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Enhanced Fiscal Integration in the EMU?

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Edited by Ralph Schmitt-Nilson

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Enhanced Fiscal Integration in the EMU?

Proceedings of the joint workshop, organised by the European Commission, the European Stability Mechanism and the German Council of Economic Experts on 19 September 2017

Edited by Ralph Schmitt-Nilson

Abstract

This volume presents the proceedings of the workshop organised by the Directorate-General for Economic and Financial Affairs (ECFIN) jointly with the European Stability Mechanism (ESM) and the German Council of Economic Experts (GCEE) on 19 September 2017 in Brussels. The workshop aimed at raising awareness about the fiscal policy architecture in Europe and its potential future developments and contributing to the expert debate on these issues. It consisted of two sessions with two panels each. Short presentations of expert or research contributions were followed by a debate with the audience. The first session was devoted to a review of the European experience with fiscal policy coordination and governance, including perspectives on the euro area fiscal stance. The second session focused on fiscal risk sharing and stabilisation in the euro area. It explored different options of a fiscal stabilisation function and their design.

JEL classification: E61, E62, H60, H50

Keywords: public finances, fiscal policy, fiscal stance, fiscal policy coordination and governance, fiscal integration, fiscal capacity, stabilisation function.

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of
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3.3. RISK SHARING ACROSS THE EMU: THE ROLE OF PUBLIC INSTITUTIONS

By *Valentina Milano and Pietro Reichlin*⁶⁸

Abstract. In this policy brief we review some of the available evidence on the degree and sources of risk sharing in the Eurozone, compared with the US federation, especially drawing on Milano (2017), which updates the estimates on the variance decomposition introduced in Asdrubali et al. (1996) up to 2014 and identifies the contribution to risk sharing in the Eurozone of the EU public institutions (ESM, ESFS, ESFM).

Introduction

Risk sharing across EMU countries falls short of the level achieved in other federations (such as Canada, Germany and the US) by a wide margin. This observation has been documented in various studies, such as Sala-i-Martin and Sachs (1991), Bayoumi and Klein (1997), Sørensen and Yosha (1998) and Von Hagen and Hepp (2013). Updates and refinements of this work up to 2014 (Alcidi et al. (2016), Furceri and Zdzienicka (2015), Rogantini Picco (2015), Milano (2017)) confirm these findings and offer some answers to the following key questions. To what extent the lack of risk sharing within the EMU is a consequence of (i) the limited role of centralised fiscal policies, (ii) the effort of peripheral countries to comply with the rules of the growth and stability pact or (iii) the lack of a developed and internationally integrated financial market? How well did the US and the Eurozone institutions respond to the financial crisis in terms of risk sharing and GDP shocks absorption? In this contribution we review some of the basic findings of this large literature and present some novel results based on the experience of the recent EMU sovereign debt crisis. In particular, we refer to Milano (2017) for most of the estimates of the degree of risk sharing within the EMU and the US. The latter is based on a variance decomposition introduced by Asdrubali et al. (1996). This methodology generates a set of coefficients, each one representing the contribution to total risk sharing from four different mechanisms: net factor income flows from abroad, capital depreciation, international fiscal transfers and national savings. Each coefficient should be interpreted as the average percentage of idiosyncratic country-specific GDP shocks that are smoothed via the above mentioned sources and their sum represents a measure of total risk sharing. Milano (2017) extends this methodology to identify the contribution to risk sharing coming from households, corporate and public savings, and from the EU financial institutions created after the sovereign debt crisis, i.e., the ESFS, the ESFM and the ESM. The main message can be summarised in these three points.

1. The US Federation achieves more intensive risk sharing largely because of a more integrated financial market.
2. Public (national and super-national) institutions have a larger role in providing risk sharing in the EMU than in the US, especially after the implementation of the ESFS, ESFM and the ESM, and the contribution of these institutions to risk sharing after the big recession more than compensated the dis-smoothing caused by a pro-cyclical fiscal consolidation and by households' increased precautionary savings.
3. By splitting the interval 1999-2014 into the pre-crisis ('99-'06) and the post-crisis ('07-'14) sub-intervals, we observe that there was a rise in the degree of risk sharing in the second sub-interval relative to the first for the Eurozone and a fall for the US federation.

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Point one is widely shared in the existing literature. Already Sørensen and Yosha (1998) have pointed out that, within the EU, and unlike the US federation, "neither factor income flows nor cross-border flows of physical goods contribute much to international risk sharing (Sørensen and Yosha (1998), p. 235)". The same authors consider this circumstance a good reason to allow for larger fiscal imbalances within the EMU. In particular, in their view, "an important implication is that the restrictions on budget deficits imposed by the Maastricht Treaty should be relaxed, allowing governments to run large deficits in response to output shocks, at least until alternative risk sharing mechanisms develop (ibidem)". However, based on the experience of the 2010-11 sovereign debt crisis, we know that systemic factors and fiscal imbalances may have contributed to financial instability and the fragmentation of financial markets in the Eurozone.

Point two has not received much attention in the literature. We refer to the role of public institutions in providing risk sharing across a federation as the sum of the percentage of GDP shocks that are smoothed via international (interstate) fiscal transfers and state (country)-level public savings. Using the estimates in Milano (2017) for the period 1999-2014, we can claim that this sum was higher for the EMU than for the US. In fact, international (interstate) transfers provided for the purpose of risk sharing have a negligible effect on risk sharing in the EMU, whereas they smooth about 19% of state-specific shocks in the US. On the other hand, state-level public savings are constrained by a balance budget rule in the US, whereas, in the EMU, government budgets have had a large role in smoothing GDP shocks, in spite of the Growth and Stability Pact. In particular, in the EMU, public savings have smoothed about 28% of country-specific GDP shocks in the period 1999-2014. Furthermore, for the GIIPS countries, financial flows from the ESFS, the ESFM and the ESM have more than compensated the negative impact on risk sharing of the fiscal consolidation and the reversal of cross-border positions of debt obligations after the 2011 sovereign debt crisis. Then, overall, the US federation is able to achieve a larger level of risk sharing than the EMU mainly because of a more integrated financial market or because the nature of the shocks hitting the US economy makes financial markets a better mechanism for providing insurance compared to Euro Area.

Point three is very much related to point two. It is well known that the degree of risk sharing falls substantially during downturns, so that the policies of supra-national authorities may be sometime more effective than the market mechanism. Furceri and Zdzienicka (2015) have estimated a 20 years rolling window of the percentage of unsmoothed GDP shocks for the EMU countries over the period 1975-2010 and found that this has increased from 58% (in the interval '79-'99) to 66% (in the interval '90-'10). On the other hand, according to the estimations in Milano (2017), the percentage of unsmoothed shocks in the interval 2007-2014 fell by eight points in the Euro Area compared to the period 1999-2007, whereas it increased by ten points in the US. This implies that, by re-evaluating the post-crisis experience over a longer period, the Euro Area appears to have performed relatively well in terms of GDP shock smoothing. This is a remarkable achievement if we put it in the context of the big boom-bust cycle of capital flows experienced by the Euro Area from 1993 to 2011, with a peak in 2007 (with a volume of capital flows at 40% of GDP) and a trough in 2009 (less than 5% of GDP). In other words, a large fraction of the adverse GDP shocks experienced by the Euro Area countries is explained by global (systemic) financial factors (i.e., not country specific) and they are strongly correlated with indicators of financial market volatility (see Lane (2013)). We can say that the 2007-2008 big recession and the 2010-11 EMU sovereign debt crisis revealed that financial markets are sometime unable to provide adequate insurance and they may, instead, contribute to excess volatility and fragmentation across sectors and regions. In fact, it is important to understand what type of risks are more likely to be important in the Euro Area before we make specific proposals to improve the degree of risk sharing in the Euro Area. For instance, Ang and Longstaff (2013) have shown that there is much less systemic risk among US sovereigns than among the Euro Area sovereigns, and that macro economic fundamentals are much less important than financial market variables in explaining the failure to achieve full insurance across countries and states. All this suggests that centralised supra-national institutions may be more effective in providing insurance across the Euro Area, and, then, EU public institutions, like the ESM, should continue to play an important role now and in the future even if more fiscal and political integration will be achieved.

Empirical Strategy

The procedure introduced by Asdrubali et al. (1996), and pursued also in Sørensen and Yosha (1998), Furceri and Zdzienicka (2015), Rogantini Picco (2015) and Milano (2017), gives rise to the estimation of a set of coefficients representing the percentage of idiosyncratic country-specific GDP shocks that are not smoothed via the available instruments in a sample of countries over a time interval. Lack of consumption smoothing is roughly equivalent to the sample covariance between the growth rates of country-specific consumptions and GDP as a ratio to the sample variance of GDP growth rates. Then, total risk sharing means that national consumption growth rates are totally uncorrelated with the national GDP growth rates on average across the Federation. In turn, the degree of risk sharing can be decomposed into the sum of four components, each one representing the percentage of GDP shocks that are smoothed on average (across the sample) via four channels:

1. factor income flows, i.e., insurance via capital income arising from cross border asset ownership,
2. capital depreciation,
3. net international transfers from/to a central authority,
4. national savings, i.e., intertemporal reallocation of consumption obtained through borrowing and lending flows and performed by the private and public sector.

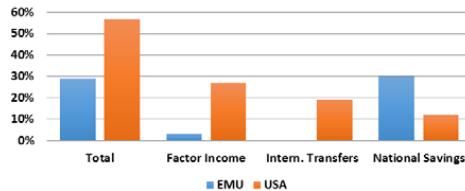
In Milano (2017), the fourth channel is decomposed into the three corresponding sub-channels arising from households, corporate and government savings, and, for the post-crisis period 2007-2014, it is further decomposed into the contribution to consumption smoothing of two sub-channels underlying government savings: the public net lending to markets (including the ECB) and the one to the ESFS, the ESFM and the ESM. From now on, when we say that "net factor income" or "depreciation" or "international transfers" or "savings" smooth $x\%$ of GDP shocks (or contribute $x\%$ to risk sharing), we imply that the corresponding coefficients take a value equal to $0.0x$.

Results

a) Comparing the EMU with the US

As shown in figure 1, country specific GDP shocks are only partially smoothed, both in the EMU and the US, but much more so in the US. Within the time interval 1999-2014, total risk sharing is about 29% in the former and about 57% in the latter. Figure 1 also shows that, in the EMU, risk sharing is almost entirely accomplished through the savings channel (internal and external borrowing and lending by the private and the public sector), smoothing about 30% of idiosyncratic shocks, whereas, in the US, it is accomplished through a diversified range of mechanisms: factor income flows (smoothing about 27% of shocks), direct transfers from the Federation (19%) and savings (12%). In turn, risk sharing from the savings channel in the EMU is almost entirely generated through the government budget. Between 1999 and 2014, EMU government savings smoothed about 28% of shocks, compared to 11% from corporate saving and -7% from households (although this estimate is not significant). Quite interesting, since the smoothing capacity of the net factor income channel is a proxy for the efficiency of international financial markets in providing insurance (within the Union or Federation), we conclude that the EMU lags behind the US Federation by a wide margin. If these markets in the EMU were as much developed as in the US, the degree of risk sharing in the former region would be roughly comparable.

Figure 1: Risk Sharing in EMU and US 1999-2014



According to the estimates in Milano (2017), the introduction of the common currency has generated some limited benefits in terms of risk sharing. The estimated value of total risk sharing (i.e., $1-\beta_u$) was about 22% in the interval 1970-1999. This conclusion differs from some earlier estimates provided by Demyank et al. (2007) and Afonso and Furceri (2008) suggesting that overall consumption smoothing through international credit markets has slightly declined in the Euro Area following the introduction of the Euro and up to the big recession. This was mostly a consequence of a more modest role of private credit (as compared to public savings), less counter-cyclical credit flows and large inflows of capital in Peripheral Europe (from the Core) up to 2006, due to a perception that the adoption of a common currency limited country risks. However, ten years after the big recession, the situation has changed significantly in terms of investors' behaviour and because of a significant overhaul of the EMU architecture and ECB interventions.

b) Before and After the Big Recession

From figures 2 and 3, we see that, after the big recession (i.e., in the 2007-2014 period), the percentage of idiosyncratic national GDP shocks smoothed through the available channels increases substantially in the EMU (from 23% in the 1999-2006 period to 31% in the 2007-2014 period), whereas it falls in the US (from 70% to 60%). Furthermore, these changes hide some notable modifications in the way risk sharing is achieved. In both areas the percentage smoothed through factor income flows falls dramatically: from 7% to 2% (i.e., by 71%) in the EMU (although these estimates are insignificant) and from 40% to 22%, (i.e., by 45% in the US). In other words, capital markets failed to provide more insurance during the crisis. In the US, the contribution to income smoothing of direct transfers and savings increases by a modest amount: from 19 to 22% and from 10 to 15%, respectively. In the EMU, instead, the amount of risk sharing achieved through savings jumps up from 15 to 39%, whereas the one achieved through direct transfers remains very close to zero. Since risk sharing through corporate savings does not change significantly and households' savings contributes negatively after 2007, the increase in the degree of risk sharing achieved in the EMU in this period is entirely achieved via government saving (i.e., rising deficits following negative shocks and official lending).

Figure 2: Risk Sharing in EMU before and after the recession

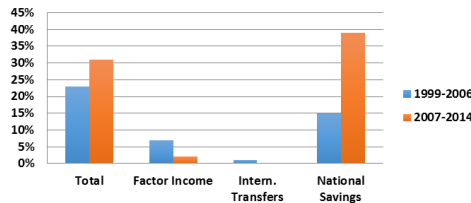
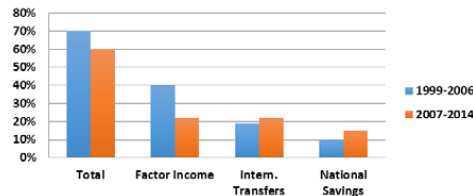


Figure 3: Risk Sharing in USA before and after the recession



c) The Role of Public Institutions

To assess the amount of risk sharing provided by public institutions, we can lump together into a single estimate the risk sharing provided by international (interstate) transfers and net lending of countries (states) governments. Notice that risk sharing through governments net lending is almost zero for the US Federation, as US states are subject to balanced budget rules. In particular, all US states, with the exception of Vermont, have constitutions imposing some form of balanced budget rule (in 38 states no deficit can be carried forward from one fiscal period to the next, and in 44 states the governor's proposed budget must be balanced). Moreover, Follet and Lutz (2010) have shown that states spending has been pro-cyclical (in contrast to the federal government policy) most likely because of the inability to run fiscal deficits. According to the 2009 data provided by Ang and Longstaff, the average debt-to-GDP ratio for US states is 7.1%, versus 87% for Eurozone countries. To have a sense of the different institutional settings in the US and the Eurozone, recall that, over the period 1998-2015, the deficits of the Eurozone countries have exceeded the 3 percent ceiling in more than three-quarters of total country-year observations (see Eyraud, Gaspar and Poghosyan (2017)). On the other hand, international transfers within the EMU provide almost no risk sharing because of very limited centralised budget for insurance purposes. Then, in the period '99-'14, total risk sharing provided by public institutions (central and local) was about 28% in the EMU (through governments savings) and 19% in the US (through transfers to/from the federal Government). The same numbers for the after-recession period ('07-'14) are 38% and 22%, respectively. In other words, the contribution of public institutions to risk sharing is much higher in the EMU than in the US. Notice that these measures do not take into account the amount of loans from the ECB to banks after the recession and, then, the contribution to risk sharing of public institutions in the EMU is probably higher than estimated.

By splitting net borrowing of national governments into that obtained through markets (including central banks) and through Centralised Public European Institutions (CPEI), i.e., the ESFS, the ESFM and the ESM, we observe that the latter have played a very important role in the after-recession period (figure 4), smoothing about 55% of shocks. As mentioned above, this figure probably underestimates the contribution of the centralised public institutions of the EMU, because it does not include the lending facilities provided by the ECB to national banks at below market rates. One may conjecture that these loans explain why the percentage of shocks smoothed via corporate savings increased from 13% in the pre-recession period ('99-'06) to 16% in the post-recession period ('07-'14). In any case, the reason why the effective net percentage of shocks that were smoothed overall after the recession in the EMU is only 38% is that two channels played a significantly negative role: governments net borrowing from markets (whose contribution to risk sharing has been -17%) and households savings (-12%). Not surprisingly, the magnitude of these numbers is almost entirely driven by the behaviour of Peripheral Europe (Greece, Ireland, Portugal, Spain), which faced fiscal consolidation and reduced access to credit markets. For this group of countries, in the 2007-2014 period, the estimated beta coefficients related to government net borrowing from markets is about -63% and the one related to government borrowing from CPEI is about 86%. On the other hand, for the core countries in the EMU these numbers are, respectively, 73% and 3%.

Figure 5 shows the patterns of the government net lending to CPEI (EU net lending) and to markets for Peripheral Europe.

Figure 4: Risk Sharing in EMU 2007-2014

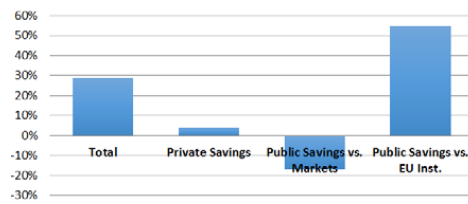
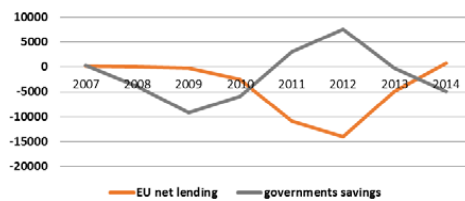


Figure 5: Savings and EU Net Lending: euro per capita, 2007, 2014
 EMU Periphery (excluding Italy)



Concluding remarks

A comparison between the EMU and other federations suggests that the "optimal" or "feasible" degree of risk sharing that can be achieved in a federation depends on how important are the institutional barriers to becoming a true federal state, i.e., on the existing mix of public policies and market institutions and, most importantly, on the explicit and implicit barriers to cross border flows, the presence of a supra-national banking authority, and on the ability of supra-national political authorities to impose and enforce country-specific fiscal rules and policies. It is well known that the EMU lacks all of these mechanisms to a large degree, and, then, we should not expect the degree of risk sharing within EMU countries to be anywhere near the one achieved in other federations with a strong federal authority, such as the US or Germany. Looking at the experience of strong federations, we see quite clearly that these allow for very little fiscal flexibility at the state level, in exchange for additional risk sharing through cross border financial transactions and fiscal transfers. Hence, one may reach the conclusion that there is a trade-off between the degree of risk sharing achieved through state-level public savings and the degree of risk sharing achieved through other mechanisms, such as international transfers and factor income flows. Namely, if the EMU were to achieve a stronger political integration, and imitate the US model, member states would have to give up almost entirely the option to smooth GDP shocks through public budgets. Based on the available estimates, it appears that this loss could be adequately compensated by the remaining risk sharing mechanisms only if the Eurozone were able to achieve full integration of capital markets, remove all barriers to cross border capital flows and establish a centralised banking authority. However, because systemic (financial) factors, as opposed to macroeconomic fundamentals and country-specific shocks, have proved to be the key drivers of GDP volatility in the Eurozone, financial market integration may not be enough. The estimates presented above show that public EU institutions, particularly the ECB, the ESFS, ESFM and ESM, despite the existing barriers to political and financial integration, played an

important role after the sovereign debt crisis, and avoided a dramatic fall in the degree of risk sharing generated by systemic risks. However, this poses more than a challenge to overall stability of the Eurozone. Public borrowing remains the main tool to improve consumption smoothing but large public debts, limited enforceability of EU policy recommendations, implicit guarantees and moral hazard considerations imply that this is a sub-optimal arrangement.

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