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THE KNOWN UNKNOWNS AND UNKNOWN UNKNOWNS OF EMU

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Highlights

- Extensive prior research on the economics of European monetary union highlighted some potential risks (the known unknowns) but overlooked others (the unknown unknowns). Asymmetries among participating countries, the potentially destabilising character of a one-size-fits all monetary policy, the weakness of adjustment mechanisms, the lack of incentives for fiscal discipline, the possibility of sovereign solvency crises and their adverse consequences were all known and understood. But policymakers often relied on a complacent reading of the evidence.
- The potential for financial disruption was vastly underestimated. Economists generally did not consider, or underestimated, the possibility of balance-of-payment crises such as those experienced by southern European countries, or the risk of a feedback loop between banks and sovereigns.
- Remedying EMU's systemic deficiencies is on the policy agenda. Banking union would go a long way towards addressing the fault lines. The urgent question for economists is if it is going to be enough and, if not, what else should complement the 'bare-bones' EMU of Maastricht.

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THE KNOWN UNKNOWNS AND UNKNOWN UNKNOWNS OF EMU

JEAN PISANI-FERRY, OCTOBER 2012

THE EUROPEAN CRISIS IS OF SUCH MAGNITUDE that it forces us to ask ourselves new questions and rethink answers to old ones. Building on Donald Rumsfeld's famous distinctions, one can speak of the *'known unknowns'* and the *'unknown unknowns'* of monetary union. There were, indeed, things we knew we did not know: some questions were raised long ago, but never properly answered and then forgotten, or buried, until the crisis broke out and shone the spotlight on them. At least for academics, who can refer policymakers to old writings full of neglected warnings, and largely also for the policymakers themselves who knew problems could arise, these were non-surprises.

But there were also things that we did not know we did not know: genuine surprises that were not, or not fully, foreseen in the academic literature, and that were not discussed by policymakers. These unknown unknowns lead us to re-examine assumptions about the economics of the common currency, and to rethink the policy architecture of economic and monetary union.

1 KNOWN UNKNOWNS

The first thing everyone knew was that the countries participating in the monetary union were no siblings. At the time of joining they had significant structural differences (in terms of, for example, their degrees of development, specialisation and labour market institutions) and had different macroeconomic histories, notably in respect of inflation and the exchange-rate regime. The whole discussion during the 1980s about the wisdom of creating a monetary union was about the degree of convergence reached, and if a common currency could be envisioned before economic integration had made further progress.

Significant research effort was devoted in the 1990s to testing if would-be participants in the euro were fit for currency unification. The main research strategy was to 'operationalise' Mundell's theory of Optimal Currency Areas (OCA) and develop *ex-ante* criteria for assessing the potential consequences of monetary unification. 'Operationalise' was a term first used by Tam Bayoumi and Barry Eichengreen (1999), but it applies to a much wider strand of research than their own[1].

The main conclusion from this research programme was that compared to the benchmark case of the US, European Monetary Union (EMU) would be characterised by stronger asymmetry across countries (especially the peripheral countries) and would only be able to rely on significantly weaker adjustment mechanisms (especially because of the low degree of labour mobility and the absence of any risk-sharing arrangement).

Based on these assumptions, concerns were expressed about the destabilising impact of a one-size-fits-all monetary policy. They were probably best captured in a simple but powerful argument put forward by Sir Alan Walters, the former economic adviser to British PM Margaret Thatcher, who argued that in the presence of major asymmetries across countries, a single monetary policy would result in country-specific inflation which would reduce the real interest rate and have destabilising pro-cyclical effects.

Against this background, two debates emerged in the 1990s. Although there was little doubt that EMU was not born with the genes of an optimal currency area, the first debate concerned the possibility of the euro turning *endogenously* into an OCA. Jeff Frankel and Andrew Rose (1997, 1998) argued that a common currency would act as a powerful driver of convergence and that its trade-creation effect would result in a higher degree of business-cycle harmonisation, which in turn would ease the task of monetary policy. However, Paul Krugman (1993) argued instead

1. References to the literature are kept at minimum in this paper. It is not intended to be a comprehensive survey.

that the paradox of currency unification would be that by reinforcing agglomeration effects, it would ultimately strengthen, rather than ease, specialisation and asymmetry.

The second debate was about the Walters critique. The destabilising effects of a one-size-fits-all interest rate was rebutted on the grounds that, with rational expectations, agents would internalise the monetary constraint and prevent a lasting real exchange-rate appreciation (Emerson *et al*, 1990; Miller and Sutherland, 1993). In other words, the optimistic view was that the real exchange-rate channel would be strong enough to balance the effect of the interest-rate channel. Optimism even continued to prevail after a degree of inflation persistence was found in the early years of EMU (Hoffmann and Remsperger, 2005): in the mid-2000s, it was hoped that remaining divergence would be short lived.

It is striking to observe the degree to which optimistic convergence bets were wrong. From 1999 to 2007 – nine years in total, until the global crisis took over and markets started discovering who was bathing without a swimming suit – intra-euro area differences accentuated, real exchange-rate misalignments aggravated, the traded-goods sector shrank in the South and grew in the North, current-account imbalances widened and net foreign asset positions built up. The common monetary policy translated for the southern countries into too-low interest rates, triggering a major credit boom that fuelled domestic demand and resulted in an unprecedented increase in private indebtedness. Against this background, hopes that trade-creation effects could reduce asymmetries turned out to be naive. Trade creation has been in fact very weak (estimated at around 5-10 percent of GDP, see Baldwin *et al*, 2008). At the same time, evidence seems to suggest that agglomeration effects have been present, as the share of northern Europe (Germany, Austria, Finland and the Netherlands) in euro-area manufacturing production grew from 46 percent in 2000 to 51 percent in 2011.

An interesting issue for discussion is whether these developments were the inevitable consequences of monetary unification or the result of the particular set of exogenous conditions that prevailed during 1997-2008: the fast pre-unification convergence of southern bond rates towards those of the North, the German drive to structural reform after it was realised that it had entered the euro at an unfavourable exchange rate, high risk appetite during the 2000s or shocks coming from the growing participation of central and eastern Europe in European production networks – thereby strengthening northern European and especially German manufacturing. Both a macroeconomic and a structural reading of the euro crisis are indeed possible, and there has been no attempt to discriminate between them. Whichever is the most relevant, however, what is clear is that policy responses to these asymmetries were weak at best, and were in fact mostly non-existent.

A second, prominent topic in the pre-EMU literature had to do with the consequences for public finances of monetary unification. It was pointed out early on that monetary union involved a risk that incentives to fiscal laxity would be strengthened (see for example Beetsma and Bovenberg, 2001); that games of chicken in the Sargent-Wallace (1981) vein could be played between monetary and fiscal policy; and that the internalisation or not by governments of fiscal discipline constraints was a major issue for the stability of monetary union, because sovereign crises could have severely disruptive effects. Re-reading the 1998 article of Barry Eichengreen and Charles Wyplosz, one can only be struck by its prescient character. The *ex-ante* literature also discussed if markets would price sovereign risk accurately, especially as signals sent by the policy system were ambiguous: the so-called no-bailout clause was meant to give markets an incentive to price the risk of default, but the European Central Bank's collateral policy did not discriminate between sovereign bonds (Buiter and Sibert, 2005). On the whole, it is also fair to say that the risk that a fiscal crisis

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would morph into a financial crisis was correctly anticipated.

Finally, there was a specific discussion on the ability of the ECB to act as a lender of last resort to the banking system, especially in view of its price-stability focus and the absence of an explicit financial stability mandate (Prati and Schinasi, 1999). Here, worries expressed in the literature proved to be excessive, as the ECB in 2007 did not hesitate long before providing wholesale liquidity to the banking system. The central bank's genetic code was strong enough to compensate for the absence of explicit treaty provisions.

Against this background, why were warnings, especially about the risk of economic divergence, largely ignored by policymakers? One reason was that EMU was an economic endeavour based on a political decision, but even under these circumstances, policy could have been geared towards getting member countries and the euro area as a whole into shape for the new policy regime. This did not happen. When drawing on the literature, European policymakers too often practised selective reading, with worries dismissed and the optimistic interpretation prevailing. There was, for example, much too much confidence that EMU could develop into an optimal currency area. perhaps inevitably, selection criteria were set in nominal rather than real terms, thus making entry feasible also for countries with weaker fundamentals. Post-entry however, and less inevitably, there was no mechanism (and, more importantly, little willingness) to ensure real convergence. Also inevitably, meeting the public debt ratio criterion was not considered mandatory but, less inevitably, the commitment to bring it down once in the euro was weakly enforced, to say the least. In general, member countries often considered they had done enough by meeting the explicit entry criteria. Considering that the euro was spurring favourable macroeconomic conditions, they deemed it superfluous to embark on the politically unappealing processes of structural reform and fiscal consolidation.

The complacent reading of the literature also provided a cover for the avoidance of difficult choices. The assumption that the private economy was inherently stable, even under this particular type of macroeconomic policy guidance, opportunely meant that it was easier to avoid politically difficult discussions on the reforms needed to make EMU resilient, and on the appropriateness of oversight of national structural and financial policies. The convenient fiction was that, provided government abided by fiscal discipline, economic and financial stability would be ensured and there was therefore no need to go beyond the already hard-to-implement Stability and Growth Pact.

Therefore, if concerns were not transposed into concrete action, economist should not be blamed – though they could have been more vocal. Rather blame should be apportioned to policymakers who too often opted for complacency when designing the building blocks of what turned out to be a perilously weak monetary union. In fact, and unsurprisingly perhaps, warnings were only taken seriously by those governments that had political or doctrinal reservations about European monetary unification, such as the United Kingdom and Sweden. In the UK, the Treasury prepared a formal report to assess if the 'five economic tests' set by the government for joining the euro were fulfilled (HM Treasury, 2003). Although selective and on the whole biased, the report was at least a coherent attempt to provide an economic basis for the policy discussion. No such reports were prepared in the vast majorities of countries that decided to join the euro.

2 UNKNOWN UNKNOWNS

The real surprises, however, were not on the macro-adjustment front. They came instead from what was considered to be the most significant achievement of monetary unification, namely financial integration. It was expected (and hoped) that the single currency would spur integration across the previously fragmented European financial markets – which indeed happened. But the implications of such financial integration and the potential for destabilising developments were not fully understood.

Economists mostly believed this integration would be stabilising. Portfolio diversification and access to credit markets were expected to make national income and wealth less dependent on national production, and to make national demand less

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dependent on national income. As shown by Asdrubali, Sorensen and Yosha (1996), in the US, financial integration was a powerful risk-sharing channel across states, and unlike migration or the creation of a federal budget, it was a direct consequence of EMU.

The first surprise has been the strength of the negative feedback loop between banking fragility and sovereign weakness – a salient feature of the euro crisis. The potential for financial destabilisation resulting from it was ignored – as more generally was the overall risk of financial instability. For sure, the existence of such a loop was not an unknown unknown. The correlation between fiscal and banking crises is a well-known stylised fact that emerges from historical experience, and as I have noted, the destructive potential for the euro area of sovereign crises was foreseen. What was not foreseen was the degree to which bank-sovereign interdependence could create a potential for self-fulfilling crises.

There are two reasons why euro-area banks and sovereigns seem to be indissolubly linked. Member states keep individual responsibility for the rescue of their national banking systems and the huge size of such systems in the euro area – the average bank assets-to-GDP ratio is 350 percent in the EU – implies that the fiscal consequences of banking failures are potentially large enough to bring state solvency into question. In the absence of a supranational resolution framework, problems in the banking system can raise doubts about the sovereign's own creditworthiness – which in turn weakens the value of the implicit guarantee provided by the state to the banking system and threatens the solvency of banks. At the same time, however, domestic banks still hold on their balance sheets a considerable share of the debt issued by their domestic governments. As each euro-area member is solely responsible for the debt it has issued, any doubt about sovereign solvency has the potential to also harm the banking system. In addition, the ECB does not have the power or the mandate of a typical national central bank and it may not ease tensions by playing the role of lender of last resort to governments, in the way that the Fed or the Bank of England are allowed to do. As observed by Paul De Grauwe (2011), these features render the euro area especially fragile. In the same way, there was a trilemma between fixed exchange rates, free capital flows and independent monetary policies: a sort of impossible, or at least uncomfortable, trinity between the strict prohibition of monetary financing, the no co-responsibility for public debt and the persistence of deeply national banking systems and banking policies (Pisani-Ferry, 2012).

The second 'unknown unknown' revealed by the euro crisis was the fact that countries within a monetary union can become subject to balance-of-payment crises. This possibility was almost completely overlooked in the pre-EMU literature. The general agreement was that within a monetary union, balance of payments would become as irrelevant as they are across regions within the same country (see Ingram (1973) for an early assessment). Persistent current account imbalances were discussed, but they were interpreted as evidence of capital flowing downhill (as expected based on theory) and a welcome decoupling of savings and investment at national level. In a way, monetary union was expected to provide a response to the Feldstein-Horioka paradox (Blanchard and Giavazzi, 2002). The exception was Peter Garber (1998) who correctly pointed out that the TARGET payment system could be the subject of speculative attacks.

True, current account imbalances can be optimal, but the type of investment financed in southern European countries – mainly excessive residential construction – and the way they were financed – through volatile sources such as portfolio debt securities and bank loans – rendered the deficit countries particularly prone to the unwinding of capital inflows. As a result, starting in 2008, and in full force since 2010-11, a reversal of the massive capital inflows that were invested

southern countries over last decade has taken place. This outflow formally qualifies as a sudden stop (Merler and Pisani-Ferry, 2012). Part (but not all) of it is explained by developments in the sovereign bond markets, where non-resident investors have been increasingly off-loading the bonds issued by the 'riskier' countries, showing a clear connection with the sovereign-banking loop.

Whereas state solvency crises were clearly anticipated, the very possibility of such a sudden stop affecting a country, rather than specific economic agents within it, was mostly ignored in the pre-EMU literature. Early confidence that the financial markets would have kept on financing all the viable borrowers regardless of their location was so strong that policymakers thought it unnecessary to open the EU balance-of-payments assistance framework to euro-area countries.

Starting in 2011, the TARGET2 system became the topic for prominent discussions after its role in offsetting capital outflows had been pointed out by observers, not least Sinn and Wollmerhaeuser (2011). Indeed private capital outflows have been matched by an equally sizable inflow of public capital, in the form of Eurosystem liquidity and disbursements under the EU/International Monetary Fund programme. This has sheltered the countries from the full impact of the sudden stop and accommodated current account deficits at a time when private markets were no longer willing to finance them.

The sovereign-banks feedback loop and the balance-of-payments crisis can be seen as two sides of the same coin. It is hard to figure out how a sudden stop in capital inflows could take place in the absence of contagion between banks and sovereigns. It is the still largely national character of banking systems that explains why doubt about the solvency of particular agents (be they sovereigns or over-indebted households) translated into doubts about the solvency of banks and ultimately into a wholesale capital flight.

Policymakers here cannot be held responsible for not having acted to prevent a type of crisis that was not really on the economists' radar screen. When the decision was made in the Maastricht negotiations to deprive euro members of the potential benefit of EU balance-of-payments assistance, because balance of payments had become irrelevant, no economist protested. It would take twenty years to discover that it had been a mistake.

3 IMPLICATIONS FOR THE POLICY AGENDA

The financial fragility of EMU, and the fact that it has turned out to be vulnerable to the very kind of crisis it was supposed to make impossible, call for a rethink of the original architecture. When deciding what structure to give to the currency union, policymakers opted in Maastricht for what could be described as a 'bare-bones EMU', which essentially rested on an independent, price-stability oriented central bank and a commitment to budgetary discipline. This architecture has proved to be incomplete, for two reasons.

The first reason relates to what the Maastricht Treaty did include, ie the prevention of fiscal imbalances. It was in fact hoped that fiscal discipline – fostered by the rules of the Excessive Deficit Procedure – would be enough to shelter the EMU from crises. Unfortunately, fiscal rules were underenforced, but they were also poorly designed. In its first ten years, the euro area repeatedly suffered from infringements of fiscal discipline; the credibility of fiscal rules themselves was significantly weakened by the 2003 decision to put the Excessive Deficit Procedure 'in abeyance' when it was about to start having implications for France and Germany. More importantly, the rules of the Stability and Growth Pact ignored the stochastic character of fiscal crises. It was assumed that they could be avoided by controlling the deficit on a yearly basis. When the crisis hit, however, Spain's deficit-to-GDP ratio deteriorated by 13 percentage points in two years, and Ireland's debt ratio increased by almost 50 percentage points, also in

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two years. The combination of a deterministic, rather than risk-based approach to the deficit, and the neglect of contingent liabilities, made the Maastricht system very ineffective.

The second reason has to do with what the Maastricht treaty did not include, ie the prevention of non-fiscal imbalances. When thinking about possible threats that EMU should be defended against, policymakers in Maastricht looked back at past experience and identified two: inflation and fiscal laxity. Financial instability was at the time perceived as being of minor importance and, even though currency unification was expected to reinforce financial integration, no provision was envisaged to deal with the effects of private credit booms-and-busts. EMU was conceived as an economic and monetary union, not as a financial union. True, the EU could have relied on the Broad Economic Policy Guidelines (BEPGs), a catch-all procedure rooted in the treaty, but it was in fact a weak, non-binding and rather neglected procedure[2]. This view proved to be short-sighted. While public indebtedness in the southern countries remained broadly stable or even declined during the first decade of EMU, private indebtedness financed by capital inflows skyrocketed, resulting in the previously described massive macroeconomic divergence.

The policy response since the first cracks appeared at end-2009 has developed on three fronts:

- First, the emphasis has been on creating instruments for crisis management and resolution. This has been a long, at times acrimonious and often confusing process, which has cost dearly in terms of policy credibility, because there was no initial agreement on how to respond to debt crises. In the end, after nearly two years, a compromise was found at end-2011, paving the way for debt restructuring and the actual creation of the European Stability Mechanism (ESM).
- Second, the fiscal regime has been put back onto the drawing board. Again, this has taken several steps and quite a lot of trial-and-error before agreement was reached in the form of the new treaty signed in March 2012, the Treaty on Stability, Cooperation and Governance (TSCG).
- Third, starting in summer 2012, the need for more systemic reform was acknowledged, especially the creation of a banking union among the members of the euro area, and possibly other EU countries.

Recognising the systemic character of the problem was a significant move. In late 2011 it became increasingly evident that financial integration – the main achievement of a decade of EMU – was making way for financial fragmentation and the retrenchment of borrowers within national borders. This unmaking of the European financial market was partly a spontaneous reaction to the perceived heightened risk of cross-border investment within the euro area. It was also the result of pressure exercised by national supervisors to reduce the cross-border exposure of banks in their jurisdictions. As a consequence, location became a key factor explaining differences in the availability and cost of credit to firms and households.

Financial fragmentation is evidently a lethal threat to monetary union. It would make little sense for participating countries to abide by the disciplines of a common currency and not be able to reap the rewards of a common financial market. Furthermore, fragmentation means that the same central bank policy rate translates into different loan rates, depending on the location. This is not a situation that can last for long. Financial autarchy would finally entail a fundamental change in the balance between the costs and benefits of participating in the euro. For these reasons it became evident during the course of 2011-12 that initiatives to repair the financial underpinnings of the euro were urgently needed.

Three strategies could be envisaged. The first solution, widely discussed in the autumn of 2011, was

2. The BEPG would have made possible for the EU to address to member states recommendations to adjust economic policy.

to give the ECB the role of a lender of last resort to sovereigns. This would not have amounted to giving it the task of making insolvent countries solvent, but rather to allowing it to prevent self-fulfilling debt crises by keeping the bond rate above the risk-free rate but below the prevailing market rate. Assuming this could be done for a limited period, a possible instrument would be secondary market purchases. A variant would be to enable the ECB to provide a credit line to a public entity (the EFSF in the Gros-Mayer 2011 proposal, the EFSF) in order to leverage its capital and give it enough firepower. This entity would then intervene in the market. Either way, the ECB would provide liquidity that would help prevent states from being cut off from financing, and it would help put a ceiling on what they have to pay to borrow, thereby stemming potentially self-fulfilling debt crises. In a way, ECB support would serve as a deterrent.

There are however significant problems with this approach. First, the ECB does not have an explicit mandate to act as a lender of last resort for sovereigns – it is instead prohibited from entering into monetary financing – and changing the mandate would require an unlikely unanimous agreement of the 27 EU members. Second, unlike the Fed when it buys US treasury bonds or the Bank of England when it buys gilts, the ECB is not the central bank of a single state and any such move would inevitably involve distributional dimensions. Should it incur losses on its bond portfolio the ECB would have to request from its shareholders the injection of additional capital, thereby becoming a vehicle for fiscal transfers – something central banks are not made for. This largely explains why the ECB was uncomfortable with the Securities Market Programme, the bond purchase scheme it launched in May 2010 (for Greece and Portugal), reactivated in August 2011 (for Spain and Italy), and finally let expire.

The ECB's September 2012 decision to initiate a scheme called Outright Monetary Transactions (OMT), which will make it able to purchase short-dated government paper of countries benefitting from a support programme negotiated with the European Stability Mechanism, can be regarded as yet another step in this direction. However the ECB has made it clear this time that its primary intention is only to address the effects of financial fragmentation, that its focus is on credit conditions faced by private agents, and that it is not going to purchase longer-dated government bonds. It is doubtful it will go further and accept a role in the containment of state insolvency.

A second possibility could be to move closer to a fiscal union by mutualising the guarantee on the public debt issued by euro-area counties, via some form of 'Eurobond'. The aim would be creation of a euro-area safe asset, because sovereigns would be jointly and severally liable for debt. It is unlikely that all of the debt would be mutualised. Rather, it could be split into two parts, with the mutualised part presumably senior to the non-mutualised part (Delpla and Weizsäcker, 2010). As a quid pro quo, states would lose the freedom to issue debt at will. The policy system would move from a framework of *ex-post* sanctions in case of infringement of common rules, to a framework of strong *ex-ante* control, with member states agreeing to submit their budgets for approval. Should a draft budget fail to respect common principles, the euro-area partners could veto it before its entry into force.

Eurobonds would in principle have three types of benefits (Claessens and Vallée, 2012):

- First they would create a common safe asset for the euro area.
- Second, they would protect sovereign states from acute funding crises as these would always retain access to issuance, at least for amounts corresponding to redemptions (though in a dual scheme the Modigliani-Miller theorem would apply, leaving the average cost of borrowing constant[3]). The interaction of these two benefits would make banks more secure and better protect states from self-fulfilling solvency crises.
- Third, by subscribing to Eurobonds and accepting the necessarily-associated scrutiny of national public finances, euro-area members would signal that they are willing to accept the full consequences of participation in the monetary union.

There are however significant hurdles before Eurobonds could become a reality. First, Eurobonds and *ex-ante* approval would represent

3. The Modigliani-Miller theorem in this case means that the aggregate cost of borrowing is independent of the structure of funding.

a major step in the process of European integration that would require a significant revision of the Treaty. Second, the potential benefits from Eurobonds would be unevenly distributed. Germany in particular benefits from a safe-haven effect that would almost certainly be lost after debt mutualisation, with consequences for its public finances. From a German perspective such a choice would represent an investment into the sustainability and the stability of the euro area, which requires firm guarantees from its partners. In turn, for the partners, giving such firm guarantees to Germany would amount to accepting the surrender of budgetary sovereignty. Third, Eurobonds are regarded by some euro-area policymakers as an incentive to fiscal irresponsibility and for transfers from fiscally sound to fiscally weak countries.

The remaining possibility is to build a banking union, which could help break the vicious cycle linking banks and sovereigns. This was the road chosen by the heads of state and government in June 2012. A number of important questions however arise. Beyond significant technicalities (which banks should be covered? Which countries should participate? How should supervisory responsibilities be divided up?), the more important issues involve the organisation of resolution and a fiscal backstop[4]. Banking union first requires a strong commitment to giving a European authority the responsibility for resolving banks and minimising the cost to taxpayers. Second, it amounts to a sort of fiscal union, but limited to a certain type of contingent liabilities. It will also involve European authorities in distributing bank losses between shareholders, creditors and depositors, as well as between national and European partners. These are potentially very political choices and it is by no means a trivial decision to let a European entity assume responsibility for them.

It also remains to be seen if banking union will be sufficient to repair financial integration in the euro area. it is certainly necessary to protect the states from their banks – and the banks from their sovereigns – but this may not be sufficient to persuade investors to purchase bonds from countries they have learned to distrust.

Beyond banking union, many questions remain about what a well-functioning and resilient monetary union might entail. Here also there are known unknowns – the need for market flexibility and a robust fiscal framework – but also unknown unknowns. Will public debt mutualisation be required to rescue financial integration? Will agglomeration effects lead to a concentration of production in a few areas, implying the need for transfers? Will labour mobility develop into a powerful adjustment mechanism? The journey has started, but where it will lead is still partially uncertain.

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