Commentary: After the Fall

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A. Introduction

Let me thank the organizers of this conference for the invitation to come to this beautiful place and to attend what is always an intellectually challenging conference. In fact, the challenges today are not just intellectual, but they also have enormously important practical implications. How can we restore growth, and how can we do so in a sustainable way?

This paper by Carmen and Vince Reinhart is essentially a paper about *facts*, assuming of course that historical data is more or less factually correct. Someone once said that facts can be awkward things, indeed even ugly things, but they can also be useful things—and that applies whether you prefer the use of inductive or deductive methods, or even some healthy mixture of both.

Keynes famously addressed the awkwardness of facts when he replied to a journalist, "When the facts change, I change my mind. What do you do, sir?" Both Keynes and Hayek began their analysis of the 1930s with the observation of a simple fact: Deep slumps are possible, and the evidence presented in this paper further confirms that fact. The awkward thing is that much of modern macro theory seems to deny this possibility. New Keynesian and New

Classical models deny it by the assumption that the economy quickly re-equilibrates in response to shocks. In contrast, the models used by central banks (and many international financial institutions) effectively deny it on the basis of a different assumption—namely, that appropriate policy can always stop out the downturn and return us to good economic performance. Because this second assumption seems more plausible than the first, which seems particularly hard to sustain after almost three years of global economic turmoil, I will return to an assessment of its plausibility in a moment. If, when and how policies might improve our economic circumstances is currently a matter of crucial importance.

Another awkward fact revealed by historical studies is that many deep slumps have not been preceded by high inflation. There was no significant inflation in the United States in the 1920s, nor in Japan in the 1990s, nor in Southeast Asia on the eve of their crisis, nor indeed prior to the current crisis. Price stability might then still be a necessary condition for macroeconomic stability, though that too is questionable in growing economies[1], but history clearly teaches us that it is not a sufficient condition. Monetary frameworks based on the objective of price stability must find some way to take this fact into account.

The database of facts assembled for this paper and the book published earlier by Reinhart and Rogoff[2] constitute a huge step forward in improving our understanding of past events, however awkward the facts that they reveal might be. For many years, a number of people asserted, on the basis of more limited data and often mere anecdote, that problems were building up under the surface of the "Great Moderation." Whether rightly or wrongly, these warnings were ignored as being based on assertion only. But now the sheer volume of the evidence recently assembled carries a lot more weight. There are simply too many facts to be ignored.

That brings me to the point that facts can be useful as well as awkward. Facts do not just call into question old theories, but they also point the way to alternative theories and different ways of looking at things. As Winston Churchill said, while drawing a characteristically firm conclusion in the British House of Commons, "One cannot

argue with arithmetic. One cannot argue with the obvious facts of the case." The Reinharts are perhaps overly modest when they say that "providing a full and testable explanation as to why crises end in such a long and pronounced tail is beyond the scope of this paper." One does not have to read between the lines (or at least not much) to see they do have an implicit hypothesis about what causes deep slumps. And I would note that they also have some trenchant observations about the dangers inherent in inappropriate policy responses as well.

Let me say a few words about each aspect of this paper. Although I welcome its broad thrust, no one will be surprised if I do not agree with everything that the authors have to say. First, a few words about the facts, including the Reinharts' empirical strategy. Second, I will add a few words about theory. What causes slumps, after financial crises, to be so deep and sustained for such long periods? Third, I will finish with some comments about possible policy responses. Again, this raises some awkward issues, as many recommended policies have positive effects in the near term but negative effects over a longer time period. Decisions having intertemporal implications are never easy to make, particularly when the body politic typically heavily discounts the future.

B. Empirical Strategies and the Facts about Post-War Financial Crises

a) Empirical Strategy

The authors follow Reinhart and Rogoff (2009) in identifying big financial crises through the use of the BCDI and the BCDI+[3] indices introduced in Chapter 16 of *This Time is Different*. I have no major problem with this but would like to make two points. Unfortunately, one gives grounds for optimism while the other points in the opposite direction.

On the one hand, the International Monetary Fund (IMF) has also undertaken research work designed to identify financial crises[4] and the events surrounding them. While using a quite different methodology from the Reinharts, the Fund concludes that only half of the financial crises they identify develop into really severe recessions. This provides some hope, in spite of the damage done in the post-2007 recession,

that we may have seen the worst and that a sustainable recovery might still be consistent with historical experience. On the other hand, there are also grounds for belief that the indices used by the Reinharts might actually understate the problems that we might face looking forward. Put otherwise, their conclusion "*that the dust has begun to settle since the 2007-2008 eruption*" might be somewhat premature.

To me, each component of these indices seems to have some element of downside risk. The incidence of banking crises (B) has thus far been lowered by government actions, yet the fragility of the banking sector in many countries continues to be a cause for concern. Consider remaining uncertainties about the valuation of toxic assets and doubts still being expressed about the adequacy of the recent stress tests of major European banks. The incidence of currency crises (C) could also rise in the light of unresolved global trade imbalances. Recent decisions by large holders of dollar reserves to diversify (albeit at the margin) into Japanese and Korean government bonds highlights another source of uncertainty. The incidence of sovereign defaults (D) has also been kept under control by IMF and European support packages. Nevertheless, worries about the longer-term prospects for sovereign debt continue to escalate, even for some countries having their own currencies. This, of course, raises again the threat of future currency crises. As for inflation (I), it has not been a problem in recent years due to globalization.[5] However, there is now evidence of overheating in a number of countries in Asia, and food and other commodity prices have been rising everywhere. Finally, stock prices (+) rose sharply from March 2009. Indeed it was a bigger rebound than anything seen during the 1930s. However, many market commentators have also raised concerns that the underlying fundamentals are not supportive of a rebound of this magnitude.

It should also be noted that these indices also have other shortcomings that were explicitly identified in Chapter 16 of Reinhart and Rogoff (2009). First, each component of the index is either "on" or "off" using their methodology. Thus, the severity of the crises identified in the subcomponents plays no role in the behavior of the index as a whole.[6] Given the unprecedented "imbalances" that characterized the run-up to the 2007 crisis[7], the peak of the indices might then be

somewhat misleading as a guide to the magnitude of the subsequent fallout. Second, the debt default (D) component of the index only includes sovereign defaults. Because the root of our current difficulties to date has been overindebtedness in the private sector (especially households), this must be considered a serious shortcoming.

b) Facts about Post-War Financial Crises

The single most important point revealed in this paper is that the economic downturns, following the 15 post-war financial crises identified by the authors, have been unusually severe and protracted. These findings are, moreover, corroborated by research work done by both the IMF and the Organisation for Economic Co-operation and Development (OECD).[8] The former says, "Recessions following financial stress are more likely to be associated with severe and protracted recession." And the latter echoes the sentiment with "downturns following banking crises are found to be more protracted with larger ultimate losses and disproportionate falls in housing and business investment." Such common findings are as unusual in macroeconomics as they are striking. Evidently, they raise the question of whether policy might have been conducted differently had this research work been done before the recent crisis and not just afterward.

As to some of the more detailed results from the Reinharts' paper, per capita growth rates are "significantly" lower in the decade after the crisis than the decade before. Moreover, unemployment rises sharply and generally does not fall to pre-crisis levels even 10 years afterward. House prices also fall sharply (in 10 of the 15 Advanced Market Economies where data is available) and 90 percent of all the observations for house prices in the following 10 years remain below pre-crisis levels. Finally, the Reinharts underline that financial deleveraging (proxied by debt/GDP) is still going on 10 years after the crisis began. And to these observations we can add some ancillary points from the work of the IMF and the OECD. They note that household saving rates also rise very sharply in recessions following financial crises, while private investment also falls dramatically.

These last points raise the obvious question of what else adjusts to satisfy the identity for saving and investment in the National

Income Accounts. The answer given by the IMF is that the identity is typically closed by very significant increases in government deficits[9] as well as major increases in exports. Of course the obvious corollary to these latter two points is less comforting in current circumstances. If government deficits are not allowed to rise, say because debt levels are already judged to be dangerously high, and if exports cannot go up because the downturn is occurring simultaneously across a number of countries, then the resulting recession could be significantly more serious than was typical after past financial crises.

C. Why is Economic Performance So Poor in the Decades Following Severe Financial Crises?

While the Reinharts are a little coy in drawing firm conclusions, I would agree with what I interpret to be the thrust of their arguments and evidence. The root of the severe problems following the average crisis is to be found in what happened before the crisis. While this does not necessarily rule out policy error after the crisis, this possibility seems for the Reinharts a matter of secondary importance.

To be more specific, the Reinharts document how an extended period of rapid credit growth drives the boom in GDP and house prices. Moreover, they note, the greater is the credit leverage, the greater is the increase in these other data series. Finally, after the crisis, a decade-long process of credit deleveraging occurs, with the degree of deleveraging being of "comparable magnitude" to what happened in the earlier period of rapid credit growth. Personally, I found this evidence compelling in its support of the general hypothesis that problems that emerge in the downturn primarily build up in the expansionary phase of the credit cycle. As my former Bank for International Settlements colleague Claudio Borio has said for some years, the exposures build up in the booms and they materialize in the busts. Interestingly, if belatedly, both the IMF and the OECD now seem to support this hypothesis as well.

All this said, the paper would still benefit from giving a more explicit analysis of the relationship between credit deleveraging and the behavior of other variables in the downturn. The same is the case for the relationship between leverage in the upswing and other variables

in the downswing: Is it possible that more credit in the upswing actually causes more disinflation (or even deflation) afterward? This would turn the conventional wisdom that money drives inflation completely on its head. What is important is to make crystal clear that the financial and real sectors are intimately interrelated in the boom phase of the credit cycle, but also thereafter. In this regard, and it is a quibble, the Reinharts' treatment of house prices as almost an "independent" factor in the downturn seems to me to be not quite right.

Evidently, one could also delve more deeply into this process of deleveraging, and here I think my interpretation of events might differ a little from the Reinharts'. Is the problem of credit deleveraging and increased private sector saving due primarily to a wounded financial system, and a decreased supply of loans, or is it primarily due to decreased demand for credit? This is a crucially important issue for policy. First, if the real problem is a decreased demand for loans, then restoring the financial system to good health will not be sufficient to get the economy expanding again. Second, it also implies that quickly tightening regulation and capital requirements will not hurt the economy as much as might otherwise have been expected. This is highly relevant today to the discussions (and lobbying) surrounding the introduction of Basel III.[10]

The paper gives the impression that the Reinharts would give more emphasis to the supply of loans. They say, for example, "*if deleveraging of private debt follows the tracks of previous crises as well, credit restraint will damp employment and growth for some time to come.*" Personally, I am more inclined to believe it is the demand for credit that is more crucial. Those who have overborrowed, having looked into the abyss of debt or even fallen into it, are going to repay debt regardless. This is a good part of the "headwinds" referred to by Alan Greenspan after the recession of 1990-91. This interpretation is also consistent with Richard Koo's identification of "balance sheet" recessions in both Japan in the 1990s and the United States in the 1930s.[11]

A hunkering down by debtors, rather than credit restrictions by banks, also seems to me to be consistent with some of the evidence in Reinhart and Rogoff (2009). They note that a more normal ordering of events was for the recession to begin first, only followed by

financial crises later, as household and corporate bankruptcies began to rise.[12] Finally, as a Canadian, I was also struck by the evidence in Reinhart and Rogoff (2009) that Canada, Mexico and Indonesia suffered greatly during the Great Depression, even though their banking systems remained in quite robust health. At the very least, we have to admit that the market for credit has a demand side, as well as a supply side. Similar to a conclusion that I drew in an earlier paper, that price stability is not "enough" to ensure good macroeconomic performance, it may be that financial stability is not "enough" either.

Still on the question of why these deep slumps occur, the Reinharts do agree that policy error after the financial crisis might sometimes have had a role to play. They say, "*That outcome (a deep slump) could materialize as a consequence of the failure of policymakers to provide sufficient stimulus after a wrenching event in an economy where rigidities give ample scope to demand management. … (S)low growth might be a self-fulfilling prophecy produced by timid authorities.*" Yet, there is one crucial fact that emerges from the Reinharts' work, and that of others. It is that the deep slumps after financial crises all look very much the same. Are we to believe that there was policy error in every case?

Consider too that the Reinharts classify our current crisis as being at least of equal severity to the average of other post-war crises. How could this happen, given the reality of unprecedented monetary and fiscal easing in many countries that was based on the belief that past policy errors had to be avoided at all costs? Finally, the IMF study referred to above (World Economic Outlook, 2009) documents that recessions preceded by financial credit crises were actually met with much sharper interest-rate cuts than in more normal cycles (see Figure 3.8). Further, policy rates were reduced even more dramatically in countries affected by synchronized cycles (see Figure 3.10). To me, all this evidence indicates that the essence of the problem has to do with "imbalances" generated before the crisis, even if policy error in some cases also might have played a role. At the risk of revealing my ignorance of the existing literature, we need, not only to look closely at all these historical downturns following financial crises, but also to document carefully the policy responses. On this basis, we could

then assess how much difference the policies followed really made to final outcomes.

All of these explanations for sharp downturns after financial crises have focused on factors affecting aggregate demand, but we cannot forget that the economy also has a supply side. The OECD has been very active using a production function approach to investigate this issue. In an April presentation, they concluded, "While long-term growth rates may well have been unaffected by the crisis, potential output is expected to have fallen by about three percentage points in the G20 countries for which OECD estimates are available."[13] The forces they identify as being at work include effects on the labor market (lower participation rates and a rise in the non-accelerating inflation rate of unemployment (NAIRU) due to longer-term unemployment). In addition, accelerator effects and higher risk premia in financial markets drive down the stock of capital.

Moreover, as if these factors influencing potential were not worrisome enough, two other considerations also warrant attention. The first comes from Reinhart and Rogoff, both in their book and other publications.[14] High levels of sovereign debt do seem to stunt growth, while lower levels of growth also raise debt levels—a potentially vicious circle. While this topic of debt is now receiving a lot of attention, a second set of factors has been less noticed. During booms, resources get drawn excessively into certain sectors—banking, cars, construction, distribution—which must downsize subsequently. Workers must find jobs in different sectors, for which they might not have the required skills or the needed physical proximity.[15] And, on an even bigger scale, one has to ask what the effect will be on frictional unemployment as global trade imbalances get resolved. There needs to be a significant move in the United States out of the production of non-tradable and into tradables, with the very opposite being required in major countries with trade surpluses. This will not happen overnight, nor without a significant increase in the NAIRU.

D. Policy Implications

The Reinharts state clearly that they are worried that policymakers will treat contractionary shocks as temporary, when they are in fact permanent. This mirrors concerns, often expressed in upturns,

that policymakers are too inclined to treat shocks as permanent when they are in fact temporary.[16] Though the authors allude to over-expansionary macro policies, they do not in fact spell out in any detail the mechanisms through which expansionary policies today might wind up having negative effects tomorrow. This is a pity because a number of statements made by representatives of the current U.S. administration give the clear impression that they reject the hypothesis that potential has been significantly affected by the crisis.

Building on some of the comments I have made above, let me now make some brief points about the implications of the Reinharts' paper for monetary policy, fiscal policy and supply side (or structural) policies.

Turning to the implications for monetary policy, a lower level of potential obviously means monetary policy must be more concerned about inflationary outcomes than otherwise. This is not to say that there is not currently a large output gap, but that it might be smaller than some people think. A second point, implied by the large number of deep and lasting slumps identified by the Reinharts, is that monetary policy easing after severe financial crises might have less stimulative capacity than might normally be the case. Indeed, the "headwinds of debt" identified by Alan Greenspan in the early 1990s have had 20 years to turn from headwinds to gales. This should change the balance of arguments concerning the net benefits of continuing monetary stimulus because we ought properly to compare the diminished stimulative effects of easy monetary policy with its longer-run costs. These costs would include lower aggregate saving rates, difficulties posed for insurance companies and pension funds, misallocated resources including "zombie" companies and banks[17], potential further bubbles, and (as already noted) a possible resurgence of inflation. In short, we should not be thinking about expansionary monetary policies as a free lunch.

Finally on monetary policy, I must take exception to one thought —albeit only a one-liner from the Reinharts—that "*monetary policy makers need to consider the benefits of an inflation buffer to protect from the zero lower bound to nominal interest rates.*" This policy suggestion seems to me to be inconsistent with the basic thrust of their paper, which is that of avoiding credit excesses in the first place, i.e.,

"lean not clean."[18] Allowing faster credit and monetary expansion to encourage inflation also encourages debt accumulation and other imbalances. In effect, this policy is internally inconsistent in that it fosters the development of the very problem (a deflationary bust) that the inflation buffer is supposed to contain.

Turning to fiscal policy, the implications are largely similar to those for monetary policy. A lower level of potential implies that a larger proportion of the current fiscal deficit is structural rather than cyclical. The already formidable challenge of restoring fiscal sustainability thus becomes even greater. Moreover, this fact also alters the trade-off of risks between a too hasty "exit," depressing demand, and a too tardy one, leading potentially to an uncontrollable fiscal debt expansion. Restoring debt sustainability thus takes on even greater urgency. These general policy implications apply to all countries, but it is also worth noting a couple of ways in which the United States is special. On the one hand, the probability of a fiscal crisis in the United States is much less than other countries with similar levels of debt. The dollar is the reserve currency after all. On the other hand, were there to be a flight from U.S. sovereign debt, the implications for the whole global trading and financial system would be very substantial. Evidently, given these externalities, the United States has a special responsibility to get its own house in order. This is the flip side of the "extravagant privilege" referred to decades ago by General de Gaulle.

Finally, if it is the case that monetary and fiscal policies have reached the limits of their effectiveness, what else can policy do? I think there are two things, but given time limitations I must be brief. First, we need to put more effort into debt restructuring, recognizing that half a loaf is always better than no loaf. This applies to household debt, corporate debt and the debt of financial institutions. Second, we need to be thinking much more about structural reforms to raise the potential growth rates of our economies, which is another way of making the burden of debt more bearable. At the risk of my advice sounding like a paid political announcement, the OECD has made numerous sensible proposals in this regard over the course of many years. Their publication *Going for Growth* is a treasure chest of ideas. I do understand that structural changes are always very difficult, but

crises present opportunities as well as challenges. As John Kenneth Galbraith once put it, "politics is not about the art of the possible. It is about the choice between the disastrous and the unpalatable." We must learn to think about the political economy of structural reform in exactly this way.

Endnotes

[1]Given positive productivity growth per capita, perhaps aggregate prices should be allowed to fall. There was a voluminous pre-war literature on this topic. See Selgin (1997). Over the last decade or so, globalization and the integration into the world economy of previously socialist economies have raised global productivity enormously, implying that this issue is not just of academic interest. See also White (2005).

[2]C.M. Reinhart and K.S. Rogoff (2009).

[3]These indices reflect the incidence of crises involving Banking, Currency markets, Defaults (of sovereigns), Inflation and (+) stock markets.

[4]See World Economic Outlook (2008) and (2009).

[5]White (2008).

[6]Having said that, magnitudes clearly takes center stage when the Reinharts turn to the facts about the many serious downturns following severe financial crises, as well as the facts about some of the developments preceding the crises.

[7]At the risk of getting ahead of my narrative, the Reinharts note at the bottom of Chart 8 that, "The median increase in credit/GDP in 15 post-war severe financial crises is about 38 percent, well below the 59 percent surge prior to the current crisis."

[8]For the IMF, see the references above. For the OECD, see D. Haugh, et al. (2009).

[9]Reinhart and Rogoff (2010) estimate that the median fiscal deficit almost doubles (86 percent) in the wake of financial crises.

[10]See Basel Committee for Banking Supervision (2010).

[11]See R. C. Koo (2009).

[12] C. M. Reinhart and K. S. Rogoff (2010), p. 145. They state, "Severe financial crises rarely occur in isolation. Rather than being the trigger of recession, they are more often an amplification mechanism."

[13]L. de Mello, and P. C. Padoan, (2010). See also D. Furceri, and A. Maurougau, (2009) as well as S. Guichard, and Rusticelli (2010).

[14] C.M. Reinhart and K.S. Rogoff (2010).

[15] In the United States, the vaunted "flexibility" of the labor market has recently been constrained by the fall in house prices. Given negative equity in their houses, workers can no longer sell and move to take jobs elsewhere.

[16]One manifestation of this has been the general failure of the fiscal authorities to reduce deficits as much as they might have done in economic upturns, not least the recovery from 2003 to 2007.

[17] On the Japanese experience in this regard, see J. Peek and E. S. Rosengren (2003).

[18] See White (2009).

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