As the International Monetary Fund and World Bank redouble their warnings on the prospects for global growth, central banks continue to flood the markets with liquidity. The US Federal Reserve began its third round of quantitative easing last month; the European Central Bank is offering unlimited purchases of bonds of troubled eurozone countries. The People's Bank of China, responding to slowing growth, has cut interest rates repeatedly and trimmed reserve requirements.

It may seem a strange time to worry about a shortage of global liquidity. But precisely this risk looms and, if nothing is done, it will threaten 21st-century globalisation.

The global trading and financial systems require lubrication by an adequate supply of homogeneous assets that can be bought and sold at low cost and are expected to hold their value. For half a century, US Treasury bills and bonds played this role. Their unique combination of safety and liquidity has made them the dominant vehicle for bank funding globally: it explains why the bulk of foreign exchange reserves are held in dollar form, and why the role of dollar credit in financing and settling international trade far exceeds the US share of international merchandise transactions.

But as emerging markets continue to rise, the US will unavoidably account for a declining fraction of global gross domestic product, limiting its ability to supply safe and liquid assets on the scale required. The US Treasury's capacity to stand behind its obligations is limited by the revenues it can raise, which depend, in any scenario, on the relative size of the US economy. With emerging markets' growth outstripping that of the US, the increase in the capacity of the US Treasury to supply safe and liquid assets will inevitably lag behind the increase in global transactions.

For the US not to address its looming fiscal challenges would be more alarming still. America may not be at risk of default, because the Fed is there to backstop the market in Treasuries. But if the current situation persists, America's sovereign obligations will not hold their value indefinitely. And if they fail to hold their value, they will not hold investors' confidence. If they no longer offer the safety that investors have come to expect, they will not function as the stable collateral required by bank funding markets. They will not be regarded as an attractive form in which to hold international reserves. And they will not be seen as a convenient vehicle for merchandise transactions.

A serious shortage of international liquidity would spell the end of globalisation as we know it. International financial and merchandise transactions would become more expensive. Without an attractive means to hold the reserves they need to intervene in international markets, central banks and governments would be reluctant to give those markets free rein. Controls would become widespread.

The only other economies large enough to supply safe and liquid assets on a meaningful scale are the eurozone and China. Europe is currently in no position to do so. Eurozone bonds would have the requisite uniformity and liquidity but they remain a bridge too far.

China, however, has not yet succeeded in developing a liquid bond market. Beyond that, there is the fact that every reserve currency in history has been the currency of a political democracy. In a democracy, the executive is subject to checks and balances. This reassures investors, including foreign investors, that they are safe from expropriation. It is not yet clear whether China, as a one-party state, can finesse this problem.

If they are not to come from the US, European or Chinese governments, then where can an adequate supply of safe and liquid assets come from? Some observers point to the private sector. They suggest that international transactions can be financed and settled using high-grade corporate bills and bonds.

Corporate obligations, however, lack the uniformity of sovereign debt. To use them, those engaged in cross-border transactions would have to make expensive investments in information or, worse yet, rely on the rating agencies. Either way, the costs would be significant.

Others propose empowering the IMF to create international liquidity by authorising it to issue additional special drawing rights and, more importantly, requiring the Fed to accept them in return for dollar liquidity. This is a clever scheme, but Congress will never agree to it.

The only solution, then, is for the US, Europe and China to share the burden. They can do so by putting in place measures to enhance investor confidence in their sovereign issues. And in each case the solution is at least as much political as it is economic. The writer is professor at the University of California, Berkeley. This article is a version of a paper published by the DWS Global Financial Institute