

Dollar's Rise Will Exact Painful Toll on Canadian Manufacturing

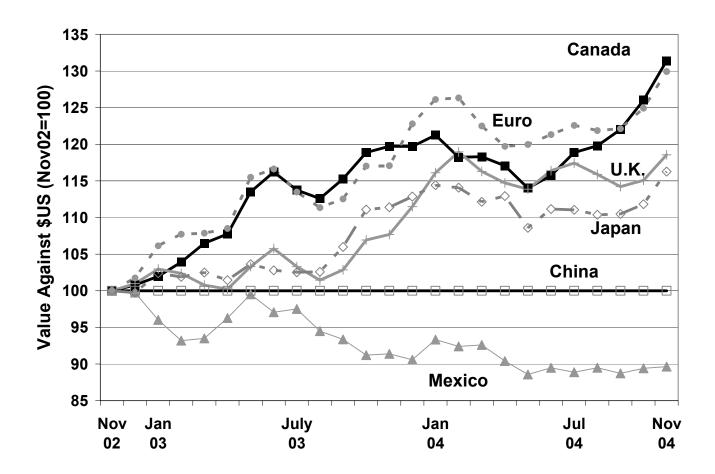
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Executive Summary

- Canada's currency has appreciated by over 30 percent against the U.S. dollar since beginning its sustained rise two years ago. During this time, the Canadian dollar has appreciated more against the U.S. dollar than the currency of any other major U.S. trading partner (some of which, such as the Mexican peso and the Chinese yuan, have been stable or declining against the U.S. dollar).
- Canada's economy is more dependent on exports to the U.S. than any other country in the world, and hence our monetary authorities should be more concerned than those in other countries with the U.S. dollar's depreciation. This paper constructs an "appreciation vulnerability index," composed of the product of the proportional appreciation in each country's currency against the U.S. dollar and the share of that country's GDP dependent on exports to the U.S. By this measure, *Canada is 12 times as vulnerable to the falling U.S. dollar as the Euro zone, and 19 times more vulnerable than Japan and the U.K*.
- The current appreciation is only the second time in postwar history that the Canadian dollar has appreciated by more than 15 percent against its U.S. counterpart. The previous occasion was the rise of the dollar from 72 cents (U.S.) to near 90 cents (U.S.) between late 1986 and late 1991 (a cumulative rise of 23 percent at peak).
- This paper compares the two episodes of appreciation in detail. The current appreciation has been larger and faster than the 1986-1991 episode. Moreover, the negative impacts of the appreciation on exports (especially non-energy exports) and manufacturing employment have been more severe than in the earlier episode.
- The rise in the dollar is coincident with a visible deindustrialization in the structure of Canada's exports. Exports of resources and basic commodities have grown, but exports of value-added products (including machinery & equipment, automotive products, and consumer goods) are down one-quarter as a share of GDP since 1999.
- Some commentators (including some Bank of Canada officials) have suggested the Canadian economy has weathered the effects of the current appreciation "surprisingly well." Historical evidence, however, suggests that the negative impacts of appreciation on exports, output, and employment are felt with substantial time lags. And so far, the impacts of the current appreciation on exports and employment have already been visibly more negative than in the 1986-1991 episode not surprisingly, considering that this appreciation has been larger and steeper.
- This paper analyzes the historical relationship between the exchange rate and Canada's share of North American manufacturing employment. Based on historical evidence, if the dollar stays at 85 cents (U.S.) we should expect Canada's share of combined Canada-U.S. manufacturing employment to fall from over 12 percent at present to just below 9 percent by 2007. That would represent a *loss in Canada of well over 400,000 manufacturing jobs*.

Canada's Soaring Currency



Canada's dollar began to rise steadily against its U.S. counterpart in late 2002. We date the beginning of the sustained appreciation as the point at which the monthly average exchange rate exceeded its 12-month lagged moving average on a sustained basis; by this measure, the current appreciation began in November 2002. Since that time, Canada's currency has appreciated by over 30 percent against the U.S. dollar. While the U.S. dollar has declined against many world currencies, Canada's dollar has experienced a larger appreciation than the currency of any other major U.S. trading partner. In fact, the currencies of some of those trading partners (China and Mexico) have been stable or declining against the U.S. dollar during this period. Japan's currency has appreciated by half as much against the U.S. dollar as Canada's currency, in large part due to financial interventions by the Bank of Japan. Other central bank officials (such as those in Europe) have also indicated their concern with the exchange rate shifts.

Canada Exposed to Appreciation Dangers

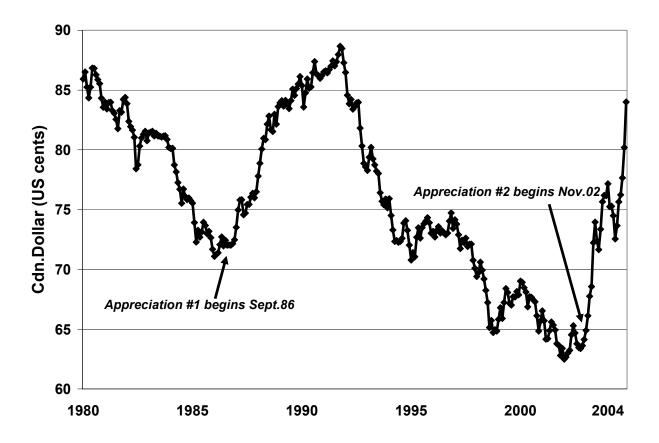
Country	Exports to U.S. (\$US Bil)	GDP (\$US Bil)	U.S. Export Dependence (% GDP)	Apprec'n Since Nov 2002	Appreciation Vulnerability Index
Canada	221.6	834.4	26.6%	31.4%	8.35
Euro Zone	187.2	8193.6	2.3%	29.9%	0.69
China	152.4	1409.9*	10.8%*	0	0
Mexico	138.1	626.1	22.1%	-10.4%	-2.30
Japan	118.0	4326.4	2.7%	16.3%	0.44
U.K.	42.8	1794.9	2.4%	18.6%	0.45

Source: Author's calculations from U.S. Bureau of Economic Analysis, World Bank, and Bank of Canada data. U.S.-bound exports and GDP data are for 2003.

Canada's currency has risen more than others against the U.S. dollar in the past two years. Yet Canada's economy is far more dependent on continued exports to the U.S. than other countries. Of the 6 largest exporters to the U.S. (treating the Euro zone as one country), Canada is the most important, and our U.S.-bound exports account for by far the largest share of home country GDP (Canada's U.S.-bound exports are equivalent to over one-quarter of Canadian GDP). The combination of the largest exposure to U.S. trade, and the sharpest appreciation, imply that Canada will be affected far more by global currency realignments than any other major economy. An "appreciation vulnerability index" is constructed, representing the product of trade exposure to the U.S. and the proportional appreciation since November 2002. By this measure, Canada is 12 times more vulnerable to negative fallout from the current realignment than the Euro zone, and 19 times more vulnerable than Japan and the U.K. Other U.S. trading partners (including China and Mexico) have managed to insulate themselves against the impact of the U.S. depreciation with stable or depreciating currencies.

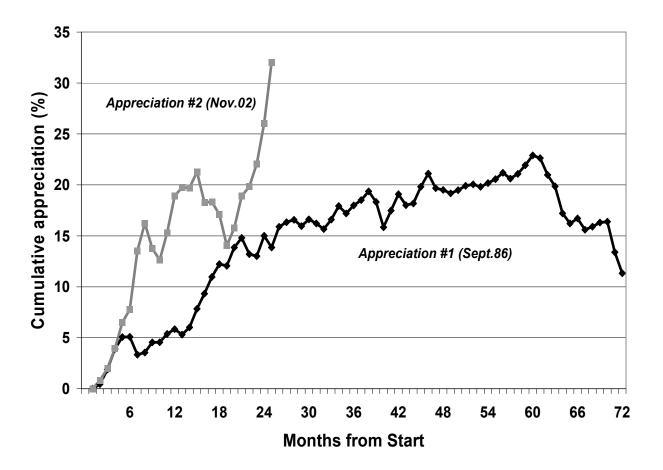
^{*} Official World Bank China GDP estimate is widely considered to understate the true value of Chinese GDP, and hence overstate the implied reliance on U.S.-bound exports.

Second Time Around



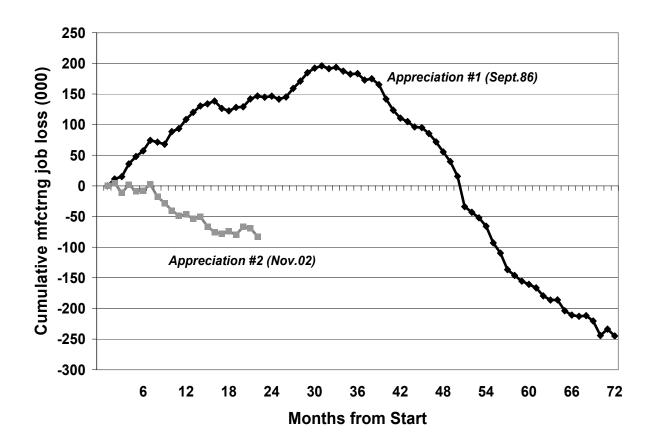
The present appreciation represents the second occasion during our postwar history in which the Canadian currency rose rapidly and substantially against its U.S. counterpart, and hence it is worth examining the history of that earlier appreciation for insights into the likely effects on Canada's currency of the current episode. Using the same dating method as indicated above, the previous appreciation began in September 1986 and lasted for just over 5 years. In late 1991, with the country mired in a deep industrial recession, the Canadian dollar reached a peak of almost 90 cents (U.S.), and then began to decline (as the Bank of Canada cut domestic interest rates to address the recession).

A Steeper Climb



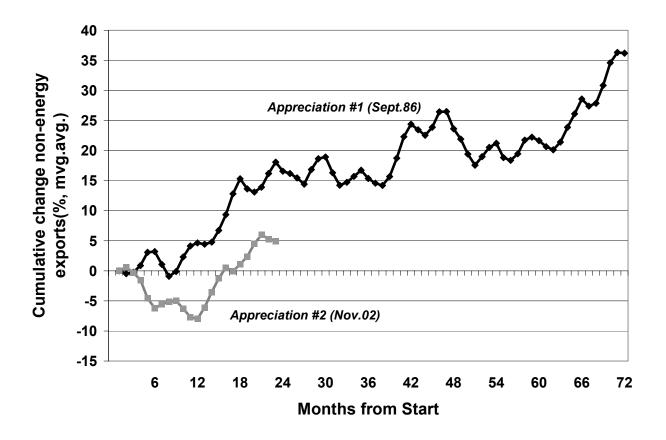
The current appreciation has been larger and steeper than the Canadian dollar's appreciation from 1986 through 1991. Already the dollar has climbed more against its U.S. counterpart (over 30 percent in two years), than it did over the entire course of the 1986-1991 appreciation.

Jobs Already Being Lost



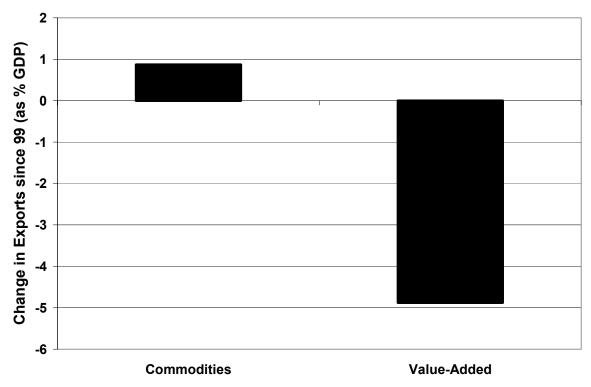
The sharper pace of the current appreciation has already exacted a noticeably larger toll on Canadian manufacturing employment than was the case at the similar stage of the 1986-1991 appreciation. About 100,000 manufacturing jobs have already been lost in Canada since the dollar began rising in November 2002, with over 17,000 more manufacturing jobs disappearing last month. In contrast, in the 1986-1991 appreciation, manufacturing employment continued to grow for the first two-and-a-half years after the dollar began rising; only after that did the economy begin to shed manufacturing jobs (450,000 of which were lost in the following three years). If anything, the sharper pace of the current appreciation, if sustained, should be expected to result in an even more painful contraction in Canadian manufacturing than was experienced in the early 1990s.

Slowing Exports



Some commentators have expressed surprise at the relative vibrancy of Canadian exports in recent months, despite the appreciating dollar. But Canadian exports continued to grow throughout the previous appreciation episode as well. In fact, exports have performed more weakly during the current appreciation than in the initial two years of the 1986-1991 appreciation – especially non-energy exports. Non-energy exports have increased 5 percent in nominal terms during the first two years of the current appreciation (with this year's increase in exports more than offsetting the export decline experienced in 2003), compared to a 15 percent increase in the similar stage of the 1986-1991 appreciation. Exports will normally adjust to an appreciation with a substantial time lag reflecting the duration of export contracts, lags in investment decisions, and other factors. It would be unusual to experience an immediate export decline in the wake of an appreciation, so the continued growth of Canadian exports in 2004 should not be interpreted as a sign that the appreciation will be painless.

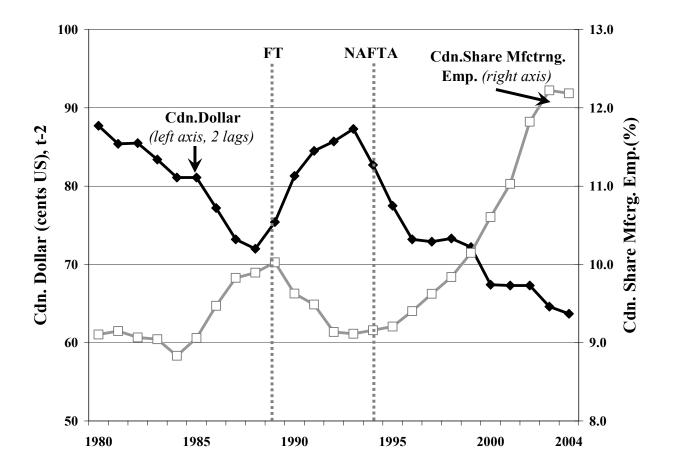
Regressing Structure of Exports



2004 estimated based on 8 month growth from 2003.

While overall Canadian exports have increased in 2004 despite the appreciation of the dollar, the structure of Canadian exports has changed considerably. Booming energy exports and other commodity exports have underpinned the overall expansion in exports. Relative to GDP, however, Canada's exports of higher value-added merchandise (including machinery and equipment, automotive products, and consumer goods) have declined sharply since 1999 – falling by one-quarter (or almost 5 percentage points) as a share of GDP. Observers agree that one factor driving up Canada's currency has been strong global commodity prices, and this has also motivated an emerging specialization of Canada's industry in resource industries and bulk industrial commodities. The corresponding appreciation of the exchange rate (if validated by monetary authorities) will reinforce this negative reorientation of our economy.

Predicted Manufacturing Job Loss



A stronger dollar increases relative production costs in Canadian manufacturing, producing (in time) a net reallocation of investment and production to other jurisdictions. This is especially evident in historical data relating the value of the dollar to Canada's share of total manufacturing employment in the combined Canada-U.S. trading region. Three-quarters of the variation in this manufacturing employment share can be explained by the exchange rate (lagged two years); see regression results on next page. On this basis, if the dollar is sustained at 85 cents (U.S.), we should expect a decline in Canada's share of combined Canada-U.S. manufacturing employment from over 12 percent at present to below 9 percent by 2007. This would imply the loss of over 400,000 Canadian manufacturing jobs. Canada's share of continental manufacturing employment has already begun to shrink in the wake of the dollar's rise in 2003 and 2004; we should expect this trend to be reinforced dramatically over the coming two years.

Regression Results

A simple linear regression of the Canada manufacturing employment share on the Canada-U.S. exchange rate (lagged two years), using annual data from 1980 through 2004 (first 10 months of data for 2004), produces the following results. Every sustained one-cent increase in the exchange rate (if sustained) eventually results in the loss of a 0.11 percent share of combined Canada-U.S. manufacturing employment. This finding is strongly statistically significant, and reflects not only the previous experience of the 1986-1991 appreciation, but also the increase in Canada's manufacturing employment that accompanied the depreciations of our currency earlier in the 1980s, and later in the 1990s.

Regression S	tatistics			
Multiple R	0.857			
R Square	0.735			
Adjusted R				
Square	0.723			
Standard Error	0.521			
Observations	25			
ANOV				
	Df	SS	MS	F
Regression	1	17.30132	17.30132	63.77035
Residual	23	6.240053	0.271307	
Total	24	23.54137		
		Std.		
	Coefficients	Error	t Stat	
Intercept	18.5762657	1.098592	16.90916	
X Variable 1	-0.1135449	0.014219	-7.98563	

Policy Conclusions

- If there is one central bank in the world that should be acutely concerned with the appreciation of its currency against the U.S. dollar, it should be Canada's. Our currency has appreciated more against the U.S. dollar in the last two years than any other major U.S. trading partner, and our economy is far more dependent on exports to the U.S. than any other country in the world.
- Some foreign monetary authorities (such as in Japan, Mexico, and China) have managed to partially or fully insulate their economies against the impacts of the falling U.S. dollar through policy or structural measures. Others have at least expressed their pointed concern over the U.S. depreciation (such as officials with the European Central Bank).
- Canadian monetary officials, however, have been far less explicit about whether they even believe these currency realignments are a problem let alone taking action to try to offset the resulting risks. While noting that the rising Canadian dollar may undermine aggregate demand conditions in coming months, Bank of Canada officials have also indicated that the appreciation may in fact be "appropriate," and have indicated their intention to "remove monetary stimulus" in the coming period despite the unprecedented rise in our dollar.
- Historical economic evidence suggests it is far too early to conclude that Canada's economy is adjusting "well" to the appreciation of our currency. Normally we would expect time lags of two years or more before that appreciation becomes visible in export and employment data. Already, however, Canadian data is indicating that the effects of this appreciation are worse than those experienced during the 1986-1991 appreciation which turned out to be disastrous for Canada's economy.
- Policy-makers should not have to wait until Canada's industrial economy experiences another painful recession before coming to the conclusion that an 85-cent dollar will be seriously damaging to our economy. They can predict those effects fairly confidently on the basis of robust historical evidence.
- The balance of risks in the current environment clearly tilts toward the significant possibility that economic activity (especially in manufacturing) will be undermined over the next two years, if the dollar's rise since late 2002 is sustained. The appropriate policy response by the Bank of Canada would be to forestall planned future interest rates, and in fact be prepared to reverse recent monetary tightening as evidence of the contractionary impact of the dollar's appreciation continues to mount.

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