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Sebastian Dullien, Martin Rapetti and Pablo Schiaffino

Can Argentina's Experience Help Predict the Effects of a Potential Grexit?

In the debate about a possible exit of Greece from the euro area, Argentina is often referred to as an example – both by those in favour of and those warning of the adverse effects of a Grexit. Yet, while Argentina pulled off an impressive economic recovery after its 2001-02 crisis – one that goes beyond a mere commodity boom – there are important structural differences between the two countries, which still render a potential Grexit a very risky endeavour.

When Greece stood at the brink of a debt default and banks were closed during the stand-off between the newly elected Syriza-led government and the country's creditors in the summer of 2015, memories of the Argentinian crisis of 2001-02 were invoked. While some warned that Greece could turn into an Argentina, implying that the situation could get much worse,¹ others claimed that following Argentina into default and into a strong depreciation could actually help Greece finally start an economic recovery.²

The background of this debate is that some authors see strong parallels in the crises in Greece and Argentina, viewing both as boom-and-bust cycles which left the countries in an overvalued position with balance of payment problems under a fixed exchange rate regime.³ Moreover, while Argentina has been seen as a pariah of

financial markets since its default, it has actually performed quite well economically (see Figure 1). The dispute is between those who claim that Argentina's recovery was due to the depreciation of the peso and the newly gained fiscal space thanks to the reduced interest burden⁴ and those who assert that Argentina just got lucky and surfed on the wave of rising commodity prices.⁵

While the debate on a Greek exit from the euro area has somewhat abated, it could resurface at any time. As of the spring of 2016, the Syriza-led government was again in negotiations over the terms of continuation of the bail-out programme. Moreover, while part of the austerity package promised in 2015 was swiftly enacted, other elements have been delayed. In addition, debt sustainability analyses of Greece began questioning once more whether the country could service its liabilities in the long term.

This paper attempts to assess what parallels really exist between Greece today and Argentina in the 2001-02 crisis. In particular, it will ask what role default and depreciation played for Argentina's recovery and what structural similarities or differences there are between the two countries that might make a replay of the Argentine experience more or less likely in Greece. As a reference scenario for Greece, the reintroduction of a national currency and a sovereign debt default is assumed.

For Argentina, our comparison will limit itself to the time from the default and depreciation in 2001-02 until the onset of the global financial and economic crisis in 2008. The reason for this choice is twofold: first, most observers

1 C. Reinhart: What Greece can expect, Bloomberg Views, 9 July 2015.

2 P. Krugman: Argentine Lessons For Greece, The Conscience of a Liberal, 9 July 2015.

3 See, for instance, R. Frenkel, M. Rapetti: A developing country view of the current global crisis: what should not be forgotten and what should be done, in: Cambridge Journal of Economics, Vol. 33, No. 4, 2009, pp. 685-702; and R. Baldwin, F. Giavazzi: The Eurozone Crisis: A Consensus View of the Causes and a Few Possible Solutions, London 2015, CEPR Press.

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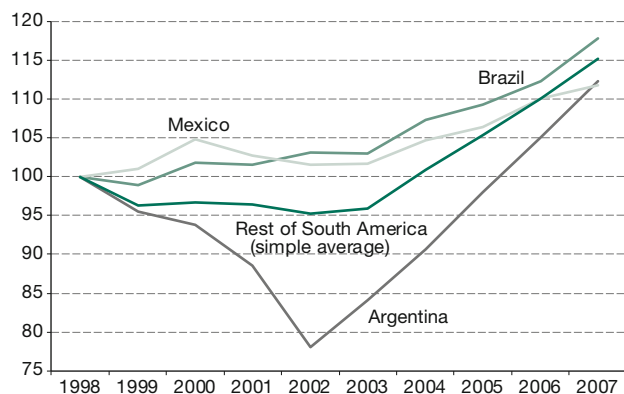
Pablo Schiaffino, Universidad Torcuato Di Tella, Buenos Aires, Argentina.

4 See for this position M. Damill, R. Frenkel, M. Rapetti: Macroeconomic Policy in Argentina During 2002-2013, in: Comparative Economic Studies, Vol. 57, No. 3, 2015, pp. 369-400; and M. Weisbrot, R. Ray, J.A. Montecino, S. Kozameh: The Argentine Success Story and its Implications, CEPR Washington, October 2011.

5 See for this position D. Gros: A tale of two defaults, CEPS Commentary, 12 July 2011.

Figure 1
Real GDP per capita in Argentina, Brazil, Mexico and the rest of South America

Index 1998=100



Source: International Monetary Fund.

see a fundamental shift in Argentina's macroeconomic policy stance between 2008 and 2010. Second, due to the Argentine government's interference in statistical measurements beginning in 2007, official data is quite murky and unreliable for the time thereafter.

Our contribution will first outline briefly the Argentinian crisis of 2001-02, the country's crisis management and its recovery thereafter. In a second step, it will evaluate the degree to which the conditions in Argentina during this time are comparable to those in Greece today.

The origins of Argentina's 2001-02 crisis

The most widespread narrative of Argentina's 2001-02 crisis emphasises fiscal mismanagement as the main driver of the crisis.⁶ It is hard, however, to reconcile this view with actual data. In 1998, when the confidence crisis started, Argentina's public debt was 38% of GDP, which is a relatively low value according to international standards, even for emerging markets. Until this moment, there was no sign of fiscal policy mismanagement. Since the adoption of the currency board in 1991, the government had been running an average primary surplus of 0.9% of GDP and an average total deficit of only 0.7% of GDP. Fiscal figures began to worsen in 1999. The government accumulated a deficit equivalent to 7.3% of GDP between 1999 and 2001; public debt rose to a peak of 54% of GDP in 2001. This deterioration occurred despite several attempts at fiscal consolidation and was largely due to two factors that were endogenous to the economic and con-

⁶ See, for example, M. Mussa: *Argentina and the Fund: From triumph to tragedy*, Peterson Institute, Washington 2002.

fidence crises. First, tax collection shrank due to the contraction of the economic activity. Second and most significant, the confidence crisis caused a rise in interest rates and thus raised the interest payments on public debt. Thus, fiscal underperformance was more a consequence than a cause of the economic crisis.

The widespread "fiscalist view" of Argentina's crisis may relate to the fact that the crisis was indeed triggered by the private sector's concerns about the sustainability of public debt. However, these concerns were based on the fact that 97% of the country's public debt was denominated in foreign currency. Consequently, fiscal solvency was highly dependent on the maintenance of the fixed exchange rate: if the peso were to be devalued, Argentina's public debt would become unsustainable. As a series of emerging market countries had started devaluing their currencies beginning in 1997, the fear that Argentina would follow their lead arose and spread in international financial markets. These concerns were not unfounded. There were clear signs that Argentina's peso was highly overvalued. The degree of real exchange rate overvaluation was in the 30-50% range, and the effects of such an overvaluation were reflected in the dynamics of the balance of payments.⁷ Since the adoption of the currency board, both the trade balance and the current account had always been negative, except for during the years of economic recession. As a result, external debt increased between 1991 and 2001 from 4.2 to 5.3 times the value of exports.

Thus, Argentina's crisis was not a fiscal crisis but a balance of payments crisis or, using the jargon adopted for the eurozone, a "sudden-stop" crisis.⁸ In other words, given the overvaluation of the peso, Argentina could not grow without running increasingly larger current account deficits. The real exchange rate misalignment had to be corrected, and this would make public debt unaffordable.

Argentina's approach to crisis management

Devaluation would not only make default unavoidable; it would also generate several other significant challenges. Given Argentina's history of high inflation and the small stock of international reserves at the central bank, devaluation – especially if carried out through a free-floating scheme, as demanded at the time by the IMF – could lead

⁷ See, for instance, G. Perry, L. Servén: *The anatomy of a multiple crisis: why was Argentina special and what can we learn from it?*, World Bank Policy Research Working Paper No. 3081, Washington 2003.

⁸ See R. Baldwin, F. Giavazzi: *The Eurozone Crisis: A Consensus View of the Causes and a Few Possible Solutions*, London 2015, CEPR Press.

to a depreciation-inflation spiral and put the economy on a path to high or even hyper-inflation. Inflation, in turn, would reduce real incomes, output and employment in the short run, negatively affecting the unemployment and poverty rates. Finally, because the US dollar was widely used for private contracts, devaluation would involve massive wealth and income redistributions. The dollarisation of contracts was prevalent in rentals, public utility rates and, most importantly, the balance sheets of banks. Indeed, in December 2001, around 72% of bank credit to the private sector was denominated in US dollars.

In order to address all these challenges, the Argentinian approach to crisis management was based on four main pillars: 1) the default and restructuring of public debt; 2) a strategy to stabilise the exchange rate and prices; 3) a comprehensive cash-transfer programme to contain the negative effects of the crisis on the most vulnerable social groups; and 4) the transformation of dollar-denominated contracts into pesos, the so-called “pesification” of contracts.

The default was announced in late December 2001, a few weeks before the devaluation. Then, devaluation made clear that servicing the public debt was unaffordable. Mostly due to the adverse effect of the devaluation on nominal GDP, the public debt-to-GDP ratio jumped from 54% in 2001 to 153% at the end of 2002. Of \$144.5 billion of total debt, the government defaulted on almost \$70 billion, while continuing to service domestic debt (\$42 billion) and debt with multilateral institutions (\$32.4 billion). The defaulted debt remained non-performing until a voluntary debt swap operation carried out between January and May 2005. More than 76% of the debt in default participated in the 2005 swap, in which \$62.3 billion of the old bonds were exchanged for about \$35.3 billion of new instruments. A second debt swap operation under the same terms occurred in 2010. This time, another 16% of the defaulted debt entered in the swap operation. Only eight per cent of the original debt remained in default, including bonds held by “vulture funds”, which sued Argentina in the New York courts and ultimately received a favourable ruling in 2014.⁹

In early January 2002, the currency board was replaced by a dual foreign exchange (FX) market: one for international trade transactions and a few financial operations with a fixed rate of 1.40 pesos per dollar, and another one for all the other operations with a free-floating exchange

rate. The idea was to use this scheme only temporarily, in order to stabilise the exchange rate while domestic prices absorbed the impact of devaluation, and then to adopt a free-floating arrangement. However, this strategy was quickly abandoned. Pushed by the IMF, the government unified the FX markets and let the peso float. The peso collapsed abruptly; after a few months, the exchange rate reached levels close to four pesos per dollar. The central bank managed to stabilise the exchange rate by mid-2002 through a series of measures aiming to curb the demand and to induce the supply of FX. The most important measures were the obligation to surrender export proceeds above \$1 million, the introduction of controls on FX transactions and the rise of domestic interest rates to a peak of 115%. These initiatives were successful and helped the central bank to consistently accumulate FX reserves.¹⁰

Although the pass-through on prices was small due to high unemployment, inflation did accelerate. In 2002, consumer price index (CPI) inflation reached a peak of 41%, and the average real wage fell by 24%. The contractionary effect of devaluation was powerful during the first quarter of 2002, when GDP fell about five per cent. As a result, unemployment reached a peak of 22%, and half of the population fell below the poverty rate. A cash transfer programme launched in early 2002 was key to stabilising this delicate social situation. The programme targeted unemployed heads of households and reached almost 2 million poor families. It amounted to about one per cent of GDP. The introduction of tariffs on primary exports (e.g. soybeans, wheat, meat and oil) was important to curb the pass-through of the devaluation to domestic prices and the contraction of real incomes. Besides, the revenues captured with these tariffs – together with lower debt services due to the default – helped finance public spending, including the cash transfer programme.¹¹

The fourth main element of the crisis management strategy was the “pesification” of previously dollarised contracts, which neutralised the effects of devaluation on debtors’ balance sheets and on households’ and tenants’ real income. Rentals, public utility rates, bank credits and other debts were converted to pesos at an exchange rate of one peso per dollar. Jointly with pesification, rentals and other contracts were indexed to CPI inflation, bank

⁹ For details of the debt restructuring process, see M. Damill, R. Frenkel, M. Rapetti: *The Argentinian Debt: History, Default*, in: B. Herman, J.A. Ocampo, S. Spiegel (eds.): *Overcoming Developing Country Debt Crises*, New York 2010, Oxford University Press.

¹⁰ For details on the stabilisation of FX market and the monetary policy over this period, see R. Frenkel, M. Rapetti: *Five years of competitive and stable real exchange rate in Argentina, 2002-2007*, in: *International Review of Applied Economics*, Vol. 22, No. 2, 2008, pp. 215-226.

¹¹ The default significantly increased the fiscal space during the crisis management period: while in 2001 the government spent 3.8% of GDP on debt interest payments, in 2004 it only spent 1.3%. The debt-servicing burden remained low on the restructured debt, as interest payments averaged 1.9% of GDP between 2005 and 2008.

credits to wage inflation, and public utility rates were not indexed at all. Banks' deposits were converted to pesos at a rate of 1.4 pesos per dollar and indexed to CPI inflation. The government issued debt to compensate commercial banks for this "asymmetric pesification" of their balance sheets (a higher exchange rate for deposits than for credits) and the "asymmetric indexation" schemes (wage indexation for credits vis-à-vis CPI indexation for loans). Because the FX market had not yet been stabilised at the time of the pesification, the authorities also decided to extend the maturity of all banks' time deposits, including those newly converted to pesos. This measure – colloquially known as *corralón*, i.e. the big fence – was meant to prevent depositors from converting their pesos to dollars and thereby putting more pressure on the foreign exchange market.

Argentina's post-crisis recovery

In a development that was rather unexpected by most observers, Argentina's economy began a rapid and strong recovery in mid-2002 that it succeeded in transforming into enduring economic growth. Between the first quarter 2002 and third quarter 2008 – when the effects of the US financial crisis began to spread to the rest of the world – Argentina's GDP grew at a stable annual rate of eight per cent. To be sure, part of this process was not accelerating underlying economic growth but just a post-crisis recovery. However, from the first quarter 2005 – when GDP surpassed the pre-crisis peak – the average annual growth rate was 7.7%. This suggests that the shift from recovery to growth was not accompanied by a sizable deceleration. Economic growth was accompanied by a rapid rise in employment as well as by a significant reduction of poverty. Between 2002 and 2008, unemployment fell from 22% to 7.9%, and the poverty rate is estimated to have fallen from 59% to 24%.¹²

A combination of factors may explain this favourable performance. The improvement of the external environment during this period – in particular, the rise of terms of trade – had a positive effect on economic performance. However, it is difficult to point to this as the main factor. Terms of trade actually remained below the pre-Asian crisis level until early 2004 and only began to boom in 2006, when the economy had already fully recovered and was rapidly growing. On the other hand, Argentina – contrarily to other countries in the region – remained largely excluded from the surge of capital inflows to emerging markets during this period. It is therefore hard to assign exclusive credit to external elements in explaining the country's favour-

able economic performance; other elements have to be brought into the analysis.

The macroeconomic policy targeting a stable and competitive real exchange rate (SCRER) became a central component of Argentina's macroeconomic strategy and proved to be a key factor behind the economic recovery and growth between 2002 and 2008. To give a sense of the degree of exchange rate competitiveness that the government targeted, it is worth noting that between 2003 and 2008, the central bank kept the multilateral or effective real exchange rate stable around 45% lower (i.e. more competitive) than the 1991-2001 average.

In the short run (i.e. 2002-03), a SCRER stimulated domestic demand and fostered economic recovery through three main mechanisms. First, it boosted private demand via import substitution. Second, helped by newly introduced tariffs on commodity exports, it stimulated public spending, especially social spending, through the cash transfer programme. Third, it boosted private spending – especially residential investment – due to the positive wealth effect that the real devaluation-cum-pesification had on the private sector's balance sheet. This effect was not trivial: the private sector's net position in US dollars was \$131 billion in 2002, i.e. close to \$3,600 per capita.

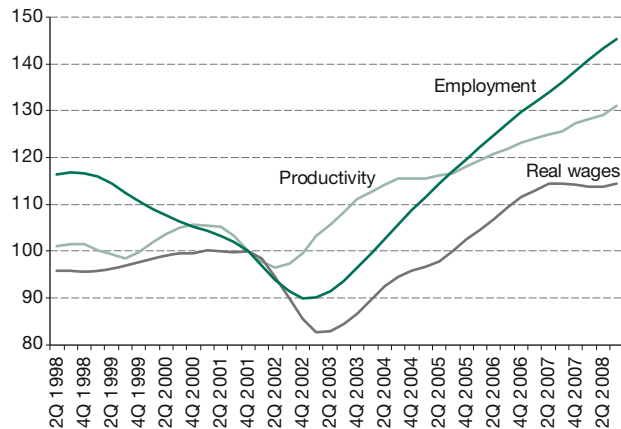
Beyond the short run, a SCRER fostered GDP growth by stimulating investment and growth in tradable sectors such as agricultural activities, manufacturing and some special tradable services (e.g. professional consulting), and also by promoting macroeconomic stability. Regarding the latter, a SCRER helped Argentina run both current account and fiscal surpluses while accumulating international reserves. This macroeconomic environment reduced the risk associated with sudden stops – which have been the traditional source of growth interruptions in Argentina – and stimulated spending and investment. The investment rate between 2003 and 2008 averaged 21.4%; this compares with a rate of 17.6% during 1991-1994, the fastest growth period under the currency board. The manufacturing sector experienced a virtuous process of recovery and growth of employment, real wages and productivity (see Figure 2). The performance of non-commodity exports was also strong between 2001 and 2008. Manufacturing exports grew at a 15% annual rate and diversified their markets. More notably, exports of services based on high-skilled labour – including IT, audiovisual and professional consulting – increased by a factor of ten, rising from \$490 million in 2001 to \$5.07 billion in 2008.

Argentina's successful performance with a SCRER was first interrupted by the effects of the global financial crisis and later by a shift in the country's macroeconomic policy

¹² See. M. Damill et al.: Macroeconomic Policy... op. cit.

Figure 2
Manufacturing sector performance: real wages, labour productivity and employment

Index: 4Q 2001=100



Source: Argentine Bureau of Statistics (INDEC).

orientation towards a more inward/populist strategy. This new macroeconomic strategy led to a significant and sustained real exchange rate overvaluation, stagnation and ultimately to a balance of payments crisis during the 2012-15 period. For the purpose of this article, it is important to stress that the decisions and outcomes during this period were unrelated to the country's path out of the 2001-02 crisis.¹³

Greece's path into the crisis: parallels to Argentina

While at first sight the Greek crisis looks more like a typical fiscal crisis caused by overspending – the country recorded debt-to-GDP ratios of more than 100% since its accession to the eurozone in 2002 – the story is more complicated. Similarly to Argentina after the introduction of the currency board, capital inflows surged when Greece joined the euro. In both countries, risk premia on both government bonds and in the interbank market fell sharply relative to the US and German markets. This made foreign borrowing cheaper and easier for both the government and the private sector. Capital inflows fuelled domestic credit, yielding increases in investment and private consumption and accelerating economic growth.

Capital inflows went hand in hand with a real appreciation in both countries. The forces which led to this real appreciation, however, were somewhat different. As growth accelerated in Greece, unemployment fell and wages rose.

¹³ For a discussion of the shift in the macroeconomic policy orientation from a SCRER-led strategy to a populist-led one, see M. Damill et al.: *Macroeconomic Policy ...*, op. cit.

In Argentina, real appreciation largely occurred as a result of the abrupt disinflation following the pegging of the peso to the US dollar in 1991. As in all successful disinflation experiences that used the exchange rate as the main nominal anchor, real appreciation resulted from the faster disinflation of tradable prices than non-tradable prices and wages. With a fixed exchange rate and open trade, tradable prices decelerated more rapidly than non-tradable prices and wages because they faced competition from foreign goods, whereas the latter maintained some inertia from the inflationary past. As productivity did not increase quickly enough to counteract non-tradable rising costs (including wages), both countries experienced a pronounced appreciation of their real effective exchange rates. Both the income effect and the deterioration of domestic companies' competitiveness led to a surge in imports and rising trade deficits. Capital inflows and current account deficits led to sharp increases of foreign debt in both countries, making them highly vulnerable to negative external shocks.

As in Argentina, the problems in Greece turned serious when the external environment deteriorated. In the case of Argentina, the deterioration began with the reversal of capital inflows to emerging markets after the 1997 Asian financial crisis, but it turned especially hard in 1999 after the currency devaluation in Brazil, Argentina's main export market. In Greece, the deterioration was triggered by the Great Recession that followed the default of the US investment bank Lehman Brothers in 2008-09, which led to a collapse of exports and output and eventually triggered the European sovereign debt crisis of 2010.

A second parallel is the lack of debt sustainability at the onset of the crisis. Similarly to Argentina, the combination of economic depression, higher interest rates and real exchange rate overvaluation made the Greek debt level unsustainable. While the first debt sustainability analysis (DSA) by the IMF and the EU in 2010 came to the conclusion that Greek debt could be made sustainable by harsh austerity programmes, it later turned out that this conclusion was based on completely unrealistic assumptions of low fiscal multipliers. Given that a competitive real exchange rate level within the euro area could only be reached by internal devaluation, which would bring down prices and hence nominal GDP (and consequently would push up the debt-to-GDP ratio), Greek debt was not sustainable. Despite the debt restructuring in 2012, the situation has not fundamentally changed. According to the IMF's recent DSAs, Greek debt is still not sustainable.¹⁴

¹⁴ International Monetary Fund: *Greece: An Update of IMF Staff's Preliminary Public Debt Sustainability Analysis, Country Report No. 15/186*, Washington DC, 14 July 2015.

What Greece can learn from Argentina's experience

Given these similarities, it is worth pondering whether a Greek exit from the euro area would share some similarities to Argentina's default and exit from the currency board.

First, the reaction of the exchange rate to the introduction of a new currency in Greece could be expected to be similar. Real exchange rate overvaluation in Argentina before devaluation was in the 30-50% range. The correction of the misalignment was not smooth, and the exchange rate strongly overshoot. Uncertainty about the future course of economic policy and the default led to capital flight, triggering a 75% depreciation of the peso in just six months. Even though Greek overvaluation is probably much less, there is no reason to expect that a new currency would behave much differently in Greece; an exchange rate overshooting could also be expected. It is reasonable to think that an exchange rate overshooting might have severe impacts on domestic prices and inflation, which we discuss in the next section.

Second, Greece could be expected to default on its government debt after a depreciation, just as Argentina did. Greek debt is currently 180% of GDP, and it is basically all denominated in euros. As mentioned above, this level is already deemed unsustainable by standard debt sustainability analyses. If Greece leaves the euro area and its new currency depreciates, the value of its debt in domestic terms would skyrocket. In such a case, Greece would clearly stop servicing its debt. It would thus need to find some solution for its debt – either an outright default or some kind of restructuring. Moreover, given that Greek banks hold a significant share of the outstanding public debt, it is likely that in such a scenario Greece would need to find some solution for its banking sector as well.

Third, Greece could learn from Argentina about de-dollarising (or de-euroising) the balance sheets of households, banks and companies. As discussed above, the de-dollarisation (or pesification) of bank balance sheets was asymmetric and involved significant fiscal costs (i.e. the government had to issue new bonds to compensate both banks and savers, totalling about 5.4% of GDP). Asymmetric pesification was meant to mitigate the discontent of depositors who saw their deposits in dollars evaporate. While it is certainly very difficult to administer situations that involve significant redistributions of wealth, it seems clear that a lack of planning in Argentina made the pesification and asymmetric indexation processes even costlier than they had to be. If Greece is forced to exit the euro area, it would be well advised to choose a more straight-

forward way of de-euroising its banking sector by converting all assets and liabilities at the same parity to the new currency and with a symmetric indexation mechanism that would protect both banks and depositors from inflation without carrying a fiscal cost.

Where Greece is different

Despite all these similarities, however, there are also a number of crucial differences between Argentina and Greece that make a direct transfer of the Argentinian experience to Greece difficult.

The first, most obvious, difference is that Greece does not have its own currency anymore, while Argentina still had the peso. This difference has two important dimensions. First, it might be physically difficult to introduce a new currency. Second, the Greek population might be unwilling to hold on to the new currency and convert all of it to euros as quickly as possible.

On the physical challenges of a currency reform, a number of authors have pointed out that it took the US army several months to prepare the introduction of a new currency in Iraq and that it was a major logistical challenge to distribute the currency across the country.¹⁵ However, this comparison might overstate the problems. First, Greece is not a country in a civil war. Systems and procedures are in place to distribute bank notes to banks and ATMs. Second, if Greece were to introduce a new currency, the issue would not be to exchange old currency against new; rather, authorities could simply print new currency and provide it to banks and ATMs, as the Greek population would by and large be expected to hold on to their euro notes and coins as assets. Third, the changeover would not have to happen overnight without hiccups. Payments could still be made by bank transfer (with deposits converted into the new Greek currency) and with euro cash (at the current exchange rate vis-à-vis the new currency).

The willingness of the Greek population to hold a newly introduced currency might be more of a problem. Argentina, on the contrary, had its own currency that had relatively solid demand from the country's population. The purpose of introducing a new currency in Greece would be to obtain an immediate improvement in terms of international competitiveness. In such a scenario, it is conceivable that the expectations of depreciation against the euro would depress the demand for the new currency. A massive switch from the new currency to euros could

¹⁵ See e.g. Y. Varoufakis: Germany won't spare Greek pain – it has an interest in breaking us, in: *The Guardian*, 10 July 2015.

generate further depreciation pressures on the new currency. This would certainly have an impact on inflation. It is important in this regard to bear in mind that Greece is – in global comparison – a rather open economy; in fact, it is much more open than Argentina was in 2001, and therefore the pass-through of depreciation on domestic prices might be large. High inflation (or even hyperinflation) is a real threat in the case of a Grexit.

Linked to this is the different degree of financial depth in the two economies. Argentina has traditionally been an economy with a low credit-to-GDP ratio, and this ratio declined even further after the default and depreciation. Before the crisis, domestic credits by the private sector peaked at 23% of GDP in Argentina, whereas in Greece, bank loans to corporates and households have contracted, but still stand at around 100% of GDP. A new meltdown of the Greek banking system due to a mishandled changeover or a massive repudiation of a new currency might thus have much more severe consequences for the Greek economy than it did in Argentina.

Another important difference is that Greek debt is mainly obligations to multilateral institutions and the rest of the euro area. According to the *Wall Street Journal*, in the spring of 2016, the Greek government owed 71% of its roughly €320 billion in upcoming debt service and repayment to other euro area governments and institutions such as the European Financial Stability Facility, seven per cent to the European Central Bank, about five per cent to the IMF, and only about 17% to private creditors.¹⁶ Widening the scope beyond the government to include the broader public sector, including the central bank, these amounts are even larger. In addition to the government's debt, at the end of 2015, the Greek central bank had liabilities against the European System of Central Banks (ESCB) from TARGET2 balances of roughly €100 billion. Taking these liabilities into account, overall, only about 13% of total debt is held by the private sector.

The reverse was true for Argentinian debt in 2001, of which only 22% of total debt was held by multilateral institutions, with the remaining 78% held by private creditors.

The difference in the debt structure makes a default easier in some ways, but more difficult in others. The fact that Greece only faces a handful of creditors means that, in principle, a compromise should be easier to strike than was the case for Argentina, where a handful of creditors

held out, blocked any debt deal and finally went through US courts to challenge the default.

At the same time, the nature of Greek debt makes it potentially more harmful to default on. As a member of the European Union, Greece depends on the EU market for most of its exports. In principle, the introduction of a new currency is against the European treaties. Moreover, Greece's EU partners might be annoyed if it stops servicing its bilateral debt to them and to the European institutions. Hence, in principle, the rest of the EU could react with sanctions or the withdrawal of trade preferences, hindering future exports. Moreover, defaulting on its TARGET2 liabilities to the ESCB might result in Greece being cut off from the TARGET clearing system, which would render Greek companies and banks unable to make and receive payments from abroad.

However, there are a number of indications that an exit from the eurozone (even with a default) might not trigger such harsh responses. First, the German Finance Minister Wolfgang Schäuble indicated during the negotiations over a new loan package in the summer of 2015 that a Grexit could be supported by debt relief. Second, Greece has a central position both in the current refugee crisis and geo-strategically, both of which might make the EU reluctant to punish Greece with sanctions after a Grexit.

A final difference between Greece and Argentina concerns the production structure of the two economies. Some authors have made the argument that Argentina has benefited mainly from a commodity boom. According to this line of argument, since Greece does not export many commodities and no price boom is on the horizon, it would not see a quick recovery after a default and depreciation.¹⁷ However, this argument is probably overstressed. As discussed above, the initial recovery in Argentina came before the commodity price boom, and the performance of manufacturing activities and tradable services was particularly strong during the 2002-08 period. It seems clear that these activities profited from the advantages created by a competitive exchange rate.

Nevertheless, it is uncertain whether the Greek economy would benefit from a competitive exchange rate as much as Argentina did. A central question here is whether Greece still has a manufacturing base from which it could see a recovery of manufacturing output. The recovery in Argentina came partly through import substitution, which worked because old and idle production capacity was

¹⁶ C. Forelle, P. Minczeski, E. Bentley: Greece's Debt Due: What Greece Owes When, *Wall Street Journal*, 19 February 2015, available at <http://graphics.wsj.com/greece-debt-timeline/>.

¹⁷ C. Alcidi, D. Gros: The Greek economy is unlikely to benefit from further devaluation, CEPS Commentary, 3 July 2015.

still present that could be put to work once the conditions changed. The open question is whether Greece also has such capacities or, on the contrary, it has been deindustrialised for too long to build upon an existing base. Additionally, the fact that South American countries – the main destination for Argentina’s manufactured exports – experienced a boom beginning in 2004 differs from Greece’s current situation, in which the European Union has been facing a prolonged stagnation for several years. A positive reaction of tradable services in Greece may be a more likely possibility.

Uncertainty remains

We have stressed the existence of important parallels between Argentina in 2001-02 and Greece currently. However, the differences between the two countries are significant enough to remain cautious in forecasting that the Argentine experience of a relatively positive economic performance after default and devaluation can be transferred to Greece.

We have made the case that some of the common arguments about Argentina’s recovery – such as the claim that it was primarily driven by commodity prices – do not really hold up to scrutiny. We have shown that it was not only the boom of commodity prices that explained Argentina’s successful economic performance during the 2002-08 period but also the country’s economic policy based on maintaining a stable and competitive real exchange rate and sound fiscal figures. This more accurate description of facts, however, does not imply that Argentina should be taken as a model to pursue a Grexit. We have emphasised several concerns that might make such an option quite difficult. The introduction of a new currency, for instance, entails a not insignificant risk of high inflation (or even hyperinflation). Moreover, there remain important question marks about the current state of Greece’s productive capacities and hence the price elasticities of supply. Finally, the Greek banking system still has much more room for a contraction after the introduction of a new national currency.

Given these risks, the better outcome would appear to be to find a solution to the unsustainable Greek debt level inside the euro area and some sort of financial help to support the structural transformation necessary to make Greece’s economy competitive. However, striking a deal with its EU partners that will sustainably resolve the country’s debt problems has proven difficult. If a solution to Greece’s current over-indebtedness remains elusive while it remains part of the euro area, the uncertain costs of a Grexit might become more attractive than the known costs of permanent stagnation.