Connor Hays

A Global View of Household Debt

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Since the early 2000s, household debt has been on the rise in both developed and emerging economies across the globe. Many developed countries face extremely high household debt-to-GDP ratios even after having initially seen significant declines in household debt in the wake of the Great Recession. Since then, debt levels have begun to creep back up. Meanwhile, emerging markets have also seen precipitous increases in consumer spending and household debt fueled by the rapid expansion of credit. As a negative correlation exists between household debt-to-GDP ratios and long run economic growth, there is concern as to the drag being placed on economies, both developed and emerging. And with continued fragility and systemic risk in the global financial system, there exists the potential for the emergence of new financial crises as central banks begin to raise interest rates, household debt rises and repayment becomes more burdensome. Under such circumstances, it is likely the global credit boom will give rise to a global credit crunch.

Introduction

A recent paper in the *Quarterly Journal of Economics*, by Atif Mian, Amir Sufi, and Emil Verner, found that increased household debt-to-GDP ratios, that is household debt expressed as a percentage of gross domestic product, predicted decreased macroeconomic growth and higher unemployment in the medium and long run across a wide range of economies.[1]

Following up on research into the macroeconomic effects of household debt, the IMF recently released a working paper that confirmed "the negative relationship between household debt and future GDP growth."[2] The IMF paper also found that while increased

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[1] Atif Mian, Amir Sufi, and Emil Verner, "Household Debt and Business Cycles Worldwide," *Quarterly Journal of Economics,* Vol. 132(4), pp. 1755-1817, May 2017, https://doi.org/10.1093/qje/qjx017
[2] Adrian Alter, Alan Xiaochen Feng, and Nico Valckx, "Understanding the Macro-Financial Effects of Household Debt: A Global Perspective," *IMF Working Papers,* April 2018,

household debt can lead to economic growth and low unemployment in the short run, in the medium to long run multiple economic mechanisms act to inhibit household consumption, increase probability of banking crises, and create unwarranted economic confidence in the wake of debt booms.

This trade off, between fueling short term growth and placing a significant drag on long run demand, is one that many developed countries are now having to face head on. With interest rate increases coming in the United States and United Kingdom, borrowers will face increased debt burdens that carry the potential to quell economic optimism and stunt continued economic growth. And as increasing household debt begins eating up a greater percentage of household income, consumers may slow spending and instead focus on paying down debt and putting money aside for future expenses.

China and Southeast Asia

In contrast to developed economies, which have faced significant household debt-to-GDP ratios since the early 2000s, emerging economies are using newly acquired access to credit to fuel economic growth and shrink the gap between themselves and the developed economies. China serves as a prime example of this dynamic, as consumer spending and a rapid increase in household debt has helped it prop up unprecedented economic growth and development. Along with China, credit has helped fuel rapid economic growth in South Korea, Thailand, Malaysia, and Singapore.

Asian households in particular have been loading up on debt. In China, the amount of outstanding debt for households has reached over $4.6 trillion, the result of an extremely rapid rise in borrowing over the past decade.[3] Starting from a remarkably modest household debt-to-GDP ratio in 2008 of 17.9 percent, Chinese households have been on the receiving end of an extraordinary boom in credit, with household debt burgeoning to 46.8 percent as of 2017.[4] Mortgage lending has grown rapidly as well, with mortgage payments rising from 3.6 percent of annual household income in 2015 to 4.5 percent in 2018. The *Financial Times* summed up the unprecedented nature of China's household debt phenomenon rather succinctly, writing "the rapidity and size of China's debt boom in the past decade has been almost entirely without precedent. The few precedents that do exist – Japan in the 1980s, the US in the 1920s – are not encouraging."[5]

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https://www.imf.org/en/Publications/WP/Issues/2018/04/06/Understanding-the-Macro-Financial-Effects-of-Household-Debt-A-Global-Perspective-45744

[3] Economist, "Asian Households Binge on Debt," *Economist*, 2 November 2017, https://www.economist.com/finance-and-economics/2017/11/02/asian-households-binge-on-debt

[4] Samba Mbaye, Marialuz Moreno Badia, and Kyungla Chae, "Global Debt Database," *International Monetary Fund Working Papers,* May 2018, http://www.imf.org/en/Publications/WP/Issues/2018/05/14/Global-Debt-Database-Methodology-and-Sources-45838

[5] Matthew Klein, "China's Household Debt Problem," *Financial Times*, 6 March 2018, https://ftalphaville.ft.com/2018/03/06/2199125/chinas-household-debt-problem/

Up until recently, the focus was on China's corporate sector, with concern about the extent of the liabilities of many state-owned enterprises, but recent attention has turned to China's total household debt outstanding. From the *Bloomberg* to the *Financial Times*, alarmist headlines of a great Asian "debt binge" can be found on a seemingly daily basis.[6] And in many ways, it is true. A whole new market of lenders and borrowers has emerged in China, a market which was nearly nonexistent just a decade ago, and Chinese households have been on the receiving end of an unprecedented economic boom for quite some time now. Household debt, when measured relative to disposable income, as opposed to GDP, has skyrocketed from 40 percent in 2007 to over 106 percent in 2017 according to the Bank for International Settlements.[7] Compared to the US, which has a debt to disposable income ratio of 105 percent, Chinese households are suffering from a higher level of indebtedness than American households on average.

Economists and policymakers are beginning to express fears about the level of household debt in China, with talk of overleverage and consumption drag becoming more common among Chinese regulators. Much of the new debt is a result of increased mortgage lending and subsequent housing market boom since 2015, with the adverse effect of a much less affordable housing market for many low-income borrowers. Mortgage debt makes up nearly three-fourths of total household debt. As such, households have had to take on larger mortgages and have faced higher down payments. A significant downturn in the housing market could quickly lead to households paying down mortgages that are of greater value than their homes.

Consumer debt has also been on the rise, accounting for 25 percent of total household debt outstanding, a rapid increase from only 8 percent in 2008. As has been widely remarked upon, consumer credit is a rather recent development in China, a market hampered by the lack of credit scoring agencies or registries and traditional cultural attitudes that put a premium on thrift.[8] However, nonbank lenders and originators have nearly singlehandedly brought a consumer credit market into existence in the matter of just a few short years. According to the Federal Reserve Bank of San Francisco, online lenders extended 4.4 trillion RMB ($677 billion) of credit in 2017.[9] As online lenders continue to make rapid inroads in the lending market, consumer debt will look to only rise and will likely continue to account for an ever-greater portion of total household debt in the coming years.

While Chinese households have been on the receiving end of rapid income growth for the past decade, incomes still haven't kept pace with debts, as household income has grown on

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[6] Andrew Polk, "Chinese Need to Learn to Save Again," *Bloomberg*, 14 January 2018, https://www.bloomberg.com/view/articles/2018-02-15/chinese-consumers-are-building-up-too-much-household-debt

[7] Bank for International Settlements, Credit to the Non-Financial Sector, 5 June 2018, https://www.bis.org/statistics/totcredit.htm

[8] Tom Hancock and Wang Xueqiao, "China Millennials' Love of Credit Cards Raises Debt Fears," *Financial Times,* 5 August 2018, https://www.ft.com/content/bb3166ea-8b1f-11e8-b18d-0181731a0340

[9] Cindy Li, "China's Household Credit Boom," *Federal Reserve Bank of San Francisco*, 29 January 2018, https://www.frbsf.org/banking/asia-program/pacific-exchange-blog/china-household-credit-boom/

average 12 percent a year while household debt has grown on average 23 percent a year. As such, household debt growth has far outpaced household income growth. Even so, China still has room for additional household borrowing, with debt only coming out to 44.2 percent of GDP. Increased consumer spending will continue to drive China's economic demand, and thus growth, for the foreseeable future as the Chinese economy continues its rebalancing.[10] As such, demand for credit looks only to grow, and so the extent of growth in household incomes and the resultant degree of credit fueled spending will determine the long run level of household debt in China.

As for South Korea, it has seen rapid growth in household debt and a boom in lending and borrowing over the past decade. Its economy is quickly closing in on a household debt-to-GDP ratio of 100 percent, standing at 92.9 percent in 2016, up from 50.6 percent at the turn of the century and 74.2 percent in 2008. Regulators in South Korea have remained judicious though, putting percentage caps on mortgage lending and requiring significant down payments on new homes, with the hope that the appropriate oversight and regulation mortgage lending can be tempered and a housing bubble can be mitigated. The Blue House, in concert with the Bank of Korea, has made slowing debt growth a priority. The Bank of Korea's Governor, Lee Ju-yeol, is hoping for a "soft landing," looking to bring household debt growth in line behind household income without causing a significant slowdown in economic growth overall.[11]

Overall, total household debt outstanding sits at 1,468 trillion won, $1.4 trillion, as of the first quarter of 2018, an all-time high for South Korea.[12] However, growth of household debt slowed in 2017, with growth slowing to 8.1 percent from a high of 11.6 percent in 2016. Growth slowed even further in the first quarter of 2018, with household debt only rising 1.2 percent, its lowest pace in over three years. As with the US and UK, there is concern that the Bank of Korea may begin raising interest rates, increasing the burden on households carrying large debt loads and either slowing consumer spending as interest eats up greater portions of disposable income or resulting in higher rates of default as borrowers fail to meet repayment obligations.

To the east, Japan has seen a remarkably different trend, with household debt falling a couple of points from 59.5 percent in 2008 to 57.2 percent in 2016, down from a high of 72.3 percent in 1999 according to the OECD. The Bank for International Settlements puts the ratio at 57.1 percent at the end of 2017. Japan's household debt stands in stark contrast to South Korea, and to the other developed economies of the Global North. Most likely a result of government spending, and the boom of public debt in Japan, which has helped

[10] Martin Wolf, "The Chinese Economy Is Rebalancing, At Last," *Financial Times*, 3 April 2018, https://www.ft.com/content/b54cda40-3659-11e8-8b98-2f31af407cc8

[11] Jiyeun Lee, "S. Korea's Household Debt Hits Record $1.3 Trillion in 2017," *Bloomberg,* 21 February 2018, https://www.bloomberg.com/news/articles/2018-02-22/s-korea-s-household-debt-hits-record-1-3-trillion-in-2017

[12] Jiyeun Lee, "South Korea's Household Debt Grows at Slowest Pace in 3 Years," *Bloomberg,* 22 May 2018, https://www.bloomberg.com/news/articles/2018-05-23/south-korea-s-household-debt-grows-at-slowest-pace-in-3-years

propel Japan forward without requiring households to finance expenditures, and thus demand and growth, without increased borrowing as has been seen in most other economies around the world. It would seem highly plausible that the Lost Decade has had a lasting impact on economic attitudes in Japan, an intransigence towards borrowing which is very much reflected in the relatively steady level of household debt and its bucking of the global economic trend.

In Southeast Asia, Thailand has seen its household debt-to-GDP ratio climb from 52.4 percent in 2008 to 79 percent in 2016. Meanwhile, Malaysia's ratio has surged from a little over 50 percent in 2008 to nearly 70 percent in 2016, and Singapore has also seen a significant increase in household debt, with a ratio of roughly 40 percent rising to nearly 60 percent in 2017. Increased household debt has in many cases been the result of increased access to global finance capital and consumer spending at home, driving significant economic growth in many countries in Southeast Asia.

United Kingdom and European Union

Household debt-to-GDP ratios vary throughout Eurozone. As of 2016, the ratio for the United Kingdom was 86.3 percent, 57.2 percent for France, 41.5 percent for Italy, 53.1 percent for Germany, 64.1 percent for Spain, 119.2 percent for Denmark, 101.2 percent for Norway, and 85 percent for Sweden. The United Kingdom and Scandinavian countries standout in the Eurozone for particularly high levels of household debt, relative to their gross domestic product.

The United Kingdom saw its household debt-to-GDP ratio rise precipitously from the turn of the century, 62.9 percent, up until its 2008 peak of 93.92 percent. Since the onset of the financial crisis, its ratio has fallen from 93.92 percent down to 85.5 percent. Even at this level, there is still concern as to the debt burden on UK households. As of June 2018, consumer debt outstanding stood at £213 billion ($271 billion), mortgage debt outstanding was £1.4 trillion ($1.7 trillion), for total household debt outstanding of £1.6 trillion ($2 trillion).[13] On average, British households spent £900 more than they earned in 2017.[14]

If real wages continue to fall, households will be forced to borrow even more just to keep up with expenses. As such, economist in the UK are worried that interest rate hikes by the Bank of England could squeeze borrowers further by making credit more expensive and increasing

[13] Bank of England, Money and Credit, https://www.bankofengland.co.uk/statistics/money-and-credit/2018/june-2018

[14] Office for National Statistics, "Making Ends Meet: Are Households Living Beyond Their Means?," 26 July 2018,https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/articles/makingendsmeetarehouseholdslivingbeyondtheirmeans/2018-07-26

the burden of those already straddled with high debt loads.[15] Of course, low-income households will be hit hardest. As the *Guardian* reported, "According to ONS figures, the poorest 10% of households spent two and half times their disposable income, on average, in the financial year ending 2017 – while the richest 10% spent less than half of their available income during the same period."[16]

Unsecured borrowing, i.e. consumer credit such as credit cards, grew by almost 10 percent in 2017 in the UK, helping households keep up their standard of living as nominal wages stagnated and prices increased. As with many other developed economies, cheap credit has helped UK households finance consumer spending and sustain demand. Some economists believe that house prices could begin falling as interest rates creep up, helping slow the rise in mortgage debt. However, consumers may have a harder time coming by consumer credit.

United States and Canada

The United States witnessed a historic rise in household debt in the lead up to the financial crisis of 2007-08, with a household debt-to-GDP ratio surging from 50 percent in the 1980s to nearly 100 percent in 2008. In the first quarter of 2008, household debt in the US peaked at 99.2 percent of GDP.[17] Household debt servicing payments as a percentage of disposable personal income peaked the quarter immediately before household debt, with repayments eating up 13.2 percent of disposable income in the fourth quarter of 2007.[18] In the aftermath of the financial crisis, household debt-to-GDP dropped off significantly, coming to its nadir of 79.9 percent in the third quarter of 2017. Debt servicing as a percentage of disposable of personal income also dropped off, falling from its peak in the fourth quarter of 2007 to a low of 9.9 percent in the fourth quarter of 2012.

However, while household debt levels and ratios fell immediately in the wake of crisis as consumers deleveraged, household debt has been back on the rise since 2012 and surpassed pre-crisis levels in 2016. As of the first quarter of 2018, US household debt outstanding stands at $15.3 trillion.[19] Consumer credit has surged to a historic high of $3.9 trillion, of which automobile loans account for $1.1 trillion, student loans account for $1.5 trillion, and revolving credit such as credit cards account for $978 billion. As for mortgage debt, it has been on the rise since the third quarter of 2014, with outstanding mortgage liabilities

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[15] Gavin Jackson and Gemma Tetlow, "Debt and Interest Rates to Be Consumers' Big Worries, Say Economists," *Financial Times,* 1 January 2018, https://www.ft.com/content/c1086cce-ebd0-11e7-bd17-521324c81e23

[16] Phillip Inman, "Household Debt in UK 'Worse Than At Any Time on Record'," *Guardian,* 26 July 2018, https://www.theguardian.com/money/2018/jul/26/household-debt-in-uk-worse-than-at-any-time-on-record

[17] International Monetary Fund, Financial Soundness Indicators, http://data.imf.org/?sk=51B096FA-2CD2-40C2-8D09-0699CC1764DA

[18] Board of Governors of the Federal Reserve System, Household Debt Service and Financial Obligations Ratios, https://www.federalreserve.gov/releases/housedebt/default.htm

[19] Board of Governors of the Federal Reserve System, Z.1 Financial Accounts of the United States, https://www.federalreserve.gov/releases/z1/20180920/html/d3.htm

standing at $10.1 trillion, but has yet to surpass its peak of $10.7 trillion in the second quarter of 2008. Of positive note is the fact that the US's household debt-to-GDP ratio has held relatively steady since 2014, with household debt growing at a rate similar to the economy on the whole.

Given that the US has surpassed its pre-crisis peak in household debt there has been some consternation among policymakers and commentators, with the *New York Times* remarking that "Americans have now borrowed more money than they had at the height of the credit bubble in 2008, just as the global financial system began to collapse."[20] Sam Fleming, writing for *Financial Times,* notes that increasing household debt has "exposed some categories of borrower to financial strain as they try to keep up with their obligations."[21] Financial strain that is beginning to show up in the credit card market, as overdue credit card debt touched a seven-year high in early 2018.[22] Increasing strain is especially true for student borrowers, who have had to take on ever increasing amounts of debt in order to finance their educations and keep their heads above water within the labor market. And while the Great Recession was precipitated by subprime mortgages and a cascade of defaults, it's not the mortgage market that is facing a slew of loans in arrears, but the student loan market where the delinquency rate has shot up to worrisome highs.

Student loan debt doesn't present the same type of systemic risk as mortgage debt does in the US, but if incomes remain stagnant, rising interest rates could push a significant portion of borrowers into serious delinquency or default. Given that debt has been fueling consumer spending, a hit to a large portion of student borrower's creditworthiness and thus their ability to take on loans for other purchases such as homes, cars, and consumer goods, could precipitate a credit crunch or greater macroeconomic downturn. Overall, there is ambiguity as to the health of household balance sheets in the US. Student loan debt has surged, mortgages have crept back up, auto loans have expanded, and credit card debt continues to rise. At the same time, real incomes are stagnant and household wealth has yet to recover from the remarkable blow it suffered in 2008. The financial stability of US households will be tested by coming Fed interest rate hikes and a potential tightening of bank credit, as households take on the additional interest burden and navigate spending under costlier and tighter credit conditions.

Up north, Canadian household debt has also hit historic highs, reaching 2.1 trillion Canadian dollars ($1.6 trillion) in June 2018, for a household debt-to-GDP ratio hovering around 100 percent.[23] In an attempt to slow its decade long credit boom, the Bank of Canada began hiking interest rates in the summer of 2017, with rates being raised from 0.5

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[20] Michael Corkery and Stacy Cowley, "Household Debt Makes a Comeback in the U.S.," *New York Times,* 17 May 2017, https://www.nytimes.com/2017/05/17/business/dealbook/household-debt-united-states.html

[21] Sam Fleming, "US Household Debt Surpasses Pre-Crisis Peak," *Financial Times,* 17 May 2017, https://www.ft.com/content/e45fd8aa-3afb-11e7-821a-6027b8a20f23

[22] Alistair Gray, "Overdue US Credit Card Debt Hits 7-Year High at $11.9bn," *Financial Times*, 28 February 2018, https://www.ft.com/content/7aad6ec2-1c00-11e8-aaca-4574d7dabfb6

[23] Bank of Canada, Household Credit, https://credit.bankofcanada.ca/householdcredit

percent to 1.24 percent.[24] Canada's tightening comes amid widespread fear that it's household debt is nearing calamitous levels even as the level of household debt has begun to level off, with Bank of Canada Governor Stephen Poloz stating "the Bank is also focused on vulnerability of our economy to rising interest rates, given high household debt."[25] However, in a speech in May, Poloz reiterated his confidence that policymakers will be able to mitigate the risk and put Canada's economy on solid ground, "Debt still poses risks to the economy and financial stability, and its sheer size means that its risks will be with us for some time. But there is good reason to think that we can continue to manage these risks successfully."

Other commentators aren't quite so sure. Economists at the Bank for International Settlements see early warning indicators of banking crises for Canada "flashing red".[26] In response, the Bank of Canada released a report on Canada's "credit-to-GDP gap", concluding that "excluding non-financial government enterprises narrows the credit-to-GDP gap to well below worrisome thresholds."[27] Canadian lenders aren't too worried either, with representatives from nearly all of major Canadian banks downplaying risks in the lending market and the impacts of interest rate hikes.[28] Whatever the exact danger posed, Canada's debt-to-GDP ratio of 100 percent and a debt to disposable personal income ratio of 170 percent are the highest in the Global North.

Household debt in Canada has been mostly driven by homeownership growth and a mortgage boom. Of Canada's C$2.1 trillion in household debt, mortgage debt accounts for C$1.5 trillion, or 71.2 percent, while consumer credit accounts for the remaining C$612 billion. Soaring housing prices have been the main driver of increased household debt, the bank's interest rate hikes hope to dampen demand and overconfidence in the housing market. And it looks to be working, home sales dropped to their lowest level in almost five years in February, with sales down in Vancouver and Toronto.[29] Housing prices have also leveled off, remaining stable from February 2018 through June 2018.[30]

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[24] Greg Quinn, "Canadians Are Starting to Ease Up on Their Household Debt Binge," *Bloomberg,* 14 June 2018, https://www.bloomberg.com/news/articles/2018-06-14/canada-s-household-debt-to-income-ratio-posts-record-decline

[25] Stephen Poloz, "Canada's Economy and Household Debt: How Big Is the Problem?," *Bank of Canada Speeches,* 1 May 2018, https://www.bankofcanada.ca/2018/05/canada-economy-household-debt-how-big-the-problem/

[26] Inaki Aldasoro, Claudio Borio, and Mathias Drehmann, "Early Warning Indicators of Banking Crises: Expanding the Family," *BIS Quarterly Review,* 11 March 2018, https://www.bis.org/publ/qtrpdf/r_qt1803e.htm

[27] Thibaut Duprey, Tim Grieder, and Dylan Hogg, "Recent Evolution of Canada's Credit-to-GDP Gap: Measurement and Interpretation," *Bank of England Staff Analytical Note,* December 2017, https://www.bankofcanada.ca/wp-content/uploads/2017/12/san2017-25.pdf

[28] Chris Fournier and Erik Hertzberg, "Why Canada's Big Banks Aren't Too Worried About Household Debt," *Bloomberg,* 29 May 2018, https://www.bloomberg.com/news/articles/2018-05-29/why-canada-s-big-banks-aren-t-too-worried-about-household-debt

[29] David Ljunggren and Leah Schnurr, "Canada Household Debt-to-Income Near Record High, Home Sales Fall," Reuters, 14 March 2018, https://www.reuters.com/article/us-canada-economy-debt/canada-household-debt-to-income-near-record-high-home-sales-fall-idUSKCN1GR1RD

[30] Statistics Canada, New Housing Price Index, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810020501

Closing Comments

In recent years, recovery in the aftermath of the Great Recession has seemingly been strong. Economic growth has slowly picked back up. Developed economies have stabilized. But how much of this is simply due to the renewal of a worldwide debt boom and credit expansion? The US economy is primarily driven by consumer demand for goods and services and China is undergoing a drastic rebalancing as consumer spending continues to account for ever more of its economic activity and growth. As such, global economic growth is primarily driven by consumption, and has been pushed and prodded along by extremely low interest rates, quantitative easing, and constant doses of fiscal stimulus over the preceding decade. All the while, savings rates for the working and middle classes have collapsed, incomes have stagnated, and household borrowing has soared. And as consumption growth has outpaced income growth, debt has piled up, debt which will continue to place increased drag on demand in the long run.

As central banks around the globe pushed interest rates near the zero-lower bound in response to the financial crisis, banks have been the primary beneficiaries of low-cost borrowing and often exorbitant rate spreads. The emergence of "monetary radicalism and fiscal conservatism," whereby the central bank "is the only game in town," has not helped matters. Now looking to proactively temper the potential for inflation, inflation which more than likely will not come so long as wages refuse to budge, a result of a myopic monetary policy focus on price stability rather than employment, central banks will continue raising interest rates for the foreseeable future without much of an effort given to direct management of the credit supply or the use of government demand to help drive output and stoke growth. As the cost of borrowing becomes increasingly prohibitive, demand for credit may simply dry up, and with-it, consumer demand in general. Given the enormous levels of household debt in nearly every developed economy, and rapidly rising levels in emerging economies, many borrowers may buckle under the increased interest rates and debt burdens. In effect, central banks may precipitate the very downturn they are trying to prevent.

If a rapid rise in defaults in any major credit market does come to pass, the stability, or rather fragility, of the global financial system will once again be tested. And with a limited number of policy mechanisms at their disposal, given bloated balance sheets and a low starting floor, the response of central banks may very well be muted by their own self-incapacitation.[31] As in 2008, for all of the focus on public debt and the potential for "sovereign debt crises," it may well be household debt that pushes the world economy to the brink yet again, as the post-crisis credit boom precipitates the next great credit crunch.

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[31] Ann Pettifor, "What Is Wrong About the Bank of England's Decision Today?," *Progressive Economy Forum,* 2 August 2018, http://progressiveeconomyforum.com/2018/08/02/what-is-wrong-about-the-bank-of-englands-decision-today/