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CHECK AGAINST DELIVERY

Capitalizing on the Commodity Boom: the Role of Monetary Policy

Everyone here remembers the bumper sticker. For two decades, Albertans promised not to waste the next boom if one were granted. With US$130 oil, US$10 natural gas, US$200 coal, and US$8 wheat, the next one has clearly arrived. The question now is how to make good on that promise. This evening, I will concentrate on one aspect of the answer: how monetary policy can help to create the conditions that will allow all Canadians to benefit from sustained high commodity prices. I am grateful for this opportunity because monetary policy is more effective when it is well understood. Seldom is this understanding more important than when our economy faces the types of supply and demand shocks engendered by a series of sharp increases in commodity prices.

Outlook for Commodity Prices

We are experiencing a commodity super cycle. Throughout the current boom, the scale of price increases has been higher, and the range of affected commodities broader, than in previous upturns. Since 2002, grain and oilseed prices have more than doubled, base metals prices have tripled, and oil prices have quadrupled. Beyond the breadth and magnitude of these price increases, the current boom is also unusual in that it began earlier in the global economic cycle and has lasted longer. While booms usually herald a downturn, this one appears to be evidence of unusually robust momentum in global growth.[1]

These dynamics suggest that a combination of very favourable and mutually reinforcing factors are at work. These include burgeoning demand, a subdued supply response, important links among commodity markets, and supportive financial conditions. An environment for a secular increase in commodity prices has been building since the middle of the 1990s. That said, we can expect considerable volatility around this longer-term trend and must remember that while supply and demand may be inelastic in the short term, they are decidedly more flexible over longer periods.

Current commodity-price dynamics are intimately linked to the globalization process. In particular, rapid growth in emerging-market demand is driving most prices. Positive underlying demand fundamentals in emerging markets include sustained growth in per capita income, rapid industrialization, and a more intensive use of commodities in production. Research at the Bank of Canada and elsewhere suggests that while oil and

[1] See International Monetary Fund, *World Economic Outlook* (Washington: IMF, April 2008) p. 198–99.

metals prices have historically moved with the business cycle in the developed world, this relationship has broken down over the past decade. For example, industrial activity in emerging Asia now appears to be the dominant driver of oil-price movements,[2] and China alone is expected to become the world's largest consumer of energy by 2010.[3] Emerging markets and developing economies have accounted for nearly 95 per cent of the increased demand for oil since 2003.[4] As recently as the 1990s, marginal demand was roughly split between OECD and non-OECD countries.

In the face of this demand, the supply response has been disappointing. Consider oil. OPEC's annual production has declined by 2 per cent since 2005 and, with a few exceptions, non-OPEC supply has failed to meet expectations. Among OECD countries, oil output has fallen by 8 per cent since 2002. As a consequence, inventories remain very tight at 31 days, and spare capacity is limited. With inelastic demand in the short term, actual or perceived supply disruptions can lead to sharp price spikes and continued volatility.

There are many reasons why the supply response has been limited thus far. First, access to many of the world's most promising regions is often tightly controlled or wholly restricted to state-owned enterprises. Second, while nominal investment has surged, so too have costs.[5] Many in this room know from direct experience how hard it is to find skilled workers, drilling rigs, and pipeline capacity. Exploration and development costs for conventional crude have doubled, and oil sands costs have tripled. Across the global industry, surging investment costs have meant that real investment has remained flat. The net result is that a 70 per cent nominal increase in non-OPEC capital expenditure since 2003 has barely replaced declining production from existing fields.[6]

Over the medium term, high prices will encourage the development of new supplies and energy alternatives. Canada will be one of the most important marginal suppliers of oil. With more than $150 billion of new investment in the oil sands proposed or under way,[7] output from the oil sands is expected to grow by 3 million barrels per day by 2020, representing about 15 per cent of expected marginal global demand.[8] Other supplies can be expected to come on stream, and alternative energy sources should be developed. Although there will be lags, it would be a mistake to assume that the market has ceased to function.

Demand will also be more responsive over time. SUV sales in the United States have fallen by nearly one-third so far this year – an important early indicator. Oil demand in

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[2] C. Cheung and S. Morin, "The Impact of Emerging Asia on Commodity Prices" (Working Paper No. 2007-55, Bank of Canada, 2007).
[3] International Monetary Fund, "Global Energy: Increasingly Unstable," *Finance & Development* 45, no. 1 (March 2008).
[4] Data supplied by the Energy Information Administration (EIA). See <http://www.eia.doe.gov/ipm/>.
[5] According to the Canadian Association of Petroleum Producers (CAPP), a 100,000-barrel-per-day integrated oil sands project that cost $3.3 billion to build in 2001 now costs over $10 billion. See <http://www.capp.ca/raw.asp?x=1&dt=PDF&dn=134739>.
[6] Data provided by IMF.
[7] Data provided by Alberta Finance and Enterprise.
[8] Production estimate from CAPP. Demand estimate from the EIA.

OECD countries has been essentially flat since 2003, and the International Energy Agency projects it to remain weak for the next few years.[9] As a result, the extent of continued upward demand pressure will depend almost exclusively on emerging markets. There are several considerations. First, we are about to find out the extent to which slowing domestic demand growth in the G-7 will affect growth in emerging Asia. Second, the stance of monetary policy in emerging markets will be an important determinant of prices in the short term. Monetary policy remains highly accommodative in a number of fast-growing economies that are major marginal consumers of commodities. The combination of accommodative monetary policy and overheating economies will eventually be reversed, either through policy action or generalized inflation. In either case, aggregate demand in emerging markets will likely slow relative to current trends.

A third consideration is that the demand response in many economies is currently being muted by the prevalence of administered food and energy prices. These efforts to protect the most vulnerable are usually poorly targeted and, as a consequence, highly distortionary. By keeping domestic commodity prices artificially low, the authorities are simultaneously encouraging consumption, which leads to higher prices elsewhere, and discouraging the internal supply response that would normally occur. In addition, by interfering with the price signals, these policies delay necessary economic adjustment and increase the risk of a dramatic and difficult reversal in the future. Encouragingly, in recent weeks, several countries have taken important steps to ease such controls. Demand can be expected to follow.

As in the wake of previous commodity-price spikes, this demand response will ultimately include the adoption of new technologies. Indeed, commodity-intensive economies will likely replace energy-inefficient capital more rapidly than their peers did three decades ago. With today’s major marginal commodity consumers operating at levels well below peak efficiency, the question is how quickly they will adopt more efficient, existing technologies once they have determined that the relative price adjustment will be sustained.

There has been much discussion about the contribution of financial factors to the commodity boom. It does appear that low long-term interest rates and past weakness in the U.S. dollar may have played minor supportive roles. The impact of outright speculation and index investment is less clear cut.[10] If speculation were keeping the spot price of a commodity substantially higher than the level where supply and demand naturally intersect, inventories should build as the incentive to increase supply outstrips the desire to increase consumption. However, there is little evidence of this in commodities as diverse as crude oil, wheat, or aluminum.

At this point, the bulk of the evidence suggests that the increase in most commodity prices is due to the fundamentals of strong demand and weak supply. This appears to be a durable relative price shift. That does not necessarily imply persistent price increases.

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[9] Data from the Energy Information Administration. See http://www.eia.doe.gov/emeu/steo/pub/3atab.pdf.

[10] For example, the prices of many non-indexed commodities have risen more rapidly than those of indexed ones.

Demand and supply will adjust, particularly as prices are passed through. In the short term, low inventories suggest continued price volatility, which may be amplified by trend-following speculation.

What the Current Boom Means for Canada

Although natural resources as a whole represent only 6 per cent of direct employment and 12 per cent of GDP, the sector has an important influence on Canadian economic activity through a number of channels. Resources account for roughly one-third of all business investment and about 45 per cent of our exports. As such, the benefits of the current commodity boom can be felt across Canada – not just in resource-heavy sectors and regions.

Above all, rising commodity prices have made Canada wealthier as a nation. Since 2002, rising commodity prices have fuelled a 25 per cent improvement in our terms of trade, which alone has been responsible for roughly two-thirds of the 15 per cent gain in real per capita disposable income recorded over that period. These income gains have helped reduce corporate leverage to its lowest level in a quarter of a century and have helped our governments to record consistent fiscal surpluses. Higher commodity prices bring increased investment, which entails direct and indirect benefits not only for the sectors in question, but also for the service sectors that support them. As well, many individual Canadians – and their pension funds – have benefited greatly from the gains in the value of their own investments in commodity-producing firms.[11] Finally, the rise in our terms of trade has brought with it an associated appreciation of our currency that has benefited everyone by lowering the cost of imported goods and services. With this downward pressure on import prices, productivity-enhancing machinery and equipment – much of which is imported – has become less expensive for all firms, not just commodity producers.

These benefits are important. However, it is unavoidable that large, sustained changes in terms of trade – whether favourable or unfavourable – will cause stress and dislocation because of significant shifts in production and employment among economic sectors. In macroeconomic terms, terms-of-trade shocks trigger a shift of resources to activities generating higher income. From that perspective, postponing adjustment would mean forgoing the potential income gains that the reallocation of resources can bring. Adjustment is always difficult, but it is vital to our long-term economic prosperity.

Despite the difficulties involved, the adjustment process of the past few years has gone more smoothly than in previous periods. Canada’s labour force participation rate has risen to a record high, and the jobless rate has fallen to a 33-year low. While the manufacturing sector has lost about one in seven jobs since 2002 – a total of about 335,000 jobs – total employment in Canada has risen by 1.6 million jobs over the same period. Equally encouraging is the quality of the jobs being created. More than

[11] The TSX energy sector has risen roughly 18 per cent per year since the beginning of 2002, while the metals and mining sector is up 11 per cent annually and the fertilizers and agricultural chemicals sector is up 44 per cent annually. These sectors have a combined weighting of 50.3 per cent of the TSX composite index.

80 per cent of new jobs are in sectors where the average hourly wage is higher than in manufacturing.

Canada's ability to capitalize on higher commodity prices (or to mitigate the impact of lower ones) depends crucially on the continued ability of our economy to adjust. Product and labour market flexibility is essential. The Trade, Investment, and Labour Mobility Agreement (TILMA) between Alberta and British Columbia is a good example of the type of response needed. It is encouraging that other governments are contemplating similar liberalizations.

Lessons from the Previous Boom

Before turning to monetary policy considerations, I would like to recall some lessons from the last sustained upturn in commodity prices. During the 1970s, a number of commodity prices spiked – including oil prices, which rose five-fold during the decade. Like today, common drivers included low real interest rates globally and supply factors, in particular, the emergence of OPEC. The decline of the newly floating U.S. dollar also pushed oil prices higher, along with the persistence of inflation in G-7 countries once inflation expectations began to rise.

Authorities in many oil-producing countries acted as if higher prices would persist indefinitely. They increased spending rapidly, which would prove calamitous when prices reversed and large structural deficits were revealed. In Canada, total program spending by the federal government rose from 17 per cent of GDP in the early 1970s to 21 per cent only a decade later. In 1985, the general government structural deficit peaked at 8 per cent of potential GDP. We should keep fresh in our minds the memory of the Herculean efforts required to eliminate this drain on future generations.

The management of monetary policy, in hindsight, was not much better. Authorities in many countries mistakenly assumed that the productivity gains experienced over the previous quarter century would continue. Rising unemployment was taken, falsely, as a sign of rising excess capacity. This ignored the fact that much of our industrial activity, indeed much of our society, was based on an assumption of perpetually cheap energy.

The monetary authorities of the day reacted to the oil-price shock by accommodating the price increase. Viewing the higher prices as contractionary, they loosened monetary policy to avoid a slowdown. The absence of an explicit nominal anchor for policy made this decision easier and its consequences far worse. As we know now, the assumed excess supply was illusory.

The fallout from these errors in monetary and fiscal policy was severe. The global recession of 1981–82 was, in large measure, the end result. In Canada, both consumer price inflation and the unemployment rate reached double digits by the early 1980s. The damage to inflation expectations meant that inflation would remain a real and present danger for years.

Implications for Monetary Policy in the Current Situation

This experience is relevant to the current situation. At a fundamental level, it underscores that the primary goal of monetary policy should be to keep inflation low, stable, and predictable. While commodity-price shocks raise complex issues, a relentless focus on inflation clarifies policy decisions, makes communications easier, and maximizes the likelihood that expectations will remain well anchored. A credible inflation target helps to keep the cost of capital down and highlights relative price movements, thus allowing individuals and firms to make better investment decisions.

In Canada, we have developed a well-functioning monetary policy framework based on inflation targeting and supported by a flexible exchange rate. Inflation targeting naturally leads the monetary authorities to take a disciplined and rigorous approach to understanding the drivers of inflation. However, even with the best framework, execution is everything. In the face of the largest commodity-price shock in our lifetimes, we cannot be complacent. Indeed, the current period of exceptional volatility in commodity prices raises several issues for the conduct of monetary policy.

First, the commodity boom underscores the importance of well-anchored inflation expectations. People's expectations for future inflation do influence actual future inflation rates. Thus, there is a risk that the high visibility of energy prices could lead to increased inflation expectations and to more general inflationary pressures. On the other hand, if people recognize that a one-time increase in commodity prices has a temporary impact on total CPI, other prices and wages will be unaffected. The demand and supply fundamentals that I discussed at the start give reasons to expect firm commodity prices, but not necessarily persistent – let alone accelerating – commodity-price increases. Quite simply, <u>high</u> commodity prices do not necessarily mean <u>rising</u> commodity prices. In fact, high prices themselves make further commodity-price inflation less likely because of the demand and supply responses they provoke.

The Bank of Canada's clear commitment to its inflation target and its consistent past success in achieving it, have kept inflation expectations well anchored. The Bank will continue to monitor movements in inflation expectations using a wide range of survey and market indicators.

Second, and relatedly, the Bank needs to be mindful of the possibility that rising commodity prices may affect the relationship between total and core CPI. The experience in Canada has been that total CPI persistently moves towards the core measure over time.[12] Moreover, our experience has been that commodity-price inflation has been one of the least persistent forms of inflation. As a consequence, in the pursuit of our 2 per cent target for total CPI, we use our core measure as an operational guide. This is because, over the years, core CPI has been a good gauge of the underlying trend of inflation and has been a better predictor of future changes in the total index than has total

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[12] See J. Armour, "An Evaluation of Core Inflation Measures" (Working Paper 2006-10, Bank of Canada, 2006) and J. Hoddenbagh, M. Johnson, and E. Santor, "Total and Core Inflation: Recent International Evidence" (Bank of Canada Working Paper, forthcoming).

CPI itself. In practice, targeting total CPI inflation requires a high degree of confidence about the future path of commodity prices.

The relationship between core and total CPI is more marked in Canada than in other countries, reflecting both the success in anchoring inflation expectations around 2 per cent and the fact that, as a major commodity exporter, movements in our dollar in response to commodity-price changes generally provide an offset that reduces the Canadian-dollar prices of all imports, including commodities. For example, the past appreciation of the Canadian dollar is one reason why food-price inflation has been markedly lower in Canada than in the rest of the developed world.[13] Overall, the Bank of Canada's commodity-price index (BCPI) has risen only half as much in Canadian-dollar terms as it has in U.S.-dollar terms, since 2002.

The Bank will continue to monitor the stability of the relationship between core and total CPI. The Bank will also continue to look at a range of measures to assess the underlying trend of inflation. Considerable judgment must always be applied, and no one measure should be relied on exclusively.

Third, we need to consider the possible impact of higher commodity prices on Canada’s potential growth. The Bank spends a great deal of effort trying to understand the factors that shape potential output and its components. This focus on potential should mean that we are less likely to misread the outlook for productivity and potential growth in the face of large relative price shifts, and thus avoid a key policy mistake of the 1970s. In particular, we need to consider the possibility that the combination of Canada’s relatively high energy intensity,[14] the exploitation of more marginal resource deposits that high prices encourage, and the significant shifts in productive resources across our economy could temporarily lead to lower productivity and potential growth. There are, of course, countervailing forces that could raise potential growth, including the strong capital investment incentives arising from a stronger dollar and the tightness of the labour market. We will make such determinations carefully and will provide our updated views in the October *Monetary Policy Report*.

Fourth, the pace and nature of recent commodity-price moves has important positive demand implications. As I mentioned earlier, large improvements in our terms of trade mean large increases in Canadian real income and wealth. This fuels domestic demand, especially for non-traded goods and services, and provides a timely offset to weaker external demand from our largest trading partner, the United States.

[13] Canadian food-price inflation has averaged 1.4 per cent over the past year, versus the OECD average of 4.3 per cent. Reasons include the past appreciation of the Canadian dollar, increased competition among food retailers, and some special factors such as the excess supply of meat. Although these factors can be considered temporary, the same may well apply to the future path of food-price increases.

[14] For instance, there is evidence from the United States that the productivity slowdown of the 1970s was concentrated in sectors that were most energy intensive and were therefore the hardest hit by the energy shock. See W. Nordhaus, “Retrospective on the 1970s Productivity Slowdown” (Working Paper No. 10950, National Bureau of Economic Research, 2004).

Finally, a central lesson from past commodity booms (and busts) is the value of a flexible exchange rate as shock absorber. A floating exchange rate is a key element of our monetary policy framework that allows Canada to pursue an independent monetary policy appropriate to our own economic circumstances. To be absolutely clear, irrespective of the path of commodity prices specifically, or global price movements more generally, a floating exchange rate means that we can continue to achieve our inflation target.

Exchange rate movements act as a signal to shift resources into sectors where demand is strongest. During the Asian crisis in the late 1990s, commodity prices fell sharply. The resulting depreciation of the Canadian dollar helped with the significant but necessary reallocation of resources out of the resource sector and into other sectors, such as manufacturing, whose competitive positions had improved. In recent years, the process has worked in reverse. It is important to remember that with changes in terms of trade, adjustment will follow. It is only a question of how. Our floating exchange rate helps to achieve the appropriate adjustments without forcing very difficult changes in the overall level of wages, output, and prices.

Conclusion: The Current Environment

Let me close with a few words about the current stance of monetary policy. In addition to sharply improved terms of trade driven by commodity prices, the Canadian economy is being hit by two major and related shocks: a marked and prolonged slowdown in the U.S. economy and severe dislocations in financial markets. The challenge for the Bank is to assess the combined implications of these three forces and other factors for the balance of aggregate supply and demand in the Canadian economy and the prospects for inflation in Canada. Reflecting the severity and persistence of the downside shocks, the Bank reduced its key policy rate by a cumulative 150 basis points since December. In our April *Monetary Policy Report,* we reviewed these forces at length and laid out a base-case projection for the economy that contained upside and downside risks to inflation. Those risks were judged to be balanced. We said at the time that “some further monetary stimulus will likely be required,” but noted that the timing of “any further monetary stimulus will depend on the evolution of the global economy and domestic demand, and their impact on inflation in Canada.”

Since then, there have been developments in the global economy relative to our expectations in April that led the Bank to decide on 10 June to maintain its target for the overnight rate at 3 per cent. Commodity prices, as measured by the BCPI, rose 10 per cent over the period between decisions, and the futures curve for oil moved sharply higher. This will support domestic demand. Other considerations included stronger global growth than previously expected and higher global inflation, which increases the risk of higher-than-projected costs for Canadian imports. In addition, many of the downside risks to inflation have eased. For instance, the price discounting on cars and books, which followed the move of the Canadian dollar to parity with the U.S. dollar, does not appear to be spreading materially to other products. In addition, as I noted a moment ago, the risk remains that potential growth will be weaker than currently assumed. Although global financial conditions remain strained, their evolution has been in line with expectations. Credit conditions in Canada are better than elsewhere, as evidenced by the Bank's decision in May to become the first G-7 central bank to begin withdrawing its extraordinary provision of liquidity to markets.

Thus, developments since April shifted the balance of risks *to the inflation projection in the April MPR* slightly to the upside. This evolution of the global economy and domestic demand was sufficient to alter the view that "some further monetary stimulus will likely be required." As a result, the Bank now judges that the current accommodative stance of monetary policy is appropriate to bring aggregate demand and supply back into balance and to achieve the 2 per cent inflation target. Going forward, there remain important downside and upside risks to inflation, but these risks are now judged to be evenly balanced.

The Bank will continue to monitor closely the evolution of developments in the Canadian and global economies in order to assess their implications for aggregate supply and demand and the outlook for inflation. One thing is certain: over time, the balance of risks will change again. Monetary policy will adjust accordingly, while always remaining focused on achieving our inflation target. In this manner, the Bank of Canada can make its best contribution to helping Canadians capitalize on the current commodity boom, and that famous bumper sticker can remain a relic.