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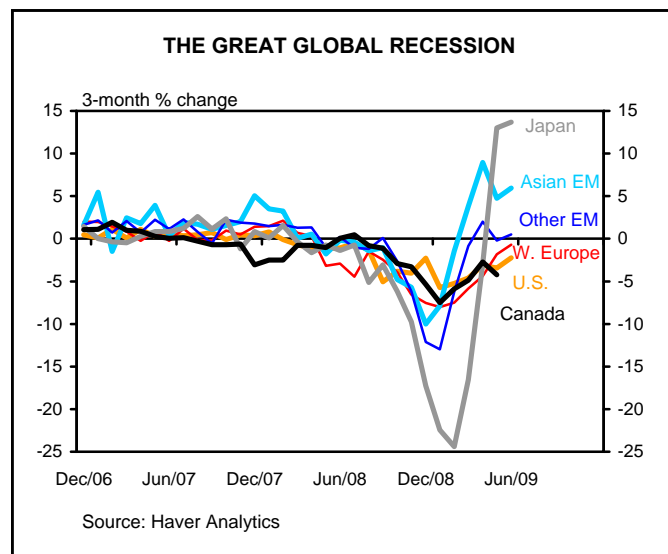
Special Report

August 28, 2009

THE GREAT RECESSION: LESSONS AND OPPORTUNITIES

The Great Recession taught us a few lessons, the kinds that are necessarily painful, but effective in being burned into our memories. First, monetarism supporters meet Keynesian supporters. Keynesian supporters meet monetarism supporters. Massive monetary and fiscal pumping could not prevent the deepest and most synchronized global economic fallout in post-war history, though the outcome would have been far worse without it. Few were spared in the estimated 1.9% contraction in global activity for 2009. It is basically off the charts relative to historical experiences as there has never been an annual contraction in global output since the data began in 1960. In terms of the pace of deterioration in global trade flows and industrial production, the deterioration was even more rapid than what we saw during the Great Depression. The difference was that the malaise of the Great Depression continued for several more years.

Second, financial regulators and investors learned that the financial world is a lot more integrated and complicated



HIGHLIGHTS

- **The Great Recession may turn out to be not so distinct after all.**
- **The length and duration of the U.S. recession is in the ballpark for previous downturns.**
- **However, the global synchronicity of the downturn was quite unique.**
- **What now happens in the aftermath presents some rather intriguing possibilities.**
- **Advanced economies must deal with government debt and lower potential GDP growth.**
- **But lower potential growth rates tend to mean higher interest rates and interest income on seniors' fixed income portfolios.**
- **Structural changes in emerging markets could help them outperform advanced economies.**
- **Governments will also have to debate the merits of increased regulation and continuing ownership of previously private-held assets.**

than they might have thought. Global production chains and cross-border capital flows may reduce costs for firms and consumers, but they mean that economic cycles are much more integrated and that financial shocks are much more quickly transmitted around the world. They also mean that the days of focusing on simple corporate balance sheets are over. You need to follow the money through the industry and across the global economy to recognize mismatches on the economy's aggregate balance sheet. Incidentally, this is not a new lesson, and in fact, we learned nothing new about financial crises in the last couple of years. Constantly rolling over short-term financing to finance long-term assets is a recipe for disaster. Just ask

Korea in 1997 or financial firms who relied on SIVs and SPVs in 2007. Once a vulnerability has been exploited, the vicious cycle will continue until governments step in, break the link, and explicitly take on the cost. Just ask Mexico in 1995, who had to buy back nearly \$30bn in U.S. dollar-denominated debt and reissue it as peso-denominated debt in order to stabilize the currency and economy, or ask governments all over the world now that have had to take ailing banks onto government ledgers in order to stabilize housing markets and economies. Finally, getting people into homes they can't afford – and repeating that mistake over one million times – is a recipe for disaster. Just ask your mother.

Third, investors should never underestimate the resilience of the U.S. economy. Although the global economy was cut down at the knees, the U.S. recession probably won't turn out to be so distinct after all. In terms of its length, the recession began in January 2007 and likely came to a close in June of 2009, putting the length of the recession at 18 months. Over this period, real GDP fell by 3.9% peak-to-trough. While this is still the longest and deepest recession in the post-war period, it is only slightly worse both in terms of duration and depth than the 1973-75 recession, which lasted 16 months and saw a peak-to-trough decline in real GDP of 3.2%, and the recession of 1981-82, which also went 16 months and saw real GDP decline by 2.9% peak-to-trough.

Global Synchronicity

With the U.S. economy acting as ground zero to the financial and housing crisis, it does raise some questions as to how the global economy could fair so poorly relative to history, while the U.S. recession remains within the realm of past historical experiences. The answer lies in the realization that the veins of synchronized economies run long and deep, due mainly to four structural changes that have occurred over the last decade.

1. Industrial production specialization has brought more emerging markets (EMs) into the global manufacturing process. This has fueled nascent domestic growth and commodity price demand, but ultimately left exceptional EM GDP growth even more beholden to ongoing consumer spending in advanced nations. This fed into increased global trade flows, as well as the stock of EM profits (i.e. the much vaunted savings glut).

U.S. BUSINESS CYCLES			
Start date	End Date	Duration (Mths)	Peak-to trough change in GDP
(Quarters in parentheses)			
Aug 1929(III)	Mar 1933 (I)	43	-26.7*
May 1937(II)	Jun 1938 (II)	13	-3.4*
Feb 1945(I)	Oct 1945 (IV)	8	-12.7*
Nov 1948(IV)	Oct 1949 (IV)	11	-1.7
Jul 1953(II)	May 1954 (II)	10	-2.6
Aug 1957(III)	Apr 1958 (II)	8	-3.7
Apr 1960(II)	Feb 1961 (I)	10	-1.6
Dec 1969(IV)	Nov 1970 (IV)	11	-1.1
Nov 1973(IV)	Mar 1975 (I)	16	-3.2
Jan 1980(I)	Jul 1980 (III)	6	-2.2
Jul 1981(III)	Nov 1982 (IV)	16	-2.9
Jul 1990(III)	Mar 1991(I)	8	-1.4
Mar 2001(I)	Nov 2001 (IV)	8	-0.3
Dec 2007 (IV)	Jun 2009 (II)	18	-3.9

*Annual data only
Source: BEA, NBER

2. Financial industry specialization dispersed risk, but left each cog more beholden to the others than ever before and allowed the securitized products based on inflated assets to be dispersed into unrelated sectors and around the world. This fed into increased global capital flows, especially when we account for all the use of offshore tax havens and SIVs.
3. Global imbalances become more exaggerated. Emerging markets, especially Asia, maintained undervalued exchange rates, which helped foment economic growth for EMs while building up international reserves to prevent “last-generation” financial crises (i.e. Tequila crisis, Russian government default, Asian flu). This, in turn, depressed long-term interest rates in advanced nations, fueling domestic asset investment and spending. This fed a build up of global production capacity based on an unsustainable level of consumer demand.
4. More and more central banks are running with the same play book. Inflation targeting regimes have become the holy grail of monetary policy. But, with so much attention focused on global imbal-

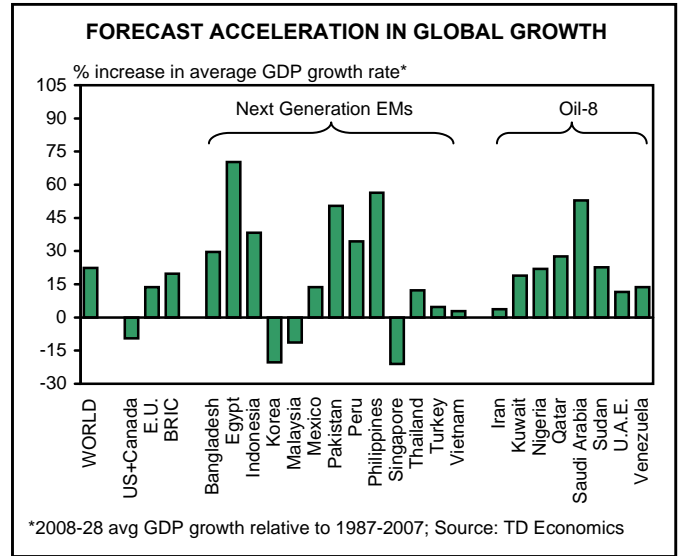
ances and the Bretton Woods II system of de facto fixed exchange rate regimes, we failed to notice that we've moved towards a global de facto fixed monetary policy regime. This fed into increasingly correlated economic growth and monetary policy cycles, especially for EMs.

To this point, central bankers placed too much faith in the merits of inflation targeting alone. A complacency and even smugness settled into policy makers that if they kept the books balanced and inflation low, then they could eliminate or at least dampen cycles. But they got blindsided by an asset bubble (housing), in which home prices do not directly figure into the common inflation measures of CPI and the PCE deflator. Greenspan's belief that the right course is to just pick up the pieces after bubbles burst is unlikely to survive.

Where to from here?

As we get the first inklings that a global recovery is in the making, the more intriguing question is what happens in the aftermath? The global recession likely hastened some structural economic changes that were already underway – such as the shrinking of manufacturing in developed economies and the relative shift away from developed towards developing economies. However, neither should be perceived as negative developments.

In particular, the manufacturing shift underway is positive for global potential output in the long run, even though the frictions created in the short-term could be detrimental for advanced economies. From an economic perspective, there should be less manufacturing employment in the

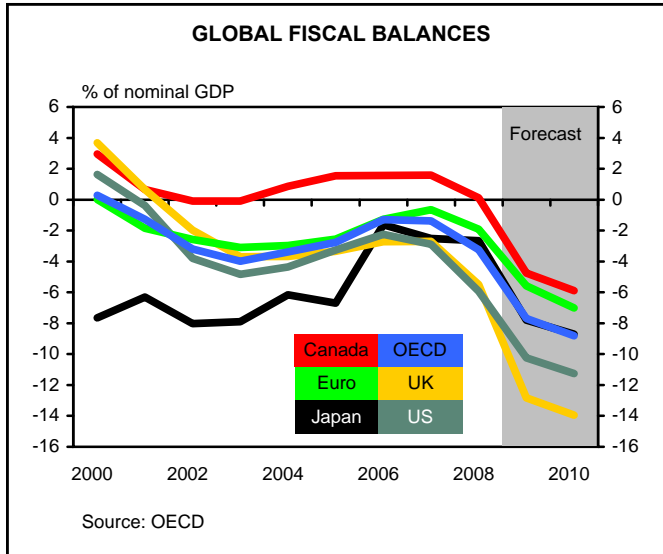


U.S., Canada, and Europe than is currently the case. The legacy of protectionism and populism has been slowing down evolution in the industry. Lower prices and more efficient use of global labor and capital would shore up global productivity and potential output. Taking it one step further, getting rid of agricultural protectionism would make even more progress.

There is plenty of evidence that shows emerging market growth models are dependent on consumers in advanced markets. Thus, lower potential growth in advanced economies necessarily means lower potential growth in emerging markets. However, structural reform does appear to have been accelerated in EMs as a result of the recent crisis. For instance, China is moving to make the Chinese yuan more convertible, increase outward investment, and introduce social safety nets; Russia is moving towards a flexible currency regime; and EMs in general are pushing for a new global reserve currency. All of this argues for greater stability of EM GDP growth, which based on catch-up should be faster than growth in advanced economies. So global potential growth could fall, but EM growth could be higher and more stable. Thus, the mental calculus then becomes a question as to whether additions to global potential from EM structural reforms can outweigh subtractions from global potential as a result of problems in advanced economies.

The structural changes outlined above have been underway for some time, so EMs will continue to increasingly represent a greater share of global economy. The North Atlantic economies – the U.S., Canada, and the European Union – accounted for 45% of the global economy in





2008, but we estimate this share will fall to 30% within two decades. China now sells virtually the same number of commercial autos domestically as the U.S. (before the Cash for Clunkers rebate program) even though at the start of 2008, the U.S. sold twice as many as China. And in just a few years, projections suggest EMs will consume more of the global crude oil output than advanced economies. These structural changes form the argument for why EMs will provide a key demand-growth base for products already well-established in advanced economies – be it the increased use of home electronics to the greater purchase of service-based products, such as home and personal insurance plans.

Advanced economies could be taking a step back

As for the economic changes that advanced economies may now face in the post-crisis world, the outlook is less positive. We have no doubt that the massive fiscal and monetary pumping, alongside household and corporate deleveraging will leave a scarred landscape.

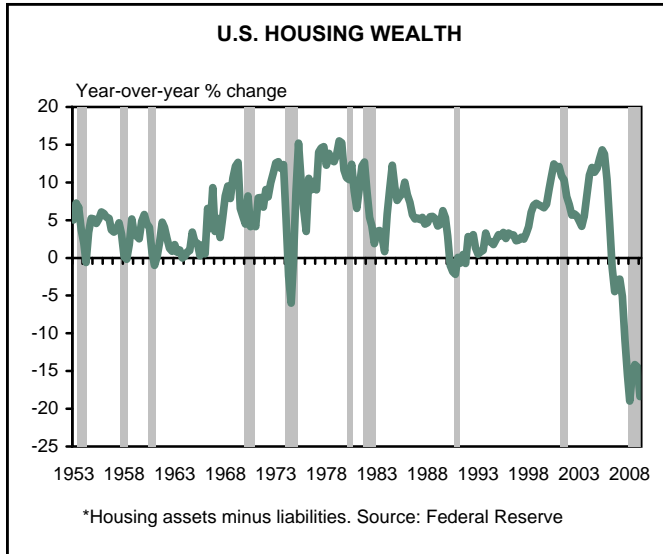
As economies recover, policy authorities will undoubtedly gloat about their extraordinary fiscal stimulus. But will they be gloating in 5 years when they still struggle with the debt headache it left? The U.S. Office of Management and Budget forecasts that the level of U.S. federal debt held by the public is on track to near 80% of GDP within a decade, while our own forecasts believe it could breach 100% of GDP before 2025. As high as this is, it's still better than the U.K. where the debt is on track to hit 100% by 2013, and Japan where the debt-to-GDP ratio is already over 170%. The penalty of such fiscal gluttony will be higher interest

rates and taxes alongside spending cuts. Expunging earmarks from budgets won't do the trick. In the U.S., this encompasses less than 1% of spending. There is already talk that the U.S. may need to adopt a general sales tax (like we have in Canada), as well as raise income taxes.

Although Canada is a fiscal darling compared to many other countries, the federal and provincial governments will still face a significant challenge in reining in sizeable budget gaps. At the federal level, the deficit is likely to reach about 3.5% of GDP. With a few notable exceptions, such as Manitoba and Saskatchewan, provinces will record red ink of more than 2% of GDP this year. At those levels, it will be difficult for governments to merely "grow" their way out of deficit, meaning that significant shifts in spending and tax policy will almost certainly be required over the next few years. Consider one example for context. New Brunswick was just downgraded on their government bonds. TD Economics believes that without tough spending restraint its deficit will stabilize around \$1 billion per year. That's more than one-fifth of their own-source revenues.

Meanwhile, some past research from the Federal Reserve and the NBER argues a 20-point sustained increase in debt/GDP would boost real interest rates by 70-110 basis points. As higher debt levels put upward pressure on interest rates, it threatens to crowd out private investment. None of this bodes well for the prospects of potential GDP growth, and is a key argument that we could be in for a long period with a downward shift in potential growth.

Bolstering this view is that there could be a fairly permanent jump in the household savings rate, which is good for economies (especially U.S.) in the longer term, but would constrain growth in the near and medium term. Although we could see this phenomenon play out across a number of advanced economies, the U.S. is particularly vulnerable. This recession has coincided with the worst decline in U.S. housing wealth since the Great Depression. Owner's equity in real estate (housing assets minus liabilities) has fallen by 40.8% since the fourth quarter of 2007. While much of this wealth was illusory – built on unsustainable home price increases – it had an important impact on real economic variables such as consumption growth and savings rates. Just as rising household wealth was behind much of the decline in the U.S. savings rate, so too has the dramatic reduction in U.S. household wealth resulted in a significant rise in the level of savings. The



savings rate reached a high of 6.2% of disposable personal income in May of this year. The U.S. saving rate at the very least is unlikely to fall significantly over the next few years and could continue to drift higher as households attempt to rebuild lost wealth. As a result, consumer spending will have to grow in-line (or slower) than the pace of income growth, resulting in a below trend rate of household spending that could be sustained for some time. To varying degrees, we will see this across other advanced economies, as well.

Add to all this the possibility that corporations around the globe might remain more risk averse than in the past, cognizant of the possibility that they may not be able to get bank credit or float bonds if they've racked up big debt. Likewise, what will be the end result of financial regulations from the crisis? It seems inevitable that there will be some tightening of capital – such as perhaps higher capital requirements – and a more concerted effort to enforce what is there on paper. The natural inclination of financial institutions will be to take on less risk, and if there is slippage in this regard, regulations will be in place to force the desired behaviour. The outcome is that lending and investment behaviour would become more restrained or less-than-optimal, throwing yet another hurdle into the road to recovery.

There are high stakes on the table. We have only presented a few examples, but the ultimate message is that advanced economies could be in for a fairly permanent downward shift in potential growth related to recapitalization, deleveraging, higher household savings, and governments needing (but possibly failing) to reduce deficits. As people

become increasingly tuned in to the vulnerabilities of the economy, and aware that cash-strapped governments will have less flexibility in providing assistance in the future, it may generate greater demand for insurance products.

Removing monetary stimulus is no easy matter

No discussion about the future economy is complete without noting risks related to the timely and effective extraction of the existing monetary stimulus. There remains the real risk that central banks pull back stimulus too early and cause another leg-down in the economy or withdraw too late and cause inflation to rise significantly. The issue is further complicated considering that a number of central banks have grown their balance sheets through an increasingly complex set of financial instruments, such as a mix of emergency loans to depository institutions, support to commercial paper markets and increased purchases of mortgage backed securities and longer-term government bonds.

The increased complexity could make it more difficult to pull back monetary stimulus since it implies selling a more complex and less liquid basket of financial instruments. Investors wary about increased budget deficits could also make it more difficult for central banks to gain traction over longer term interest rates. In as much as direct purchases of longer-term government debt give the appearance of “debt monetization”, it is yet another influence that threatens to raise long-term inflation expectations, thus increasing the risk premium on bond yields.

A central bank could, however, also pull the plug too early. This has happened in the past. Perhaps the best example of the risks of early monetary stimulus withdrawal occurred during the 1930s. The Great Depression in the U.S. was really two economic downturns. The first stage occurred in the early 1930s and saw the unemployment rate peak at 25% in 1933. This was followed by a period of positive economic growth and a declining unemployment rate between 1934 and 1937 – the likely results of stimulative policy action. However, just as it looked as though the economy was heading towards recovery, the government stepped up its actions at withdrawing stimulus even while the economy remained quite weak. The result was another economic contraction and a return to 19% unemployment.

Finding the diamond in the rough

Up until now the discussion has highlighted the many concerns and risks to advanced economies as they exit the

recession and feel the repercussions from past excesses of household, corporate and government borrowing. However, there are ways to be opportunistic in any environment. Lower potential GDP growth that comes hand-in-hand with retiring baby boomers and higher interest rates means there would be higher interest income on what is likely to be a greater holding of fixed income products by seniors.

One lesson learned from the Great Recession is that the increased synchronization of global markets left little place for investors to hide. Diversifying portfolios might not save the day by itself. However, to use the old cliché, let's not throw out the baby with the bath water. As we noted above, structural changes already underway could make EMs more stable than in the past, especially as they gain more and more traction. This, coupled with the increasing shift of global activity from advanced economies to high-growth emerging markets may heighten the investment opportunities in EM equities and currencies.

Lastly, we cannot discount the possibility that the government can make a tidy profit on recent bail-out initiatives that may alleviate some of the fiscal pressures. A recent Financial Times article noted that the government had earned an annualized return of 23% from its \$10bn investment in Goldman Sachs under Tarp. "In June, Goldman returned the \$10bn and later paid another \$1.1bn to buy back warrants attached to Tarp aid. Morgan Stanley, American Express and other banks have done the same, leaving taxpayers with substantial profits."

Finally, we close on a point of economic philosophy. In recent decades there had been a shift in most countries towards less state economic intervention and more reliance upon the private sector. Some argue that the root of the Great Depression was allowing the private sector, and in particular capitalism, to run amok. There is no doubt that around the globe the reaction to the onset of the recession brought an almost violent swing toward state economic intervention. We see this in state equity interests in banks and auto companies, bail-outs for other sectors such as forestry, massive injections of fiscal stimulus and extensions of the central banks' reach into areas never before touched. We have noted that policy authorities will have to remove the fiscal and monetary stimulus, and state injections into banking are being returned sooner than might have been anticipated. But still one can question whether the state-private balance of economic affairs will be permanently changed by the events of recent years. Having had a taste

of more activist policy, will politicians and central bankers be content to go back to their more removed positions?

In some regards, such as financial sector regulation, there can be no doubt, and it is warranted in many countries, that there will be no return to the previous status quo. Greater state intervention is here to stay. Only time will tell in other cases. A lot has been done under the name of fiscal stimulus. But interventions, whether they be equity injections into companies or massive spending on infrastructure, sets a precedence and begs demand for more. The U.S. is immersed in a debate about the appropriate state role in health insurance. Canada will likely enter a debate soon about the appropriate state role in providing retirement income insurance, adding to the current debate about employment insurance. Alternatively, with government finances constrained over the medium-term, the scenario could conceivably go in the opposite direction. The push towards privatization in the 1990s was in part a means to increase government revenues and pay down debts. With the latter concerns more pressing than ever, an argument could be put forward to increase privatization, but all the while ensuring adequate regulatory oversight over those areas.

Whatever the outcome of the state-private sector balance, the Great Recession will almost certainly have the distinction of a long tail in terms of economic and policy repercussions. Most recessions fade from memory a few years after the fact. We will still be debating and living with the consequences of this one in 5 and maybe even 10 years.

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