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Ottawa Economics Association  
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CHECK AGAINST DELIVERY

### **The Virtue of Productivity in a Wicked World**

It is either brave or foolhardy of the Ottawa Economics Association to organize another conference around Canada's perennial challenges of demographics, productivity, and potential growth.

The cognoscenti wearily deride these shortcomings even while they acknowledge their importance.<sup>1</sup> After all, who really wants to talk about getting old? Similarly, the subject of productivity is described as too dull, or worse, too threatening for Canadians. It is said to imply working harder, not smarter, or to promote job losses rather than income gains. These debates are thus thought best confined to the policy wonks, in order that our diagnoses and prescriptions can occur in a parallel, forgotten universe.

However, one wonders, who would not want to be productive in their work? Is there a child whom we do not want to reach his or her full potential? Could what Canadians expect of their economy be so very different from what they expect of themselves?

Our ambitions for the Canadian economy should be bold. We are a country of immense strengths and, as demonstrated during the recent crisis, considerable resilience.

Yet Canada does underperform. We are not as productive as we could be. Our potential growth is slowing. Moreover, this is occurring as the very nature of the global economy, in which we previously thrived, is under threat. This debate can no longer be avoided.

What, then, must be done?

There are two imperatives—one domestic, one international—to secure strong, sustainable, and balanced economic growth for Canada. Both recall Aesop's fable of the ant and the grasshopper, the moral of which can be best summed up as "idleness brings want." In short, in a wicked world, Canada needs productive virtue.

#### **Canada's Slowing Potential**

This conference has already benefited from comprehensive reviews of productivity and potential growth, so I would like to briefly summarize the Bank's views (which are largely in accord with the emerging consensus).

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<sup>1</sup> See, for example, J. Simpson, "Needed urgently: more creativity from the business class." *Globe and Mail*, 25 May 2009.

We have a problem: demographic drag will increase in coming years. As the boomer generation ages, labour force participation rates will decline and hours worked will fall. The question is merely one of degree. For some age groups, there is a possibility that participation rates will be higher than currently anticipated, particularly since participation rates of older workers have risen since 1996. Moreover, there is a role for policy to reduce further disincentives for participation in the labour market. Nevertheless, it will not be able to reverse longer-run demographic pressures.

We have a second, much bigger problem: our abysmal productivity record. Over the past decade, it has averaged a paltry 0.7 per cent, about half the rate recorded over the 1980-2000 period.

The combination of slower productivity growth and demographic shifts could well mean that the average rate of potential growth for the Canadian economy will be closer to 2 per cent going forward than the more than 3 per cent we enjoyed in the first half of the past decade and the latter half of the 1990s.<sup>2</sup>

If this differential were to persist over a decade, the cumulative loss of income would be almost \$30,000 for every Canadian.<sup>3</sup> Given Canada's demographic trends, the principal way to avoid this loss is by improving our productivity.

### **First Imperative: Improving Canada's Productivity**

There appears to be ample opportunity to do so, since Canada is not as productive as it could be. Canada's productivity ranking has dropped from third of the 20 countries in the Organisation for Economic Co-operation and Development (OECD) in 1960 to 15th of the current 30 members (see Appendix, [Chart 1](#)).<sup>4</sup> After some promising signs in the late 1990s, average labour productivity growth has since slowed dramatically ([Chart 2](#)).

In growth-accounting terms, the main culprit has been multifactor productivity growth, which has slumped markedly, while capital intensity failed to pick up pace.<sup>5</sup>

I will sketch out three types of explanations based on the research done at the Bank of Canada and by many of you in this room.<sup>6</sup>

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<sup>2</sup> In April 2009, the Bank of Canada lowered its forecast for the growth of potential output to 1.2 per cent in 2009, 1.5 per cent in 2010, and 1.9 per cent in 2011 from 2.4 per cent in 2009 and 2.5 per cent in 2010 and 2011, reflecting significant structural changes and subdued corporate investment.

<sup>3</sup> As expressed in 2009 dollars.

<sup>4</sup> Compendium of Productivity Indicators, Organisation for Economic Co-operation and Development (OECD), 2006 and 2008.

<sup>5</sup> Multifactor productivity measures joint influences on economic growth, such as technological change, efficiency improvements, and returns to scale. Its growth rate is calculated as the difference between the growth in the amount of output produced and the growth of the quantity of all inputs used, such as labour and machinery and equipment.

<sup>6</sup> For a recent summary of Bank of Canada research, see R. Dion, "Interpreting Canada's Productivity Performance in the Past Decade: Lessons from Recent Research," *Bank of Canada Review* (Summer 2007): 19-32, available at: <<http://www.bankofcanada.ca/en/review/summer07/dion.pdf>>; and R. Dion and R. Fay, "Understanding Productivity: A Review of Recent Technical Research," Bank of Canada Occasional Paper 2008-3, available at: <[http://www.bankofcanada.ca/en/res/dp/dp\(y\)\\_2008.html](http://www.bankofcanada.ca/en/res/dp/dp(y)_2008.html)>.

First, measurement challenges for both output and prices in the resources and service sectors could explain some of the shortfall.

Second, lags associated with the economy's adjustment process could be obscuring otherwise strong performance. These include:

- longer-tailed resource investments that require substantial upfront expenditures before natural resources can be turned into output, all the while drawing on more marginal reserves; and
- the large-scale restructuring of industries and the reallocation of capital and labour to new industries, which naturally dampen productivity as they take place.<sup>7</sup>

Third, there appear to be deeper structural determinants that will require more concerted efforts on the part of business and government to address:

- Canada under-invests in machinery and equipment (M&E), training, and innovation—in fact, all of the underlying drivers of productivity.
- Canadian workers have about half the amount of information and communications technology (ICT) of their American counterparts. ICT capital has been linked to stronger multifactor productivity growth in many countries.<sup>8</sup>
- With its highly educated workforce, flexible labour markets, and high rates of firm entry and exit, Canada appears to have all the ingredients needed to be an innovation leader. However, it is only 16th among the OECD countries in the intensity of business research and development.<sup>9</sup>
- Our dismal multifactor productivity growth indicates that Canadian firms do not effectively use the capital that they purchase.<sup>10</sup>

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<sup>7</sup>Bank of Canada research suggests that job reallocation across firms is a significant positive factor explaining Canadian labour productivity growth over the 1992–2006 period. D. Leung and S. Cao, “The Changing Pace of Labour Reallocation in Canada: Causes and Consequences,” *Bank of Canada Review* (Ottawa: Bank of Canada, Summer 2009): 31-44. Available at: <http://www.bankofcanada.ca/en/review/summer09/leung.pdf>.

<sup>8</sup> This is not related to industrial structure—it is found in most industries. See A. Sharpe, “What Explains the Canada-US ICT Investment Gap?” Research Report 2005–2006, Centre for the Study of Living Standards (CSLS), December 2005.

<sup>9</sup> A recent report concluded that “too many businesses in Canada are technology followers, not leaders” and stressed the need for “innovation-based business strategies.” See P. Nicholson, “Innovation and Business Strategy: Why Canada Falls Short,” *International Productivity Monitor*, No. 18 (Spring 2009): 51–71. Available at: <http://www.csls.ca/ipm/18/IPM-18-Nicholson.pdf>.

<sup>10</sup> Using a growth-accounting framework, Baldwin and Gu show that multi-factor productivity (MFP) is the main culprit in Canada's lagging productivity performance. They note that two sectors in particular – mining and oil and gas extraction and manufacturing – account for much of the slowdown in MFP growth in this decade. See J. Baldwin and W. Gu, “Productivity Performance in Canada 1961-2008: An Update of Long-term Trends,” Statistics Canada, 2009.

Some possible explanations for why we both under-invest and appear to use capital so poorly include:

- the wrong skills mix: Canada has a well-educated labour force but, perhaps as the structure of the economy shifts, not in the areas required;
- small firms: Compared with the United States, Canada has proportionately more small firms that are significantly less productive than large firms;<sup>11</sup> and
- in particular, inadequate competition in some sectors, especially network industries that have spillovers throughout the economy, including telecommunications, electricity, and retail.<sup>12</sup>

Whatever the combination of reasons behind Canada's poor productivity record, there are several avenues available to policy-makers to encourage sustainable longer-run growth.

It is important to acknowledge that successive governments have taken many steps in the right direction. Canadian businesses benefit from a sound macro-policy environment, including sustainable fiscal policy and credible monetary policy, which delivers low, stable, and predictable inflation. Corporate tax competitiveness—particularly for new investment—has improved markedly over the past decade and is now among the most attractive in the industrialised world. Canada has also actively pursued trade openness through new agreements and unilateral tariff reductions.<sup>13</sup> Staying the course in these regards is likely the single most important contribution of the public sector.

These core framework policies can be supplemented by measures to foster innovation and commercialization, investments in strategic infrastructure, and incentives for scale.

Finally, it is vitally important that current global financial sector reform efforts yield a stable and efficient financial system that channels the capital necessary for long-run growth.

In general, while there is always more to do, governments have put in place conditions for a productivity revival. Business, thus far, has disappointed. In fact, productivity growth fell in the latest recession, the first time this has happened in three decades. Looking forward, despite the availability of capital, relatively strong balance sheets and improving economic conditions, corporate Canada does not appear ready to invest. Investment intentions for 2010 remain modest and largely driven by the public sector.

This appears unwise.

### **The Coming Global Winter?**

There could be tough times ahead. Canadian grasshoppers, perhaps basking in the historically easy access to the U.S. market and the relative abundance of resource

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<sup>11</sup> D. Leung, C. Meh, and Y. Terajima, "Productivity in Canada: Does Firm Size Matter?" *Bank of Canada Review*, Autumn 2008. Available at: <[http://www.bankofcanada.ca/en/review/rev\\_autumn2008.html](http://www.bankofcanada.ca/en/review/rev_autumn2008.html)>.

<sup>12</sup> OECD, *Economic Policy Reforms: Going for Growth*, 2010

<sup>13</sup> See The Budget Plan, Department of Finance, Canada 2010.

opportunities, could be in danger of wasting their days in the sun and finding themselves unprepared for the winter to come.

Canada's productivity challenge is made more pressing by an international economic landscape that is changing dramatically. A powerful and sustained restructuring of the global economy has begun. The pace and volatility of global growth are likely to be quite different than during the so-called "Great Moderation" earlier this decade. The considerable uncertainty about medium-term global prospects will require concerted, co-operative measures to moderate.

### **The Second Imperative: The G-20 Framework**

Policy-makers must work to ensure that business can operate, as much as possible, in an open and stable global economy. At a minimum, this means living up to the G-20 commitment to resist trade and financial protectionism. More proactively, it means substantial reforms to build a more resilient, open, global financial system. Ultimately, as I will discuss in a moment, securing strong, sustainable, and balanced global growth will also require changes in behaviour and policy adjustments on several fronts.

While the recent financial crisis had many causes, its intensity and scope reflected unprecedented disequilibria. Large and unsustainable current account imbalances across major economic areas were integral to the buildup of vulnerabilities in many asset markets. In recent years, the international monetary system failed to promote timely and orderly economic adjustment.<sup>14</sup>

Further postponing adjustment will only serve to increase vulnerabilities. In the past, the frustration of adjustment by current account surplus countries generated deflationary pressures in the rest of the world. Similarly, today, the adjustment burden is being shifted to others. Some advanced countries—including Canada—have recently seen sizable appreciations of their currencies. Their ability to increase domestic demand in response is limited.

The net result could be a suboptimal global recovery, in which the adjustment burden in those countries with large imbalances falls largely on domestic prices and wages, rather than on nominal exchange rates. History suggests that this process either could take years, repressing global output and welfare in the interim or lead to another crisis, which would accelerate adjustment, but at a terrible cost.

### ***The G-20 framework could address this issue***

The G-20 framework to promote strong, sustainable, and balanced growth in global demand, launched last November in St. Andrews, Scotland, is an attempt to learn these lessons from history.

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<sup>14</sup> This failure has ample precedents. Over the past century, different international monetary regimes have struggled to adjust to structural changes, including the integration of emerging economies into the global economy. In all cases, systemic countries failed to adapt domestic policies in a manner consistent with the monetary system of the day. As a result, adjustment was delayed, vulnerabilities grew, and the reckoning, when it came, was disruptive for all.

The G-20 framework stresses the shared responsibility of countries for global economic performance. Under the framework, members have agreed to a mutual assessment of their monetary, exchange rate, fiscal, and financial policies, with the assistance of the International Monetary Fund (IMF). The implications of these policies for the level and pattern of global growth and the risks to financial stability will be reviewed by finance ministers and central bank governors in preparation for agreement on any common actions by G-20 leaders in Canada and South Korea this year.

To illustrate what is at stake, the Bank of Canada has generated three scenarios for the evolution of global growth and current account positions.<sup>15</sup>

The first is a business-as-usual scenario ([Chart 3](#)). No significant changes are made to the current mix of policies, which creates a situation similar to the one that led to the recent crisis. In particular, advanced countries do not make the fiscal adjustments necessary to stabilize their debt dynamics, and their household savings rates do not increase.<sup>16</sup> As well, emerging Asia continues to finance the U.S. deficit through reserve accumulation, effectively impeding real exchange rate adjustment.

In the short run, this combination of policies provides a fiscal boost, but it does not last. In response to the rising public debt burden, global interest rates begin to rise, crowding out private investment and ultimately lowering potential growth. This, in turn, further worsens the fiscal situation. Global economic growth falls steadily and, by 2013, it is only 2.7 per cent (compared with the 4 per cent average rate during the Great Moderation of 2002-07). More alarmingly, global imbalances reassert at an explosive rate. Paths for public and external debt are unsustainable and could lead to another crisis.

An obvious lesson to draw from this scenario is that advanced countries need to engage in fiscal consolidation over the medium term. Indeed, that is the express policy of all industrialised countries. But would that alone be sufficient to rebalance the global economy?

Consider a second scenario in which there is fiscal consolidation in advanced countries such that debt-to-GDP stabilizes by 2015 ([Chart 4](#)).<sup>17</sup> Other countries maintain current policies. In particular, there is neither a real effective exchange rate adjustment nor an increase in the trend of domestic demand growth in Asia's emerging economies.

In this scenario, there is deficient demand globally. With monetary policy constrained by the zero lower bound, deflation emerges. As a consequence, real interest rates increase sharply, growth stalls, and fiscal consolidation becomes more difficult.

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<sup>15</sup> Note that these scenarios are purely illustrative and do not represent the Bank's base-case projection. They were generated using BoC-GEM-FIN, the Bank's global general-equilibrium macro model. See K. Beaton, C. de Resende, R. Lalonde, and S. Snudden, "Prospects for Global Current Account Rebalancing," Bank of Canada Discussion Paper, forthcoming in 2010.

<sup>16</sup> Countries do not make the necessary fiscal adjustments to stabilize their debt dynamics. There is no stabilization in debt-to-GDP ratios by 2015. In the "framework" scenario, debt/GDP in the United States stabilizes around 75 per cent of GDP. In this "do nothing" scenario, U.S. debt/GDP would reach about 95 per cent of GDP by 2015.

<sup>17</sup> At 120 per cent for the United States, 130 per cent for Euro area.

It is cold comfort that global imbalances are effectively eliminated. The cost is a prolonged global recession, with massive foregone output. If this scenario were to occur, the risk of protectionism would undoubtedly rise, potentially exacerbating the damage.

Finally, consider a “framework scenario,” one that highlights the large gains that the G-20 process could—and should—produce (Chart 5). In this case, the fiscal consolidation of the second scenario is complemented by policies to increase domestic demand in emerging Asia and a modest real effective depreciation of the U.S. dollar (across all major currencies).

In this case, current account imbalances stabilize at low levels and, more importantly, global growth rises to 3.7 per cent in 2010 and 4.5 per cent in 2011. Growth is strong, sustainable, and balanced.

There is no doubt we would all be much better off with the last scenario (Table 1). By 2015, the difference in the level of global GDP between the deflation and framework scenarios is about 12 per cent (Chart 6).<sup>18</sup> For Canada, the difference would be 10 per cent of Canadian GDP.<sup>19</sup>

### **The Morality of Global Imbalances**

If the gains to rebalancing are so considerable, why isn't it assured that countries will take the necessary steps? There are two issues: misdiagnosis and coordination.

Regarding the former, some view global imbalances, not as a missed opportunity but, rather, a modern morality tale. To them, deficit countries are the profligate grasshoppers whiling away their hours in the sun, while the surplus countries are ants prudently husbanding resources in anticipation of winter.

The problem with this diagnosis is that it ignores the symbiotic nature of the global economy. Excess savings in some countries go hand-in-hand with excess dissavings in others. Taken to the extreme, the husbanding of resources makes the economic winter more likely. The thrift of the Swabian housewife or the obsessive self-insurance of the emerging giants is globally debilitating and self-defeating. Hegel's observation that all societies die from the morbid intensification of their own first principles comes to mind.

The drivers of domestic demand cannot be concentrated in the same countries forever. As the Managing Director of the IMF has suggested, not all countries can simultaneously export their way to growth.<sup>20</sup>

The framework process does not appeal to a country's altruism. As shown in Table 1, the framework scenario is *pareto improving*—every region is better off under it.

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<sup>18</sup> Or a total of \$7 trillion.

<sup>19</sup> According to the Bank's rough calculations, the cumulative U.S.-dollar purchasing-power-parity income per citizen would increase by about US\$3,000 by 2015. Five years later, in 2020, it would be about US\$11,700.

<sup>20</sup> Dominique Strauss-Kahn, as cited in C. Giles, “IMF warning over reliance on exports,” *Financial Times*, 30 January 2010.

The second issue is coordination. To stimulate private domestic demand, surplus countries could enhance their social safety nets, reform financial systems to liberate trapped savings from small and medium-sized enterprises, and sharpen relative price signals (in part through greater exchange rate flexibility). While it is in their own interests to implement these policies, surplus countries could be further encouraged by industrialised countries implementing the necessary complementary measures.

In particular, industrialised countries must develop credible medium-term plans for fiscal consolidation and implement them once the recovery is firmly entrenched. Moreover, it is essential that industrialised countries, particularly those at the epicentre of the financial crisis, implement a series of financial reforms to increase the resilience of the global financial system. This means more and better bank capital, improved market infrastructure for derivatives and funding markets, and a series of initiatives to end “too-big-to-fail.”<sup>21</sup>

It will not be enough to propose. Measures must also be credibly implemented. That is why the peer review process of the Financial Stability Board (FSB) and external reviews by the IMF are so important. Through these processes, financial reforms could increase actual and perceived systemic stability and thereby encourage mutually supportive policies in surplus countries.

Finally, all countries will need to maintain their commitment to price stability. I will now turn to this issue in Canada before concluding.

### **Update on the Inflation Outlook**

The global economy has evolved largely as expected. Strong growth in many emerging-market economies has been accompanied by positive though uneven growth in most advanced countries. Although the level of economic activity is now somewhat higher than projected, the outlook for inflation and economic growth in the global economy over the near term remains essentially unchanged, with exceptional monetary and fiscal stimulus continuing to provide important support in many countries.

Economic activity in Canada has surprised slightly on the upside in recent weeks relative to the projection in our January *Monetary Policy Report*. Growth has been driven mainly by domestic demand, but exports have also recovered further in response to improving external demand. Significant policy stimulus, combined with increased confidence, improved financial conditions, and higher terms of trade, are the main factors supporting growth in Canada’s domestic demand.

At the same time, the persistent strength of the Canadian dollar and the low absolute level of U.S. demand in certain key sectors, such as autos and housing, will continue to act as significant drags on economic activity in Canada.

Core inflation has been slightly firmer than projected, the result of both transitory factors and the higher level of economic activity. The outlook for inflation should continue to

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<sup>21</sup> For a more detailed discussion, see M. Carney, “Reforming the Global Financial System.” Speech to the Autorité des marchés financiers, Montréal, Québec, 26 October 2009.



reflect the combined influences of stronger domestic demand, slowing wage growth, and overall excess supply.

At its 2 March 2010 decision, the Bank reconfirmed that the target overnight rate can be expected to remain at its current level until the end of the second quarter of 2010 in order to achieve the inflation target. This commitment is expressly conditional on the outlook for inflation, which will be updated in the Bank's next *Monetary Policy Report*, to be published on 22 April.

### **Conclusion**

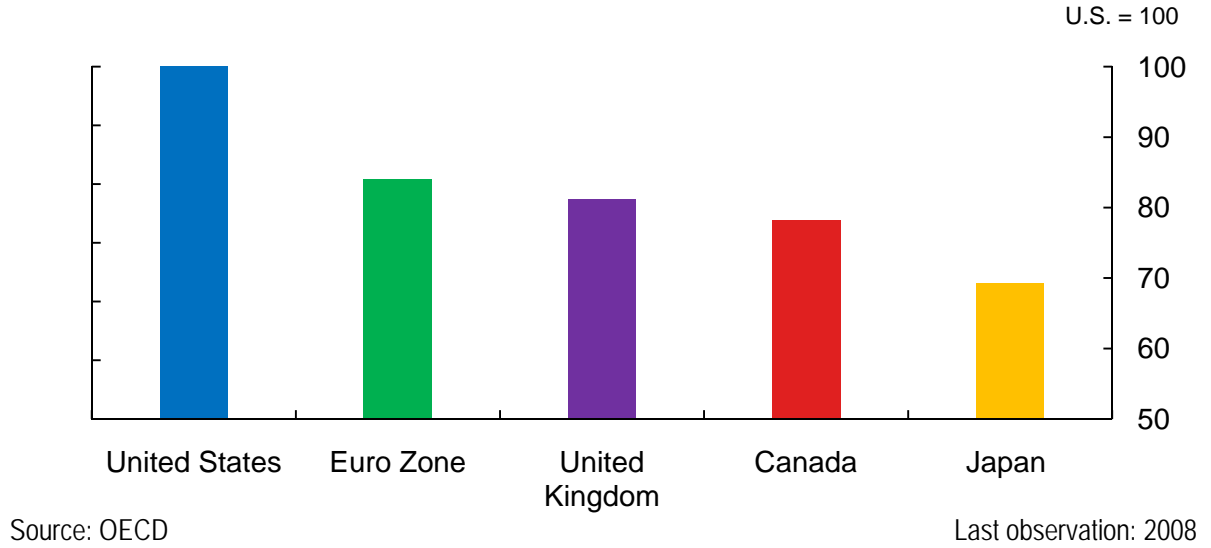
In conclusion, the twin challenges of boosting Canadian productivity and of implementing the G-20 framework globally are daunting. But the gains are considerable. Now is not the time to rest on our laurels or to take an open global economy for granted.

The Bank is committed to tackling these important issues. We have a broad research agenda on productivity. We are working with our domestic and international partners to reform the global financial system. We are active participants in G-20 framework discussions, not merely because they offer the best outcome for the global economy but also because they are in Canada's interests.

Finally, and most fundamentally, the Bank has an unwavering commitment to price stability. The single, most direct contribution that monetary policy can make to sound economic performance is to provide Canadians with confidence that their money will retain its purchasing power. That means keeping inflation low, stable, and predictable. Price stability lowers uncertainty, minimizes the costs of inflation, reduces the cost of capital, and creates an environment in which households and firms can invest and plan for the future.

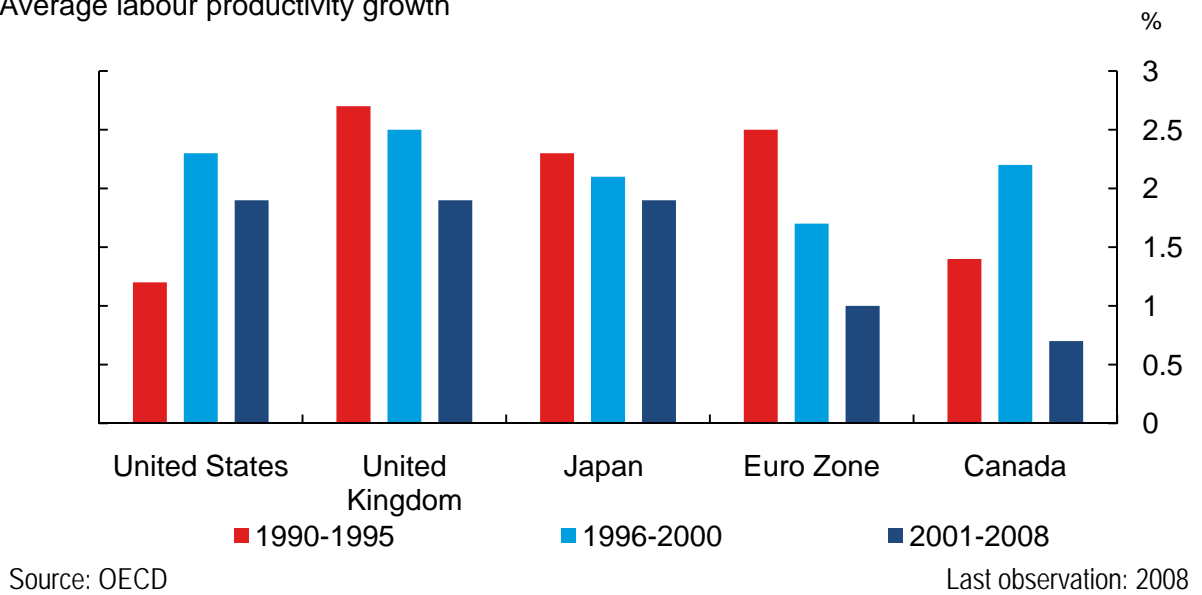
## Appendix

### Chart 1: Productivity level in 2008 (GDP per hour)



### Chart 2: Canadian productivity gap increasing

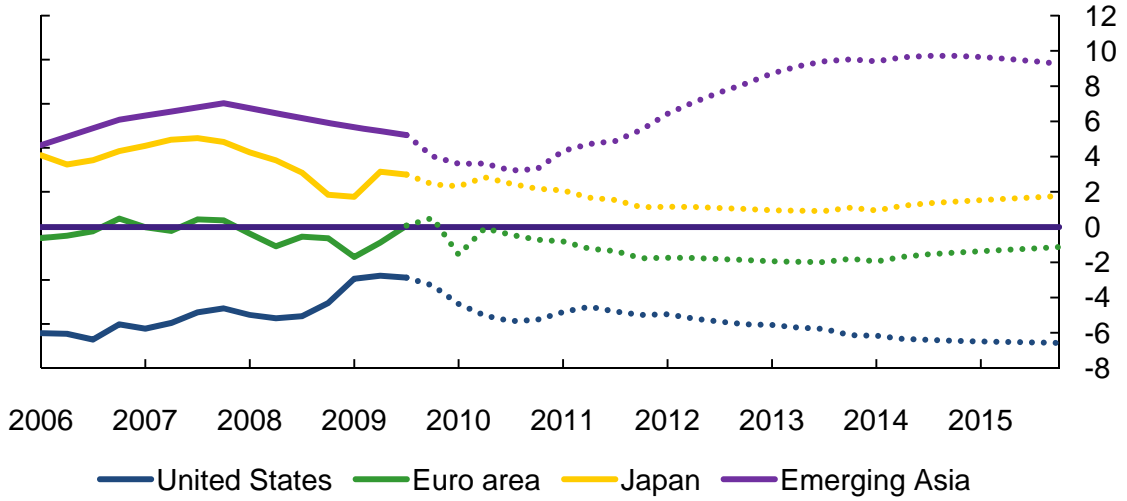
Average labour productivity growth



### Chart 3: Business as usual

Current Account Balance

Per cent of GDP

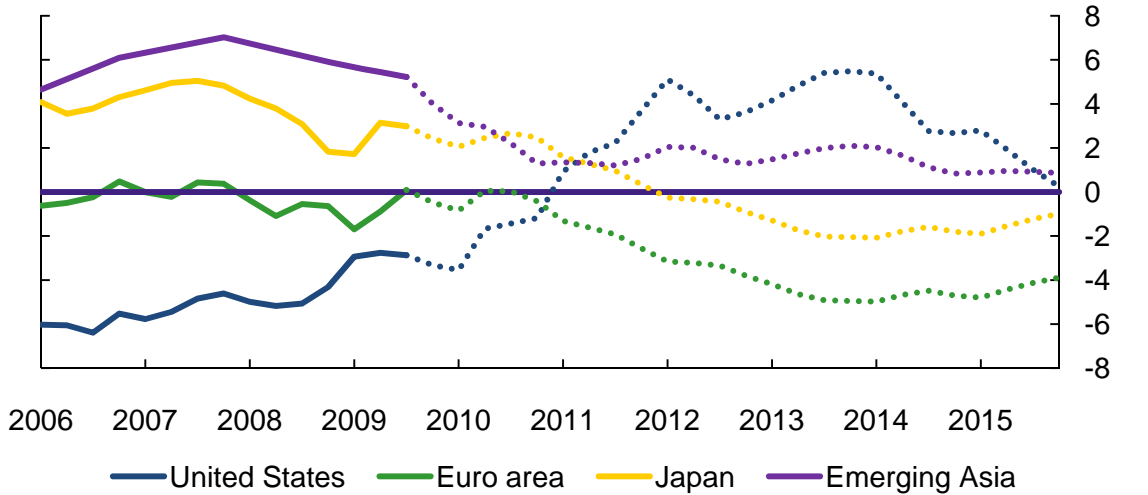


Source: Bank of Canada

### Chart 4: Global Deflation

Current Account Balance

Per cent of GDP

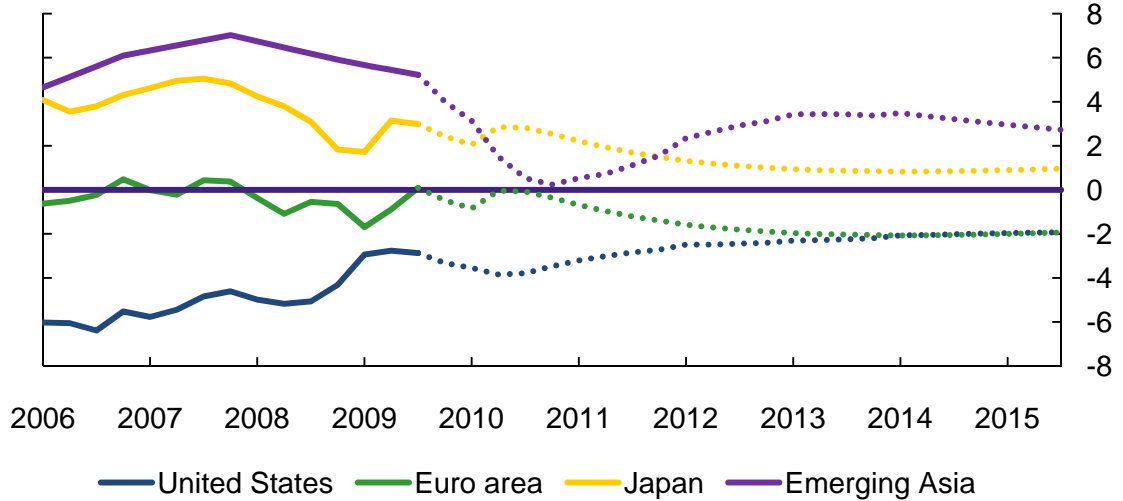


Source: Bank of Canada

### Chart 5: Framework Policies

Current Account Balance

Per cent of GDP

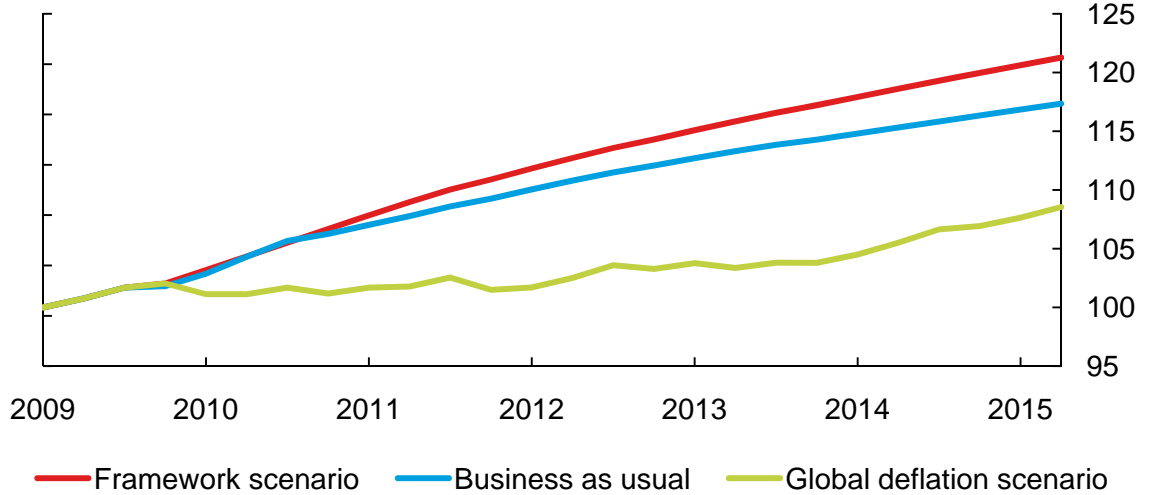


Source: Bank of Canada

### Chart 6: World GDP Projection

2009Q3 level = 100

Index level



Source: Bank of Canada

**Table 1: World Real GDP Growth**

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	2010	2011	2012	2013	2014	2015
Business as Usual	3.8	3.1	3.1	2.7	2.4	2.4
Global Deflation	-0.2	0.7	0.9	0.8	2.8	2.9
Framework	3.6	4.5	4.1	3.7	3.3	3.2
World Economic Outlook – January 2010 Update	3.9	4.3				

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