, Toronto has been fairly consistent since 2007-08. Like all Canadian CMAs, Toronto is far behind the metros; even the weakest, Los Angeles, has more than twice the level of investment as Toronto. Dallas has held on to the number one ranking since *Scorecard 2010*. With an average per firm investment of $19,582, Dallas becomes the only metro to earn an “A”. Investment in Dallas grew by 49 percent between 2010 and 2011, while investments in most other metros either leveled off or declined.

- **Patents:** Patent activity, along with indicators for Venture Capital Investment and IPOs, tell us something about how Toronto performs as an innovative city. Measured on ranking alone, Toronto looks reasonably secure in ninth spot, one spot higher than last year and better than any other Canadian CMA. However, with just 18.8 patents per 100,000 population, Toronto is a spectacular under-performer compared to San Francisco, Seattle, Boston, and Tokyo. San Francisco even managed to widen the gap on this indicator with a higher proportion of patents than last year. With more than 198 patents per 100,000 population, San Francisco had nearly twice as many as second place Boston (202.2.7). And when compared to the weakest U.S. metro, Toronto has about 60 percent of the patent creation as Chicago.

Economic Update: Focus on North America

In *Scorecard 2011*, we assessed the economic performance of North American metropolitan areas in the pre- and post-recession periods, and discovered that Canadian cities generally out-performed their U.S. counterparts, particularly during the recovery. Higher employment growth and a more stable housing market during that period accounts for much of Canada’s success. But throughout the course of the recession, U.S. metros managed strong productivity growth, especially when compared to Canada’s CMAs.

Successive *Scorecards*, including this one, place Toronto in the bottom half of the overall global rankings for real GDP growth and productivity growth. In order to better understand Toronto’s current performance within a North American context, *Scorecard 2012* introduced an Economic Update, drawing on the most recent data available. In this current edition, we draw on data up to the second quarter of 2012. Such up-to-date data is typically only available for metropolitan regions in the U.S. and Canada, and applies to the following eight indicators:

- Real GDP per capita and real GDP growth
- Productivity and productivity growth
- Income per capita and income growth
- Employment growth
- Unemployment rate

The Economic Update rankings are generated using all 18 indicators included in the Economy domain, combining the new results (eight indicators) with the results from the ten other economic indicators (not updated).

The discussion that follows focuses primarily on what’s new and different from the Economy domain assessment; that is, information coming from the eight updated indicators.

Economic Update for North America

Rank	Metro area	Normalization Score	Grade
1	Boston	0.69	A
2	San Francisco	0.57	B
3	Dallas	0.54	B
4	Seattle	0.54	B
5	Calgary	0.47	C
6	Halifax	0.42	C
7	**Toronto**	**0.39**	**D**
8	New York	0.38	D
9	Montréal	0.36	D
10	Vancouver	0.35	D
11	Los Angeles	0.33	D
12	Chicago	0.33	D

Toronto has improved. While still in "D" territory, Toronto has moved up two places to rank seventh, just missing the chance for a "C" grade. In this Update, the struggles of many U.S. metros to recover through their "jobless recovery" continue. For Canadian CMAs, the familiar pattern of weak productivity and poor growth re-appears. Halifax is the only Canadian CMA showing positive productivity growth.

Compared with the results of the Economy domain overall, Toronto has gained some ground against at least one U.S. metro — New York, which ranked six places ahead of Toronto. However, the distance between Toronto and the top performers (Boston, San Francisco, Dallas, and Seattle) continues to widen. Specifically, Boston's Overall Update score of 0.69 is 0.30 ahead of Toronto, but Boston is only 0.15 points ahead of Toronto on the global Economy domain.

With the exception of faltering New York and resurgent Halifax, the rankings are similar to *Scorecard 2012*, and reasonably consistent with those of the Economy domain overall. Among all twelve metros, Chicago has suffered the most, dropping into last place.

Looking at the top performer, Boston has established a dominant position as the only "A" metro. Boston was one of the few U.S. metros to see rising productivity growth and falling unemployment levels. Unemployment in the second quarter of 2012 was 5.5 percent, compared to 6.8 percent a year before. Only Calgary had a better unemployment rate. Boston ranks first on real GDP per capita, third on real GDP growth and third on per capita income. Boston earns "A" grades on six of the eight updated indicators. Income growth of 2.7 percent is Boston's worst result, but perhaps not surprising, given the high per capita income levels reported in 2012 ($46,086 compared to Toronto at $25,400).

San Francisco has come back to claim second place, outperforming Seattle (#2 in 2012 and now #4). San Francisco has held on to the top ranking in productivity since *Scorecard 2011*, including Economic Updates. At $124,809 in the second quarter of 2012, productivity levels have dropped modestly since 2009 (as per the Economy domain). Nevertheless, productivity in San Francisco is well above Calgary's $79,454 — the highest Canadian CMA. San Francisco also ranks first on per capita income, as it did in the Economy domain. San Francisco, along with five of the six other U.S. metros, enjoyed a boost from falling unemployment rates, dropping from 9.6 percent to 8.4 percent over the year. Nonetheless, San Francisco had no employment growth — typical of all U.S. metros (except Dallas, where growth was negligible).

Dallas, ranked third, has maintained reasonably consistent results since last year's Economic Update — the best in real GDP growth, and second-best in productivity growth. Income growth has been slower than during the previous period, but at 3 percent, is second only to Seattle among U.S. metros. And as noted, Dallas is the only U.S. metro to have had any employment growth at all between 2007 and the second quarter of 2012. Yet, all others except Boston saw some improvement on this indicator; in other words, a slowing down of job losses.

What Does this Mean for Toronto?

Toronto's ranking on the Economic Update has risen from ninth to seventh place, largely due to the weakening fortunes of several U.S. metros. Toronto has made gains on income growth, real GDP growth, and residential building permit growth, but continues in 2012 to struggle with poor productivity and high unemployment. Overall, Toronto stays as a "D" performer, receiving "D" grades on four of the eight indicators updated from the Economy domain; in other words, no change from last year's Economic Update. They include:

- Real GDP per capita
- Productivity
- Productivity growth
- Income per capita

Looking first at the good news:

- Toronto improved its ranking on real **GDP growth**, moving up from eighth to seventh earning a "C" grade. The gain was made at the expense of Montréal, who dropped just below Toronto. Real GDP growth in Toronto averaged 0.7 percent, the same as in the 2006-11 period, still well below the leaders, Dallas (2 percent) and Halifax (1.8 percent). While not a major turnaround for Toronto, nonetheless, it is an improvement. Four U.S. metros struggled to see any real GDP growth, with New York falling the furthest from last year.
- Toronto showed improvement in **income growth**, ranking sixth — up two compared to *Scorecard 2012*. Toronto made gains relative to Montréal and New York. Toronto's income growth of 2.9 percent was less than in the previous period, but every metro experienced lower income growth. In top-ranked Calgary, income grew by 4.9 percent on average, slightly lower than the 5 percent recorded for the previous period.
- **Residential building permit five year average annual growth** increased from 0.4 percent to 3.1 percent compared to *Scorecard 2012*. Montréal, Toronto, and Halifax lead the field, contrasting sharply with the negative growth in U.S. metros. Boston, the best of the U.S. metros, saw a five-year average annual decrease of 9 per cent in residential permit activity, better than last year's reported — 14 percent but still dismal. These results have been consistent for the past two *Scorecards 2012* and *2011*, beginning with the findings on the effects of the recession and recovery in from 2011.
- Toronto, along with all Canadian CMAs, continued to enjoy an advantage over U.S. metros with regard to **employment growth**. Toronto ranks fourth — same as last year, although employment grew by only 1 percent annually between 2007 and 2012 (Q2), compared to 1.4 percent and 2.4 percent in the respective two previous five-year periods. Compared with U.S. metros with persistent negative growth (except Dallas at +0.3 percent), Toronto fares well — good enough for an "A" grade. Calgary is best with 1.8 percent average annual employment growth, an improvement from the previous period's growth of 1.6 percent. Vancouver, ranked second, also improved marginally from 1.6 percent to 1.7 percent.

With regard to **real GDP per capita and productivity**, Toronto is in ninth place on both indicators, just as it was in last year's Update with 2011 data. Toronto stays well below the leading U.S. metros, the same as before. Furthermore, in 2012 (Q2), Toronto is in the same relative position as in 2009, described in the Economy domain. The absolute values for each indicator have barely budged; e.g. — real GDP per capita was $34,526 in 2009 and just $34,565 in 2012. By contrast, Boston's per capita real GDP (ranked first) increased from $53,982 in 2009 to $55,687 by 2012 (Q2).

On three of the eight updated indicators, Toronto slipped in the rankings: productivity growth, unemployment rate, and income per capita.

- **Productivity growth** is Toronto's worst result, falling to last place with an average annual decline in productivity of 0.4 percent in the 2007-12 (Q2) period. Every Canadian CMA except Halifax experienced negative average growth over this period, as they had during the

2006-2011 period. As reported in all previous *Scorecards*, Canadian CMAs struggle to close the gap on productivity with U.S. metros. However, with the exception of Boston, productivity growth in U.S. metros was slower than in the 2006-11 period. Productivity grew on average by 1.8 percent in Boston, ranked first, and by 1.7 percent in Dallas, ranked second.

- Toronto's **unemployment rate** rose from 8.4 percent to 8.7 percent between the second quarter of 2011 and the second quarter of 2012. Toronto ranks ninth, down one spot from last year and drops from a "B" to a "C" grade. Meanwhile, in eight of the twelve metros, unemployment rates fell; only Montréal, Halifax, and New York join Toronto as metros with higher unemployment in 2012 (Q2) than a year earlier. Calgary stays at the top, with an enviable 4.8 percent unemployment rate, down by a full percentage point from 2011 (Q2). Most U.S. metros witnessed a fall in their unemployment rate of 1 to 1.5 percentage points, although even with improvement, Los Angeles still has double-digit unemployment (10.5 percent).
- On **after-tax income per capita**, Toronto drops from tenth to 11th place, as incomes in Vancouver surpassed Toronto's in 2012 (Q2). Incomes of $25,400 per capita in Toronto are just over half those in San Francisco, edging out Seattle in 2012. Calgary's after-tax income per capita is $37,121, making it the only Canadian CMA with incomes higher than many U.S. metros. Calgary climbs from sixth to fifth, behind San Francisco, Seattle, Boston, and Dallas, leaders since 2009.

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade
Real gross domestic product (GDP) per capita # cities ranked: 12	Overall value of goods and services produced within the metro area. Real GDP is divided by total population to get real GDP per capita. Data is from 2012 Q2.	Per capita real GDP is commonly used to compare relative wealth among regions.	**Toronto** stays in 9th place, in the same relative position shown for 2009. Calgary is the only Canadian CMA with a "B" grade, improving its position from last year. All other Canadian metros rank well below U.S. metros, earning "D"s. Once again, Boston and San Francisco are in the top two spots.	1. Boston A ($55,687) 2. San Francisco A ($53,417) 3. Seattle A ($51,588) 4. New York A ($50,123) 5. Los Angeles B ($47,649) 6. Calgary B ($46,514) 7. Dallas B ($44,331) 8. Chicago B ($43,026) **9. Toronto D ($34,565)** 10. Vancouver D ($30,564) 11. Halifax D ($30,041) 12. Montréal D ($28,123)
Real GDP growth # cities ranked: 12	The average annual increase in real GDP over a five-year period, from 2007-2012 Q2 period.	Stronger growth generates, among other things, more employment opportunities.	**Toronto** ranks 7th, up one spot compared to *Scorecard 2012*. Dallas holds on to its top ranking, although growth rates have slowed compared to last year's *Scorecard*. Calgary has bounced back to 4th place, and from a "D" to an "A" grade. Growth rates cooled further in Seattle, New York, and Chicago. Chicago posted negative growth over the period.	1. Dallas A (2.0%) 2. Halifax A (1.8%) 3. Boston A (1.7%) 4. Calgary A (1.5%) 5. Vancouver B (1.4%) 6. Seattle B (1.1%) **7. Toronto C (0.7%)** 8. Montréal C (0.6%) 9. San Francisco C (0.5%) 10. New York D (0.1%) 11. Los Angeles D (0.0%) 12. Chicago D (-0.3%)
Productivity # cities ranked: 12	Productivity is the level of real GDP divided by employment, measuring total output per worker. Data is from 2012 Q2.	High productivity levels generate wealth, allowing businesses to pay higher salaries and wages.	**Toronto** stays in 9th, consistently below all U.S. metros like all other Canadian CMAs. The rankings for all 12 metros are the same as in *Scorecard 2012*. San Francisco, Los Angeles and New York rank 1-2-3, although with lower values. Boston and Chicago are the only two U.S. metros with productivity levels higher than last year.	1. San Francisco A ($124,809) 2. Los Angeles A ($121,413) 3. New York A ($113,263) 4. Seattle A ($109,505) 5. Boston A ($107,724) 6. Dallas B ($101,023) 7. Chicago B ($95,272) 8. Calgary C ($79,454) **9. Toronto D ($68,786)** 10. Vancouver D ($58,124) 11. Montréal D ($56,025) 12. Halifax D ($55,471)

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade
Productivity growth # cities ranked: 12	Productivity growth shows how quickly a CMA is gaining in wealth, measured over the 2007-2012 Q2 period.	Strong productivity growth allows for economic growth without inflationary pressures, fostering greater purchasing power for households.	**Toronto** ranks last. Negative productivity growth persisted through the 2nd quarter of 2012, although with a slight improvement from -0.8% to -0.4%. Compared to the 04-09 period, Toronto's performance has deteriorated in both absolute and relative terms. Halifax is the strongest Canadian CMA with a "C" grade. Boston's gains allowed it to move from 4th to 1st place.	1. Boston A (1.8%) 2. Dallas A (1.7%) 3. Los Angeles A (1.5%) 4. San Francisco A (1.5%) 5. Seattle A (1.5%) 6. Chicago B (0.8%) 7. Halifax C (0.5%) 8. New York C (0.2%) 9. Montréal D (-0.2%) 10. Vancouver D (-0.3%) 11. Calgary D (-0.3%) **12. Toronto D (-0.4%)**
Employment growth # cities ranked: 12	Five-year average annual percentage growth in total employment is measured for 2007-2012 Q2.	Strong employment growth means better opportunities for securing work. A high growth CMA is more attractive.	**Toronto's** most recent 5-year annual average employment growth was 1.0%, below the previous 5-year period, but good enough for 4th place. However, employment levels began to improve in 8 of the 12 CMAs, with Calgary making the best gains rising to the #1 ranking.	1. Calgary A (1.8%) 2. Vancouver A (1.7%) 3. Halifax A (1.3%) **4. Toronto A (1.0%)** 5. Montréal B (0.8%) 6. Dallas B (0.3%) 7. Boston C (-0.1%) 8. New York C (-0.1%) 9. Seattle C (-0.4%) 10. San Francisco D (-1.0%) 11. Chicago D (-1.0%) 12. Los Angeles D (-1.5%)
Unemployment rate # cities ranked: 12	The percentage of the labour force not working as of 2012 Q2.	A metropolitan area with a lower unemployment rate indicates a more engaged work force. In turn, such places are more likely to attract people.	With an unemployment rate of 8.7%, **Toronto** slips from 8th to 9th – only one of 4 metros to see rising unemployment rates compared to last year. Calgary stays in 1st place, with unemployment falling from 5.8% to 4.8% since the second quarter of 2011. Boston is the only other metro with an "A" grade.	1. Calgary A (4.8%) 2. Boston A (5.5%) 3. Vancouver B (6.4%) 4. Halifax B (6.8%) 5. Dallas B (6.8%) 6. Seattle B (7.5%) 7. San Francisco C (8.4%) 8. Chicago B (8.6%) **9. Toronto B (8.7%)** 10. Montréal C (8.8%) 11. New York C (8.9%) 12. Los Angeles D (10.5%)

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade
Disposable income per capita # cities ranked: 12	Average after-tax income of the metro area* is divided by total population, adjusted for cost-of-living. Data is based on average after-tax income in US$ in 2012 Q2.	Metro areas with high average incomes are likely to draw in more people.	**Toronto** stays in 11th place, well behind all U.S. metros. Only Montréal is worse off. Similar to 2009, Toronto CMA's average disposable income is only just over half that of the top metro, San Francisco.	1. San Francisco A ($48,527) 2. Seattle A ($47,788) 3. Boston A ($46,086) 4. Dallas B ($39,323) 5. Calgary B ($37,121) 6. Chicago B ($36,943) 7. New York C ($34,701) 8. Los Angeles C ($32,877) 9. Halifax D ($26,679) 10. Vancouver D ($25,986) **11. Toronto D ($25,400)** 12. Montréal D ($23,856)
Disposable income growth # cities ranked: 12	Percentage changes in disposable income are measured over a five year period. A higher ranking shows how quickly a CMA is improving its standard of living. This covers the period from 2007-2012 Q2.	Strong income growth boosts a metro area's attractiveness.	With 2.9% income growth over the most recent 5-year period, **Toronto** ranks 6th – up two spots from last year, notwithstanding the slower rate of growth compared to last year. Every metro experienced lower income growth, compared to the previous 5-year period. In top-ranked Calgary, income grew by 4.9%, slightly lower than the 5% recorded for the previous period.	1. Calgary A (4.9%) 2. Vancouver B (3.7%) 3. Halifax B (3.7%) 4. Seattle B (3.6%) 5. Dallas C (3.0%) **6. Toronto C (2.9%)** 7. Boston D (2.7%) 8. New York D (2.6%) 9. San Francisco D (2.6%) 10. Montréal D (2.5%) 11. Los Angeles D (2.1%) 12. Chicago D (2.1%)
High-Tech employment # cities ranked:12	This indicator measures the share of total employment in the information and communications technology sector, expressed as a five-year average over the period 2007-2011, the same period as for the Economy domain.	In line with the "creative cities" theory, high levels of employment in this sector signal an attractive metro area.	With 5.7% employment in the high-tech sector, **Toronto** ranks 5th among North American metros but first in Canada. As in previous Scorecards, Seattle, Boston, and San Francisco rank at the top – the only "A" metros.	1. Seattle A (7.3%) 2. Boston A (7.0%) 3. San Francisco A (6.5%) 4. Dallas B (5.9%) **5. Toronto B (5.7%)** 6. Montréal B (5.4%) 7. Vancouver C (4.5%) 8. Calgary D (4.2%) 9. Halifax D (4.0%) 10. Los Angeles D (4.0%) 11. New York D (3.4%) 12. Chicago D (3.2%)
Residential building permit growth # cities ranked: 12	The percentage increase in the number of residential building permits was calculated for the five-year period from 2006-11 Q4.	Residential building permits growth indicates the rate of investment activity in the residential sector. As an important sector of the economy, housing is a proxy for confidence in the growth of the metro area.	All Canadian CMAs continued with stronger building activity than U.S. metros. **Toronto**, ranked 2nd, and Montréal, ranked 1st had strong gains, compared with the previous period. Halifax is the only other CMA with positive growth. Residential building permits increased by 3.1% in Toronto, compared to -28.3% in last-place Chicago. Nonetheless, values for all U.S. metros improved from last year.	1. Montréal A (4.2%) **2. Toronto A (3.1%)** 3. Halifax A (2.0%) 4. Vancouver A (-1.5%) 5. Calgary A (-2.2%) 6. Boston B (-9.0%) 7. San Francisco C (-12.6%) 8. Los Angeles C (-12.9%) 9. Dallas C (-12.9%) 10. Seattle C (-13.7%) 11. New York C (-15.5%) 12. Chicago D (-28.3%)

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade
Professional employment** # cities ranked: 12	Based on the Statistics Canada definition, the share of total employment in 40 occupations, including but not limited to: engineers, physicians, judges, and professors. Data is from 2011, the same year as for the Economy domain.	Again, this is included as part of the "creative cities" agenda. High levels of employment in knowledge-driven professional occupations are correlated positively with an attractive metro area.	**Toronto** continues as the best in North America, with over 21% of the local workforce employed in professional/knowledge occupations. Montréal and Calgary stay strong, ranked 2nd and 3rd respectively. Boston is the most highly-ranked U.S. metro – #4 just behind Calgary.	**1. Toronto A (21.2%)** 2. Montréal A (19.9%) 3. Calgary B (18.9%) 4. Boston B (18.7%) 5. San Francisco B (18.6%) 6. Halifax B (18.5%) 7. New York B (17.8%) 8. Vancouver B (17.7%) 9. Seattle C (16.5%) 10 Chicago D (15.6%) 11. Los Angeles D (15.5%) 12. Dallas D (13.8%)
Total Tax Index (TTI) # cities ranked: 12	The total taxes paid by similar corporations in a particular location and industry, calculated as a percentage of total taxes paid by similar corporations across the United States. Data is for 2011, the same year as for the Economy domain.	The index is designed to compare the total tax burden faced by companies in each city, including: income taxes, capital taxes, sales taxes, property taxes, miscellaneous local business taxes, and statutory labour costs. Metro areas with lower tax burdens are more attractive to new business and investment.	**Toronto**, along with all Canadian CMAs, ranks ahead of every U.S. metro area. Canadian metros are so strong that they push all others into C and D territory. Toronto's 4th place ranking is the same as in *Scorecard 2012*, but with a much more favourable TTI down to 56 from 67.6. The tax burden for San Francisco businesses is 63% higher than first-ranked Vancouver.	1. Vancouver A (49.2) 2. Halifax A (49.4) 3. Calgary A (50.7) **4. Toronto A (56.0)** 5. Montréal A (62.1) 6. Boston C (92.1) 7. Seattle D (92.6) 8. Chicago D (95.0) 9. Dallas D (98.6) 10. New York D (101.3) 11. Los Angeles D (105.1) 12. San Francisco D (106.6)
Average office rents # cities ranked: 12	This is a measure of the total rental cost of downtown Class A office space, based on U.S. dollars per square foot. Data is for 2011, the same year as for the Economy domain.	This indicator is a measure of the cost of doing business. Metro areas with lower office rents are more attractive to new business and investment.	**Toronto** is the most expensive metro in North America, having surpassed New York. At more than $70 per square foot, Toronto rents are more than double those in Dallas or Halifax. Compared to 2010, rents rose the most in San Francisco, – an increase of 75%.	1. Dallas A ($31.48) 2. Halifax A ($32.50) 3. Seattle A ($40.71) 4. Boston A ($40.80) 5. Los Angeles B ($46.17) 6. Chicago B ($48.55) 7. Montréal B ($48.52) 8. San Francisco C ($57.68) 9. Vancouver D ($50.92) 10. Calgary D ($63.70) 11. New York D ($69.85) **12. Toronto D ($71.13)**

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade
Number of patents per 100,000 population # cities ranked: 12	Using utility patents from the U.S. Patents and Trademark Office, total patents are divided by population to measure the degree of new product development or product improvement. Data is for 2009, the same year as for Economy domain.	This is a proxy for the amount of creativity taking place in a metro area.	With 18.8 patents per 100,000 population, **Toronto** ranks 8th. Although the best in Canada, Toronto remains behind all U.S. metros. Chicago is immediately ahead of Toronto in 7th place, with 60% more patents on average.	1. San Francisco A (198.3) 2. Seattle C (102.2) 3. Boston C (99.0) 4. Los Angeles D (40.8) 5. Dallas D (334.5) 6. New York D (32.8) 7. Chicago D (31.0) **8. Toronto D (18.8)** 9. Vancouver D (17.9) 10. Calgary D (16.6) 11. Montréal D (13.8) 12. Halifax D (7.0)
Venture Capital Investment per million $ of GDP # cities ranked: 12	This measures the average investment in new start-ups per $1 million GDP (U.S. dollars). Data is for 2011, the same year as for the Economy domain.	In line with the "creative cities" theory, high levels of Venture Capital Investment signal an attractive metro area.	**Toronto**, like all Canadian CMAs, continues to perform poorly on this indicator. Ranking 11th, Toronto fell one place in the rankings. Montréal, the best Canadian CMA, had nearly twice as much investment as Toronto. San Francisco continues to be the runaway leader, widening the gap with all other metros. Investment rose to $21.9 million of GDP.	1. San Francisco A ($21,918.6) 2. Boston B $12,191.9) 3. Dallas C ($8,304.2) 4. New York C ($7,238.7) 5. Chicago D ($3,825.6) 6. Seattle D ($3,592.5) 7. Los Angeles D ($3,049.6) 8. Montréal D ($3,029.9) 9. Halifax D ($2,933.9) 10. Vancouver D ($2,353.9) **11. Toronto D ($1,547.4)** 12. Calgary D ($1,427.5)
Average investment per Venture Capital Firm # cities ranked: 12	This indicator is a measure of the average investment of companies involved in Venture Capital Financing. The unit of measure is thousands of U.S. dollars. Data is for 2011, the same year as for the Economy domain.	In line with the "creative cities" theory, high levels of Venture Capital Investment signal an attractive metro area.	**Toronto** stays in 9th place, and like the other Canadian CMAs, well below all U.S. metros. Toronto's average investment of $4.2 million per Venture Capital Firm is less than half of the weakest U.S. metro, Los Angeles. Dallas stays as #1, having increased its average investment by more than 45% – establishing itself as the only "A" metro.	1. Dallas A ($19,582) 2. Chicago B ($11,898) 3. Seattle B ($11,275) 4. San Francisco C ($10,181) 5. New York C ($9,807) 6. Boston C ($9,402) 7. Los Angeles C ($9,096) 8. Vancouver D ($4,359) **9. Toronto D ($4,196)** 10. Montréal D ($3,039) 11. Calgary D ($2,738) 12. Halifax D ($2,529)

Economy Indicators Updated	Definition	Significance	What About Toronto?	The Grade					
Average size of IPOs # cities ranked: 12	A measure of the monetary value of initial public offerings (IPOs) in 2009. Generally, IPOs are issued by smaller companies seeking capital to expand. But large companies can also issue an IPO. Data is from 2009, the same year as for Economy domain.	Though it can be seen as a risky investment, the size of an IPO typically appraises the net worth of smaller companies.	**Toronto** gets another "D' grade. The average size of an IPO in Toronto at $65 million (measured in millions of US$), is far behind the leading metros: Boston at $443; New York at $287. Toronto falls just behind Montréal, the highest ranking Canadian CMA.	1. Boston 2. Chicago 3. New York 4. San Francisco 5. Dallas 6. Los Angeles	A B B C C C	($284) ($240) ($227) ($168) ($136) ($101)	7. Seattle 8. Montréal **9. Toronto** 10. Calgary 11. Halifax 12. Vancouver	D D **D** D D D	($80) ($64) **($61)** ($60) ($31) ($12)
Market size # cities ranked: 12	This is a measure of the total income of the population within a 500-mile radius of the metro area (measured in trillions of U.S. dollars). Data is for 2010 – unchanged from *Scorecard 2012.*	The greater the purchasing power of the broad regional market, the more attractive the metro area is as a place for new business and investment.	**Toronto** tops all North American metros on market size, with a market value of $5.17 trillion. New York is ranked 2nd. Toronto benefits from its prime location with access to the wealthy markets in the north-eastern and mid-western U.S.	**1. Toronto** 2. New York 3. Montréal 4. Boston 5. Chicago 6. Los Angeles	**A** A A B B B	**($5,170)** ($4,421) ($4,038) ($3,623) ($3,364) ($1,893)	7. San Francisco 8. Dallas 9. Halifax 10. Vancouver 11. Seattle 12. Calgary	B D D D D D	($1,664) ($1,638) ($925) ($657) ($643) ($480)

Sources: Conference Board of Canada; Statistics Canada; Bureau of Labor Statistics; Moody's Economy.com; Organisation for Economic Co-operation and Development; Eurostat; International Monetary Fund; KPMG; Science-Metrix; CB Richard Ellis; Australian Bureau of Statistics; Shanghai Statistical Yearbook; Government of Hong Kong; Thomson Reuters; Euromonitor International.

**Occupational data from the Bureau of Labor Statistics was partially secure for some metro areas. Data was either missing or not available for various occupational categories. Therefore, the ranking for U.S. Metropolitan Statistical Areas is under-estimated.

Economy: Concluding Observations

Toronto continues as a "C" performer on the Economy, but falls to the bottom half of the rankings in 12th place, after two consecutive 11th place rankings in *Scorecards 2011* and *2012*. Moreover, Toronto's progress in closing the gap with Calgary (identified in *Scorecard 2012*) has been reversed. Toronto is now four places behind Calgary, but maintains its edge over Halifax, Montréal, and Vancouver.

Toronto gained no ground against the leaders (San Francisco, Boston, Paris, Seattle), as real GDP, productivity, income, venture capital investment continued to weaken. The steepest drop came on productivity growth as Toronto dropped from 19th to 22nd place, continuing a slide begun last year with the drop from 14th to 19th. Even on indicators where Toronto's ranking stayed the same, symptoms of a frail economy were evident. For instance, five-year average employment growth dropped in half, compared to the previous period. Although most other metros faced similar downturns, Toronto's 1 percent average growth was less than a third of Calgary's.

Amidst these weaknesses, some hopeful signs emerge. To begin with, Toronto's strengths in high-tech and professional employment are still evident, and Toronto keeps its North American advantage in market size. Furthermore, improvements in three areas nudged Toronto up in the rankings on indicators relating to: per capita income, residential building permit growth, and corporate tax burden (TTI). Firstly, per capita incomes increased by 5 percent, compared to 4.6 percent in the previous period; putting Toronto ahead of all U.S. metros except Seattle on income growth. This is in keeping with all other Canadian CMAs, who fared well on this indicator, although no one did better than Calgary with 9.1 percent five-year income growth.

Residential building permit activity continued to climb in Toronto. Between 2006 and 2011, residential building permits increased 3.1 percent per year on average, marking a robust rebound from the 2004-09 period, when Toronto experienced an average annual decrease in residential building permits (-3.7 percent). And finally, Toronto's tax burden (TTI) fell from 67.6 in 2009 to 56 in 2011. For businesses in Toronto, the tax advantage gain may be tempered somewhat by the sharp rise in Toronto's office rents. In 2011, Toronto surpassed New York as the most expensive North American city for downtown office space.

For the second consecutive year, the *Scorecard* includes an Economic Update section, benchmarking all twelve of the North American metros. In all, eight of the core Economy indicators were updated using data as recent as the second quarter of 2012, and when combined with the other ten Economy indicators, provides a more current economic picture of Toronto and the other eleven North American metros.

Compared with the results of the Economy domain overall (based on 2009 data), Toronto has gained some ground against at least one U.S. metro — New York, which had ranked three places ahead of Toronto and now is spot place behind. However, the distance between Toronto and the top performers (Boston, San Francisco, Dallas, and Seattle) appears to have widened. As expected, productivity and average productivity growth continue to plague Toronto (and most other Canadian CMAs). In the 2007-12 (Q2) period, Toronto had negative average annual productivity growth — the worst of all twelve CMAs.

Toronto moves up from ninth to seventh overall on the Economic Update, with progress on income growth, real GDP growth, and residential building permit growth. These signs of improvement are reinforced by the results of CIBC's recent *Metro Monitor* (January 2013), showing Toronto as the top-ranked Canadian CMA for improved economic activity in the short term. In the *Metro Monitor*, ten macro-economic variables are combined to create the metropolitan activity index, of which only two variables

8 CIBC Economics, Metro Monitor, January 3, 2013, pp 1 – 6.

overlap with this Economy Update analysis (employment growth, and unemployment rate, where Metro Monitor actually found no improvement).[8] Overall, the annual improvements reported by *Metro Monitor* would support an optimistic view of Toronto as a metro region with momentum going forward into 2013.

At the same time, the struggles of some U.S. metros to rebound from the economic slowdown continue, particularly in Chicago and Los Angeles. Boston, on the other hand, emerges as strong and confident — the only metro with an "A" grade. Boston was one of the few U.S. metros to see rising productivity growth go hand in hand with falling unemployment.

Like last year's Economic Update, Canadian CMAs outdo their U.S. counterparts on employment growth, while U.S. metros dominate on real GDP per capita and productivity. Dallas continues to be the only U.S. metro with any employment growth. Every other U.S. metro experienced absolute decreases in employment numbers, although not as dramatically as in the previous period. The advantage enjoyed by Canadian CMAs on employment growth is more than offset by U.S. metros' advantage on productivity. For example, the weakest performing U.S. metro on productivity is Chicago, where productivity levels ($95,272) are 40 percent higher than Toronto's. Canada has had more employment growth, but the U.S. is leaner, continuing to have high levels of GDP with fewer workers.

6 | LABOUR ATTRACTIVENESS

Labour Attractiveness Overall

Rank	Metro Area	Grade (normalization score)	
1	Paris	A	0.68
2	London	A	0.66
3	Madrid	A	0.63
4	Barcelona	A	0.62
5	**Toronto**	**B**	**0.60**
6	Calgary	B	0.58
7	Sydney	B	0.58
8	Oslo	B	0.55
9	Vancouver	C	0.53
10	Stockholm	C	0.53
11	Montréal	C	0.52
12	Halifax	C	0.50
13	Tokyo	C	0.49
14	New York	D	0.49
15	Seattle	D	0.49
16	Dallas	D	0.47
17	Berlin	D	0.47
18	Hong Kong	D	0.47
19	Shanghai	D	0.45
20	Chicago	D	0.44
21	Boston	D	0.44
22	San Francisco	D	0.44
23	Milan	D	0.44
24	Los Angeles	D	0.43

Introduction

The Labour Attractiveness domain contributes to our understanding of how 24 metro areas are performing on socio-economic and environmental factors, based on 15 indicators. As in the Economy domain, there are few big surprises. Overall results follow a similar pattern to last year's *Scorecard on Prosperity 2012*. Paris and London are ranked first and second for a third year in a row. Among the top ten performers, eight remain the same. Vancouver and Stockholm moved up at the expense of Montréal (#11) and Tokyo (#13). Again just as in *Scorecard 2012*, only eight metros earn "B" grades or better.

Toronto has stayed competitive in fifth place — just missing out on an "A" grade. This year, Toronto outranks Calgary as the top-ranked Canadian Census Metropolitan Area (CMA), as Calgary slipped from fourth to sixth place. Vancouver (#9) climbed two spots in the rankings to become the third Canadian CMA in the top ten. All Canadian CMAs fall within the top half of the rankings.

European metro regions continue to dominate at the top, claiming the top four spots; Madrid (#3) and Barcelona (#4) follow Paris and London at the top of the leader board. Six of the eight metros in Europe are in the top ten. For metro regions like Madrid and Barcelona, success comes from having a young labour force, relatively low income inequality, decent transportation results, and the good fortune of a pleasant climate.

Despite the climate and relatively weak results on commuter travel, Canadian CMAs perform fairly well, ahead of U.S. metro areas, Montréal (#11) and Halifax (#12) land just outside of the top ten metros. New York (#14) is just ahead of Seattle and Dallas in the bottom half of the pack. This is the second consecutive *Scorecard* where U.S. metros have performed poorly on Labour Attractiveness — an outcome attributed at least in part to the rise of certain European metros, such as Barcelona and Oslo. On the other hand, Berlin and Milan distinguish themselves from the pack of high-performing European metros, ranking 17th and 23rd respectively. Both metro areas struggle with weak population growth, and attracting a young labour force (population 25-34 years of age). In the case of Milan, it is also ranked last when it comes to the percentage of population with at least a Bachelor's degree.

Just as in *Scorecard 2012*, the U.S. metros with strong Economy results falter on Labour Attractiveness. Boston, San Francisco, Seattle, and Dallas all earn "D" grades. Reasons vary among the metro regions, but all score poorly on indicators like income inequality, and automobile dependency (travel to work mode). In the case of San Francisco, first place ranking on the Economy, high crime rates and poor housing affordability were further contributors.

Who's Best?

Once again, **Paris** is best, maintaining its first place ranking for the third year in a row with continued strength on six of the 15 indicators, where it has scored among the top three metros. They are characterized by:

- a low homicide rate (#3)
- healthy air quality (#1)
- low income inequality (#3)
- a strong cultural occupation sector (#1)
- a favourable travel mode (non-auto commuting) (#3)
- its attractiveness to international visitors (#3)

In addition, Paris has a relatively young and well-educated labour force, and ranks well on measures of domestic water usage.

On the other hand, Paris is plagued with long commute times (over 67 minutes); and is characterized by a population with relatively low diversity. Only 10 percent of Paris' citizens are foreign-born, half as much as Montréal and not even one-fourth as much as Toronto (45.7 percent).

Just like Paris, second-place **London** keeps its ranking on Labour Attractiveness; but once again outscores Paris as the number one destination for international visitors. London also has a young labour force and a good record on non-automobile commuting. Compared to Paris, London is a far more diverse metropolis (34 percent foreign-born). However, London's overall score drops due to low population growth (only one-third of Toronto's rate), very poor commuting times (only Shanghai is worse), and relatively high homicide rates.

Madrid moved up three places into third place, outperforming Barcelona, Calgary, and Toronto in *Scorecard 2012*. When it comes to a young labour force, Madrid ranks first among all metros. 19 percent of the population is between the ages of 25 and 34, compared to only 13 percent for last-place Milan. Further, Madrid has a low homicide rate, and low water usage. Madrid and Barcelona are blessed with a favourable climate, and both have relatively low income inequality. And as in many European metros, the majority of Madrid residents choose to commute by public transit, walking, or cycling, contributing to Madrid's high ranking on this indicator.

Barcelona slipped from third to fourth, narrowly losing ground to its national rival, Madrid. Still, Barcelona came in first on three indicators: comfortable climate, Gini coefficient, and commute times. Similar to Madrid, Barcelona has a young labour force. Just as in *Scorecard 2012*, Barcelona ranks fifth, when it comes to attracting international visitors, although with only 60 percent of the visitors of fourth-ranked New York. However, when it comes to diversity, with only 2.7 percent of its population foreign-born Barcelona ranks 23rd.

Labour Attractiveness Indicators	Definition	Significance	What About Toronto?	The Grade					
Population 25-34 years old # cities ranked: 23	The proportion of the population between the ages of 25 and 34, as per: Canada, Europe, Hong Kong: 2011, U.S., Tokyo, Sydney: 2010	This age group represents the mobile, educated, and creative core of the talented labour pool. A metro area able to attract workers in this age cohort will be better positioned to thrive in the future.	**Toronto** ranks 16th, with 15% of its population in this age group. At 19% and 18% respectively, Madrid and Barcelona have the highest proportion of 25 to 34 year olds. Calgary (#3) is the top-ranking North American metro area with 17.5% of its population in this cohort.	1. Madrid 2. Barcelona 3. Calgary 4. London 5. Sydney 6. Oslo 7. Paris 8. Vancouver 9. Seattle 10. Hong Kong 11. Tokyo 12. Montréal	A A A B B B B C C C C C	(19.0%) (18.0%) (17.5%) (17.0%) (16.2%) (16.0%) (16.0%) (15.4%) (15.3%) (15.3%) (15.1%) (15.0%)	13. San Francisco 14. Stockholm 15. Dallas **16. Toronto** 17. Halifax 18. Los Angeles 19. Chicago 20. New York 21. Berlin 22. Boston 23. Milan Data not available for Shanghai.	C C C **C** C C D D D D D	(15.0%) (15.0%) (15.0%) **(15.0%)** (14.9%) (14.7%) (14.5%) (14.3%) (14.0%) (13.7%) (13.0%)
Immigrant population # cities ranked: 24	The proportion of the population who were foreign-born. U.S., Sydney, Hong Kong, Shanghai: 2011 Tokyo: 2010 Europe: 2009 Canada: 2006	With lower birth rates, immigration is critical to boost the future workforce. New immigrants seek open-minded and diverse places, which is why a metro area with a high proportion of foreign-born residents scores best.	With nearly 46% of its population being foreign-born, first-place **Toronto** is the top performer, followed by the only other "A" metro, Vancouver (39.6%). Sydney, Los Angeles, and London are the only other regions where more than one-third of the population is foreign-born. Shanghai (1.1%), Barcelona (2.7%), and Madrid (3.2%) have the fewest immigrants.	**1. Toronto** 2. Vancouver 3. Sydney 4. Los Angeles 5. London 6. San Francisco 7. New York 8. Calgary 9. Montréal 10. Chicago 11. Dallas 12. Seattle	**A** A B B B B B B C C C C	**(45.7%)** (39.6%) (34.4%) (34.1%) (34.0%) (29.9%) (28.4%) (23.6%) (20.6%) (17.4%) (17.1%) (16.8%)	13. Boston 14. Milan 15. Stockholm 16. Paris 17. Oslo 18. Halifax 19. Hong Kong 20. Berlin 21. Madrid 22. Tokyo 23. Barcelona 24. Shanghai	C C C C D D D D D D D D	(16.6%) (13.9%) (12.4%) (10.0%) (7.9%) (7.4%) (7.4%) (6.5%) (3.3%) (3.2%) (2.7%) (1.1%)
Population with at least a Bachelor's degree # cities ranked: 23	The percentage of the population aged 25 and over with at least a Bachelor's degree, based on: U.S., Sydney, Hong Kong: 2011 Tokyo: 2010 Europe: 2009 Shanghai: 2008 Canada: 2006	Population with at least a Bachelor's degree is commonly used as an indicator of a professional labour force. The higher the percentage, the higher the score.	**Toronto's** 11th place is in the middle of the pack, good enough for a "B" grade. With just over 30% of the population having at least a Bachelor's degree, Toronto is behind all U.S. metros and well below the top two: San Francisco (43.9%) and Boston (43.1%). However, Toronto ranks ahead of all the other Canadian CMAs ("C" grades) on this indicator.	1. San Francisco 2. Boston 3. Seattle 4. New York 5. Oslo 6. Paris 7. Chicago 8. Stockholm 9. Dallas 10. Los Angeles **11. Toronto** 12. London	A A A A B B B B B B **B** B	(43.9%) (43.1%) (37.1%) (36.2%) (35.6%) (35.3%) (32.2%) (34.0%) (31.4%) (31.0%) **(30.2%)** (29.9%)	13. Calgary 14. Vancouver 15. Hong Kong 16. Halifax 17. Tokyo 18. Berlin 19. Sydney 20. Montréal 21. Madrid 22. Shanghai 23. Milan Data unavailable for Barcelona	C C C C C C C C C C D	(28.4%) (27.7%) (25.5%) (26.5%) (26.2%) (25.1%) (24.1%) (23.6%) (22.9%) (22.7%) (13.7%)

Labour Attractiveness Indicators	Definition	Significance	What About Toronto?	The Grade	
Cultural occupations # cities ranked: 22	The proportion of the employed workforce employed in cultural occupations, based on: Canada, U.S., Shanghai: 2011 Europe: 2009 Sydney: 2006	The prevalence of artists, writers, performers, musicians, etc., indicates community that nourishes creativity and promotes culture. A metro area with a higher share of cultural workers will be more attractive.	**Toronto** ranks 13th among 22 metro areas – good enough for a "B". 4.7% of Toronto's workforce is employed in cultural occupations. In first-ranked Paris, more than 7% are employed in cultural occupations. Among the 5 Canadian CMAs, Montréal ranks highest (#10). Shanghai is the only "D" metro, with fewer than 1% of the population employed in cultural occupations.	1. Paris A (7.1%) 2. Los Angeles A (6.8%) 3. Stockholm A (5.9%) 4. Seattle A (5.8%) 5. New York A (5.8%) 6. London A (5.6%) 7. Chicago A (5.5%) 8. San Francisco B (5.4%) 9. Oslo B (5.3%) 10. Montréal B (5.1%)	11. Sydney B (4.9%) 12. Dallas B (4.8%) **13. Toronto B (4.7%)** 14. Boston B (4.3%) 15. Madrid B (4.3%) 16. Vancouver B (4.1%) 17. Berlin C (3.7%) 18. Milan C (3.7%) 19. Barcelona C (3.5%) 20. Halifax C (3.3%) 21. Calgary C (2.8%) 22. Shanghai D (0.7%) Data unavailable for: Hong Kong, Tokyo.
Number of teachers per 1,000 school-aged children # cities ranked: 16	The number of elementary and secondary school teachers per 1,000 students aged 5-19 averaged, as per: Data for all metros is 2011, *except* Sydney, from 2006.	This is used as proxy for the education system, and assumes the greater the number of teachers per student population, the better the education.	**Toronto** dropped from 3rd to 7th in one year, dropping behind all Canadian CMAs except Calgary. Halifax dominates the field, with more than double the number of teachers/student as last place Los Angeles. Montréal continues to rank among the leaders, but slipped from 1st to 2nd.	1. Halifax A (106.4) 2. Montréal B (85.0) 3. Shanghai C (73.3) 4. Vancouver C (72.8) 5. Dallas C (71.3) 6. Sydney C (69.5) **7. Toronto C (67.8)** 8. Chicago C (67.1)	9. Hong Kong C (65.7) 10. Tokyo C (60.9) 11. Calgary C (60.7) 12. New York C (60.0) 13 Boston D (53.3) 14. San Francisco D (49.7) 15. Seattle D (45.8) 16. Los Angeles D (44.1) Data unavailable for Barcelona, Berlin, London, Madrid, Milan, Oslo, Paris, Stockholm.
Comfortable climate index # cities ranked: 24	The comfortable climate index is a measure of how far the average maximum temperature strays from 15°C in the winter months and from 25°C in the summer, adjusted for hours of sunshine. Data is averaged from 1971-2000 (unchanged from last year).	This is meant to capture the notion of an "ideal climate". The lower the index, the better. Very hot or very cold places score poorly and have high index values.	**Toronto** ranks 20th among the 24 metro areas. All Canadian CMAs and Nordic metros rank in the bottom ten on this indicator. The top two metro areas are Barcelona and San Francisco. Rankings are based on the same data available last year; hence are unchanged.	1. Barcelona A (3.6) 2. San Francisco A (3.8) 3. Los Angeles A (4.4) 4. Madrid A (6.6) 5. Dallas A (7.5) 6. Tokyo A (7.6) 7. Shanghai A (8.8) 8. New York A (10.0) 9. Boston A (11.5) 10. Sydney A (13.3) 11. Chicago B (16.0) 12. Seattle B (16.4)	13. Hong Kong B (17.8) 14. Milan B (19.0) 15. Paris B (20.6) 16. London B (22.6) 17. Vancouver B (23.1) 18. Calgary B (23.5) 19. Halifax B (24.4) **20. Toronto B (26.1)** 21. Montréal C (28.1) 22. Berlin C (36.4) 23. Oslo D (39.0) 24. Stockholm D (49.0)

Labour Attractiveness Indicators	Definition	Significance	What About Toronto?	The Grade
Crime: homicide rate # cities ranked: 24	The number of homicides per 100,000 people, based on a 5-year average from 2006-11 except: Tokyo (2010 single year only); and Europe (2004-09)	The lower the homicide rate, the more attractive the city or metro area.	**Toronto's** homicide rate went up from 1.8 to 2.1, accounting for the drop in the rankings (7th to 10th). Nonetheless, Toronto keeps its "A" grade, largely due to the high homicide rates in San Francisco Chicago, and Los Angeles. San Francisco's rate of 7.5 homicides per 100,000 people is more than triple that of Toronto's. Hong Kong ranks first with a very low rate of 0.5.	1. Hong Kong A (0.4) 2. Tokyo A (0.9) 3. Paris A (1.0) 4. Madrid A (1.3) 5. Shanghai A (1.3) 6. Calgary A (1.6) 7. Barcelona A (2.0) 8. Montréal A (2.0) 9. Vancouver A (2.0) **10. Toronto A (2.1)** 11. Oslo A (2.1) 12. Milan A (2.2) 13. Halifax B (2.2) 14. Stockholm B (2.5) 15. Seattle B (2.7) 16. Sydney B (2.7) 17. Boston B (2.8) 18. London B (3.8) 19. Berlin C (4.1) 20. New York C (4.5) 21. Dallas C (5.3) 22. Los Angeles D (6.4) 23. Chicago D (6.7) 24. San Francisco D (7.5)
Travel to work: transit, walking, and other non-auto # cities ranked: 24	The proportion of the employed labour force that does not drive to work, as per: U.S., Hong Kong, Shanghai: 2011 Europe, Tokyo, Sydney: 2009 Canada: 2006	A metro area with a high proportion of non-car commuters is more sustainable. These cities tend to have better access to public transit, better bike paths, and/or better walking paths, making them more attractive.	**Toronto** is near the bottom of the "C" class in 14th place, just behind Montréal. Apart from New York (at 41%), all other North American metro areas do worse. Where 28.8% of Toronto's commuters choose transit, walking, or cycling, nearly 90% do so in Hong Kong. All three Chinese metros earn "A" grades, ranking 1, 2 and 4. Paris comes in 3rd, at 73.7%.	1. Hong Kong A (88.5%) 2. Shanghai A (74.8%) 3. Paris A (73.7%) 4. Tokyo A (68.0%) 5. Madrid B (60.0%) 6. London B (59.3%) 7. Stockholm B (51.0%) 8. Barcelona B (49.7%) 9. Berlin B (49.7%) 10. Oslo C (43.0%) 11. New York C (41.0%) 12. Milan C (33.1%) 13. Montréal C (29.5%) **14. Toronto C (28.8%)** 15. Sydney C (26.7%) 16 Vancouver C (25.3%) 17. Halifax D (24.1%) 18. San Francisco D (23.7%) 19. Calgary D (23.2%) 20. Boston D (19.6%) 21. Chicago D (17.2%) 22. Seattle D (14.6%) 23. Los Angeles D (11.5%) 24. Dallas D (4.0%)
Commuting time # cities ranked: 22	Calculated as the average time (in minutes) of a trip to and from work, and is based on 2011 data except: Canada: 2010 Europe: 2006	Metro areas associated with low commute times are considered to be more attractive places to live.	**Toronto** is in 15th place with a 66-minute commute time; the metro with the longest commute time in North America except for New York (69.8). Barcelona ranks first, followed by Calgary and Oslo.	1. Barcelona A (48.4) 2. Calgary A (52.0) 3. Oslo A (52.0) 4. Dallas A (53.1) 5. Milan A (53.4) 6. Seattle A (55.2) 7. Los Angeles A (58.3) 8. San Francisco A (57.4) 9. Boston A (58.5) 10. Vancouver A (60.0) 11. Chicago B (61.9) 12. Montréal B (62.0) 13. Berlin B (63.2) 14. Madrid B (66.0) **15. Toronto B (66.0)** 16. Paris B (67.4) 17. Sydney B (68.0) 18. Tokyo B (69.6) 19. New York B (69.8) 20. Stockholm B (70.0) 21. London B (74.0) 22. Shanghai D (100.8) Data unavailable for Hong Kong, Halifax.

Labour Attractiveness Indicators	Definition	Significance	What About Toronto?	The Grade
Housing affordability # cities ranked: 12	The relative spread of the ratio of housing prices to income to the national average in a specific metro area/city. Metro areas where house prices are higher can perform well if the level of income in that metro area is relatively high. Data for U.S. metros is from 2010; Canada: 2011.	Housing affordability is a key factor deciding where to locate. Although bigger, fast-growing cities may have expensive housing, higher incomes may compensate. Cities and metro areas with better housing affordability are more attractive.	**Toronto** is the middle of the pack, ranked 6th with a "B" grade, better than most U.S. metros, except Dallas and Chicago, but behind Calgary, Halifax, and Montréal. With house prices about twice the Canadian average, Vancouver dropped below San Francisco to last place.	1. Dallas A (0.7) 2. Calgary A (0.7) 3. Halifax A (0.7) 4. Chicago A (0.9) 5. Montréal A (1.0) **6. Toronto B (1.1)** 7. Seattle B (1.2) 8. Boston B (1.3) 9. Los Angeles C (1.5) 10. New York C (1.6) 11. San Francisco D (1.9) 12. Vancouver D (2.1) Data unavailable for Barcelona, Berlin, Hong Kong, London, Madrid, Milan, Oslo, Paris, Shanghai, Stockholm, Sydney, Tokyo.
Gini coefficient # cities ranked: 24	The Gini coefficient measures income inequality by calculating the extent to which the distribution of income among individuals within a country deviates from a perfectly equal distribution. Data is based on: Canada: 2010 U.S. and Europe: 2011 Sydney, Hong Kong, Shanghai, and Tokyo: 2007	The Gini coefficient measures income distribution. A Gini index of 0 represents perfect income equality (that is, every person in the society has the same amount of income). A Gini coefficient of 1 represents perfect inequality (that is, one person has all the income and the rest of the society has none). Thus, the higher the index, the lower the ranking.	**Toronto** ranks 14th, the same as *Scorecard 2012*, but ahead of Calgary and Vancouver. With lower levels of income inequality, all the Canadian CMAs rank above the U.S. metro areas. Barcelona and European metros continue to top the list. With the notable exception of last place Hong Kong, all the "C" and "D" metros are in Canada and the U.S.	1. Barcelona A (0.28) 2. Berlin A (0.30) 3. Paris A (0.30) 4. Milan A (0.30) 5. Madrid A (0.31) 6. Oslo A (0.31) 7. Shanghai A (0.32) 8. Sydney A (0.32) 9. London A (0.32) 10. Tokyo A (0.33) 11. Stockholm A (0.34) 12. Halifax B (0.39) 13. Montréal B (0.39) **14. Toronto C (0.41)** 15. Calgary C (0.41) 16. Vancouver C (0.44) 17. Seattle C (0.45) 18. Dallas C (0.46) 19. Chicago D (0.48) 20. Boston D (0.48) 21. San Francisco D (0.49) 22. Los Angeles D (0.49) 23. New York D (0.51) 24. Hong Kong D (0.53)
Average population growth # cities ranked: 24	Average population growth is measured as the annual growth rate, compounded over five years from 2006-11.	Population growth is a proxy for labour attractiveness. The higher the growth rate, the more attractive and vibrant an urban area.	**Toronto's** average annual population growth of 1.8% keeps it in 6th place with a "B" grade. Despite the fact that Calgary's growth continued to cool, it is the fastest-growing metro. Calgary, Vancouver, and Toronto out-perform all U.S. metros on this indicator except for Dallas.	1. Calgary A (2.4%) 2. Shanghai A (2.2%) 3. Dallas A (2.1%) 4. Vancouver A (2.0%) 5. Oslo A (1.9%) **6. Toronto B (1.8%)** 7. Stockholm B (1.7%) 8. Sydney B (1.6%) 9. Seattle B (1.4%) 10. Madrid B (1.4%) 11. Halifax C (1.2%) 12. Montréal C (1.2%) 13 San Francisco C (1.1%) 14. Milan C (0.9%) 15. Barcelona D (0.8%) 16. Boston D (0.7%) 17. London D (0.7%) 18. Paris D (0.7%) 19. Hong Kong D (0.6%) 20. New York D (0.5%) 21. Tokyo D (0.5%) 22. Chicago D (0.4%) 23. Los Angeles D (0.4%) 24. Berlin D (0.3%)

Labour Attractiveness Indicators	Definition	Significance	What About Toronto?	The Grade
International visitors # cities ranked: 24	This indicator measures the average number of international visitors to the metro area in 2010 (in millions).	Cities or metro areas with a high number of international visitors are considered to be more attractive.	Despite a drop in the number of international visitors, **Toronto** keeps its 7th place ranking as the only Canadian CMA to place in the top ten. New York is the only metro in North America with more international visitors. Top-ranked London attracts more than 5 times as many visitors (14.9 million) as Toronto, and earns the only "A" grade.	1. London A (14.9 m) 2. Hong Kong B (10.9 m) 3. Paris B (8.5 m) 4. New York B (8.2 m) 5. Barcelona C (4.8 m) 6. Shanghai C (4.6 m) **7. Toronto D (3.9 m)** 8. Los Angeles D (3.8 m) 9. Madrid D (3.5 m) 10. Tokyo D (2.9 m) 11. San Francisco D (2.7 m) 12. Berlin D (2.6 m) 13. Vancouver D (2.3 m) 14. Sydney D (2.1 m) 15. Milan D (1.9 m) 16. Stockholm D (1.8 m) 17. Montréal D (1.5 m) 18. Seattle D (1.3 m) 19. Chicago D (1.2 m) 20. Oslo D (1.2 m) 21. Boston D (1.0 m) 22. Calgary D (0.6 m) 23. Dallas D (0.4 m) 24. Halifax D (0.2 m)
Air quality # cities ranked: 18	Air quality is measured as the average accumulation of particulate matter in mg per cubic metre (mg/m^3), averaged for the years from 1999, 2002, 2004, 2006, 2008, and 2009.	The less the level of air pollution, the more attractive the metro area is as a place to live.	**Toronto** is in 11th place, having improved its position relative to New York. High pollution levels in Hong Kong and Shanghai mean that the top 11 metro areas earn "A" grades. Compared to *Scorecard 2012*, Hong Kong is the only metro area with higher pollution levels, albeit only a slight increase. Most metros showed modest decreases.	1. Paris A (11.5) 2. Stockholm A (11.5) 3. Vancouver A (12.5) 4. Montréal A (18.0) 5. Oslo A (18.8) 6. Sydney A (19.7) 7. London A (20.0) **8. Toronto A (21.2)** 9. Berlin A (21.5) 10. New York A (21.5) 11. Chicago A (23.7) 12. Madrid B (30.2) 13. Milan B (30.3) 14. Los Angeles B (32.8) 15. Barcelona B (35.0) 16. Tokyo B (38.3) 17. Hong Kong C (56.8) 18. Shanghai D (73.3) Data unavailable for Boston, Dallas, San Francisco, Seattle, Calgary, and Halifax.
Domestic water usage # cities ranked: 21	Domestic water usage only, based on the per capita average daily water flow in litres. Data is based on: Hong Kong: 2011 Tokyo: 2010 Canada, Europe: 2009 U.S.: 2005	Low water usage indicates more efficient and sustainable use of this natural resource. City/metro areas scored highest when domestic water usage was low.	**Toronto** moves up to 2nd place, remaining as Canada's best CMA. In Toronto, residents use about 45% more water than Berliners (#1), but less than half the amount consumed by residents in Dallas. All Canadian CMAs except Montréal rank in the top 10; Montréal stays near the bottom in 18th place.	1. Berlin A (148) **2. Toronto A (215)** 3. Calgary A (229) 4. Madrid B (249) 5. Paris B (267) 6. Barcelona B (273) 7. Halifax B (290) 8. Vancouver B (321) 9. Tokyo B (338) 10. Boston B (338) 11. San Francisco B (341) 12. New York B (343) 13. Seattle C (351) 14. Chicago C (355) 15. Hong Kong C (356) 16. Stockholm C (361) 17. Los Angeles C (424) 18. Montréal C (428) 19. Milan C (431) 20. Oslo D (490) 21. Dallas D (542) Data unavailable for: London, Sydney, Shanghai.

Sources: Statistics Canada; Census 2006; Environment Canada; Canadian Real Estate Association; Bureau of Labor Statistics; Moody's Economy.com; United States Geographical Survey; American Community Survey; Eurostat; United Nations; Euromonitor International; Organisation for Economic and Co-operation Development; UK Census; Transport for London; Statistics Australia; Australia Census 2006; Shanghai Statistical Yearbook; Government of Hong Kong; Hong Kong Census; Mercer Consulting; World Bank; Society for the Study of Economic Inequality; University of Canberra; Jonkoping University; Weather Network.

*For the indicator Teachers per 1,000 School Aged Children, Shanghai's population below 18 was used as the school age, instead of the 5 to 19 age cohort.

**Occupational data from the Bureau of Labor Statistics was partially secure for some metro areas. Data was either missing or not available for various occupational categories. Therefore, the ranking for U.S. Metropolitan Statistical Areas is under-estimated.

Focus on Toronto CMA's Labour Attractiveness

From the very first *Scorecard* in 2009, Toronto has been among the leading metros in Labour Attractiveness, maintaining its high ranking on the strength of its diversity and population growth. Toronto ranked fifth, the same as in *Scorecard 2012*, earning "A" or "B" grades on ten of 15 indicators. Toronto's ranking on eight of the indicators remained exactly the same, and among the other seven, shifts were minor except for 1. an increase in homicides; and 2. a drop in the teacher: pupil ratio. Elsewhere, Toronto's scores improved modestly with regard to income inequality (Gini coefficient) and air quality.

By now, Toronto's strengths and weaknesses are familiar, having been identified in earlier *Scorecards*. They remain as reliable predictors of Toronto's overall place on Labour Attractiveness, keeping the CMA among the top five and running neck-in-neck with Calgary. Toronto's most outstanding attraction comes from the diversity of its population. With over 45 percent of the population foreign-born, Toronto tops the field, 16% higher than second-ranked Vancouver and 21 percent higher than third-place Sydney. Toronto and Vancouver remain the only two "A" metros. It is worth noting that Toronto's dominance is likely even more pronounced, given that Canadian data dates from 2006, whereas data for all other metros is more recent (2011 for U.S. and Australia; 2009 for Europe). Population growth in Toronto, fuelled by immigration, continues to be strong, although five metro areas grew faster, including Calgary, which outpaced all other metros.

Toronto's other top results come on the environmental indicators. On domestic water consumption, Toronto improved from third to second, and is only one of three metro areas with an "A" grade. Toronto residents consume only about half the amount of water as residents of Los Angeles, or Montréal. Toronto's air quality also improved, leading to a rise in the rankings from 11th to eighth. Nevertheless, air quality in Paris (#1) and Stockholm (#2), is nearly twice as good as Toronto's. At the other end, Shanghai and Hong Kong have such poor air quality that almost every other metro looks good.

In *Scorecard 2012*, one of the highlights for Toronto was the improvement in education; specifically with regard to the teacher-student ratio. Last year, Toronto ranked third with 73.8 teachers per 1,000 school-age children — good enough for a "B" grade. This year, based on 2011 data, Toronto fell to seventh place and a "C" grade. The teacher pupil ratio dropped to 67.8, about 9 percent. Meanwhile, a combination of factors in Halifax propelled it to the top of the rankings and the only "A" metro, with a teacher pupil ratio of 106.4. Montréal continues strong in this field, now in second place. Of all Canadian CMAs, fast-growing Calgary fares worst, but is not far behind Toronto.

Apart from teachers, Toronto's biggest one-year change occurred in the homicide rate, rising from 1.8 per 100,000 to 2.1. Although not a dramatic change, such a rise is clearly unwelcome. Compared to San Francisco (7.5), Chicago (6.7), and Los Angeles (6.4), Toronto remains an "A" grade metro. Still, Toronto's rate is five times that of Hong Kong (#1) and twice that of Paris.

Toronto's population with a Bachelor's degree or higher is frequently identified as a key strength of the region. As noted last year, Toronto's ranking on this indicator suggests that relatively speaking, Toronto is a "B" class metro — good but with room for improvement. With 30.2 percent of the adult population possessing at least a Bachelor's degree, Toronto ranks 11th, (up one spot) and stays ahead of all other Canadian CMAs but behind all U.S. metros. As described in previous *Scorecards*, the powerhouses of San Francisco (43.9 percent) and Boston (43.1 percent) are in a league of their own.[9]

9 Nonetheless, it is worth noting that data for Canadian CMAs comes from the 2006 Census and hence, is less recent than data for U.S. (2011) or European metros (2009). We can speculate that Canadian CMAs would have higher shares of adults with at least a Bachelor's degree in 2011.

Year after year, Toronto has scored relatively well on housing affordability, understandable in the context of more extreme affordability problems in New York, Vancouver, and San Francisco. Toronto ranks sixth, same as last year, but has dropped from an "A" to a "B" grade. In fact, Toronto's housing affordability is at its worst since the first *Scorecard* (2009). Vancouverites are worse off. For the first time, Vancouver comes in last, behind San Francisco and New York. Relatively speaking, residents — or prospective residents — of San Francisco face nearly double the housing costs as Torontonians.

As measured by these 15 Labour Attractiveness indicators, Toronto's otherwise-enviable livability is tarnished by poor results in just a handful of areas. Two are transportation-related: mode of travel to work; and commute times. The third is income inequality as measured by the Gini coefficient. And the final one is comfortable climate, Toronto's lowest-ranked indicator but something over which no policy-maker has any control.

Two years ago, *Scorecard 2011* examined transportation issues in depth with eleven transportation-related indicators applied to all metro areas. Apart from bad commute times, we learned that Toronto performs poorly on indicators related to public transit, especially rail. This year's results on the two key transportation indicators — mode of travel to work and commute times — underscore Toronto's weakness. When it comes to travel mode, Toronto ranks 14th, the same as last year, but a drop of three places compared to *Scorecard 2011*. 28.8 percent of commuters in the Toronto CMA travel to work by transit, cycling, or walking, far below the runaway leaders: Hong Kong (88.5 percent), Shanghai (74.8 percent) or Paris (73.7 percent). Toronto remains just behind Montréal, the second-best North American metro (New York is better). Nonetheless, Torontonians continue to show that they are less car-dependent than all other U.S. metro residents. Dallas stays in last place, with ever-diminishing results. In 2011, only 4 percent of residents in Dallas chose transit, walking, or cycling to get to work, compared to 4.4 percent in 2009.

With respect to commute times, Toronto's 15th place finish may mask some considerable weaknesses in the region's livability. Shanghai's average round-trip commute of 100.8-minutes overshadows all others, including London (second worst at 74 minutes). Toronto's 66-minute commute time is the worst among Canadian CMAs, and second-worst in North America after New York (3.9 minutes longer). Commuters in Barcelona, the top-ranked metro, spend 48 minutes commuting — an average of 18 fewer minutes a day than Torontonians.

On the measure of income inequality, Toronto showed a slight improvement in the Gini coefficient, moving from 16th to 14th place, but maintaining a "C" grade. Toronto is clustered in among all other Canadian CMAs, with Vancouver showing the highest degree of income inequality. And just like last year, all European metro areas had better income equality results than those in North America. Led by first-ranked Barcelona, the top six metro areas are in Europe. Stockholm, the worst performing European metro, is ranked 11th and still earns an "A" grade.

With a Gini coefficient of 0.41, Toronto is better off than all U.S. metros, but not good enough to claim an equitable society. A 2011 report from the Organization for Economic Cooperation and Development (OECD) describes the economic, social and political challenges created by income inequality. It can stifle upward social mobility, making it harder for talented and hard-working people to get the rewards they deserve. Intergenerational earnings mobility is low in countries with high inequality.[10]

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10 Organization for Economic Cooperation and Development (OECD), Divided We Stand: Why Inequality Keeps Rising, Dec 2011.

Concluding Observations on Labour Attractiveness

Toronto maintains its reputation as a good place to live, with five consecutive years of strong results on Labour Attractiveness. In every *Scorecard* since 2009, Toronto has led all 23 other metro areas on the indicator of population diversity, with over 45 percent of the population foreign-born population. And once Census 2011 data is available, Toronto's advantage is likely to surge again. Factoring in steady population growth and a healthy environment (air quality and water consumption), Toronto has a lot to offer to attract newcomers from within Canada and abroad. Notwithstanding Toronto's relative standing on housing affordability, this year's *Scorecard* shows a downward trend for Toronto; housing is less affordable than in previous years. For the first time, a Canadian CMA — Vancouver — ranks as the least affordable metro among those ranked.

Ranked fifth overall this year, Toronto's position remains unchanged from *Scorecard 2012*. While minor changes occurred within certain indicators, the portrait that emerges is the same overall. Two indicators showed real, albeit, modest improvement: 1. Gini coefficient; and 2. air quality. On the other hand, Toronto lost ground on two other indicators; namely, homicide rate, and the teacher/pupil ratio.

Toronto continues to chase top-ranked Paris (#1) and London (#2), but will have challenges overcoming their superiority in matters like: attracting international visitors, commuter travel mode, and cultural occupations. However, if Toronto could make gains on commute times, it could narrow the gap. Toronto's 66-minute round trip commute time is the second-worst in North America (New York at 69.8) but better than Paris or London. In addition, Toronto is only 14th when it comes to commuting by transit, walking, or cycling; further undermining Toronto's position with regard to transportation.

7 | SPOTLIGHT ON HUMAN CAPITAL

"Talent is not a "soft" skill anymore: it has a positive and quantifiable connection to a company's financial performance… The scarcity of talent is quickly turning out to be the single biggest obstacle to growth."[11]

Where once cities competed mainly to attract companies and investment, they now also aim to attract a highly educated and skilled workforce. Much attention is paid to promoting the amenities and quality of life available in their respective communities. Likewise, businesses making location decisions look to the size and quality of a region's labour market as a critical determinant. Moreover, the quality of human capital greatly affects productivity growth in a metropolitan region.

In this Spotlight on Human Capital, *Scorecard on Prosperity 2013* introduces the "Human Capital Lens" to complement the work of previous *Scorecards*, where capital and infrastructure were examined in depth. A consistent outcome from all *Scorecards* has been Toronto's middling economic and productivity-related performance, particularly with regard to its U.S. counterparts. This is in keeping with overall results for Ontario, where the province's productivity gap with key U.S. competitor regions widened considerably between 2001 and 2010 (from approximately $6 of Gross Domestic Product (GDP) per hour to approximately $11 of GDP per hour).[12] More specifically, our in-depth analysis showed that underinvestment in transport infrastructure and weak venture capital markets have contributed to Toronto's weak productivity.

As noted in the Ontario Jobs & Prosperity Council 2012 report, "investments in public infrastructure (including transportation, public transit and utilities) create both short- and long-term economic benefits. The Council believes that modern infrastructure, particularly transportation, can form part of Ontario's competitive advantage."[13]

Beyond capital investment and investment in R&D, productivity performance and economic success of a region is also dependent upon the quality of its human capital. In a 2012 survey carried out by Ernst & Young, the authors advise organizations to rethink their approaches to talent management now, or forever risk losing their competitive edge "in the race to grow in a world of exceptional complexity and unprecedented competition."[14]

In the meantime, the race to attract new talented workers is fuelled by the prospect of looming labour shortages as baby boomers reach retirement age. Despite the current climate of relatively high unemployment, labour shortages already exist in certain sectors. In a recent report published by the Canadian Manufacturing Coalition, the authors note: "today nearly 50 per cent of all Canadian companies are facing labour shortages. These shortages are being faced by all sizes of companies in all regions of the country."[15]

11 Ernst & Young, "Paradigm shift: Building a new talent management model to boost growth", 2012, p 3.
12 Jobs & Prosperity Council, "Advantage Ontario", 2012, p 7.
13 Ibid, p. 10.
14 Ernst & Young, Op.Cit., p. 5.
15 Canadian Manufacturing Coalition, "Manufacturing our Future: A Manufacturing Action Plan for Canada", 2012, p 9.

Accordingly, *Scorecard 2013* sets out to benchmark Toronto's human capital against the eleven other North American metro regions. In keeping with the purpose of benchmarking, this analysis of human capital enables us to grade Toronto's performance, but does not address the determinants of that performance. For example, in comparing Toronto's female labour force participation rates with other metros, we discover Toronto is relatively weak, but the data is silent on "why." Research beyond the scope of this report would be needed to assess whether better daycare, better education, or other factors could improve the female participation rate.

In establishing 13 indicators to measure human capital, this *Scorecard* helps us understand the make-up of a productive and prosperous society. These indicators reflect a mix of labour market inputs and outputs, and address either: 1. labour force characteristics; 2. workforce health; or 3. workforce skill set.

Labour Force Characteristics:

- **Unemployment rate:** As in the Economy domain, the unemployment rate indicates which metropolitan areas have the most engaged workforce and the best potential for job-seekers; the lower the rate, the better the ranking.
- **Youth unemployment rate:** Similarly, the lower the youth unemployment rate, the better the ranking, indicating a metropolitan area with more opportunities.
- **Females in management occupations:** Along with the next two indicators, this signals a more diverse, equitable, and balanced workforce. The indicator measures the percentage of women employed in all management occupations.
- **Female-Male income:** This measures median female income as a percentage of median male income as a way to assess equity in the labour market.
- **Female participation rate:** High female participation rates indicate a balanced and more diverse labour force.
- **Population aged 65 and over:** While the Labour Attractiveness domain benchmarks the younger labour force population (25-34 years of age), this Human Lens indicator measures the senior population. A metro area with a high percentage of 65+ indicates an older labour force much closer to retirement, suggesting potential labour shortages in the near term.[16] It is estimated that after 2015, participation rates will begin to fall for both males and females, as a wave of baby boomers retire.

Workforce Health

- **Population health (index):** The health index is based on the incidence of six key health risks within the metro area's population: arthritis, diabetes, obesity, cancer, heart disease and suicides. A healthier population signals an attractive region, as well as a more productive labour force.
- **Unintentional work-related injury deaths:** The lower the number (per 100,000 population), the safer the workplace. As with health, metro regions that provide safer work environments are more productive and attractive.

16 While few jurisdictions have a mandatory retirement age, the majority of people leave the labour force by age 65. The current average age of retirement in Canada and the U.S. is currently between 62 and 63 years of age.

Workforce Skill Set

- **Adult population with only high school education or less:** The metro areas with the highest percentage score lowest. With only a high school education or less, prospects for employment are lower, and jobs are generally less productive.
- **Adult population with a post-secondary degree or diploma:** This measures the percentage of the adult population with either a college degree or diploma, or Bachelor's degree and higher. The higher the percentage, the better educated and trained the workforce.
- **Adult population with a Bachelor's degree or higher:** As in the Labour Attractiveness domain, this measures the percentage of the adult population with a Bachelor's (received from either a University or College), Master's, or Doctoral degree. A highly educated population is the foundation for a productive and innovative metropolitan economy. These indicators enable a comprehensive look at all levels of educational attainment, from high-school or less through to advanced university degrees.
- **Employment in high-skill occupations:** High skill occupations include those normally requiring university education as well as all senior and specialized management occupations.[17] Metro areas with high levels of employment in these fields have the fundamentals for a creative and productive economy.
- **Highly-skilled immigrants:** This measures the share of new immigrants with at least a university education. They have greater chances for successful integration and employment in a metropolitan area, and offset labour shortages in areas with a sizeable older labour force.

The selected indicators aim to capture some of the most critical characteristics of human capital: employment, diversity, health and safety, and education. Metro regions competing for talent around the world need to score highly on each of these factors in order to raise productivity, and attract and retain workers.

- **Employment** opportunities typically top the list of reasons for individual and family relocation; therefore these opportunities become a critical component of the attractiveness of a metropolitan region. Moreover, where opportunities exist for employment in high-skill occupations, a region will draw in educated, skilled, and creative workers. The Toronto Workforce Innovation Group underscores the importance of education in preparing our youth for the work of the future, stating "knowledge work is undeniably the wave of the future and the basis for continued prosperity in Canada as well as in Toronto."[18]
- **Diversity** in the population is a hallmark of a successful society, and it is critical that the labour force reflects the make-up of the population across all job classifications, accounting for skills and education. Failing to recognize the qualifications and experience of new immigrants is costly; in the Toronto region, the cost to the economy is approximately $1.5-2 billion per year. Across Canada, research shows that 40 percent of new immigrants have to make a downward shift in their career upon arrival in Canada.[19]

  According to Catalyst, Inc., a highly respected non-profit organization, gender diversity matters because increased diversity can lead to increased innovation and productivity, diversity of thought and collective intelligence, better employee satisfaction, and better financial performance, among others.[20] More specifically, they promote the need for more women in senior positions, finding that talent retention and productivity of both men and women increase when women are equitably represented at senior levels.[21] In light of looming labour shortages in North America, it is imperative that cities do not discriminate against employment on the basis of gender.

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17 This is based on Human Resources and Skills Development Canada (HRSDC) classifications, and does not include apprenticeships.
18 Toronto Workforce Innovation Group, "An Economy Out of Shape: Changing the Hourglass," April 2010, p 29.
19 Toronto Board of Trade, "Lifting All Boats: Promoting Social Cohesion and Economic Inclusion in the Toronto Region", June 2010, p 8.
20 Catalyst, Inc., "Why Diversity Matters, Catalyst Research Studies, 2005-10.
21 Catalyst, Inc., "Women and Men in Canadian Capital Markets: An Action Plan for Gender Diversity", 2012, p 1.

- **Health and safety** correlate strongly with productive and attractive workplaces and regions. The composite health index developed for *Scorecard 2013* takes into account the incidence of six key health risk factors; of which several can be mitigated by environmental or lifestyle changes (reduce pollution, improve diet, and provide opportunities for exercise and activity). Furthermore, recent research has exposed significant economic risks associated with an unhealthy labour force. The Conference Board of Canada published a trio of studies looking at the economic impacts of heart disease, chronic lung disease, and mental illness. For example, poor mental health will cause an estimated loss of $20.7 billion in labour market participation in 2012, increasing to $29.1 billion by 2030.[22] In addition, the report highlights the effect on overall productivity: "Mental illness can affect workplace productivity levels by reducing the efficiency of employees who are working with co-workers directly affected by poor mental health."[23]
- **Higher education** is widely accepted as a predictor of strong economic performance, critical to success in a global innovation-driven economy. Studies have demonstrated the links between education and GDP, based on educational attainment at the Bachelor's degree level or higher. A U.S. study undertaken for the Federal Reserve Bank of New York found that by using educational attainment as an indicator of human capital, a one-percentage point increase in the proportion of residents with a higher education (*BA or higher*) is associated with about a two percent increase in U.S. metropolitan area real GDP per capita."[24]

  Here in Canada, the Ontario Task Force on Competitiveness, Productivity and Economic Progress makes the case for investment in education, as an important ingredient for future prosperity. A better-educated workforce is more productive, and has a higher propensity to innovate.[25] Furthermore, Statistics Canada reports that over the span of their careers, university graduates will typically earn $1.3 million more than those with high-school alone.[26]

  And in a benchmarking report prepared for the U.S. Department of Education, it was reported that in Canada, 31.2 percent of the adult population with a Bachelor's degree or higher earned more than twice the median income of all Canadian income earners (2007) — the second highest of all seven countries surveyed (Japan was first; the U.S. was third).[27]

Within Canada, opportunities for higher education also come from colleges, which offer degrees and diplomas in a variety of skills and disciplines with strong links to regional labour markets. The Government of Ontario had forecasted that occupations requiring a college degree or apprenticeship would account for 35 per cent of new jobs between 2008 and 2013, compared to 26 percent for university degrees.[28] In order for Toronto's economy to grow, it is clearly important that the labour force has the skill set demanded by the market place, underlying the importance of the college system *(see text box)*.

22 Conference Board of Canada, "Mental Health Issues in the Labour Force: Reducing the Economic Impact on Canada", July 2012.
23 Ibid, p 11.
24 Jason Abel and Todd Gabe, "Human Capital and Economic Activity in Urban America", Federal Reserve Bank of New York Staff Reports, July 2008, rev Feb 2010, p 18.
25 Task Force on Competitiveness, Productivity and Economic Progress, Eleventh Annual Report, The Institute for Competitiveness and Prosperity, 2012, p 51.
26 AUCC, "Quick Facts", www.aucc.ca/wp-content/uploads/2012/09/quick-facts-back-to-school-2012.pdf, accessed Feb 5, 2013.
27 David C. Miller, Laura K. Warren, and Eugene Owen, "Comparative Indicators of Education in the United States and Other G-8 Countries: 2011", National Center for Education Statistics, 2011, p. 57.
28 Government of Ontario, Ministry of Training, Colleges, and Universities, "Ontario Job Futures", http://www.tcu.gov.on.ca/eng/labourmarket/ojf, accessed 20 Feb 2013.

Who's Best?

Human Capital Lens

Rank	Metro area	Normalization Score	Grade
1	Calgary	0.67	A
2	San Francisco	0.66	A
3	Boston	0.66	A
4	**Toronto**	**0.65**	**A**
5	Vancouver	0.57	B
6	Halifax	0.56	B
7	Seattle	0.50	B
8	Montréal	0.47	C
9	New York	0.40	D
10	Dallas	0.36	D
11	Los Angeles	0.34	D
12	Chicago	0.32	D

Calgary takes the top spot, with San Francisco in second place, and Boston (#3) and Toronto (#4) fractionally behind the leaders. These four Census Metropolitan Areas (CMA) are all "A" metros, with the overall highest quality of human capital. With the exception of Montréal, all Canadian CMAs score relatively well, outperforming the remaining five U.S. metros. New York, Dallas, Los Angeles, and Chicago all earn "D" grades, occupying the bottom four positions.

Calgary edges out San Francisco for top spot due to robust employment. Just as in the Economy domain, Calgary has the lowest unemployment rate and unique to this Lens, also shows the lowest youth unemployment rate. Based on 2011 average unemployment numbers, Calgary's overall rate of 5.8% was well below second-ranked San Francisco's at 9.4 percent. Calgary enjoys a similar advantage when it comes to youth unemployment; at 12.8 percent, Calgary's youth unemployment rate, although high, was far less severe than the 20.7 percent experienced by youth in San Francisco. Calgary earns two other first-place rankings: 1. accidental work-place deaths, with the fewest per 100,000 population; and 2. female participation rates. Calgary's overall excellent human capital results are somewhat tarnished by poor outcomes on females in management occupations and female-male income ratios.

San Francisco (#2) and Boston (#3) are both dominant on the indicators linked to education; namely, 1. the proportion of adults with at least a Bachelor's degree; and 2. the proportion of the employed workforce in high-skill occupations. Both also earn "A" grades on the share of the population with post-secondary education, and have smaller shares of their population with less education (high school or lower). They are the top metros for females in management occupations, although Boston mirrors Calgary in having a very poor female to male income ratio. San Francisco distinguishes itself from Boston by being the number one metro on the health index, while Boston is well down in eighth. On the other hand, Boston excels on two other indicators where San Francisco falls behind: unemployment rate (#3); and proportion of highly skilled immigrants (#1).

Toronto, earning fourth place and an "A" grade, is discussed in detail in the following sub-section.

At the bottom of the rankings, New York, Dallas, Los Angeles, and Chicago do poorly; each with their own combination of weaknesses. Los Angeles and Chicago share at least one problem; namely, high unemployment and high youth unemployment rates. Los Angeles' 11.4 percent unemployment rate makes it the worst of all metros and the only one with a "D" grade. Chicago, second-to-last on unemployment, has the worst youth unemployment rate — a staggering 24.4 percent. However, it is New York's ninth place finish that is, perhaps, most surprising. New York shows particular weaknesses on: youth unemployment, female participation rates, 65+ population, adults with high school education or less, and highly skilled immigrants. Metro New York's large and varied economy, matched by a large and diverse population, contains a number of trouble spots, notwithstanding the powerful image and wealth of Wall Street.

Focus on Toronto

When it comes to human capital, Toronto ranks among the best. In fourth place with an "A" grade, Toronto's strengths emerge in the areas of health and safety and employment in high-skilled occupations. As every *Scorecard* has emphasized, Toronto is a "winner" in Labour Attractiveness, but cannot afford to be complacent. On five indicators, Toronto is in the bottom half of the rankings; namely: unemployment, females in management occupations; adults with high school or less; adults with a Bachelor's degree or higher; and highly-skilled immigrants. Failure to improve on these indicators would erode Toronto's attractiveness as a destination-of-choice and lead to serious gaps in the quality of the labour force.

The following summarizes Toronto's results:

- **Unemployment:** Toronto ranks seventh, reporting an average unemployment rate of 8.4 percent in 2011. Although doing better than most U.S. metros, Toronto's unemployment rate is the worst of all Canadian CMAs. Los Angeles' dismal 11.4 percent lifts Toronto to a "B" grade on an otherwise weak result. Leading all CMAs, Calgary's unemployment rate was 5.8 percent. Looking ahead to the second quarter of 2012, (per the Economy Update), Toronto's unemployment problem deepened with a reported rate of 8.7 percent — only one of three metros to experience rising unemployment. Montréal and New York are the other two.

  Youth unemployment: On this related indicator, Toronto ranks fifth, behind all other Canadian CMAs, with a 16 percent youth unemployment rate — double the overall unemployment rate. The Toronto Workforce Innovation Group acknowledged the serious youth unemployment rate alongside a low participation rate. Their 2012 report on the local labour market update pointed to a further problem; namely, that "this generation is confronting a large student loan debt and is working in positions not reflective of their education."[1]

  Once again, Calgary tops the field, although the youth unemployment rate, like Toronto's, is double that of overall unemployment. Relative to overall unemployment, youth in Seattle have it second worst, with rates 2.8 times more than average overall unemployment (24.3 percent compared to 8.7 percent).

- **Females in management occupations:** One of the key areas for improvement, Toronto ranks eighth but ekes out a "B" grade due to the narrow range in results among the top nine metros. In Toronto, females account for 39.3 percent of all management occupations; in top-ranked Boston, their share is 42.8 percent. On this indicator, Calgary finds itself in the rare position of last place, with females occupying less than one-third of all management positions.

- **Female-Male income:** This is one of Toronto's two best results, with a second-place ranking. But when female incomes are only 72.7 percent of those of males, Toronto should be disappointed rather than buoyed by this result. This gulf between male and female incomes is unacceptable. Even worse, only three of the twelve metros show female-to-male incomes above 70 percent; first-place Los Angeles, only a fraction above Toronto, at 73.2 percent; and Montréal at 72.1 percent. Calgary finds itself in the bottom trio of "D" metros, at only 63.1 percent. In Seattle, ranked last, females earn only 61.4 percent of male incomes.

- **Female participation rate:** Toronto ranks fifth with a "C" grade. The female participation rate is 62.7 percent, below the average participation rate recorded in 2012 for males and females combined (67.4 percent).[29] Calgary, despite poor results on female income and females in management, has the highest female participation rate at 68.2 percent; similarly below the overall average participation rate of 74.7 percent.[30] Conversely, Los Angeles with the best results in female-male incomes, posts the lowest female participation rate — a dismal 58 percent. Perhaps even more surprising is New York, second-lowest at only 58.7 percent.

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[1] Toronto Workforce Innovation Group, "Toronto's Opportunities and Priorities, TOP Report", Local Labour Market Update 2012, p 8.
19 Statistics Canada, CANSIM table 282-0110.
30 Ibid.

- **Population 65+:** Toronto ranks in the middle (#6), with 12.2 percent of the population aged 65 and over. Within 20 years, this older cohort is expected to comprise over 20 percent of the population, while the proportion of youth will be only half that of seniors.[31] By now well-publicized, this demographic trend signals troubling signs of labour force shortages. Only two metros have 65+ populations comprising less than 10 percent of the total: Dallas (#1) and Calgary (#2).
- **Health index:** Toronto scores well on this indicator, ranking third with an "A" grade, followed closely by Calgary. San Francisco and Vancouver rank first and second; perhaps not surprising due to the "west coast" healthy eating/healthy living lifestyle attributed to these two metros. As noted, several of the risk factors (e.g., diabetes, heart and lung disease) can be mitigated by lifestyle changes; which in turn can be facilitated by good public infrastructure (places to walk, exercise, and air pollution reduction).
- **Accidental workplace injury deaths:** Alongside three other Canadian CMAs, Toronto does well on this indicator (Halifax is the outlier, in last place). With 22.5 deaths per 100,000 population, Toronto ranks fourth with an "A" grade. As a metro with a mixed economy that includes a strong manufacturing sector, this is a good result. Calgary, with only 19 deaths per 100,000 does best. New York and Los Angeles are the only two U.S. metros in the top half of the rankings.
- **Adults with high school diploma or less:** Toronto ekes out a "C" grade in eighth place. Viewed in conjunction with the results on adult population with a BA degree or higher, this is a disappointing score and points to a weakness in Toronto's human capital performance. Nearly four in ten adults have a high school education or less — a greater proportion than those with a university education. By comparison, the three top-ranked metros exhibit the reverse pattern. San Francisco, Seattle, and Boston have proportionally more university-educated adults than adults with high school education or less.

  Enhancing the educational attainment of Toronto's population from high school to post-secondary levels will improve the economic performance of the Region.
- **Adults with post-secondary degrees and diplomas:** Toronto ranks in second place, with an "A" grade, just slightly behind Calgary. Boosted by the strong and effective college system, Toronto joins Calgary, Halifax and Vancouver in outranking all U.S. metros. Boston and San Francisco are the only U.S. metros with an "A" grade. As one of Toronto's top two results on Human Capital, success on this indicator marks the strong point of Toronto's education outcomes, largely attributed to the 23.5 percent of the population with college degrees or diplomas. This is a good result for Toronto, suggesting that a large share of Toronto's labour force is receiving post-secondary education and obtaining the skills required for solid employment prospects. *(See text box for further discussion)*. However, fault lines are appearing. Recent Organization for Economic Cooperation and Development (OECD) economic surveys show that post-secondary attainment among younger adults (25-34 years of age) in Canada is falling behind, prompting this conclusion: "rates of participation will need to grow if Canada is to remain competitive in a globalised local market as its population ages."[32]
- **Adult population with a Bachelor's degree or higher:** Despite having the best results for Canadian metro areas, Toronto ranks eighth, with a "C" grade. All Canadian CMAs fall well below U.S. metros; results that were made evident in the discussion on Labour Attractiveness. 30.2 percent of Toronto's adult population has a bachelor's degree or higher, compared to top-ranked San Francisco, with 43.9 percent. Boston is a close second (43.3 percent). As noted, the combined results

31 Toronto Workforce Innovation Group, Op.Cit., p. 3.
32 OECD, "Education at a Glance 2012: CANADA Country Note", Sept 2012, p 2.

of the two education indicators cement the reputation of San Francisco, Boston, and Seattle (on Bachelor's degree or higher, ranked third) as education leaders. The link between the education levels and the economic successes of these three metro areas, as documented in the Economy domain, is no fluke. A 2003 study undertaken by two prominent urban economists examined the relationship between education and metropolitan growth, concluding: "With almost any reasonable set of parameter values, the connection between education and population growth is the exclusive result of rising productivity."[33]

Post-Secondary Education: Colleges in Canada*

College education in Canada offers opportunities for higher learning to those students seeking applied education focused on specific skill development. According to the association of community colleges, there are 130 publicly-funded colleges and institutes in Canada with campuses in 1,000 communities — urban, rural, and remote. Graduates of community colleges can go on to skilled employment in a broad range of fields, contributing to Canada's human capital assets. In 2011-12, 41 percent of students had some previous post-secondary education, 23 percent of whom previously completed a college and or university program (12 percent from universities) according to the recent survey by Colleges Ontario.[1]

The Government of Ontario had forecasted that occupations requiring a college degree or apprenticeship would account for 35 per cent of new jobs between 2008 and 2013, compared to 26 percent for university degrees.[2] In order for Toronto's economy to grow, it is clearly important that the labour force has the skill set demanded by the market place, underlying the importance of the college system.

Since 2007, colleges have been granting four-year Bachelor's degrees in a range of disciplines, offering students an ever-widening set of skills and credentials. In the GTA alone, the number of college graduates with a BA (or equivalent) rose from 12 in 2007 to more than 700 in 2012 (KPI, Graduate Administrative data files). However, colleges graduated only about 1.1 percent of Bachelor's degrees in 2009-2010.

Due to imperfect data compatibility between Canadian and U.S. metro areas, benchmarking college education alone becomes challenging, especially when taking into account the inclusion of CEGEPs in the Canadian data. Differing post-secondary educational models make it difficult to carry out "apples-to-apples" comparisons, particularly at the metropolitan level.

International comparisons based on national-level data can, however, offer some insights. The OECD's report, *Education at a Glance: 2012* is a well-referenced and respected overview of inter-country educational measures. Canada ranks first among OECD countries in the proportion of adults with a tertiary education, and continues to be a leader in higher education, "with its ability to produce a skilled workforce with generally good labour-market outcomes." The report validates what *Scorecard 2013* shows at the metropolitan level; namely that Canada's high ranking is largely due to higher college rather than university attainment rates. However, the OECD offers a caution: "Nonetheless, data suggests areas for improvement. Canada's ranking drops from first to 15th when considering the tertiary attainment rate of 25-34 year olds.[3]

*Including all Colleges, CEGEPs or other non-university certificates or diplomas, as well as University certificates below the bachelor level and Bachelor's granted by Colleges.

1 http://www.collegesontario.org/research/2012%20Environmental%20Scan/CO_EnvScan_12_Stu&GradProfiles_WEB.pdf
2 Government of Ontario, Ministry of Training, Colleges, and Universities, "Ontario Job Futures", http://www.tcu.gov.on.ca/eng/labourmarket/ojf
3 OECD, "Education at a Glance: 2012, Country Report: Canada", p 1-2.

33 Edward L. Glaeser and Albert Saiz, "The Rise of the Skilled City", Harvard Institute of Economic Research, Discussion Paper Number 2025, Dec 2004, p. 4.

- **Employment in high-skill occupations:** Toronto scores well, ranking third with an "A" grade, with results very close to the powerhouses of Boston and San Francisco. In Toronto, 26.6 percent of the workforce is employed in high-skill occupations, just a percentage point behind San Francisco and 1.1 points off of first-ranked Boston. Despite trailing on the education indicator, Toronto seems to make the most of its university graduates. But it also suggests that there are many non-university-educated managers in senior positions, especially when compared to other metro regions.

- **Highly-skilled immigrants:** Toronto comes in seventh, the weakest of all Canadian CMAs, although the differences among them are small. Just over 55 percent of new immigrants to Toronto have a university degree, compared to 60.2 percent for Halifax and Boston. Previous *Scorecards* have highlighted Toronto's failure to capitalize on the skills and talents of its newcomers — a weakness documented in other regional economic reports. For example, the Toronto Board of Trade's 2010 report, "Lifting all Boats", exposes a huge cost to the regional economy from failing to recognize the qualifications and experience of new immigrants at $1.5-$2 billion per year.[34] Not only does Toronto come up short when it comes to attracting and retaining university-educated immigrants, it fails to take full advantage of the qualifications of the 55 percent who come with a university degree.

34 Toronto Board of Trade, "Lifting All Boats: Promoting Social Cohesion and Economic Inclusion in the Toronto Region", June 2010, p. 8.

Human Capital Lens Indicators	Definition	Significance	What About Toronto?	The Grade
Unemployment rate	The percentage of the labour force not working. Data is the average for 2011.	A metropolitan area with a lower unemployment rate indicates a more engaged work force. In turn, such places are more likely to attract people.	**Toronto** ranks in the middle, in 7th place, but falls behind all other Canadian metros. This is in line with the overall Economy results. Calgary ranks first, consistent with its performance vis-à-vis all North American metros in the Economy and Economy Update. Los Angeles, still in double digits, ranks last with the only "D" score.	1. Calgary A (5.8%) 2. Halifax A (6.1%) 3. Boston A (6.6%) 4. Vancouver B (7.3%) 5. Dallas B (7.8%) 6. Montréal B (8.2%) **7. Toronto B (8.4%)** 8. New York B (8.5%) 9. Seattle C (8.7%) 10. San Francisco C (9.4%) 11. Chicago C (9.9%) 12. Los Angeles D (11.4%)
Youth unemployment rate	The percentage of the youth labour force not working, including ages 15 to 24. Data is the average for 2011.	A metropolitan area with a lower youth unemployment rate indicates a more robust and diverse work force, providing a foundation for future prosperity.	**Toronto** ranks 5th, better than all other U.S. metros but has the highest youth unemployment among the Canadian CMAs. Calgary's relatively robust employment picture is evident once again. With youth unemployment at 12.8%, it is just over half that of last place Chicago at 24.4%. Relative to overall unemployment, youth in Seattle have it worst, with rates 2.8 times more than average overall unemployment.	1. Calgary A (12.8%) 2. Vancouver A (14.0%) 3. Montréal A (14.1%) 4. Halifax A (14.3%) **5. Toronto B (16.0%)** 6. Boston B (17.1%) 7. Dallas C (19.4%) 8. San Francisco C (20.7%) 9. New York D (22.0%) 10. Los Angeles D (23.1%) 11. Seattle D (24.3%) 12. Chicago D (24.4%)
Females in management occupations	This represents the number of women employed in a management occupation as a share of total management employment, using the National Occupation Classification System (NOCS). Data is from 2011.	A metropolitan area with a higher percentage of females in management indicates a more equitable society, and wider opportunities for everyone.	**Toronto** ranks 8th. Females account for 39.3% of total management employment, below all U.S. metros except Dallas. Boston is best at 42.8%, and Calgary is last at 32.9%. Even so, the range among all metro areas is relatively small.	1. Boston A (42.8%) 2. San Francisco A (41.4%) 3. Seattle A (40.8%) 4. Halifax A (40.6%) 5. Los Angeles A (40.4%) 6. Chicago B (40.1%) 7. New York B 40.0%) **8. Toronto B (39.3%)** 9. Vancouver B (38.9%) 10. Dallas C (36.1%) 11. Montréal C (35.9%) 12. Calgary D (32.9%)

Human Capital Lens Indicators	Definition	Significance	What About Toronto?	The Grade
Female-Male income	The median income of all female employees is divided by the median income of all male employees (*not* defined by similar professions). Female income is expressed as a percentage of male income. (U.S. figures are based on average, not median, income). Data is 2010 for Canada; 2011 for U.S.	A higher percentage indicates a more equitable income distribution among males and females. Note that the best reported score falls well below perfect equity.	**Toronto's** 2nd place ranking and "A" grade masks a wider problem; namely, that when female incomes are less than 73% of males', this falls far shortof equity. Even Los Angeles, ranked 1st, is only at 73.2%. Only three metros are above 70%; the third is Montréal. Note that Calgary, with such strong employment results on other indicators, does poorly on this indicator, as well as females in management.	1. Los Angeles A (73.2%) **2. Toronto A (72.7%)** 3. Montréal A (72.1%) 4. Vancouver B (69.0%) 5. San Francisco B (67.8%) 6. Dallas B (67.7%) 7. Halifax B (67.3%) 8. New York C (66.8%) 9. Chicago C (64.7%) 10. Calgary D (63.1%) 11. Boston D (62.7%) 12. Seattle D (61.4%)
Female participation rate	The percentage of women 15 years and older in the labour market. Data is 2011.	High female participation rates indicate a balanced and more diverse labour force.	**Toronto** comes in 5th, third-best of all Canadian CMAs. With a female participation rate of 68.2%, Calgary takes top spot, despite scoring poorly on the other two female employment indicators. New York and Los Angeles are at the bottom, the only two metros with rates below 60%.	1. Calgary A (68.2%) 2. Halifax A (66.8%) 3. Boston B (64.1%) 4. Seattle C (69.2%) **5. Toronto C (62.7%)** 6. Vancouver C (62.3%) 7. Dallas C (62.0%) 8. Chicago C (61.7%) 9. Montréal C (61.7%) 10. San Francisco C (61.2%) 11. New York D (58.7%) 12. Los Angeles D (58.0%)
Population aged 65+	The percentage of the total population aged 65 and older. Data is 2011.	Metro areas with a high percentage of people aged 65 and over are ranked lowest. The older labour force is closer to retirement, leading to potential labour shortages within the metro region.	**Toronto** ranks 6th, with 12.2% of the population aged 65 and over. There are only two metros where 65+ population comprise less than 10%: Dallas and Calgary. Montréal ranks last, with more than 14% of the population aged 64 and older.	1. Dallas A (9.0%) 2. Calgary A (9.5%) 3. Seattle B (11.1%) 4. Los Angeles B (11.3%) 5. Chicago B (11.6%) **6. Toronto C (12.2%)** 7. San Francisco C (12.9%) 8. Halifax D (13.0%) 9. Vancouver D (13.1%) 10. New York D (13.3%) 11. Boston D (13.3%) 12. Montréal D (14.3%)
Health index	A composite index of the health of the population, combining arthritis, diabetes, obesity, cancer, heart disease and suicides into one indicator. Data ranges from 2007-11.	A higher score indicates a lower average incidence of all these diseases. A healthier metropolitan region is both more productive and attractive.	**Toronto** ranks 3rd, with an "A" grade, followed closely by Calgary. San Francisco and Vancouver rank #1 and #2; not surprising due to the "west coast" healthy eating/healthy living lifestyle attributed to these two metros. On the other hand, Halifax is an unexpected outlier as the only "D" metro.	1. San Francisco A (0.78) 2. Vancouver A (0.74) **3. Toronto A (0.68)** 4. Calgary A (0.67) 5. Los Angeles A (0.62) 6. New York B (0.51) 7. Seattle B (0.50) 8. Boston C (0.41) 9. Dallas C (0.38) 10. Montréal C (0.36) 11. Chicago D (0.28) 12. Halifax D (0.11)

Human Capital Lens Indicators	Definition	Significance	What About Toronto?	The Grade
Unintentional injury deaths	The rate of mortality for those who have workplace accidents, calculated per 100,000 population. Data for Canada: 2007 Data for U.S.: 2009	The lower the number, the safer the workplaces within the metropolitan region. As with health, safer places are more attractive and productive.	**Toronto** ranks 4th with an "A "grade. Led by Calgary, four of the Canadian CMAs score "A" or "B" grades, with New York and Los Angeles the only two other metros at the top. Halifax slides to the bottom; at an average of 33.5 accidental deaths per 100,000 people, it is 75% higher than Calgary.	1. Calgary A (19.0) 2. New York A (19.8) 3. Montréal A (22.1) **4. Toronto A (22.5)** 5. Los Angeles B (23.0) 6. Vancouver B (23.9) 7. San Francisco B (25.1) 8. Chicago B (25.4) 9. Boston C (29.5) 10. Dallas D (33.2) 11. Seattle D (33.3) 12. Halifax D (33.5)
Adult population with high school completion or less	The percentage of the population who are 25 years of age and older with only a high school education or less. Data for Canada: 2006 Data for U.S.: 2011	The metro areas with the highest percentage score lowest. With only a high school education or less, prospects for employment are lower, and jobs are generally less productive.	**Toronto** ekes out a "C" grade in 8th place. Nearly four in ten adults have only high school education or less. Consistent with other education indicators, San Francisco, Seattle and Boston are the top three. Halifax is the best Canadian CMA.	1. San Francisco A (30.5%) 2. Seattle A (30.6%) 3. Boston B (34.1%) 4. Halifax C (36.3%) 5. Calgary C (36.4%) 6. Vancouver C (38.4%) 7. Chicago C (38.9%) **8. Toronto C (39.1%)** 9. Dallas D (39.5%) 10. Montréal D (40.7%) 11. New York D (41.7%) 12. Los Angeles D (42.1%)
Adult population with post-secondary degrees and diplomas	The percentage of the adult population with any post-secondary degree, including college diploma, Bachelor's degree and higher. Data for Canada: 2006 Data for U.S.: 2011	A metropolitan area with a high share of college or university graduates scores best. This signals a population with the education and training to meet labour force needs.	**Toronto** ranks 2nd, with an "A" grade, just slightly behind Calgary. Boosted by the strong and effective college system, Toronto joins Calgary, Halifax and Vancouver in outranking all U.S. metros. Boston and San Francisco are the only U.S. metros with an "A" grade.	1. Calgary A (54.0%) **2. Toronto A (53.7%)** 3. Halifax A (52.2%) 4. Vancouver A (52.0%) 5. Boston A (50.6%) 6. San Francisco A (50.5%) 7. Seattle B (46.5%) 8. Montréal C (45.5%) 9. New York C (42.6%) 10. Chicago D (40.9%) 11. Los Angeles D (38.2%) 12. Dallas D (37.8%)
Adult population with at least a Bachelor's degree or higher	The ratio of people 25 years of age and older who have a Bachelor's degree or higher (includes post graduates). Data for Canada: 2006 Data for U.S.: 2011	A highly educated metropolitan area includes those with a Bachelor's degree or higher, supporting a professional and highly skilled labour force. The higher the percentage, the higher the score.	**Toronto** ranks 8th, with a "C" grade. All Canadian CMAs fall well below U.S. metros; results that are consistent with those in Labour Attractiveness. With 43.9% of San Francisco's population having a Bachelor's degree or higher, it ranks first. Boston is a close second. Toronto is the best Canadian CMA, with 30.2% of the population with a Bachelor's degree or higher.	1. San Francisco A (43.9%) 2. Boston A (43.3%) 3. Seattle B (37.1%) 4. New York B (36.2%) 5. Chicago B (34.2%) 6. Dallas C (31.4%) 7. Los Angeles C (31.0%) **8. Toronto C (30.2%)** 9. Calgary D (28.4%) 10. Vancouver D (27.7%) 11. Halifax D (26.5%) 12. Montréal D (23.6%)

Human Capital Lens Indicators	Definition	Significance	What About Toronto?	The Grade
Employment in high-skill occupations	The proportion of the labour force working in occupations that usually require a university education, as well as all senior and specialized management occupations (based on Human Resources and Skills Development classifications). Data is 2011.	High levels of employment in these fields suggest a productive, creative labour force. These include most knowledge-driven and entrepreneurial professions.	**Toronto** scores well, ranking 3rd with an "A" grade, coming in just behind the powerhouses of Boston and San Francisco. Despite trailing on the education indicator, Toronto seems to make the most of its university graduates. On this indicator, the range between best and worst is not huge.	1. Boston A (27.7%) 2. San Francisco A (27.6%) **3. Toronto A (26.6%)** 4. Seattle B (25.3%) 5. Montréal C (24.9%) 6. Halifax C (24.8%) 7. New York C (24.3%) 8. Calgary C (24.3%) 9. Vancouver D (23.1%) 10. Los Angeles D (22.6%) 11. Dallas D (22.2%) 12. Chicago D (22.2%)
Highly-skilled immigrants	The number of new immigrants with at least a university education, as a share of total immigrants. New immigrants have been in the country for 5 years or less. Data for Canada: 2006 Data for U.S.: 2011	A greater percentage of university-educated new immigrants reflects the metro area's ability to attract and retain newcomers. It also means better chances for successful employment and integration of newcomers into a metropolitan area.	**Toronto** comes in 7th, surprisingly the weakest of all Canadian CMAs. Boston is ranked 1st, with 60.2% of all new immigrants having a university education. Halifax is almost tied with Boston, with a strong result. Weakest of all is Los Angeles, where only 44.1% of immigrants are university educated.	1. Boston A (60.2) 2. Halifax A (60.2) 3. Montréal A (57.7) 4. Seattle A (56.7) 5. Vancouver A (56.3) 6. Calgary A (56.2) **7. Toronto B (55.3)** 8. San Francisco B (53.5) 9. Dallas C (50.1) 10. Chicago D (47.2) 11. New York D (46.8) 12. Los Angeles D (44.1)

Sources: Statistics Canada; Census 2006; Centers for Disease Control and Prevention; American Community Survey; U.S. Census Bureau; Health Indicators Warehouse; Bureau of Labor Statistics; National Cancer Institute.

In Focus: Toronto in Action. How is Toronto Tackling Human Capital Issues?

The Toronto Region is home to a multitude of organizations working hard to improve the quality of human capital. Often these are unique public, private and non-profit sector collaborations. We present just a few examples of the many programs that target different demographic segments of our labour force including women, skilled immigrants, youth-at-risk, high-skilled youth, and former Canadian armed forces members. Together such efforts support the better integration of all our population into the Toronto Region's economy and labour market.

<table>
<tr><th colspan="2">Organizations</th></tr>
<tr><td>Women in Capital Markets (WCM)
WCM WOMEN IN CAPITAL MARKETS</td><td>WCM is a non-profit organization representing over 700 members across the GTHA. WCM promotes the entry, advancement, and development of women in the Capital Markets industry.
WCM's vision is to attract, advance and retain women in the capital markets industry. WCM is a volunteer-driven organization with membership open to professional women and men working in the capital markets or associated industries and to full-time students.
It is a reality that the lack of role models, mentors and access to informal networks are key barriers to women's advancement in the capital markets.
WCM is dedicated to:
• Promoting the entry, advancement, and development of women in Capital Markets
• Shaping women leaders in business
• Fostering accountability for diversity within the industry
• Recognizing leaders who have advanced women in the Capital Markets industry
Services available:
Through dedicated volunteer leadership, collaborative committees and innovative programming, WCM offers diverse and creative opportunities for networking, career growth, and personal development.
WCM members have access to opportunities for newcomers and seasoned professionals.
Programs include:
• Networking events
• Mentoring and professional development
• Career path insights for students
• Forums to share best practices with industry leaders</td></tr>
<tr><td>Catalyst
CATALYST Changing workplaces. Changing lives.</td><td>Catalyst is the leading non-profit membership organization with a mission to expand opportunities for women and business.
Catalyst is a global organization with offices in the U.S., Canada, Europe, and India. Catalyst's global lens and regional reach allow to provide their members, the media and the public with information and advice on creating workplaces that enable women and their employers to succeed.
Catalyst has more than 500 members around the world including companies, firms, business schools and associations that collectively employ millions of women.
Services available:
Catalyst's work is rooted in its research. Catalyst studies women and men across job levels, functions and geographies to learn about women's experiences in business, barriers to their career advancement and the individual and organizational strategies that lead to success. Catalyst's reports reveal the challenges and opportunities for organizations and women at work around the globe.
Catalyst events span the globe addressing topics vital to women in the workplace. These gatherings connect attendees, inspire action, and advance transformative vision of changing workplaces and changing lives.
Catalyst provides a powerful array of knowledge and solutions-focused services including consulting services (CS). CS provide members with trusted advice and actionable insights to build and sustain workplace inclusion. Catalyst works closely with clients to diagnose strengths and issues, raise awareness of key opportunities and develop customized solutions that advance women and meet the organization's goals.</td></tr>
</table>

Organizations

The Toronto Region Immigrant Employment Council (TRIEC)

TRIEC is a multi-stakeholder council founded by Maytree and the Greater Toronto CivicAction Alliance in 2003. TRIEC is taking action on the underutilization of skilled immigrants' education, talent and experience. The Council represents over 70 partners, including close to 40 employers.

TRIEC Objectives:

- To convene and collaborate with partners, creating opportunities for skilled immigrants to connect to the local labour market.
- To work with key stakeholders, particularly employers, building their awareness and capacity to better integrate skilled immigrants into the workforce.
- To work with all levels of government, enhancing coordination and effecting more responsive policy and programs for skilled immigrant employment.

Services available:
TRIEC connects companies to programs that can help them better recruit and retain immigrants. It develops and distributes learning tools and curriculum; and helps immigrants build their professional connections through mentoring and professional immigrant networks.

Programs include:

- **Learning:** learning resources that focus on recruitment and selection, talent management practices, as well as facilitating cross-cultural teamwork
- **Finding Immigrant Talent:** the program works with the Consortium of Agencies Serving Internationally-trained Persons (CASIP) and other community partners to help with recruitment of internationally qualified professionals
- **Mentoring for change:** the program brings together recent skilled immigrants and established professionals in occupation-specific mentoring relationships. Now operating for over six years in the Toronto Region, TRIEC has facilitated close to 1,000 mentoring relationships between skilled immigrants and established Canadian professionals each year
- **Hosting an intern:** the Career Bridge paid internship program, operated by Career Edge Organization
- **National Opportunities:** a national network employing network councils across Canada

The Partnership to Advance Youth Employment (PAYE)

PAYE is a joint initiative between private sector employers and the City of Toronto. A group of business leaders is working to increase access to economic opportunities for youth and to connect employers to a pool of talented young candidates.

When PAYE was launched in 2007, it was designed to respond to the needs of Toronto's 13 priority neighborhoods that were identified in the Mayor's Community Safety Plan. In 2010 PAYE expanded and has since featured city-wide recruitment initiatives. So far, the program has provided 1,400 job interviews to more than 1,000 young people, resulting in 250 job offers.

Opportunities for Employers' Involvement:
Employers play a crucial role in developing the potential of Toronto's youth as creators of jobs, mentors, and role models.

They offer:

- Exclusive job opportunities appropriate for youth
- Skill development or training opportunities
- Participation in a large-scale Learning Forum

The City of Toronto's staff provides ground-level support for all PAYE initiatives and match qualified youth to employment opportunities.

Community-based agencies are the primary deliverers of youth employment programs. They provide the guidance and support youth need in gaining and maintaining employment.

Programs include:

- **Recruitment Events:** working with employers in the financial services sector and employers with customer service and administrative roles.
- **Orientation Sessions:** helping to connect youth with job opportunities, and refer an individual to opportunity fairs and networking events.
- **Trainings:** resume writing, interviewing skills, etc.

Organizations	
MITACS	Mitacs is a national, not-for-profit research organization. It supports national innovation by coordinating collaborative industry-university research projects with human capital development at their core. Since 1999, Mitacs has been promoting academic-industrial R&D while supporting the development of future innovation leaders. Mitacs has developed a proactive and successful approach to supporting innovation, both directly through collaborative R&D and indirectly through long-term development of skilled human capital. **Mitacs Objectives:** • Help companies identify their innovation needs and matches them with academic expertise • Foster cutting edge research tied to commercial outcomes • Build international research networks, creating innovation leaders in Canada and abroad • Provide professional and entrepreneurship skills training for graduate students, so they have the tools to meet emerging innovation needs **The Mitacs Human Capital Strategy:** The Mitacs strategy is designed to address all facets of human capital development: • **Recruitment:** Increase students in innovation-supporting academic programs • **Networking:** Create global innovation knowledge networks with Canada a key player • **Development:** Complement academic training to include professional and business skills, internships, and other strategies • **Deployment:** Ensure avenues for graduates to apply their skills in the economy Through research and training programs, Mitacs is aiming to develop the next generation of innovators with vital scientific and business skills. **Programs include:** • **Accelerate:** graduate-student led industrial R&D internships as a platform for technology transfer and commercialization • **Elevate:** industrial R&D management training program for post-doctoral fellows through class-room instruction and on-site learning • **Global Link:** summer research internships for top international students in Canada builds global R&D networks
Canada Company	Canada Company, a charitable, non-partisan organization, advocating for Canada's Armed Forces in Canada and abroad. Members of Canada Company include Canadian business leaders and leaders from the greater community. To date, the organization has more than 450 members. While Canada Company supports many initiatives, one initiative in particular deserves special attention. • **Military Employment Transition Program:** this initiative is aimed to assist Canadian Forces members who are transitioning out of the military obtain employment in the civilian workforce. This coordinated program serves as a bridge between the Canadian Forces and Canada Company's "CF Friendly" employer partners. The online resource centre has been designed to provide transitioning CF members and employers with the tools and resources necessary to establish a best in class transition experience

Concluding Observations on Human Capital

As noted, previous *Scorecards* have identified a persistent problem with productivity and productivity growth in the Toronto CMA, especially when measured against the U.S. metros. Past *Scorecards* have examined such key determinants of productivity as the size and quality of physical capital, investment opportunities, and transportation infrastructure, and have found Toronto lacking. Recognizing the key role that human capital plays in overall productivity and competitiveness, this *Scorecard 2013* furthers the exploration by benchmarking human capital.

Overall, Toronto's high marks and fourth-place ranking on the Human Capital Lens position it among the best in North America. Four of five Canadian CMAs scored better than their U.S. counterparts, with the notable exceptions of San Francisco and Boston, ranked second and third respectively. Consistent with the Economy and Labour Attractiveness results, these two U.S. metros out-perform the field when it comes to education and high-skilled occupations.

Toronto's strong overall performance can be attributed to particularly good results on population health, safety in the workplace, employment in high-skilled occupations, and adults with post-secondary education. Given Toronto's success, we conclude that human capital cannot be viewed as the main cause of Toronto's low productivity performance. Nevertheless, the excellent overall score hides some troubling underlying weaknesses that leave no room for complacency. Specifically, these are:

1. Toronto's population is not as highly educated as many of its competitors. On the proportion of population with high school education or less, the CMA scores a "C" grade, well down in the rankings. While the proportion of the population with a post-secondary degree or diploma is at the top of the rankings with an "A" grade, the proportion of population with a Bachelor's degree or higher is very low, with a "C" grade. These results contribute to Toronto's low productivity performance, which contrasts sharply with that of the education leaders, San Francisco, Boston, and Seattle. Enhancing the educational attainment of Toronto's population from high-school to post-secondary levels will improve the economic performance of the Region.
2. Toronto's third-place ranking on the indicator for high-skill occupations is a strong "A" grade, but is out of step with the higher education results. Toronto's mediocre score on the education indicators raises doubts about the qualifications of Toronto's managers, which could in turn impact on the CMA's productivity.
3. Toronto does not rank highly in terms of the skills of its immigrants, measured by their level of education. The Toronto CMA ranks in seventh place (out of the 12 CMAs in the sample) behind every other Canadian CMA. Furthermore, as previous *Scorecards* have discussed, those newcomers who arrive in Toronto with a university education are often under-employed, particularly when compared to their Canadian-born counterparts. Toronto has a significant challenge in attracting and retaining higher numbers of university-educated immigrants.
4. Toronto could make better use of the employment potential of its female population, especially in the context of its relatively older population. Although Toronto scores relatively well in terms of gender income equality (ranking second behind Los Angeles), female incomes are only 72.7 percent of males' — an unacceptable gulf. Furthermore, Toronto has only a "C" grade on female participation in the workforce and ranks near the bottom of the pack on the proportion of females in management positions (along with most other Canadian CMAs). The OECD confirms this problem for Canada, reporting that among 34 OECD countries, Canada has the fourth smallest proportion of full-time female earners with Bachelor's degrees (or higher), accounting for an 18 percent gender disparity. The gap in the U.S. is only 10 percent.[35]

35 OECD, Op.Cit., p 4.

5. Although Toronto ranks around the middle of the pack on the overall unemployment rate and on youth unemployment (with a "B" score on each of these indicators), these unemployment rates remain troublingly high.

Looking ahead, it will be more critical than ever to attract new skilled immigrants, young employees, and women in management positions. Experts agree that regions with a sizeable population of baby boomers will be scrambling to fill labour shortage gaps within the near future. Enhancing educational attainment levels from high school to post-secondary completion is a critical first step to achieving success in a global innovation-driven economy. Toronto faces three major policy challenges in order to ensure that its fundamentally strong human capital asset continues as a comparative advantage for the region:

1. Toronto needs to attract more university and college graduates to help lift productivity and GDP, as well as to ensure the labour force matches the skills needed in the market.
2. Toronto needs to attract and retain more highly skilled immigrants; and
3. Toronto needs to make better use of the employment potential of its female population.

8 | CONCLUSION

In this fifth *Scorecard on Prosperity*, **Toronto** continues to prove that it ranks among the world's best global metropolises. Ranked sixth, Toronto is in the top quarter of the 24 benchmarked metro areas. Although finishing one place down from last year (#5), Toronto ranks higher than all other U.S. metros for the first time since the *Scorecards* were introduced.

At the heart of Toronto's success is the region's consistently good record on Labour Attractiveness, highlighted by its number one advantage: diversity. Year after year, Toronto has maintained its first place ranking as the most diverse metro with more than 45 percent of residents foreign-born. Toronto ranked fifth on Labour Attractiveness, the same as in *Scorecard 2012*, while earning "A" or "B" grades on ten of 15 indicators. Population growth in Toronto, fuelled by immigration, continues to be strong, although five metro areas grew faster, with Calgary outpacing all others. Toronto's other top results come on environmental indicators: low levels of domestic water consumption; and improved air quality. And compared to many other metros in North America, Toronto's housing is relatively affordable.

Toronto's otherwise-enviable livability is tarnished by poor results in just a handful of areas. Two are transportation-related: mode of travel to work; and commute times. Two years ago, *Scorecard 2011* examined transportation issues in depth with eleven transportation-related indicators applied to all metro areas. Apart from bad commute times, we learned that Toronto performs poorly on indicators related to public transit, especially rail. Toronto's 66-minute commute time is the worst among Canadian Census Metropolitan Areas (CMAs), and second-worst in North America after New York (3.9 minutes longer).

A third weakness on Labour Attractiveness relates to income inequality. With a Gini coefficient of 0.41, Toronto is below all European metros. Despite doing better than its U.S. counterparts, Toronto's results are not good enough to claim an equitable society.

Toronto's struggles in the Economy domain persist. Toronto stays as a "C" performer on the Economy, dropping to 12th place, after two consecutive 11th place rankings. Moreover, Toronto's progress in closing the gap with Calgary (as highlighted in *Scorecard 2012* has been reversed. Similarly, Toronto gained no ground against the leaders (San Francisco, Boston, Seattle), with results on key indicators such as real Gross Domestic Product (GDP), productivity, income, and venture capital continuing to weaken. In total, Toronto's rankings went down on ten of the 18 Economy indicators, although in most instances by only one or two places. The steepest drop came on productivity growth as Toronto dropped from 19th to 22nd place, continuing a slide begun last year with the drop from 14th to 19th.

Amidst these weaknesses, some hopeful signs emerge. To begin with, Toronto's strengths in high-tech and professional employment are still evident, and Toronto keeps its North American advantage in market size. Furthermore, improvements in three areas nudged Toronto up in the rankings on indicators relating to: per capita income, residential building permit growth, and corporate tax burden (TTI). But for businesses in Toronto, the tax advantage gain may be tempered somewhat by the sharp rise in Toronto's office rents. In 2011, Toronto surpassed New York as the most expensive North American city for downtown office space.

For the second consecutive year, the *Scorecard 2013* includes an Economic Update section, benchmarking all of the North American metros using the most current data available. For Toronto, the news is brighter. Toronto moves up from ninth to seventh overall on the Economic Update, with progress on income growth, real GDP growth, and residential building permit growth. Like last year's Update, Toronto and all other Canadian CMAs outdo their U.S. counterparts on employment growth. On the other hand, U.S. metros dominate on real GDP per capita and productivity. Canada has had more employment growth, but the U.S. is leaner, continuing to have high levels of GDP with fewer workers.

The "Human Capital Lens" introduced in this *Scorecard* complements the work undertaken in earlier *Scorecards*, when infrastructure and capital were examined in some detail. When measured against all North American metros, Toronto ranks among the best on human capital, in fourth place. Given that Toronto has already established itself as a "winner" on Labour Attractiveness, this strong result is not surprising. Toronto's best results come in the areas of health and safety, employment in high-skilled occupations, post-secondary education, and relative success in the area of female-to-male income.

However, Toronto's excellent overall score on human capital masks some troubling weaknesses that leave no room for complacency:

1. Firstly, Toronto is well down in the rankings on two of three education indicators, signaling too many adults with only high school or less, and too few adults with a Bachelor's degree or higher. While the proportion of the population with a post-secondary degree or diploma is at the top of the rankings with an "A" grade, the proportion of the population with a Bachelor's degree or higher is very low, with a "C" grade. These results contribute to Toronto's low productivity performance, which contrasts sharply with that of the education leaders, San Francisco, Boston, and Seattle.
2. While Toronto does well on high-skill occupations, the "A" grade is out of step with the higher education results. Toronto's mediocre score on the education indicators raises doubts about the qualifications of Toronto's managers, which could in turn impact on the CMA's productivity.
3. In terms of the skills of its immigrants, the Toronto CMA ranks behind every other Canadian CMA. Furthermore, as previous *Scorecards* have discussed, those newcomers who arrive in Toronto with a university education are often under-employed, particularly when compared to their Canadian-born counterparts. Toronto has a significant challenge in attracting and retaining higher numbers of university-educated immigrants.
4. Toronto's results on females in the labour force are weak: only a "C" grade on female participation in the workforce; and an eighth place ranking on the proportion of females in management positions (consistent with most other Canadian CMAs). Meanwhile, Toronto's relatively high ranking on gender income equality is misleading. Where female incomes are only 72.7 percent of males, this is an unacceptable gulf.
5. Although Toronto ranks around the middle of the pack on the overall unemployment rate and on youth unemployment (with a "B" score on each of these indicators), these unemployment rates remain troublingly high.

Looking ahead, it will be more critical than ever to attract new skilled immigrants, young employees, and women in management positions. Experts agree that regions with a sizeable population of baby boomers will be scrambling to fill labour shortage gaps within the near future. Toronto faces three major policy challenges in order to ensure that its fundamentally strong human capital asset continues as a comparative advantage for the region:

1. Toronto needs to attract more university and college graduates to help lift productivity and GDP, as well as to ensure that the skills of its labour force match the skills demanded by the market place;
2. Toronto needs to attract and retain more highly skilled immigrants; and
3. Toronto needs to make better use of the employment potential of its female population.

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