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The Post-Crisis Slump in the Euro Area and the US

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ABSTRACT: This note discusses the drivers of the persistent post-crisis slump in the Euro Area (EA) and the US, and it gives a brief overview of the research literature that studies the slump. The note argues that financial shocks were key determinants of the 2008-09 Great Recession, for both the EA and the US. The post-2009 slump in the EA mainly reflects a combination of adverse aggregate demand and supply shocks, in particular lower productivity growth, and persistent adverse shocks to capital investment, linked to the poor health of the EA financial system. Adverse financial shocks were less persistent for the US.

The global financial crisis (2008-09) led to a sharp contraction in both Euro Area (EA) and US real activity, and was followed by a long-lasting slump. However, the post-crisis adjustment in the EA and the US shows striking differences. In particular, the EA slump has been markedly more protracted. There is a heated debate about the causes of these developments. Understanding these causes is essential for an effective policy response to the post-crisis slump.

Some commentators argue that the protracted EA slump reflects weak aggregate demand, driven i.a. by restrictive fiscal policy ('austerity'); see, e.g., IMF (2012), De Grauwe (2014) and Stiglitz (2015). Those commentators mainly advocate policy measures that boost aggregate demand. Other analysts stress that rigidities in EA product and labor markets may have hampered the rebound of the EA economy, by slowing down sectoral redeployment and the adoption of new technologies (e.g., Fernald (2015)). That analysis suggests that supply side policies (e.g., structural reforms) would be appropriate to overcome the slump. Several commentators have also suggested that post-crisis deleveraging pressures and financial constraints have contributed to the persistent slump, especially in the EA (e.g., Rogoff (2015)). The supply of credit to the private sector was disrupted more persistently in the EA than in the US, due to the continuing poorer health of EA banks (OECD (2014)). EA banks rebuilt their capital much more gradually

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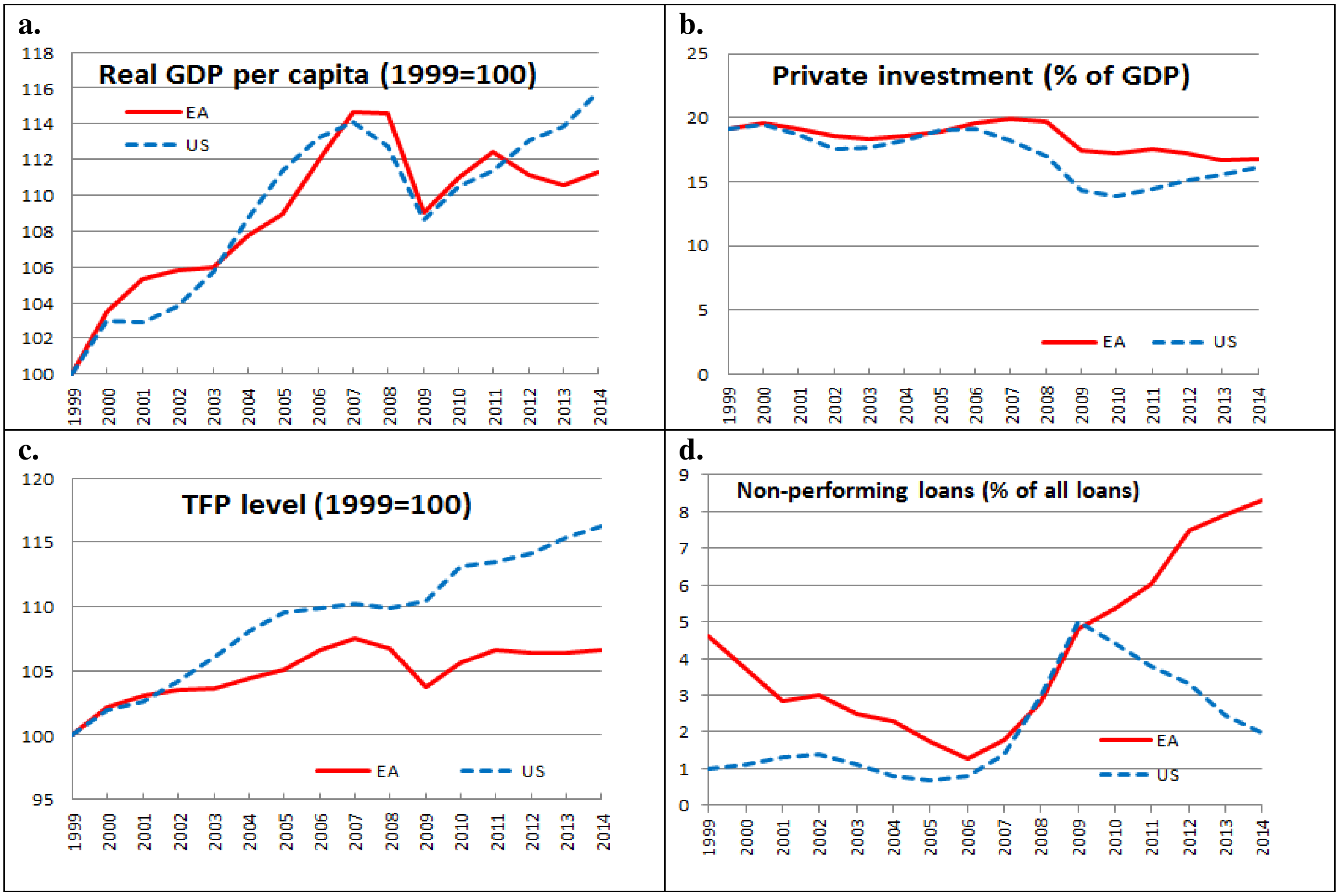
than US banks, after the crisis; in addition EA bank balance sheets were weakened by the sovereign debt crisis that erupted in 2010-11 (Acharya et al. (2015), Kalemli-Özcan et al. (2015)).

I next provide a more detailed overview of the divergent post-crisis trajectories of the EA and US economies, to shed light on possible drivers of the slump. I then discuss very recent work by Kollmann et al. (2016) that analyzes the post-crisis slump using a state-of-the-art empirical model that allows to disentangle and quantify the key shocks and transmission channels that have been debated in the policy literature cited above.

EA and US per capita GDP grew at about the same rate before the 2008-09 'Great Recession'. Both economies experienced roughly the same (relative) contraction, -5%, in 2008-09, and then began to recover at roughly the same rate. However, the EA recovery was short-lived. In 2010-11 the sovereign debt crisis erupted in EA periphery countries, and the trajectories of EA and US per capita GDP began to diverge: the EA experienced a recession in 2011-13, while US output growth returned to pre-crisis rates (see Panel a of the Figure below). EA and US per capita real GDP only recovered to pre-crisis levels in 2016 and 2014, respectively, and remain noticeably below pre-crisis trends, as of this writing. Private investment contracted less (as a share of GDP) in the EA than in the US, during the 2008-09 crisis, but in the aftermath of the crisis the EA investment share continued to trend down, while the US investment share began to recover in 2011 (Panel b of Fig.). The post-crisis EA-US divergence is also apparent in measured total factor productivity (TFP), a key determinant of an economy's production capacity. EA TFP fell during the Great Recession, and has since then stagnated at a level below its pre-crisis peak. US TFP showed zero growth during the Great Recession, and then started to grow again (see Panel c of the Figure). Also, post-crisis inflation has been lower in the EA than in the US. Banking/financial variables too indicate a marked divergence between the EA and the US, in the aftermath of the Great Recession. The health of *both* the EA and US banking systems was damaged by the 2008-09 financial crisis. The state of the EA banking system, continued to deteriorate after 2009, but the health of the EA banking system improved steadily. Note, for example, that the global financial crisis triggered a sizable increase in EA and US non-performing loan (NPL) rates (defined as non-performing bank loans divided by outstanding loans), see Panel d of the Figure. After 2009, the EA NPL rate continued to trend upward, while the US NPL rate fell steadily. As documented in Kollmann et al. (2016), credit supply continued to tighten in the EA, after 2009, while credit standards loosened in the US.



Macroeconomic and financial indicators, Euro Area (EA) and US. Source: Kollmann et al. (2016)

So far, the debate on the causes of the post-crisis slump has often been polemical, with little use of evidence-based quantitative models. The research by Kollmann et al. (2016) sheds light on the main hypotheses that have been discussed in the academic and policy literatures (see above), using a state-of-the-art *estimated* structural dynamic macroeconomic model derived from coherent microeconomic principles. To address the range of views about the post-crisis slump, the model assumes a rich set of demand and supply shocks in goods, labor and asset markets, and it allows for nominal and real rigidities and financial frictions. The use of an *estimated* economic model allows Kollmann et al. (2016) to recover the shocks that have driven the divergent EA and US adjustment paths—and, hence, to determine what shocks and transmission mechanisms mattered most during the financial crisis, and its aftermath.

Kollmann et al. (2016) find that the slow post-crisis recoveries in the US and EA have both common and idiosyncratic components. An important common feature is the strong rise in investment risk premia during the 2008-09 recession that put an end to a pre-crisis investment boom. Kollmann et al. (2016) argue that the persistent EA slump reflects a combination of adverse supply *and* demand shocks, in particular negative shocks to TFP growth and adverse shocks to production capital investment risk premia, linked to the continuing poor health of the EA banking system. The empirical analysis suggests that fiscal policy (austerity) had a non-negligible impact, but was not the major factor delaying the recovery in the EA. However, private saving shocks are important for the post-crisis slowdown of inflation. EA real activity has benefited from noticeable *positive* factors during the aftermath of the crisis--however those positive influences were weaker than the adverse supply and demand shocks mentioned above. For example, the model estimates suggest that EA price mark-ups fell during and after the Great Recession (2008-09), which was reflected in a rise in the EA wage share, and was a driver of low post-crisis EA inflation. An additional factor for low post-crisis inflation in the EA was weak private demand.

According to the estimates presented by Kollmann et al. (2016), the faster post-crisis rebound of the US economy largely reflects a steady fall in capital investment risk premia, linked to the faster improvement in the health of the US financial system. In other terms, adverse financial shocks were less persistent in the US than in the EA. Furthermore, post-crisis TFP growth fell markedly less in the US than in the EA. In the aftermath of the crisis, US aggregate activity also benefited from more resilient private consumption demand, consistent with faster household deleveraging in the US (compared to the EA). According to the estimates, US fiscal policy was more stimulative than EA fiscal policy during the financial crisis. However, the authors also identify important factors that slowed down the recovery of the US economy; in particular, US price mark-ups rose during the post-crisis period, which had a negative influence on US output (and a positive effect on US inflation).

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