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Société Générale
Economic and Sectoral Studies Department

US PUBLIC DEBT: TOWARDS MORE DOMESTIC AND PRIVATE FINANCING

— From the early 2000s to mid-2008, the portion of US federal public debt held by non-residents rose from 30% to 50%, driven by the accumulation of international reserves by the central banks of emerging economies (led by China) and oil-exporting countries, periodic currency interventions by the Bank of Japan, and yen-dollar carry-trade transactions.

— The surge in US public debt in the wake of the "Great Recession" of 2008 (+40 % of GDP), combined with Fed quantitative easing purchases led to a partial rebalancing of the investor base. Still, the portion of debt held by foreigners stayed at about 50%, with non-residents remaining highly active on the Treasuries market.

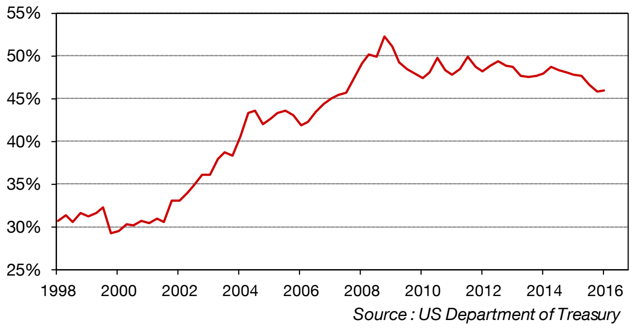
— However, two major shifts have occurred since 2014:

i) The share of US public debt held by non-residents has turned downward. Emerging countries have become net sellers of US bonds (with the decline in their international reserves). This trend was partially offset by private investors, particularly in Europe, who increasingly substituted for emerging countries' central banks in buying US Treasuries.

ii) As for residents, the share of total debt held by the Fed has declined slightly, while that held by institutional investors in particular (mutual funds, pension funds and insurance companies) and, to a lesser extent, banks, has risen.

— These structural shifts in the holding of US debt (a lower share held by foreigners, the private sector's supplanting of official entities) resulted in more debt being held for "speculative" reasons (yield spreads) rather than for "precautionary" reasons (international reserves). In light of the above, and given that these trends are expected to continue, the possibility of greater volatility on the Treasuries market cannot be ruled out in the coming years.

PORTION OF US TREASURIES HELD BY NON-RESIDENTS



Source : US Department of Treasury

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Despite the almost constant piling up of public deficits since the mid-1970s, the United States has no problems funding its public debt, either domestically or by non-residents. In particular, foreigners' share of the holding of US debt, has risen sharply since the 2000s and is still quite high (46% of the debt held by the public; see box). The sharp increase in federal debt in the wake of the "Great Recession" of 2008 (from 63% of GDP at end-2007 to 105% in mid-2016) hasn't changed this pattern. The dollar's role as a reserve, transaction and "safe haven" currency remains a sizeable advantage for the US. Even so, capital inflows from "traditional" foreigners have levelled off recently. The holding of US debt by non-residents is beginning to decline, which once again raises the possibility of a disruption in the way of funding the US deficits. In this study, we break down recent trends in the holding of US debt into three distinct phases, while analysing its causes and its implications.

BOX: BREAKDOWN OF US FEDERAL DEBT BY HOLDERS

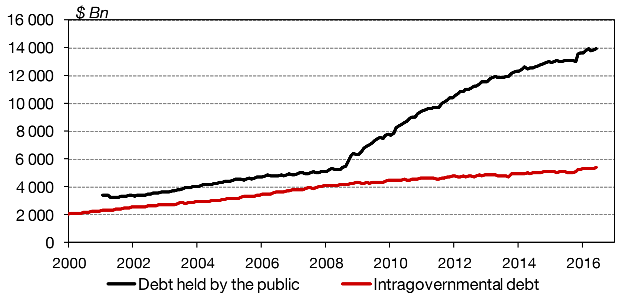
In Q1-2016, the US federal public debt[2] reaches $19,265bn (105% of GDP), according to the US Department of the Treasury. This amount can be broken down into two distinct parts:

i) The "Intragovernmental" debt ($5,340bn, or almost 28% of the total), held by federal agencies (mainly Social security funds and Federal retirement funds). This can be considered as debt that the federal government owes to itself. Basically, it reflects reinvestment by federal agencies of their cash surpluses into Treasuries. These are mainly non-negotiable securities.

ii) The debt "held by the public" ($13,925bn), which includes domestic holders (private investors, the banking and financial sector, the Federal Reserve, local governments) and foreign holders (private investors or official entities). These are mainly negotiable securities.

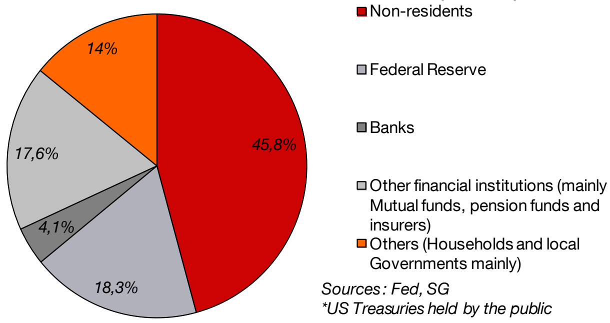
This study focuses on US Treasuries "held by the public"[3]. Almost 46% ($6,287bn) of these Treasuries are held by non-residents, including 30% ($4,072bn) by the official sector (central banks, international and regional organisations) and 15% by foreign private investors. The Federal Reserve ranks second, holding almost 18% of the total. Domestic institutional investors hold 17% (of which 11% just by mutual funds), followed by households (8%), and local governments and their pension funds (6%). US banks and insurance companies hold only 4%[4] and 2% of Treasuries, respectively.

GR. 1: US TOTAL FEDERAL DEBT ($19382 Bn - JUNE 2016)



Source : US Department of Treasury

GR. 2: HOLDING OF US FEDERAL DEBT* (Q1-2016)



Sources: Fed, SG
*US Treasuries held by the public

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[2] *This measure does not include the debt of individual states and other local public administrations (about $3,000bn), nor the debt of federal agencies such as the Federal Home Loan Banks (FHLB) nor the Government National Mortgage Association (GNMA, or Ginnie Mae), nor government-sponsored enterprises (Fannie Mae and Freddie Mac). However, it does include intragovernmental debt and is therefore not comparable with the measurement of public debt commonly used in Europe, which includes local debt but excludes intragovernmental holdings. For more details and a sample comparison of countries, see https://www.chicagofed.org/publications/chicago-fed-letter/2016/353.*

[3] *The concept of federal debt based on the Fed's Flow of Funds (FoF) ($15,402bn in Q1-2016) differs from the Treasury's measurement ($19,265bn) in that it excludes intragovernmental holdings, with the exception of* Federal Government Retirement Funds (FGRF), *which, since September 2015, have been considered as part of the financial sector. With a few adjustments, the debt held by the public, according to the US Treasury ($13,925bn) is therefore equal to the federal debt as defined by the FoF, adjusted for the holdings of* FGRF *securities ($1,700bn). To simplify things and make comparisons easier, we have qualified this concept of federal debt held by the public as defined by FoF ($13,702bn).*

[4] *Banks hold a 26% share when counting, in addition to Treasuries, securities of government sponsored enterprises (GSEs), which are not included in federal debt (although these agencies are covered by a public guarantee).*

FOREIGN HOLDINGS OF US DEBT HAVE RISEN SHARPLY SINCE THE START OF THE 2000s …

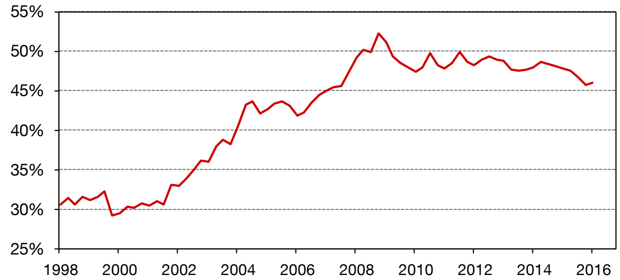
During the 2000s, the holding of US public debt by non-residents rose sharply, driven by:

- The accumulation of international reserves by central banks in emerging economies (led by China) and oil-exporting countries, based on the their sovereign wealth funds' investment strategies;
- Periodic currency interventions by the Bank of Japan and the switch by Japanese investors to US Treasuries (carry trade transactions to exploit the interest rate gap with the US).

This trend was driven mainly by increased global imbalances during the review period[5], combined with greater global financial integration (diversification of portfolios and increase in cross-border financial flows) *(J. Andritzky, 2012[6])*. As for oil-exporting countries, higher prices boosted their surplus savings and encouraged them to buy Treasuries with regard to the exchange-rate policy conducted by most of them.

Between 2000 and mid-2008, non-residents thus accumulated almost $1,500bn in US Treasuries (half by China and Japan, followed by OPEC countries, Brazil and Russia), or more than 80% of the increase in federal debt during the period. The share of debt held by non-residents thus rose from 30% in the early 2000s to more than 50% in 2008.

GR.3: PORTION OF US TREASURIES HELD BY NON-RESIDENTS



Source : US Department of Treasury

The global savings glut that characterised this pre-crisis period thus helped keep US long-term interest rates low, despite the Fed's mid-decade monetary tightening. This situation, which Alan Greenspan called a "conundrum", helped generate a real-estate bubble and the subsequent subprime crisis.

Finally, until the financial crisis, the US public debt had expanded only slightly and was mainly held by the non-resident official sector, in particular Asian and oil-exporting countries.

… AND HELD STEADY DESPITE THE SPIKE IN PUBLIC DEBT AFTER THE GREAT RECESSION OF 2008

The surge in US public debt since mid-2008 (+ 40% of GDP) driven by the substantial fiscal stimulus adopted to face the "Great Recession", **has somewhat shifted the investor base towards domestic holders.**

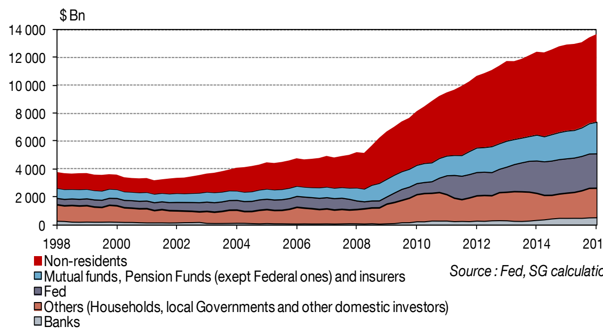
This has been driven by several factors

- Fed quantitative easing (QE), under which it accumulated almost $2,000bn in Treasuries between QE1 (begun in December 2008) and QE3 (completed in October 2014);
- the announced intention of China, Russia and other emerging economies to rebalance their portfolios and diversify their reserves;
- a gradual return of a domestic bias with risk aversion.

Even so, foreigners remained quite active on the Treasuries market. The stock of debt accumulated by non-residents (almost $3,700bn) was even greater than before the crisis. As a result, foreigners continued to hold about 50% of debt until 2014.

Over the $8,525bn additional debt registered since mid-2008, 43% has been accumulated by non-residents, vs. 57% by resident investors (of which 23% by the Fed, almost 10% by mutual funds and households respectively, and 5% by banks).

GR. 4 : US OUTSTANDING FEDERAL PUBLIC DEBT

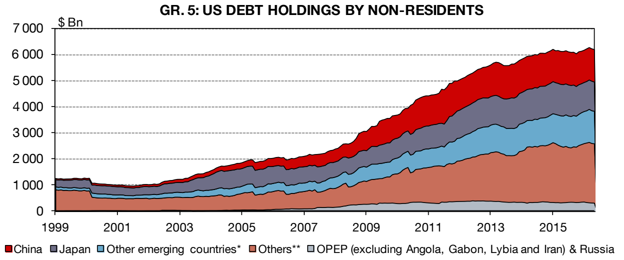


Source : Fed, SG calculations

[5] *A wide savings surplus in emerging economies, as a corollary to the accumulation of huge current accounts deficits by some advanced economies.*

[6] *J. Andritzky, IMF (2012): "Government Bonds and Their Investors: What Are the Facts and Do They Matter?"*

GR. 5: US DEBT HOLDINGS BY NON-RESIDENTS



Brazil, Carribeans, Chile, Columbia, Mexico, India, South Korea, Singaporer, Taiwan, Thailand, Turkey
*** Essentially the EU, Switzerland and other Asian countries*
Sources : US treasury, SG calculations

There are many reasons for the continued prominence of foreigners on the Treasuries market: 1/ the resorption of current account imbalances was smaller and slower than expected, with stubbornly heavy surpluses among oil-exporting countries and China, until 2014. The former benefited from the surge in oil prices during the period, while China dragged its feet in rebalancing its growth model towards domestic demand; 2/ US monetary tightening, initially expected as early as 2014, was ultimately pushed back after the tensions created by the tapering announcement[7] on emerging economies in summer 2013; and 3/ the Eurozone sovereign debt crisis helped make "safe" bonds rarer: in 2014, only 42% of the total stock of long-term OECD sovereign bonds was rated AAA, down from 52% in 2011. US Treasuries thus continued to play this safe haven role, which maintained foreign investors' appetite.

All in all, as of the end of May 2016, China and Japan remain the two main foreign holders of US Treasuries, together totalling almost 40% on non-resident holdings.

	Major foreign holders of US Treasuries (US Treasury - March 2016)	$ Bn	% of total
1.	China	1244,0	20,0%
2.	Japan	1133,2	18,3%
3.	Cayman Islands*	260,2	4,2%
4.	Ireland	259,8	4,2%
5.	Brazil	249,5	4,0%
6.	Switzerland	228,7	3,7%
7.	Luxembourg	221,8	3,6%
8.	United Kingdom	216,5	3,5%
9.	Hong Kong	192,7	3,1%
10.	Taiwan	181,5	2,9%
11.	Belgium	151,7	2,4%
12.	India	118,0	1,9%
13.	Singapore	109,2	1,8%
14.	Saudi Arabia	103,7	1,7%
15.	Germany	97,1	1,6%
16.	Russia	88,2	1,4%
…	Other countries	1353	21,8%
	TOTAL	6208,3	100,0%

** The existence of international financial centers could bias non-resident holdings upwards*

These figures, provided by the US Department of the Treasury must be interpreted with caution, as the existence of international financial centres (Bahamas, Bermuda, the British Virgin Islands, the Cayman Islands, Panama, etc.) may skew the holding by non-residents upwards. Indeed, statistics on non-residents' assets often fail to distinguish between intermediate holders and beneficial owners. To take one example, an international financial services centre (Ireland, Luxembourg, UK, or the Cayman Islands) may register assets whose beneficial owner is a resident of the issuer country, leading to an over-estimate of holdings by non-residents.

SINCE 2014, HOLDING OF US DEBT HAS BEEN INCREASINGLY DOMESTIC AND PRIVATE

There have been two major recent trends on the Treasuries market.

The share of US public debt held by non-residents turned down in 2014, falling from 50% to 46% of the total. Many countries have become net sellers of US securities (with the shrinking in their international reserves), especially Asian countries (Japan and China in particular), as well as Latin American countries (Brazil and Mexico in particular).

Indeed, the accumulation of international reserves by emerging economies' central banks has levelled off since 2014 and even turned down, and for many reasons:

1/ savings to be recycled are lower, due to the rebalancing of growth models in some economies;

2/ the slowdown in China and many emerging economies, combined with expectations of depreciation of their currencies and the *taper tantrum* impact (outflows of capital that had initially flowed into emerging economies) have led to capital outflows, reversing the trend seen until then;

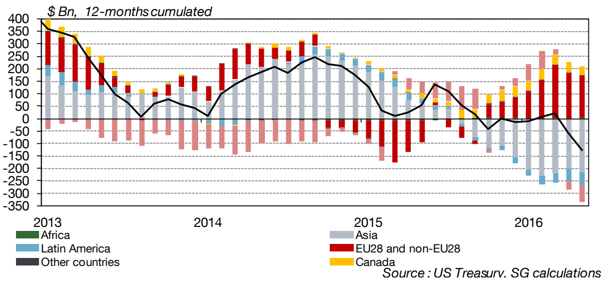
3/ the collapse in oil prices since mid-2014 has hit oil-exporting countries revenues hard, also undermining their accumulation of reserves.

4/ lastly, the Bank of Japan's stopped its currency interventions, which have also contributed to this phenomenon.

Meanwhile, net sales of US Treasuries by emerging economies have been partly balanced by net purchases by European countries (UK, Switzerland, France and Germany in particular). This is due in part to the appetite of yield-starved private European investors for US assets, given the widening in spreads in the US's favour.

[7] *The Fed announced it would phase out its QE3 securities purchases by the end of 2014.*

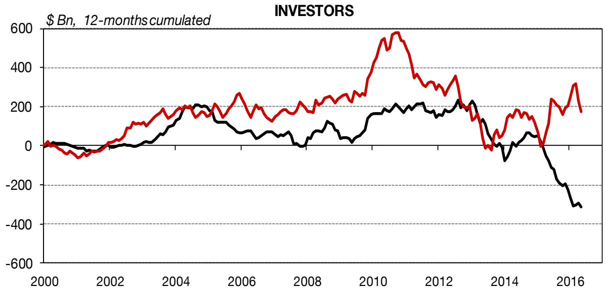
GR. 6: FOREIGN NET PURCHASES OF US TREASURIES BY COUNTRIES



Source : US Treasury, SG calculations

The second trend that has emerged over the past two years has been the increasing tendency of private investors to supplant official entities in non-residents' purchases of US debt. One the one hand, the quantitative easing policies of the other major central banks (ECB and BoJ) have encouraged capital outflows from the euro zone and Japan, with private investors sending their excess liquidity abroad, in part towards US sovereign bonds. On the other hand, the gradual freeing up of capital restrictions in China, combined with fears of a Chinese and emerging slowdown, have led to a shift in capital flows to the United States. These trends occurred in an environment in which the Fed was conducting its tapering, which had the impact of stabilising the use of public debt that it held on its balance sheet, causing expectations of US interest rate hikes and promoting capital shifts.

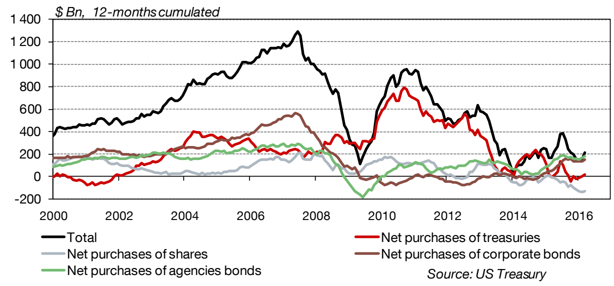
GR. 7 : NET FOREIGN PURCHASES OF US TREASURIES BY TYPE OF INVESTORS



Source: US Treasury

This trend has spread to other US long-term securities, with the exception of equities. Foreign private investors have, in addition to Treasuries, also raised their purchases of US corporate and agency debt. Based on balance-of-payment data, it is also worth noting the increase in foreign direct investment (FDI) into the US in 2015, while portfolio investment flows declined.

GR. 8 : NET FOREIGN PURCHASES OF US LONG-TERM SECURITIES



Source: US Treasury

WHAT CONSEQUENCES CAN BE EXPECTED FROM CHANGES IN THE WAYS THE US DEBT IS FUNDED?

These structural shifts in the holding of US debt (from official entities to private investors) are a clear reflection of the shift from holding debt for "precautionary" reasons towards holding it for "speculative" reasons (yield spreads). Several factors are expected to help drive these trends, going forward:

i) ongoing ultra-accommodating monetary policies in Europe and Japan (QE in particular) are likely to maintain yield-starved foreign private investor's appetite for US securities.

ii) While it has kept its balance sheet constant in size since the end of 2014 despite phasing out QE3, the Fed is likely to shrink it in the medium term by ceasing to reinvest maturing principal payments.

iii) Increasingly strict regulatory requirements are likely to promote heavier weightings of investment grade sovereign debt by private financial institutions.

iv) The shift in global imbalances (large current account surpluses in the euro zone, rebalancing of Chinese growth, a modest increase in commodity prices, etc.) are along these lines;

v) The gradual opening of China's capital account is also likely to lead to increased private Chinese investments abroad and, as a corollary, a decline in purchases of foreign securities by the central bank.

Greater volatility on the Treasuries market is likely to accompany this shift from a buy-and-hold model (official entities) to a more opportunistic (spread-based) model by the private sector (both foreign and domestic). This increase in volatility is also likely to be driven by other trends, which are also likely to last, including lower market liquidity, the development of electronic trading, and the search-for-yield in a low-interest rate environment.

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