



Rethinking Exchange Rate Arrangements after the Crisis

Jay C. Shambaugh
George Washington University and NBER

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Introduction

The exchange rate regime decision is one of the most important ones a country can make in terms of macroeconomic policy. It has important implications for how a country will manage its financial account and its monetary policy options. This brief chapter cannot run through all aspects of the decision, but will instead focus on one thing: what have we learned in the crisis about the experience of fixed exchange rates versus floating, as well as the institutional design of currency unions.

My thesis is that we have relearned many things we should have known already prior to the crisis. In many areas, such as fiscal policy at the zero lower bound, monetary policy at the zero lower bound, or macroprudential policy, this crisis surprised many and, at the very least, provided evidence for issues about which we did not have a clear understanding. Conversely, regarding exchange rate regimes, an undergraduate who had taken a basic international macroeconomics class could probably have described ahead of time most of the key things that have taken place. That student would have known that in general, floating can serve as a shock absorber, external adjustment may be easier if you float, and entering a currency union at the wrong price can be very painful. These are things that we already knew, but these are things that we have seen time and again throughout this crisis.

One surprise was the fact that when pegs broke in this crisis, they did not spiral wildly out of control. This time around, when a fixed exchange rate broke, countries tended to loosen the bands they kept the exchange rate in, as opposed to having a sharp depreciation. That was a new experience, but the other core stylized facts are things that academics and policymakers should have understood.

These same lessons can serve as reminders for what the institutional structure should be for currency unions, and they highlight the cost of inadequate shock absorbers within a currency union.

Floating as a Shock Absorber

A popular—but rather dark—joke of early 2009 was “What’s the difference between Ireland and Iceland?” The answer was: “One letter and six months.” As it turned out there was another very stark difference (among many others): One had a floating exchange rate and one did not. Coming into the crisis, Iceland was likely in much worse shape, with a current account deficit over 20 percent of GDP in one year, whereas the external deficit peaked close to 5 percent in Ireland. Both, though, had large credit booms and somewhat spectacular financial busts. And yet, there were very different experiences between the two countries.

In Figures 1a–1f, the red line is Ireland, and the blue line is Iceland. Iceland experiences a sharp depreciation when the crisis hits (Figure 1a). It has higher inflation coming out of the crisis (Figure 1b). But the inflation does not offset all of the depreciation, so there is a substantial real effective exchange rate depreciation (Figure 1c). In the real economy, real exports grow faster (Figure 1d). The figure for real GDP shows a modest difference, although depending on the base year used, this picture could look different. The last figure, though, shows the most stark difference: the sharp jump in the unemployment rate in Ireland relative to Iceland.

There are many other differences between these two countries and Iceland has not necessarily been a paragon of financial policy management, but the contrast is a reminder that when there are severe shocks, it is useful to have the pressure release valve of the exchange rate.

If one looks more broadly, there were a number of countries, whether Israel, Poland, Sweden, or the U.K., that right when the crisis hit benefited from the ability to have their exchange rate change. Even more broadly, in the two decades before the crisis, pegged and nonpegged countries tended to grow around the same rate. But, during the crisis, the pegs grew about a percentage point more slowly. There may have been different shocks as well as many other policies all mixed together in that result. So the point is in no way conclusive. And, there are some countries that were floating in the past five years that felt they were appreciating too much, and they likely would have preferred to have been pegged rather than experience the appreciation. But floating, both in theory and in casual observation during the crisis, can serve as a shock absorber.

Exchange Rate Changes and External Adjustment

The bigger question is what happens when adjustment is needed. Pegging versus floating should not make a country grow faster or slower over time, but exchange rate flexibility should help external adjustment if it is needed.

Looking at external adjustment with fixed rates, one thing economists have known for a long time is that it should be more difficult for a country to manage a substantial change in its current account if the exchange rate is fixed. Prices are sticky. They are especially downward sticky. Thus, it is hard for there to be a substantial real depreciation if the nominal exchange rate cannot change.¹ This should make it more difficult to have a substantial external adjustment.

Table 1 looks at 10 countries that had very large current account deficits going into the crisis and very large external adjustment during this crisis. They came into the crisis with a current account deficit-to-GDP ratio of at least 10 percent, and they cut the ratio by at least 10 percentage points. There is a roughly even split between pegged and nonpegged economies. This is quite important, as it highlights the fact that a fixed exchange rate does not mean a country cannot have external adjustment.

On the other hand, of the six countries that were pegged, none of them experienced real GDP growth over the period from 2008 to 2011, whereas three of the four nonpegged countries did. On average, the pegged countries contracted by about 10 percent as opposed to an expansion in the nonpegged countries. The nonpegged countries experienced a relatively mild average change in the exchange rate against the base country; they were not all large depreciations, but there was a substantial difference in the real economy experiences of the countries. These are small countries, and it is a small sample. This is not rigorous econometric evidence, but the experience we would have predicted going into the crisis did broadly happen. When financial flows seized up and it was more difficult to finance externally, the pegged countries that made large adjustments had a harder time than did the floating countries.

¹ See Shambaugh (2012) for discussion.

Relative Prices at the Entry of a Currency Union

Economists have also known for a long time, certainly since 1925 when Keynes was writing critical things about Churchill (Keynes, 1925), that if you enter a currency union at the wrong price, it can be painful. Keynes pointed out that rejoining the gold standard at the wrong price was very painful for Britain, and this is something that both theory and the experience of countries after World War I demonstrate.

When looking at the lead-in to the euro, the convergence criteria were inflation, debt and deficits, and a stable exchange rate. I recently was talking about the euro area with my students, and I asked them, “What were the convergence criteria?” A student raised her hand and said, “The balance of payments deficit couldn’t be too big.” Someone tapped her on the shoulder and said, “No, you mean ‘fiscal.’” She said, “Right, right, fiscal deficit can’t be too big.” And I thought to myself, that is somewhat telling. While it may seem intuitive that they would, the rules were not putting limits on the balance of payments deficit. There was no rule that purchasing power parity had to hold. Policymakers were about to fix the nominal exchange rate forever. But, confirming that relative prices were at the right level was not part of the entry criteria.

Over the period from entry until 2007, current account deficits and surpluses were quite persistent in the euro area. Figure 2a shows the current account to GDP at entry (x-axis) and the current account to GDP in 2007 (y-axis). The relationship is quite strong and the slope is nearly 1. This persistence has been documented before (see, for example, Lane and Pels, 2012, or Kang and Shambaugh, 2013, for discussion). The next two figures look across other groups of countries to see if the pattern is any different.

Figure 2b looks at the more recent entrants to the euro area and/or countries pegged to the euro. The line also has a slope close to 1, but the fit around the line is not quite as tight (the R^2 is lower). Figure 2c takes the remaining countries from the Eurostat database that are neither the original 12 entrants into the euro (those that entered prior to 2003) nor later entrants and pegs. There are roughly 15 countries floating in that data set. Relative prices can move fluidly for these countries, as the nominal exchange rate is floating. Yet, there is almost a perfectly straight line for this group, too. In the buildup to the crisis, current accounts, no matter the exchange rate

regime, were very persistent. Countries that were running deficits kept running deficits. Countries that were running surpluses kept running surpluses. There did not appear to be pressure to push countries back toward a balanced current account. It does not seem that floating exchange rates helped these countries back to balance.

However, the question becomes, once adjustment had to happen, was there a difference? Here, the answer appears to be “yes.” Figures 3a–3c show the current account in 1999 (or entry to the euro for the early entrants) on the x-axis and the change in the unemployment rate during the crisis on the y-axis. The relationship appears to be steeper for the early euro members. Countries that had a big current account deficit at entry into the euro wound up having a much higher spike in the unemployment rate once adjustment had to happen. For pegs or late entrants, the relationship is not as steep, meaning that a given current account deficit correlates with a smaller increase in the unemployment rate. For the floating countries, the relationship is essentially flat. The current account in 1999 has almost no bearing on the unemployment response during the crisis. The current account deficit is a country’s net borrowing from the world—the country’s borrowing, not the government’s. Those countries that were borrowing extensively when the euro began appear to have paid a price once adjustment had to happen. That is less true for floating exchange rate countries. They had more flexibility in how they approached the crisis.

It may be worth noting that many of the more recent entrants into the euro area have had fairly substantial current account deficits on entry. The most notable case is that of Cyprus, which had a current account deficit of 16 percent of GDP in its first year as a member of the euro area. Slovenia (5 percent deficit) and the Slovak Republic (3 percent deficit) did not have extremely high deficits, but were certainly not in external balance. Estonia, which had a 2 percent surplus in 2011, is the only recent entrant with a surplus. These recent entries raise the question of whether exchange rates are being fixed permanently at the right price.

The non–exchange rate crisis of breaking pegs

One experience in the crisis that is somewhat new is the way in which exchange rate pegs broke. It is well established that exchange rate pegs are fragile.² Figure 4 shows the percentage of countries that are pegged in any given year that break their peg.³ There is a small spike right around 2008, so more countries than usual broke their pegs during this crisis, which is not surprising given the nature of the crisis.

What was more surprising is what is seen in Figures 5a and 5b. Figure 5a shows that of those countries that broke their peg after 2006, the range of their exchange rate against the country that they were pegging to was not particularly large after they broke the peg. The median range is just over 6 percent, relative to a median range of over 10 percent in the post-1973 era. In a sense, many of these pegs did not really break. They simply loosened the band some. Figure 5b makes this more clear. It shows the percentage of the countries that broke their peg, which went from a 2 percent band to a 5 percent band. Almost two-thirds of the countries in the crisis that broke their previously tight peg simply loosened the bands and stayed somewhat pegged to the base. This contrasts to roughly 40 percent in the 1973–2006 time period.

The above findings suggest a strong preference in some countries for exchange rate fixity. Despite the fact that the crisis has highlighted some of the challenges that come with having a fixed exchange rate—that adjustment can be difficult with a fixed exchange rate—plenty of countries want to stay close to pegged, even if they cannot maintain a tight peg. In any given year, around half the countries in the world have a fixed exchange rate. If one drops a number of very small countries from the sample, closer to 40 percent peg. Also, though, which countries peg changes from year to year. The debate over exchange rate regimes does not have a corner solution that economists often like. Not every country is going to float, and not every country is going to peg. This reminds us of the importance of figuring out the costs and benefits of pegging.

Implications for Currency Unions

² See Obstfeld and Rogoff (1995) and Klein and Marion (1997) for earlier discussions. Klein and Shambaugh (2008) explore the duration as well as the propensity of broken pegs to reform.

³ A peg is defined here as a country that stays within a 2 percent up or down range over the course of a year (excluding single-year pegs that may be due to a lack of volatility) or those that are perfectly flat, with the exception of a one-time realignment. See Klein and Shambaugh (2010) for an extensive discussion of exchange rate regime classifications.

A number of these stylized facts have implications for currency unions. Again, many of the things we have observed in currency unions—particularly in the euro area—are things that were well understood in the literature more than a decade ago.

Certainly from a macroeconomic perspective, the euro area has not done well. GDP growth has been slower than that of a typical country and even a typical advanced country. The unemployment rate is much higher than in other advanced economies as well. These facts, though, should not necessarily be a reflection on the wisdom of currency unions. The euro area floats against the world, so the average performance of the euro area is not a reflection of the fact that it has a currency union internally. Weak economic performance could simply be a reflection of worse shocks. Alternatively, it could be worse macroeconomic policy management—monetary policy that has been too tight or fiscal policy that has been too tight.

What tells us more about the wisdom of the euro as a currency and the institutional structure that supports it is what happens when the need for adjustment differs across countries within a currency union. In that sense, this crisis has revealed some of the true problems within the euro area. Figures 7a and b show the range and standard deviation of unemployment rates across U.S. states and across the euro area (the blue bars are the United States, the red are the euro area). In both areas, there is a stark jump when the crisis hits from 2007 to 2010. The range and standard deviation of unemployment rates are higher. From 2010 to 2012, though, the dispersion starts coming down in the United States. The states with high unemployment rates are having their unemployment rate fall faster. In the euro area, the dispersion has kept going up as unemployment rates have fallen in some countries that were already doing well, but have continued to rise in the worst-hit countries.

This sequence of events suggests a lack of adequate shock absorbers within the euro area. Differential monetary policy within the currency union and exchange rate adjustments are no longer possible, and labor mobility and fiscal federalism are not sufficient to offset shocks in one region and smooth them in relation to another. Again, this is not a surprise or a new observation. The entire optimal currency area theory was founded by a paper noting the importance of a shock absorber (labor mobility) for a currency union to be an optimal currency area (Mundell, 1961). It

was well known at the founding of the euro that forming a currency union without these shock absorbers was likely going to be painful if a substantial asymmetric shock took place.⁴

Summary

On net, a number of important observations seem to have come out of this crisis. Countries with fixed exchange rates need to recognize that external adjustment is going to be very challenging. This suggests two things: One, it is important to avoid excessive borrowing if there is a fixed exchange rate, again, not necessarily by the government or the state, but for the economy overall, because if the country needs to rebalance the external account rapidly, it is likely going to be very painful. And two, it suggests that if exchange rates are fixed, there needs to be some other way to cushion big shocks.

The other papers in this conference have emphasized the way fiscal policy and monetary policy operate at the zero lower bound, and this work suggests that it is important to have fiscal stabilizers within a currency union, because if the monetary policy is going to run into the zero lower bound, not having any agency that is acting to stabilize the economy with fiscal policy is going to be a problem. In addition, states or countries within a currency union should not be radically cutting back on their fiscal policy in a recession, because we know they're going to be doing so in an environment with very high multipliers. Therefore, currency unions also need to have some way to avoid that situation.

Also, economists and policymakers have learned more about the macro and finance linkages and what some have referred to as “doom loops” between the banks and the sovereigns, highlighting the fact that it is crucial for weaknesses in banks not to become an asymmetric shock within a currency union. If, when Washington Mutual got into trouble, the state of Washington was responsible as a fiscal backstop, it seems the state of Washington would have been in a very challenging fiscal position. Instead it was an FDIC problem, not a problem for the state of Washington. This highlights the need for deposit insurance, bank supervision, a lender

⁴ See Obstfeld (1997) and Obstfeld and Peri (1998) for discussion.

of last resort, and bank resolution all at the currency union level, because if they do not exist, it suggests that the financial system could be the originator of asymmetric shocks.

Euro area institutions are changing; in some cases, they are changing far more rapidly than anyone could have imagined five years ago. On the other hand, one of the things the crisis seems to highlight is that we cannot ignore what we know. The implications of exchange rate regimes is an area of economics in which the standard literature could have predicted most of what has taken place. It was well known prior to the launch of the euro that labor mobility was weak and fiscal federalism nonexistent. The fact that this lack of shock absorbers would make the euro a risky bet was well established. Likewise, the lack of an official lender of last resort and prudential supervision role for the ECB were widely discussed.⁵ As a profession, we have learned more about macrofinancial linkages, but the risks of a currency union with fragmented backing supervision were understood.

When one steps back and considers the exchange rate regime decision, it is clear that very small countries are going to peg—especially if they are tied to one economy. Also, it seems that very large economies with open financial markets are not going to be willing to subjugate monetary policy to the exchange rate. The question is what countries in between should do. The countries of the euro area clearly have decided to sacrifice other policy options for exchange rate stability. Doing so, though, without the necessary institutional structure was a gamble. The gamble was that the needed change in the institutional structure and in the economy would happen before a big crisis. The question is: Now that the costs are apparent, can policymakers fill in the needed institutional structure fast enough?

⁵ See Obstfeld (1997) for discussion.

Table 1: Experience of countries making major external adjustment in the crisis

	Number	Number that grew	Average ΔGDP	ΔE vs. base	ΔREER
Pegs	6	0	-10%	0%	3% appr
Non-pegs	4	3	7%	15% dep	4% depr

Note: E is the nominal exchange rate measured against a relevant base country. REER is the real effective exchange rate index.

Figures 1a–1f:

Figure 1a

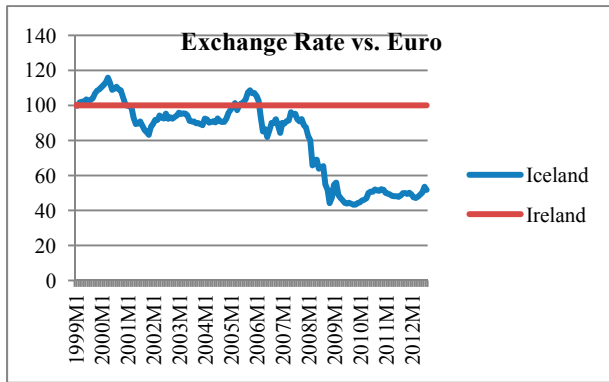


Figure 1b

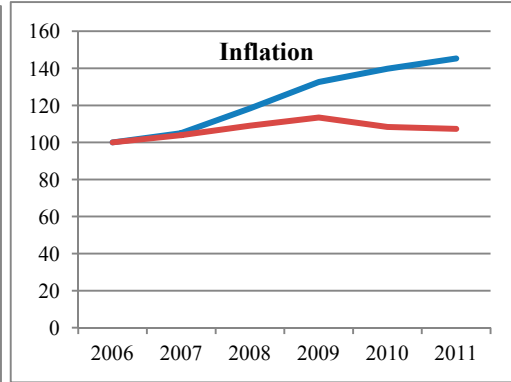


Figure 1c

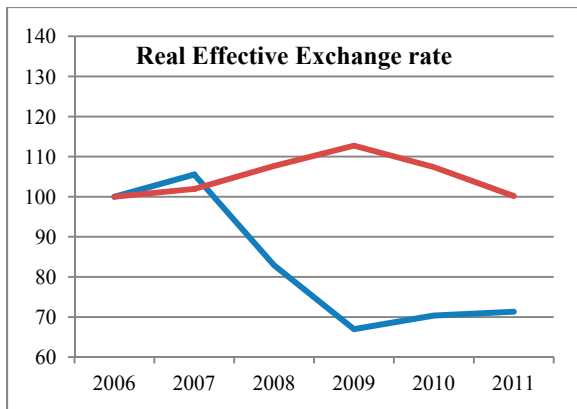


Figure 1d

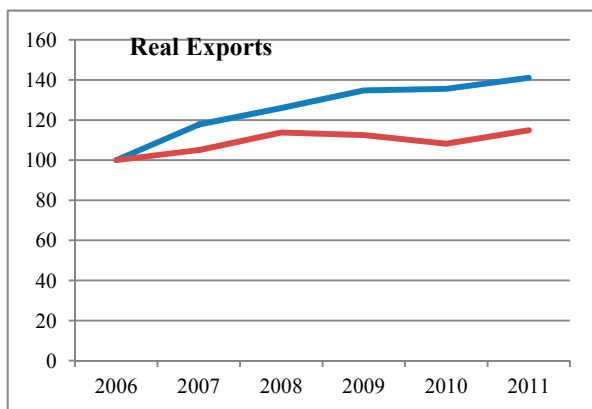


Figure 1e

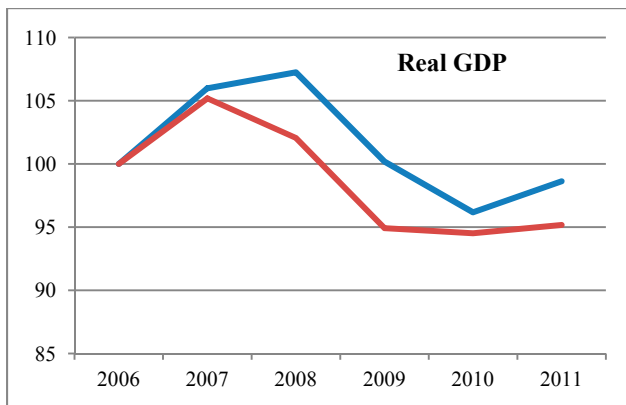


Figure 1f

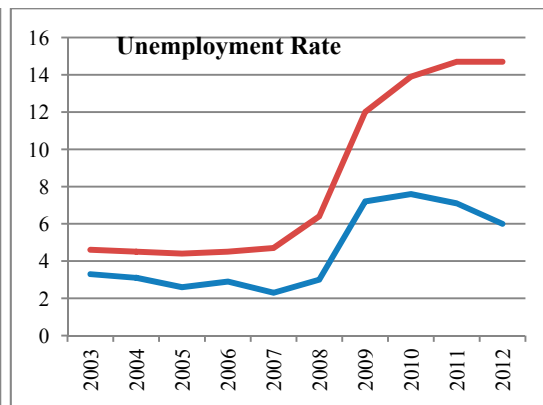


Figure 2a: Early entrants

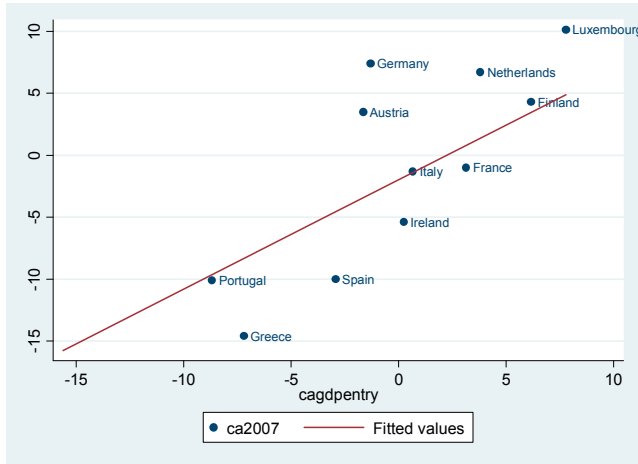


Figure 2b: Pegs and late entrants

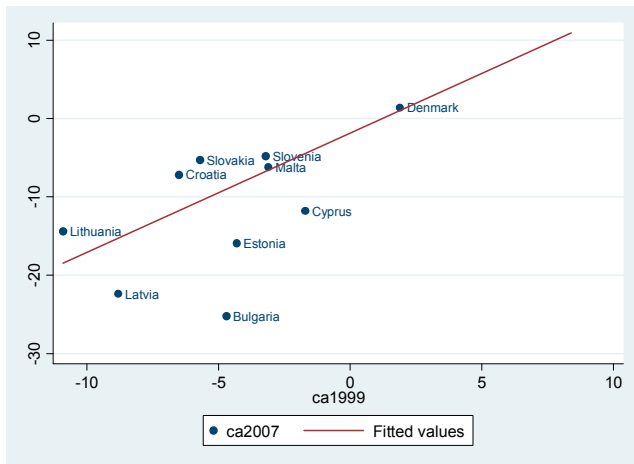


Figure 2c: Floats

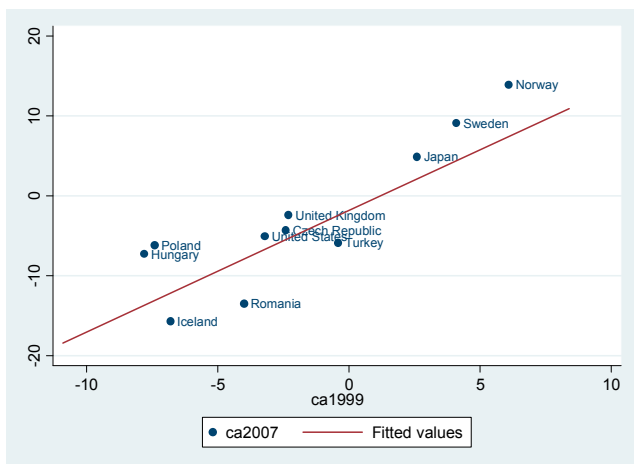


Figure 3a

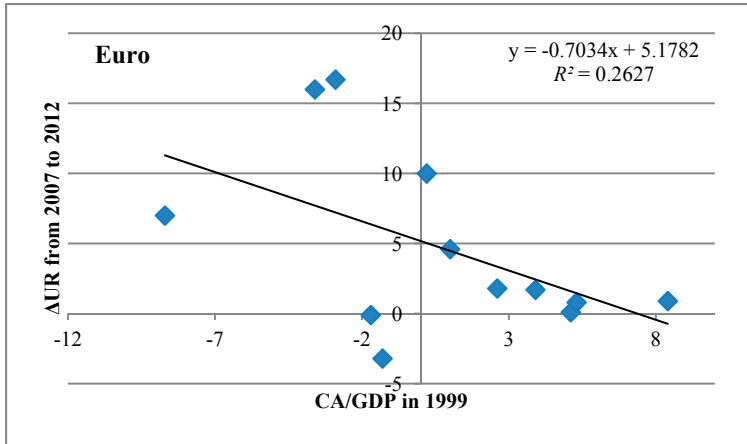


Figure 3b

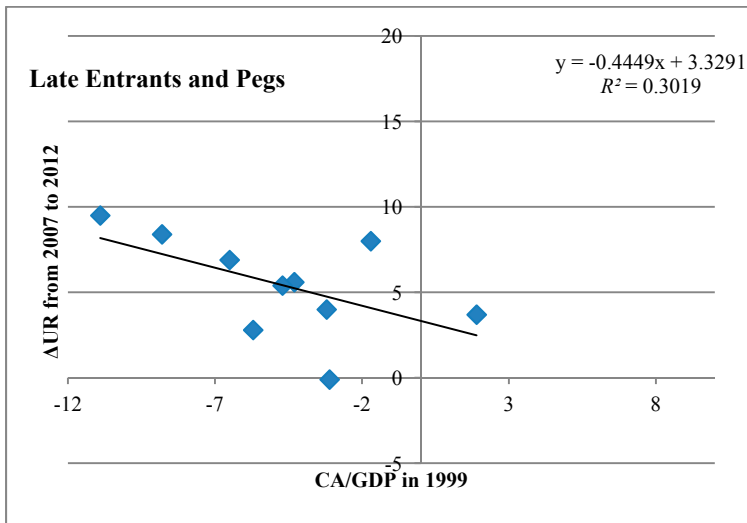


Figure 3c

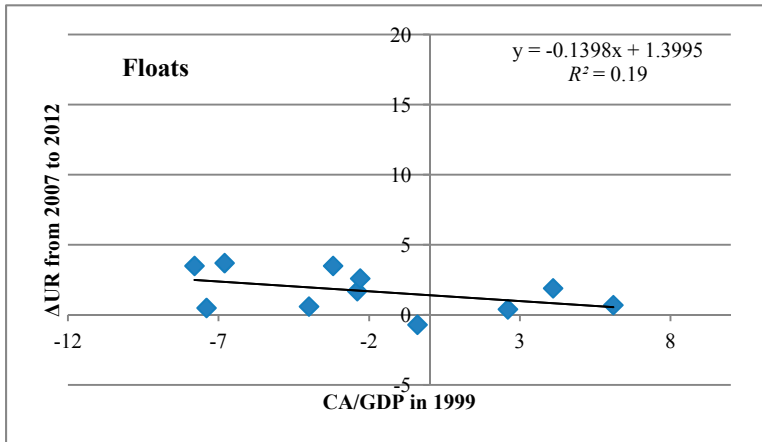
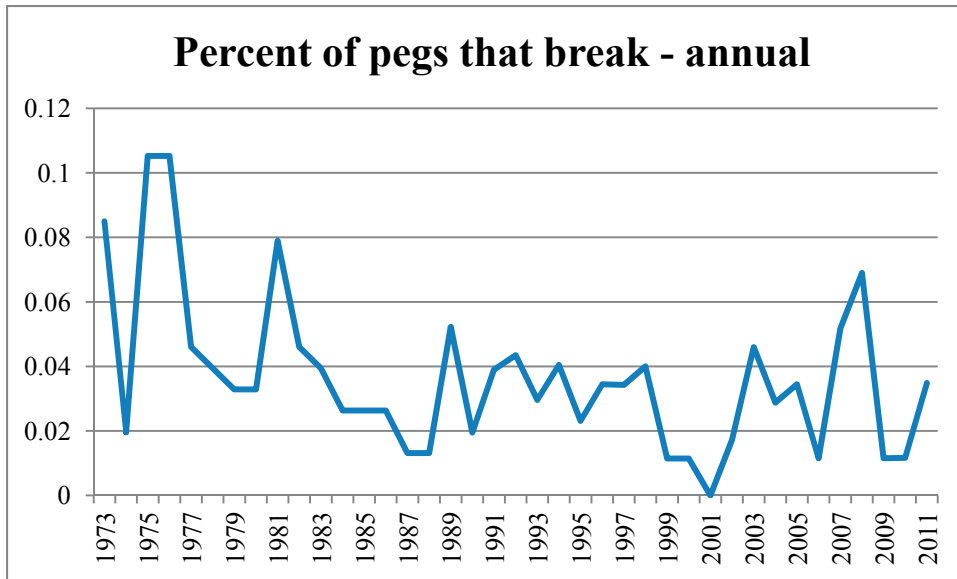
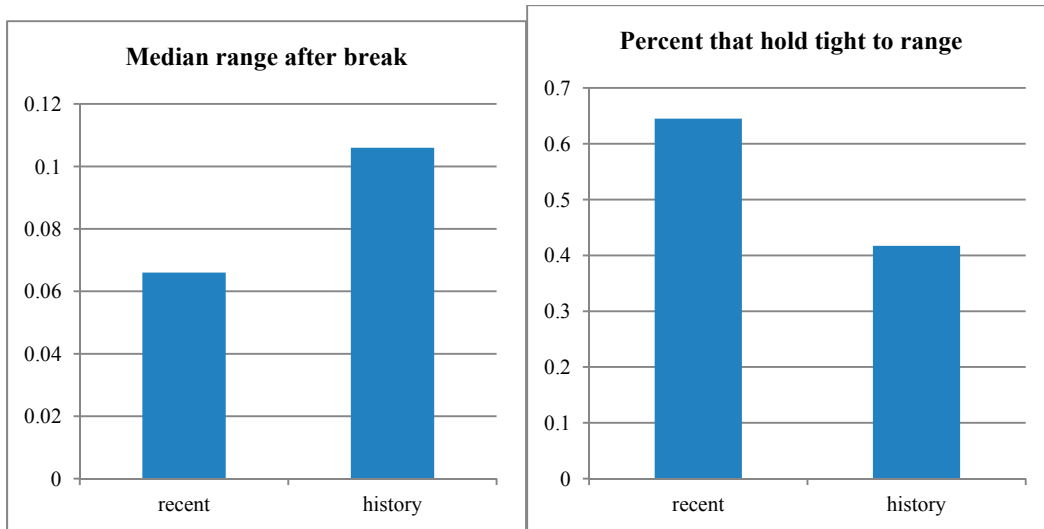


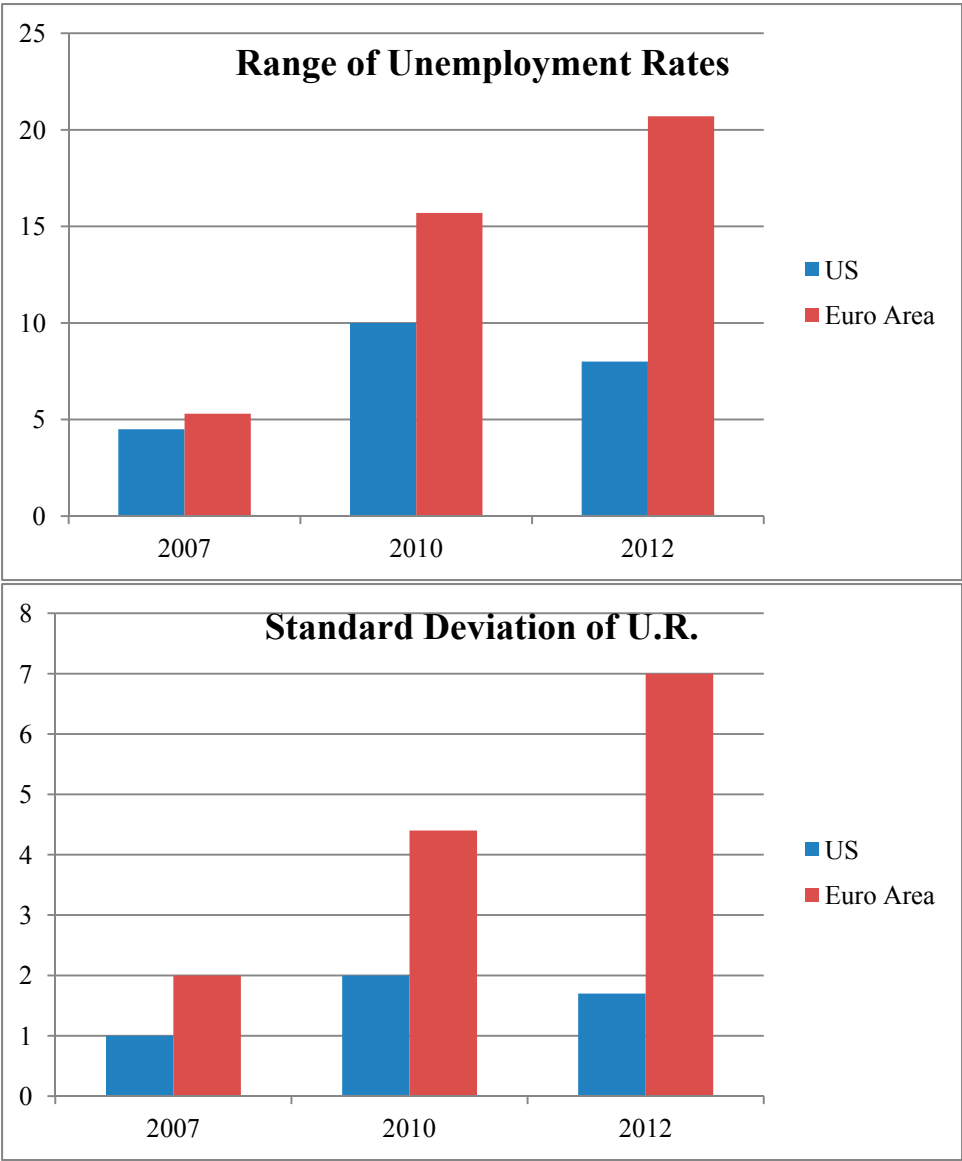
Figure 4:



Figures 5a & 5b



Figures 6a and 6b



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