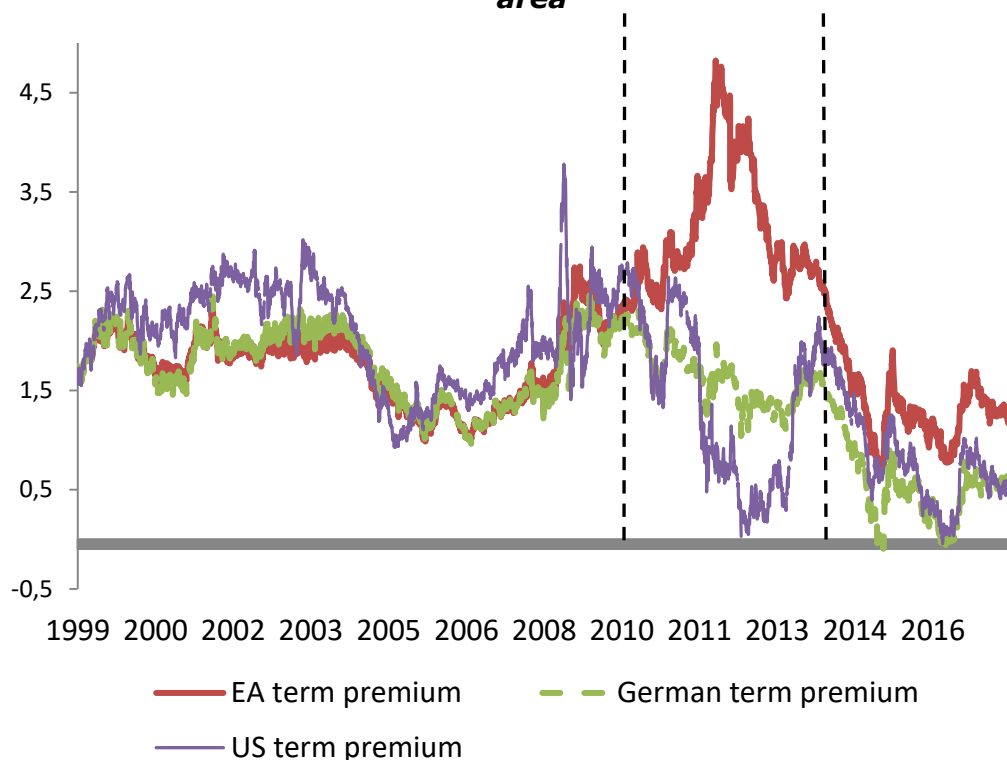


Spillovers to the euro area from a sudden rise in the US term premium

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The US term premium (TP) has been very low by historical standards. Would its sudden rise affect the euro area (EA)? Lower US demand and tighter financial conditions would slow down EA activity. A surprise 1pp increase in US TP could reduce US and EA GDP growth by 0.4pp and 0.25pp respectively. Such effects would be smaller if the monetary authorities were to counteract the fall in inflation.

Figure 1: 10-year Term Premia in the United States, Germany and the euro area



Note: The term premia of 10-year government bonds are estimated by NIESR. The euro area term premium is here calculated as ECB capital key weighted average of the term premia of the member countries.

Given its historically low levels, what would be the consequences of a sudden increase in the US term premium? In particular, in the current context of the growing US budget deficit and a decrease in the bond holdings of the Federal Reserve (Fed), an upward pressure on the US term premium appears likely. What are the implications of the rising US term premium for the euro area economy? On the one hand, any appreciation of the US dollar resulting from the increase in the US term premium could improve the trade competitiveness of euro area countries. On the other hand, the contemporaneous dampening of US demand would reduce the euro area's exports to the US. In addition, if international term premia are closely correlated due to financial linkages, then a rise in the euro area term premium would also weaken euro area domestic demand.

Does the US term premium affect the euro area term premium?

Figure 1 presents changes in estimates of the US, German and euro area term premia (NIESR estimates in line with [Adrian et al. \(2013\)](#) methodology) from the end of the 1990s to today. As it is readily apparent to the naked eye, these are strongly correlated throughout the entire sample, with the exception of the European sovereign debt crisis period (while the level of the term premia (henceforth TP) can differ according to the estimation period, the correlation between United States and the euro area holds across alternative TP estimates). In this crisis period, between the two vertical lines, investors started to dispose of peripheral sovereign assets. Concentrating on the most recent period, both German and euro area TP are highly correlated with the US TP (91% and 93%, respectively) and, as noted by [Coeuré \(2018\)](#), a "strong correlation between international asset prices therefore doesn't necessarily result from a common shock"; as a matter of fact, it can be driven by a monetary or fiscal policy decision taken in a single country. For example, higher US yields induced by balance sheet normalisation attract investors, lower demand for euro area assets and push up the euro area term premium. [Rogers et al. \(2014\)](#), show that indeed there is a spillover from US unconventional monetary policy surprises to non-US yields. Based on this evidence, for the purposes of our simulation we assume that a 100bp increase in the TP in the United States is associated with an increase of 40 bp in the euro area TP. We evaluate the overall impact (and the channels) of this US term premium shock on the euro area economy using a semi-structural global model – [The Flexible System of Global Models - FSGM](#).

Decompression in the US term premium: model simulation

To keep the analysis simple and transparent, we assume the Fed does not immediately lower short-term interest rates to counteract the term premium shock and that the ECB keeps the short-term nominal rate constant for two years. To find an upper bound on the possible spillover effects, we assume that the ECB does not react to the increase in the EA term premium by extending its asset purchases or signalling that it would further delay its first rate hike. The impact of the shock would be milder if monetary policy were used actively in the United States and/or in the euro area to offset the negative impact of the term premium shock on the inflation outlook.

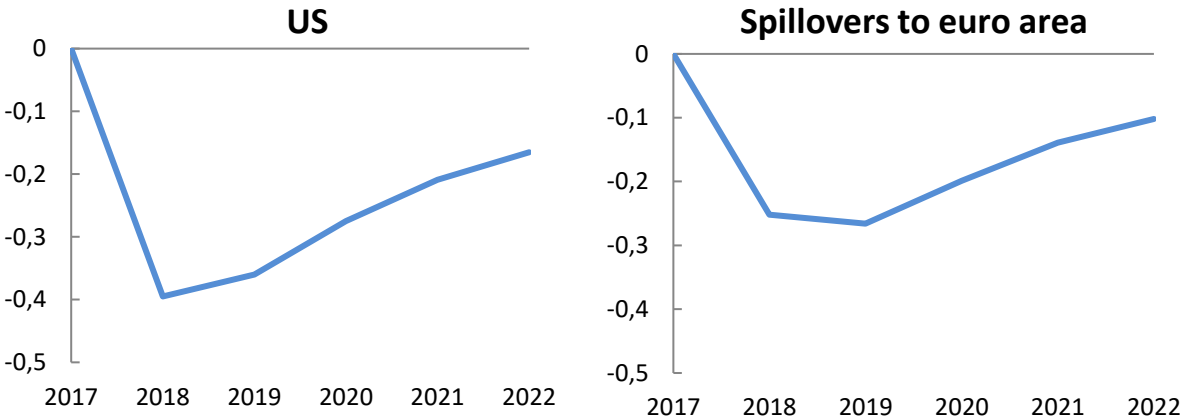
The US term premium shock would reduce output in the United States

Our simulation shows that in the United States, the 100bp increase in the term premium would result in weaker consumption and investment because of higher long-term borrowing costs: GDP growth would be reduced by 0.4pp after one year relative to the baseline scenario (Figure 2). Weaker domestic demand would lead to a decrease in inflation (-0.27pp) but it is assumed the Fed would not counteract this decrease in the first year, which amplifies the adverse effects of the shock. An increase in the term premium would raise the long-term real rate, causing the dollar to appreciate, according to the exchange rate equation in the FSGM model.

Negative spillovers to the euro area

As shown in Figure 2, the increase in the US term premium would have dampening effects in the euro area as well. Lower US demand for foreign goods would decrease euro area exports. This would push down euro area inflation, although by less than the fall in US inflation. ECB monetary policy is assumed not to offset the decline in inflation, and the real interest rate would thus increase. This would result in a slight appreciation of the real effective exchange rate, amplifying the adverse impact on exports due to the weaker US demand.

Figure 2: US and euro area real GDP response to a term premium shock (percentage difference from baseline)



Note: Responses to a 100-basis-points shock to US term premium.

In addition, financial interconnectedness also plays a major role in dampening euro area demand. Here, we assume that given the strong financial market interconnectedness between the United States and the euro area, relative adverse effects on euro area financial conditions are higher than on the average of all remaining economies worldwide. We assume a 40bp increase in the euro area term premium and no increase elsewhere. As a result, the increase in the TP, amplified by the assumed lack of response by euro area monetary policy, would result in an increase in both short and long-term real rates. Higher real rates would increase the cost of borrowing and increase the benefits of saving, pushing down both investment (-0.85 pp) and consumption (-0.2 pp). The real effective exchange rate would appreciate even further.

In sum, a 100bp increase in US term premium is shown to reduce the euro area's GDP growth by 0.25 percentage point in the year of the shock in the absence of a response by the Fed and the ECB. However, given the negative impact of the term premium shock on the inflation outlook, the central banks in both economies are likely to react by easing their respective monetary policies.