GLOBAL SOVEREIGN DEBT MARKET: NOT SEEING THE TREES FOR THE FOREST

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In response to the Covid-19 shock, global public debt will hit an all-time high of 130% of GDP or USD277trn in 2020, exceeding even the levels seen during the Second World War. This won't be without consequences for debt sustainability, particularly for the most fragile economies in the European periphery. Today's conventional wisdom tells us that governments benefit from a quasi-infinite capacity to issue debt when facing a systemic shock, especially with the support of central banks resolutely engaged in unconventional monetary policy. Accordingly, the Covid-19 crisis has sparked a strong and globally synchronized increase in public debt, particularly in advanced economies, to smooth the negative impact of lockdowns (see Figure 1). At the same time, central banks have pursued unconventional monetary policies, mainly involving government bonds purchases, with their balance sheets converging above 50% of GDP at the end of 2020. This is simultaneously allowing a quasi-direct financing of world public debt.

Figure 1 - Historic overview on public debt and long-term rates
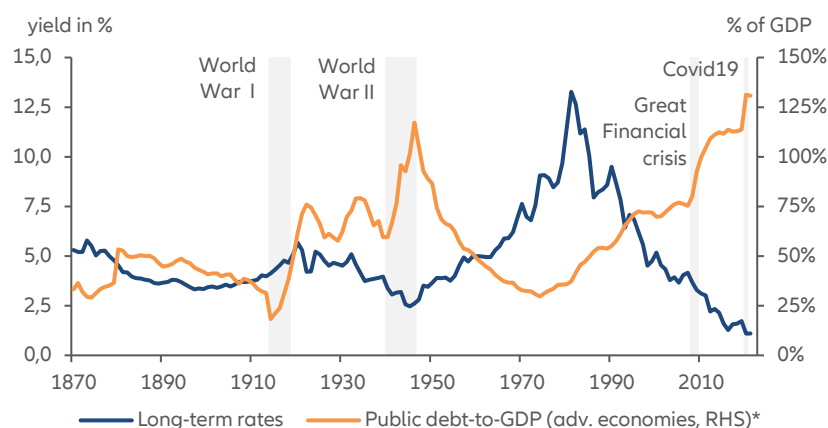
adv. economies (AU, BE, CA, DK, FI, FR, DE, IT, JP, NL, NO, PT, ES, SW, CH, UK, US)
Sources: Macrohistory Database (Jordà et al., 2017), IMF, Allianz Research.

These common factors seem to have compressed risk premiums and created a spirit of complacency regarding the sustainability of world public debt. Over the last few years, government bond yields have been evolving at a very low level, while spreads between countries, a mirror of the relative risk of default, have trended on the downside despite the risky behavior of debt accumulation. European debt spreads in particular have recently reached record low levels following the initiative to create a pool of common debt via the European Recovery Fund. In our view, there is a

non-negligible probability to see those spreads increase again in the near future, even if a rapidly rising common pool of global sovereign debt and direct purchases of government bonds by central banks have significantly altered the capacity of investors to distinguish between viable and non-viable regimes of debt accumulation.

The question is therefore the following: rather than the absolute level of public debt, expressed as a percentage of GDP, is it rather the deviation from a common trend of debt accumulation that leads to a widening of government bond spreads? In this case, in a context of a generalized inclination to issue much higher public debt, and where central banks tend to prevent interest rates from increasing too rapidly, one could think that there is a lower risk for governments to face the sanction of the market. This implicitly tests the assumption that Europe will be stronger in issuing a common pool of public debt.

To study this question, we build a model allowing us to identify the common and specific determinants of debt issuance across countries to see if only the specific components (that we could associate with a deviation from a trend of higher public debt at a global level) have an influence on government spreads.

Step 1 consists in identifying a world common trend in the supply of public debt. We identify the world common factor of public debt supplies by using a state-space model applied on the yearly growth rate of public debt.[1] State-space models[2] differentiate between observed data (the signal) and hidden data (unobserved components helping understand a macroeconomic phenomenon). In our model, the growth rate of every individual country's public debt supply is equal to the sum of a world common factor (of debt supplies) and a specific factor (deviation from the trend) described in a series of measurement equations[3]. The state equations describe the dynamic of the hidden common factor and the dynamic of specific factors. They are assumed as following an AR(1) process. For example, the World common factor = C(10)* world common factor (-1) + [e1][4].

Step 2 implies studying the variation of European sovereign spreads in function of a world common trend of debt supplies and national specific factors. We explain European spreads (10-year national sovereign rate - German 10 year Bund yield) in function of the common factor of debt supplies, the national specific debt supply factor and the U.S. 10-year interest rate (as a proxy of global monetary and financial conditions). We also add the German and U.S. specific factors of debt supply to test the influence of global benchmark markets in determining the variations of EMU sovereign spreads. All common and specific factors of debt supply have a four-quarter lag. We obtain the following results:

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[1] Using IIF data for U.S., Japan, Germany, Italy, France, Greece, Spain, Portugal, Netherlands, Ireland
[2] https://www.cairn.info/revue-de-l-ofce-2003-3-page-203.htm
[3] By country, we build this equation: Country i debt yearly growth = world common factor + C(i)* country i specific factor
[4] Country j specific factor = C(j)* country j specific factor (-1) + [ej]]

Table 1 - Estimated coefficients from common and specific factors

Coefficients attached to factors impacting EMU sovereign spreads *						
Variables	FR	GR	IT	NL	PT	ES
Constant (avg. level of spread)	0.84	1.32	3.27	-2.00	4.89	2.63
Common factor of debt supply	0.03	0.64	0.04	0.10	0.29	0.14
Specific factor of US debt supply	0.07	1.58	0.07	0.26	0.88	0.35
10-year US Treasury yield	-0.20	-3.74	-0.69	1.37	-1.24	-0.68
Specific factor of country's debt supply	0.02	-0.26	-0.10	0.34	4.7**	0.02**
Specific factor of Germany's debt supply	0.01	0.12	0.03	0.03	0.08	0.03

data from Q1 2006 to Q1 2020
**not significant*
Sources: Euler Hermes, Allianz Research

The first conclusion is that the common factor of public debt supplies (the global trend) is significant (with a lag of four quarters) for all countries in explaining sovereign spreads, with higher beta for the European periphery. An acceleration in the common factor of public debt supplies triggers a widening of spreads one year later. The EMU periphery countries tend to be more sensitive to this common factor (they have a higher beta) and therefore the exposure of those countries to a risk of generalized complacency is higher (Table 1). This feature is reminiscent of the sovereign debt crisis in 2012-2013, which took place a few years after the implementation of large synchronized fiscal impulses in response to the Great Financial Crisis. With regard to the EU recovery fund, this also means that issuing common public debt does not necessarily immunize sovereign spreads from episodes of stress and widening a few quarters later. Accordingly, the ECB is likely to have to continue acquiring large swaths of European sovereign bonds to avoid any significant widening of spreads leading to new doubts about the Eurozone's fragmentation.

The second conclusion we draw is that the U.S. 10-year interest rate has a higher impact on European spreads than national specific factors of debt. Coefficients attached to this factor are negative. This could mirror a smoothing or shock-absorbing function of the world's most important central banks (the Fed and other central banks that are followers), stabilizing the market when spreads become overly volatile by outright intervention of securities purchases. In this configuration, U.S. rates reflect the stance of the major central banks in stabilizing monetary and financial conditions. Lower U.S. interest rates result from high global risk-aversion and fragile market liquidity, an environment where spreads tend to widen. This suggests that the ECB, could have to intervene in an asymmetric manner, compared with the Fed, should the European spreads widen while the US central bank is engaged in a phase of monetary policy normalization.

The third conclusion is that specific factors of the U.S. and Germany's public debt supply are strongly significant in explaining all EMU sovereign spreads. We could call that the safe heaven signal effect. Therefore, any deviation from the global trend of public debt issuance by the U.S. or

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Germany has a significant impact on European spreads. This shows how dependent fragile economies are upon the benchmark markets. The main risk for them stems from a possible austerity shock in Germany and/or the U.S. This could trigger another episode of stress in the EMU sovereign debt market. This means that by implementing a more conservative fiscal policy compared to the common trend, the U.S. and Germany could trigger a widening of EMU sovereign spreads (national specific factors are negatively correlated with the common factor).

Finally yet importantly, specific factors of periphery countries' public debt have a low explanatory power (are not significant for the Spanish and Portuguese cases) in explaining spreads, meaning that those countries could face high difficulties in stabilizing their government bond yields even when being determined to stabilize public debt. We call that the diluted signal effect of debt policy. When looking at the share of variance explained by country-specific debt supply (Table 2), we realize that the common factor of debt supply, and above all the U.S. 10-year interest rate, have a much higher explanatory power with regard to sovereign spreads. This means that EMU countries are not fully in control of their destiny when trying to implement asymmetric fiscal policies in order to influence sovereign spreads.

Table 2 – Explanatory power of factors (variation in R2 when integrating the variable)

EMU sovereign spreads (% of total variance)						
Variables	FR	IT	ES	GR	PT	NL
Common factor of debt supply	16%	2%	13%	14%	16%	5%
10-year US Treasury yield	41%	36%	23%	22%	20%	61%
Specific factor of country's debt supply	6%	8%	0%	14%	1%	5%
Specific factor of Germany's debt supply	18%	9%	8%	14%	44%	6%
Specific factor of US debt supply	8%	1%	8%	9%	16%	3%
Others	11%	44%	48%	27%	3%	20%

Sources: Euler Hermes, Allianz Research

There is therefore no place to hide. Even times of generalized complacency in public debt issuance are likely to trigger a surge of risk premia for those countries that are structurally the most fragile. An austerity shock, especially in the U.S. but also in Germany, that would act as sudden stop in the supply of safe assets, or an unexpected disruption of the smoothing function of unconventional monetary policies could have a destabilizing effect on the stability or sustainability of the European periphery's public debt via a significant widening of sovereign spreads.

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