

Symposium on international risk sharing: Introduction

This special symposium consists of a selection of papers that were presented at a conference on International Risk Sharing held at ECARES (Université Libre de Bruxelles), in October 2010.¹

According to standard theory, one of the central benefits of international financial markets is the possibility of reducing national consumption risk. A basic measure of risk sharing is hence the degree to which national consumption rates move in unison across countries. In the simplest theoretical model of international financial markets, efficient risk sharing implies that consumption growth in a given country closely tracks world consumption growth. With integrated financial markets, consumption growth should hence be highly correlated across countries – and more highly correlated than output growth. Yet despite the liberalization of international financial markets and the strong growth in international capital flows during the past few decades, this prediction is sharply at variance with the evidence. Empirically, national consumption closely tracks national output, while cross-country consumption correlations are generally lower than cross-country output correlations. Hence, it would seem that countries are not fully exploiting the welfare benefits of international risk pooling. Documenting the pattern of (incomplete) risk sharing, and understanding the financial frictions at its roots, is thus of great interest for economic research and policy.

The first six papers in the present special issue provide novel *empirical* analyses of international risk sharing. These studies use national consumption, output and

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real exchange rate data to quantify the *degree* of risk sharing that is sustained by international capital markets; the papers also identify key *channels* through which risk pooling is achieved.

The paper by **Baxter** compares cross-country consumption correlations at short vs. long horizons, for OECD countries. She shows that long-run risk is better shared internationally than short-run risk – though the difference may be exaggerated by the dominance of measurement errors in consumption growth at high frequencies. Paradoxically, risk sharing has not increased among OECD countries during the new globalization era of the last two decades. **Flood, Marion, and Matsumoto** develop a welfare-based measure that captures how far countries are from the ideal of perfect risk sharing. Using data for a large set of industrialized and developing countries, the authors document that low-frequency risk makes up the bulk of consumption risk. Industrialized countries improved the sharing of long-run risk significantly during the 1970s and 1980s. Developing countries engage in much less risk sharing (than industrialized countries), but risk sharing by these countries has increased during the recent globalization era. The paper attributes this to the recent high growth of emerging market countries. A broad multi-country data set is also considered by **Berka, Crucini, and Wang**, who document that, for many developing countries, the specialization in the production of primary commodities poses significant risks, as commodity prices are highly volatile and unpredictable. National production responses generally magnify, rather than dampen, the effect of commodity price movements on export earnings. World-wide, only one-third of national GDP variability is pooled across countries. **Corsetti, Dedola, and Viani** present risk-sharing measures that explicitly take real exchange rate movements into account. When countries' consumption baskets differ, so that real exchange rates vary over time, there is no theoretical requirement that consumption be perfectly correlated across countries, even when world financial markets are complete. Instead, countries whose real exchange rate depreciates should experience higher consumption growth, relative to other countries. This prediction is strongly rejected by the data. Corsetti et al. study the empirical determinants of the correlation between the real exchange rate and relative consumption, using a frequency domain approach. By their metric, violations of risk sharing are strongest at business cycle and lower frequencies. **Balli, Kalemli-Ozcan, and Sørensen** present empirical analyses of the *channels* through which countries achieve risk sharing. The authors construct a method of quantifying the contributions of cross-country factor income flows, and of capital gains on external assets, to international risk pooling – external portfolios promote risk sharing if capital gains co-vary negatively with domestic GDP. Balli et al. show that risk hedging via these risk sharing channels is greater for the EU than for the rest of the OECD. Moreover, the importance of these channels has risen substantially for euro area countries after the inception of the euro, although a substantial fraction of GDP risk remains undiversified. **Hoffmann and Nitschka** document that the strong growth in international cross-holdings of securitized mortgages was associated with better cross-country risk

sharing in the period immediately prior to the recent global financial crisis (2008). The authors argue that this effect is explained by the fact that securitization helps spread the risks associated with domestic credit growth internationally; however, when credit dries up, the risk-sharing benefits of securitization disappear.

The last three papers of the special issue analyze the determinants of international risk sharing, using structural open economy models with financial market frictions.

Devereux and Hnatkovska develop a two-country model in which financial markets are incomplete, in the sense that only a risk-free bond can be traded internationally. Each country produces traded and non-traded goods; there is sectoral adjustment along both the intensive and the extensive margins. The combination of these features allows to the model to match empirical measures of limited international risk sharing. **Benigno and Küçük** point out that the degree of risk sharing under incomplete markets models can be sensitive to the set of assets that are assumed to be traded. The authors consider single-bond models, in which adding another traded asset essentially re-establishes full risk sharing. **Kollmann** argues that limited cross-country consumption risk sharing can be explained by a *simple* model in which a subset of households trade in complete financial models, while the remaining households lead hand-to-mouth lives. Thus, imperfect cross-country risk sharing might be due not to the underdevelopment of international financial markets, but to the fact that a significant fraction of households do not participate in those markets.

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