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# Financial crises, sound policies and sound institutions: an interview with Michael Bordo<sup>1</sup>

*Interview conducted by John Singleton, Victoria University of Wellington*

Professor Michael D. Bordo is a Professor of Economics and Director of the Center for Monetary and Financial History at Rutgers University in New Brunswick, New Jersey. He visited New Zealand in June and July 2009 as part of the Professorial Fellowship in Monetary and Financial Economics sponsored by the Reserve Bank of New Zealand and Victoria University of Wellington. Michael is a Research Associate of the National Bureau of Economic Research in the United States, and has spent time as a Visiting Scholar, Professor or Consultant at the IMF, the World Bank, and many central banks. In this interview, Michael talks to John Singleton about his research interests in monetary and financial history and financial crises, the determinants of New Zealand's financial vulnerability, and some of the issues facing central banks in dealing with the aftermath of the current global financial crisis.

*How did you come to do advanced studies in economics and to focus your research on financial crises?*

I started my university education at McGill University in Montreal. I was always interested in history and political science and I developed an interest in economics. In a course in my first year at McGill, Frank Cyril James gave a spectacular course on global economic history, with the culmination of the course being the 1931 Financial Crisis. I just loved this course, and eventually took Honours [in] economics and political science at McGill. The teachers we had were excellent. I knew I wanted to go to graduate school, I knew I wanted to be a professor. I decided to apply to the London School of Economics, and not really knowing what I was going to do, I signed up for public finance. I later switched to advanced economic theory. Being in the Masters programme at LSE was a very enjoyable time for me. There, I met Bill Phillips.

*When you went to the LSE, were you aware that Phillips was an important character and that he'd done very important research?*

Yes, but not that much – I was still green in the profession. I was impressed with Lionel Robbins and gave a paper in his seminar. That was really a very exciting event for me. There

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<sup>1</sup> The views expressed in this article are those of Professor Bordo, and are not necessarily those of the Reserve Bank of New Zealand.



**Professor Michael Bordo (Tim Ng/RBNZ).**

were other great people at LSE and Phillips was one of them, but he wasn't really on my radar screen. I knew about the Phillips Curve, but it's not something that was dominating our thinking. We were being taught very Keynesian-type macro, as anybody who went to university in England or Canada at the time was getting.

*Was Phillips himself a Keynesian?*

Well, I'm giving you my impressions as a graduate student at 21 years old. He gave a series of lectures and demonstrated how his machine could explain the circular flow of income in a very simple Keynesian model. He had a concept of the economy as a control system, in today's sense. You know,

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a control system whereby the central bank and the treasury together would push policy levers and regulate the circular flow of income, offsetting negative injections with positive injections. His model was a Keynesian model, so that's what I mean when I say he was a Keynesian – he had a very simple Keynesian framework.

He also talked about the Phillips Curve, but it wasn't called the Phillips Curve then. He discussed the empirical relationship he found between the rate of change in money wages and the level of unemployment in Great Britain from 1857 to 1951. He fitted the line through it and then discussed how it was hard to interpret – he did not give us a theory. We got the theory from Richard Lipsey. Lipsey had the story of how the Phillips Curve was picking up excess demand in a very simple Keynesian-cross type of model, but Phillips didn't talk about that.

***Was Phillips a good lecturer?***

He was very nice, charming, modest, funny – he had this really strong New Zealand accent.

***After the LSE, you went to Chicago to do your PhD and ended up with Milton Friedman as your supervisor. Why did you choose Chicago?***

I got interested in Chicago from talking to my instructors at LSE, especially Ed Mishan, who was my advisor in the second year. He had done his PhD at Chicago and was a student of Milton Friedman. He wrote a strong letter for me and Harry Johnson arranged everything for me. Mishan just wrote a letter on one of those old-fashioned blue aerograms and shipped it off to Harry and, bang, I got in with a full scholarship.

The thing about Chicago was that I was always fascinated by the Chicago School and Friedman and Stigler. At LSE they were really anti-Friedman, and I sort of went along with it, but I was always curious. I wanted to find out what the Chicago School was all about, and when I got there I was assigned Milton Friedman as my advisor. He was extremely nice to me and said, 'You were at LSE, you've had a British education and studied in Canada – you've got a lot of

advantage over the other students from the United States – and I'm really happy that you could be with me'. Now I did have an advantage in price theory and in the history of economic thought, but I was a disaster in macro, because macro at LSE was Keynesian and macro at Chicago was Friedman and the quantity theory.

**“ I was always fascinated by the Chicago School and Friedman and Stigler... when I got there I was assigned Milton Friedman as my advisor. ”**

It took me a year to figure out how to do things and think like Friedman. Then I thought, well, now that I've figured it out, I'm going to stick with him. But I was also interested in economic history and I took courses from Robert Fogel, who was very friendly to me – you could just walk in and see him. With Friedman you had to make an appointment weeks in advance to see him, and then you'd have a half hour with him. When you saw him it was fine, but he was so famous by then. Fogel was the one that turned me on to economic history. First it was F. Cyril James, and then Bob Fogel.

I wanted to do a thesis that would combine both economic history and monetary economics, so I had read carefully through *A Monetary History of the United States* by Friedman and Schwartz. I wanted to do something in that vein, so I started a thesis topic with Milton. Friedman and Fogel were on my committee and I also got Anna Schwartz involved because I needed historical data. The year after I left Chicago, Friedman arranged for me to go to the National Bureau of Economic Research in New York, and I worked with Anna for three months to finish my thesis.

***What was your thesis topic?***

It was called 'The income effects of the sources of monetary change'. The question was, does it matter how money

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is injected into the economic system? Does it matter if it comes in through expansion of the banking system, or it comes through gold discoveries, or it comes through paper money? The approach was to compare different periods of US economic history where the sources of monetary change differed. I compared the pre-Civil War and post-Civil War periods, and I ran a large number of regressions using techniques that are totally defunct today – everything that you could imagine today was wrong with the econometrics, but anyway, I did these regressions of changes in output on changes in the money supply, adjusting for how the money came in. That was the econometric part. The other part was narrative and I basically did a historical analysis of the monetary system and the monetary arrangements that led to changes in money.

## “ Does it matter how money is injected into the economic system? ”

The thesis led me to write a paper on John Cairnes, a British political economist and a follower of John Stuart Mill. The idea for the thesis in part had come from Cairnes. Friedman had said to me, ‘You know, Mike, you should look at some articles by John Cairnes.’ Cairnes looked at the gold discoveries in Australia and California in the 1850s and traced out the effects of the gold discoveries on world prices. He predicted that the effects would first be on prices in Australia and California, then it would spread through the balance of payments to the UK and the rest of the world. He predicted that it would take about twenty years for the doubling of the quantity of gold to lead to a doubling in prices globally. He also predicted the chain of markets that the gold would flow through, and which prices would rise more than other prices depending on their elasticities of supply. And Friedman said, ‘Why don’t you take Cairnes’ idea and do a thesis based on that?’ So that’s more or less what I did, and I got my first publication with my article on Cairnes in the journal *History of Political Economy*. I’d put in a ton of work – it was one of the best papers I ever wrote.

Only a handful of people remember it. I ended up publishing two or three articles out of the thesis.

### *Did Friedman ever mention his views on the Phillips Curve?*

In the macro course I took from Friedman, he developed his famous *American Economic Review* article, published in 1967, that led to the Natural Rate Hypothesis. Friedman spent a lot of time attacking the Phillips Curve and showing that you could not gear policy on a stable Phillips Curve. In that course, he developed the Natural Rate Hypothesis based on adaptive expectations, coming up with the argument that the Phillips Curve can only be a vertical line in the long run, and that policy makers should not try to target the level of unemployment.

### *Did you find his exposition of the Phillips Curve convincing?*

I picked up the rational expectations approach to it and I think that’s where I stopped. I basically don’t think the Phillips Curve is a useful policy instrument. It’s a good description of things, and I think it’s a way of thinking about the short-run versus the long-run effects of changes in monetary policy on the economy. You can describe it in terms of the transmission mechanism that goes from changes in monetary policy to changes in real output to changes in prices, and to the extent that prices are sticky, it is going to appear in output. Friedman also taught us that Irving Fisher preceded Phillips in a paper that he wrote in the 1930s, which described a similar pattern. Fisher didn’t show the U-shaped pattern that Bill Phillips did, but he did say that as long as you had nominal rigidities, then monetary policy was going to have real effects on output, and there’s going to be lagged effects on prices.

### *How did your career develop after you left Chicago?*

I was hired by Carleton University in Ottawa, Canada. For the first three years, I was developing my courses in economic history and trying to finish my thesis. After I finished my

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thesis in 1972, Carleton decided that economic history was not important and informed me that I was now going to be a macroeconomist. So I taught macro, monetary theory and international finance, staying at Carleton for another nine years.

I left Carleton to move to the University of South Carolina, where they hired me as a monetary economist. The paper I wrote on Cairnes led to another paper on the effects of monetary policy on relative prices that was published in the *Journal of Political Economy*, and that got me a lot of attention in the States. And because I had started writing joint papers together with Anna Schwartz, I got gradually plugged into the US network. I didn't like living in South Carolina much but I got a lot of work done at USC. I joined the NBER and I started writing joint papers with a large number of people.

A lot of what I did involved monetary history. I've always written papers that talk about the relevance of historical evidence for current monetary theory and policy, and was successful at that because not many people did it. I had this little comparative advantage in that I was somebody who did monetary history. The macro people didn't like economic historians much and thought they were wasting their time, but said to me, 'Oh yeah, but what you do is useful.'

“ The macro people didn't like economic historians much... but said to me, 'Oh yeah, but what you do is useful'. ”

*Then you went to Rutgers.*

Yes, I went to Rutgers in 1989 to join Hugh Rockoff and Eugene White. Hugh was a classmate of mine at Chicago. The two of them were doing really good work and they wanted to bring in a third person, and they had a sympathetic dean who thought that we could set up a Centre of Excellence.

That's how I got to Rutgers and I have very much enjoyed it there. My colleagues and I have been running a workshop in Monetary and Financial History since 1989 and anybody who's done any good work in anything related to macroeconomic history has come through that workshop, and I feel really good about that. I think it's a major accomplishment that we got the thing going.

*And for the last few weeks here in Wellington you've been working on financial crises?*

Yes. Let me backtrack for a second, since you asked me how I got interested in financial crises. Because I've always been a big fan of Friedman and Schwartz, banking panics have always been something that were part of the courses I teach. In 1985, I did a paper for a conference in London on financial crises, which got me into the subject formally. I put together a database and that paper led to a number of citations, and since then I've always been working in that area.

“ Certain factors can insulate or prevent countries from being hit by crises. ”

Here in New Zealand, I have been extending my research on currency and banking crises, and also debt crises and sudden stops. What my research shows is that there are certain factors that can insulate or prevent countries from being hit by crises. These factors can be labelled as either sound policies or sound institutions. Sound policies include low money growth, low inflation and low fiscal deficits. Sound institutions are things like adherence to the Gold Standard pre-1914, adhering to the rule of law, and parliamentary democracy. Countries that had sound institutions and sound policies were often able to avoid crises.

New Zealand fits right into the group of countries that were able to insulate themselves to a certain extent from

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financial crises, in comparison to countries like Argentina, Italy and the other Latin or southern European countries that didn't have many of these sound institutions. One of the key features that led to financial crises was having what was called 'original sin' or 'liability dollarisation', where a large fraction of debt is foreign-currency-denominated. New Zealand was a country that had a high original sin, but it didn't have serious crises. Canada was another country like that and the reason was that they came up with ways to offset the risk of crises. They held either large gold reserves, or they had high exports which could generate gold reserves to pay off the foreign-currency debt.

What my research at the Reserve Bank with Dave Hargreaves and Mizuho Kida did was look at the determinants of financial crises. In earlier research with Chris Meissner, I had assessed the probabilities of a financial crisis, given certain values for the current account deficit, money growth, the fiscal deficit, original sin, offsets to original sin, and a number of other variables. From the regressions, you can predict the probability of a crisis. So we did the same exercise for New Zealand, focusing on the New Zealand values of each of these variables. You could then come up with a measure of the risk that New Zealand faced relative to that faced by other countries.

What we learnt is that in the pre-1914 period, New Zealand was at lower risk of having a currency crisis but at slightly greater risk of having a sudden stop. It generally did better than the average. For the second era of globalisation, 1972 to the end of the 20th century, we found that even though New Zealand had some sound fundamentals, it also had some fundamentals that weren't so sound. It had high original sin, and not as high an offset to original sin. So even though per capita GDP was high, it was not enough to offset the exposure. In the 1970s, 80s and 90s, New Zealand was, on average, more susceptible to having a currency crisis.

We then looked at other factors that could affect New Zealand. Even though, on average, it was in relatively good shape with respect to financial crises, it still had some risk. There were other things that you would have to worry about and these were real global shocks, such as terms-of-trade shocks and shocks to the demand for exports as a consequence of foreign real GDP shocks. Time series

regressions over the period 1880-2007 on a moving average of the growth of real per capita GDP, with the terms of trade, the real exchange rate and foreign GDP represented by the US as independent variables, explained over half of the variation in real GDP. Adding in the financial crisis indicators didn't explain much more. So it backed up a story that New Zealand was vulnerable largely to real shocks. The policy prescription that comes out of this result is to follow a floating exchange rate. Floating is the way to protect yourself, and switching to a float in 1985 was a pretty good policy.

**“ New Zealand switching to a float in 1985 was a pretty good policy. ”**

*You said in your public lecture talk that it might be a good idea for New Zealand to consider a monetary union with Australia.*

When you're a very small open economy, the floating exchange rate also has some problems, in that it overshoots. It overshoots for big countries too, but the overshooting can have serious consequences in changing the relative prices of traded to non-traded goods, leading to reallocation of resources between those sectors. Now if you have a very flexible economy, it's not an issue. If your economy's not that flexible, it can be an issue. For that reason, given the extreme degree of openness you have and the size of your country, there is a case to tie yourselves to a larger country that has stable monetary and fiscal policies – a stable nominal anchor. You would have less risk of the misallocation issues associated with the float.

The literature on monetary unions and European Monetary Union (EMU) is relevant to this. You weigh the benefits of integration with a larger economy against the cost of giving up the independence of monetary policy to deal with asymmetric shocks. Which countries should join an MU and which countries shouldn't is an empirical question. I don't know what the answer to that question is for New Zealand; I suspect the evidence is mixed. But just from a very casual

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examination, I think there is an economic case for joining an arrangement something like EMU with free trade, free factor mobility, one currency and some degree of fiscal centralisation.

Having said that, whether there's an economic case or not is often immaterial, because what really drives monetary union is politics. I've done a lot of research on EMU, and what were called the "optimal currency area" arguments for joining just didn't stack up. The economics of Europe adopting EMU just didn't stack up in the 1990s. It was a political move to set up EMU in 1999, driven by political will. All past monetary unions in history have been driven by politics and strategic considerations.

What the evidence does seem to show is that once a monetary union was set up, trade integration increased quite a bit inside Europe, and that the benefits of trade integration are quite significant. However, the cost of giving up monetary policy in the face of big recessions like we're facing right now is not insignificant. So the European example is one that New Zealand should think about. But really, what matters is whether the New Zealand people want to do this, and whether Parliament wants to go along with it. Economists can only push things so far.

**“ Economists can only push things so far. ”**

I suspect what's going to happen in the future is that as New Zealand continues to decline in importance relative to Australia, reflecting the fact that Australia is a much bigger economy with economies of scale and of scope, and also with more natural resources and connections to the metropolitan part of the world, the benefits of joining will go up. Other issues will come up as China becomes more important in the world. There may be other strategic benefits for Australia and New Zealand to hook together.

***If New Zealand should become more flexible, what can it do?***

You basically need to limit any restrictions on labour mobility. I know New Zealand's gone part of the way in doing that, but basically resources just have to re-allocate themselves. With a floating exchange rate, theory tells you that you need to have perfect labour mobility where resources can move within the economy. Exchange rate changes affect traded good prices relative to non-traded goods. You have to have people that can move quickly and labour and capital that can move quickly in response. Now, in practice it doesn't happen that way, and the more rigidity you have, the more of a problem it is.

Immigration is a different issue. Immigration would give New Zealand a larger market and the ability to have economies of scale, economies of scope. It would bring in human capital, different skills to make the economy more flexible, to give it more depth. When I say more immigration, I don't mean just cherry-picking the very best, I mean bringing in people who can afford to get here and that's just about it. People with low incomes from poor countries will come here – some do come here – and work really hard to make a good life for themselves and especially for their kids. There are the incentives to do so and there are resources here. There's a lot of human capital here already and the country's sparsely populated. I think New Zealand should think about an economy that's got maybe 12 million people, or 15. I know that a good chunk of the country is mountains and people can't live on the Southern Alps, but I suspect there's still a lot of room. I don't see why New Zealand can't have the population density of a European country or the United States.

**“ New Zealand should think about an economy that's got maybe 12 million people, or 15. ”**

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***You're a member of the Shadow Open Market Committee in the US. What do you see as the main challenges for the Fed in the next year or two?***

I think there are two main challenges for the Fed. The first is with monetary policy and that is coming up with an exit strategy from their current expansionary quantitative easing approach. They need to reverse course without either precipitating a second recession like what happened in 1937–38, when they tightened after easing from 1933 to 1936, but at the same time getting out in time to prevent inflationary expectations from building up.

The second issue is independence. The Fed has had a lot of independence over its history. The kind of policies it has been following in this crisis, working closely with the Treasury, have deeply compromised its independence. It has to break away from the Treasury and it has to get out of a lot of the arrangements propping up certain credit markets and helping guarantee and bail out firms and banks with Treasury support. It has to get back to what it was doing before, which is to focus primarily on providing stable money, and come up with a very strong statement backed up by the government, saying that the government respects the Fed's independence, and that the Fed itself realises that it has to be independent of the Treasury.

The other issues are about how to unwind the mess they got themselves into and roll back all these facilities they created. I think that they will do it, but it seems like they've created a situation where they're engaged in credit allocation – in picking winners and losers in the economy. These are things that government shouldn't do at all, but if they're going to be done, they should be done by the Treasury and not by the Federal Reserve. The Federal Reserve went through a long history in the 30s, 40s and 50s of engaging in credit allocation. They decided by themselves that this was something they didn't want to do, they wanted to get out of it – and now they have gotten themselves into it again.

***Should they have done things differently in the last year or two?***

Did they make some mistakes? Yes, they did. The first mistake was viewing the crisis as primarily a liquidity crisis.

At the beginning it was. When the inter-bank markets froze up, it was a liquidity problem and they did the right thing by expanding liquidity.

But then it became apparent quite quickly that the problem was one of solvency. The issue was that with the toxic sub-prime mortgages, their derivatives and other derivatives on real-estate-backed paper, nobody knew how to value these assets. So a great suspicion arose among banks and other kinds of financial institutions about the quality of the paper that these banks had issued and were holding. And this is a solvency issue. Nobody knew if the banks were really solvent or not, and this explains why all the credit markets just ceased functioning and the spreads got so large.

The Fed treated it as a liquidity issue and set up all these facilities to deal with it. What I and others in the Shadow Open Market Committee think they should have done is just engage in open market operations and let the market determine how the credit is allocated. We think going down the credit allocation route was a mistake.

Because they were following a credit allocation policy, the second thing the Fed did was sterilise the expansion in the monetary base from about the end of 2007 until about September 2008. This meant that money and credit growth was flat. The money multiplier was shrinking, so any quantitative measure you look at suggests that monetary policy was relatively tight for six or seven or eight months. Also, using DSGE models, if you measure the natural rate of interest and look at the actual real interest rate compared to it, it suggests that the real interest rate was too high, and that in a Wicksellian sense there was deflationary pressure on the economy. In a sense, this made sure that there was going to be a serious recession. Fed policy put fuel on the fire for about eight or nine months.

***That sounds very much like 1929 and 1930.***

Yes, indeed. The late autumn of 1929 and 1930, exactly when the Federal Reserve Board reversed the policy of ease that it followed immediately after the October 1929 stock market crash. In the recent crisis, the Fed changed gears and did the right thing around the time of the Lehman crisis. They stopped sterilising the increases in the monetary base,

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so it has been increasing quite rapidly. At the same time, they cut short-term interest rates close to zero. They became very worried as policy rates reached the zero nominal bound, but they had the good sense to realise that hitting the zero nominal bound doesn't mean you can't use monetary policy. So they did switch to a policy of quantitative easing (purchasing assets other than short-term Treasuries) at the end of 2008, and I think that was a really good thing.

I am convinced that the US economy is going to recover. It has reached the bottom of the cycle right now (summer 2009). Expansionary monetary policy, which should have been expansionary earlier, is getting us out of this recession.

“ I am convinced that the US economy is going to recover. ”

*Why did it take the Fed so long to switch to an expansionary monetary policy?*

Because they thought the problem was liquidity, and that getting the spreads down in these different credit markets would eliminate the credit crunch. Then bank lending would flow and the economy would recover through bank lending. But if it isn't just a liquidity problem, if banks are potentially insolvent and nobody knows what or where the toxic assets are, then monetary policy has to do an end-run around the banks. It has to just throw money at the economy. It has to work through the banks too, but not just depend upon bank lending. That's what the Fed has done, but it took them a while to figure it out.

*Going back to your work, your research shows that financial crises are becoming more common. Is that something we just have to live with as the downside of globalisation? Can anything be done to iron out these crises?*

That's an interesting question. There's an argument that, in a sense, emerging countries can use financial crises as

opportunities to develop sound institutions. A crisis is a learning experience – a wake-up call about imbalances and faults in your financial system – and you can improve your institutions by adapting following the crisis.

“ A crisis is a wake-up call about imbalances and faults in your financial system. ”

The history of the United States and the UK tells us that. In the nineteenth century, the UK had a crisis virtually every decade after the Napoleonic Wars until 1867. But what did the British do after these crises? They held a royal commission that criticised the Bank of England, and the Bank made changes. Eventually, after Walter Bagehot wrote his famous *Lombard Street* in 1870, they really did get their act together and learned to follow the “responsibility doctrine” (subsuming their own profits to the public interest), and they attached a lot of importance to trying to prevent banking crises. They were successful for close to 150 years, until Northern Rock in 2007.

The US learned through the failures of the Free Banking era, which led to the institution of the National Banking system. The National Banking system still had serious problems, which led to the creation of the Federal Reserve, whose shortcomings in the Great Contraction then led to the revision of the Federal Reserve Act in 1935. It took them four tries and a hundred years to get it right, and they still haven't got it completely right, but each time it's been getting better.

*Thanks very much for chatting with me today.*

You're welcome.