

Global Debt Leverage: Risks Rise, But Near-Term Crisis Unlikely

Oct. 27, 2020

Key Takeaways

- **We believe a near-term debt crisis is unlikely.** Although we project global debt-to-GDP in 2020 to jump 14% to a record 265%, a debt crisis within the next two years is not likely given the expected economic recovery, a vaccine by mid-2021, favorable financing conditions, and sovereign, corporate and household spending and borrowing behaviors.
- **But there will be more insolvencies and defaults.** Increased leverage means rising insolvency risk, while defaults will likely rise substantially to levels not seen since the 2009 crisis. The heavier corporate debt will delay the recovery of credit metrics beyond 2022 for the hardest hit sectors (such as airlines, leisure and oil and gas).
- **Risks remain on the downside.** These include the economic recovery stumbling, a continued spread of the pandemic or poor vaccine distribution, a sustained surge in interest rates and dramatic widening of credit spreads, no notable deceleration of growth in debt after this year, and consumption demand rebounding less than we expect.

We expect **global debt-to-GDP to surge 14% to 265%** by year end before easing off as the world slowly recovers toward pre-coronavirus income levels. Higher leverage, together with a more challenging operating environment, has led us to downgrade 22% of corporate and sovereign issuers globally—particularly speculative-grade borrowers and those suffering most from COVID-19's economic effects.

Insolvency risk will likely increase for some corporate borrowers if cash flows and earnings don't return to pre-pandemic trends before the withdrawal of extraordinary fiscal and monetary stimulus. Indeed, default rates could double by mid-2021. Leverage growth may level off in the coming years as corporates rethink revenue and investment opportunities, governments rebuild balance sheets, and households turn more conservative.

However, we believe a **near-term debt crisis is unlikely**. This is based on our base-case assumption of a continuing, albeit choppy, global economic recovery. The recovery, in turn, is predicated on the wide availability of a COVID-19 vaccine by mid-2021, continuing accommodative financing conditions, and adjustments in corporate, government, and household spending and borrowing behaviors (see chart 1). Given the commitments of governments and pharmaceutical manufacturers, we **assume a coronavirus vaccine will be widely available next year**.

Unprecedented fiscal stimulus from governments around the globe, combined with equally massive central bank monetary stimulus, has helped keep the liquidity tap open for corporates through the bond markets and bank loans. We **expect benchmark interest rates to remain low into 2023**. In the U.S., the Federal Reserve has said it may allow inflation to run higher than its previous target of 2% while keeping the federal funds rate low to spur job growth. Meanwhile, credit spreads have tightened from the highs in March and are, for now, more sensitive to business-specific risks than market risks—albeit with residual sensitivity for the lowest-quality borrowers.

A substantial portion of global debt is funded by banks. We expect **most major banks should be able to absorb credit losses arising these two years**, given core earnings. Banks should largely be able to continue lending, moving back to business as usual by 2023. Regulators' responses to the economic shock have bolstered banks' ability and willingness to lend and support customers. The withdrawal of fiscal measures could reveal new fragilities in asset quality, and borrower forbearance may mask declining asset quality. For banks globally, we forecast credit losses of about \$2.1 trillion for 2020-2021, with this year's \$1.3 trillion more than double the 2019 level.

Primary Contacts

Terence Chan, CFA
Melbourne
terry.chan
@spglobal.com
+61-3-9631-2174

David Tesher
New York
david.tesher
@spglobal.com
+1-212-438-2618

Global Head of Research

Alexandra Dimitrijevic
London
alexandra.dimitrijevic
@spglobal.com
+44-20-7176-3128

Global Chief Economist

Paul Gruenwald
New York
paul.gruenwald
@spglobal.com
+1-212-438-1710

Research

Jose Perez-Gorozpe
jose.perez-gorozpe
@spglobal.com
+52-55-5081-4442

Paul Watters, CFA
paul.watters
@spglobal.com
+44-20-7176-3542

Gareth Williams
gareth.williams
@spglobal.com
+44-20-7176-7226

Michelle Hsiung
michelle.hsiung
@spglobal.com

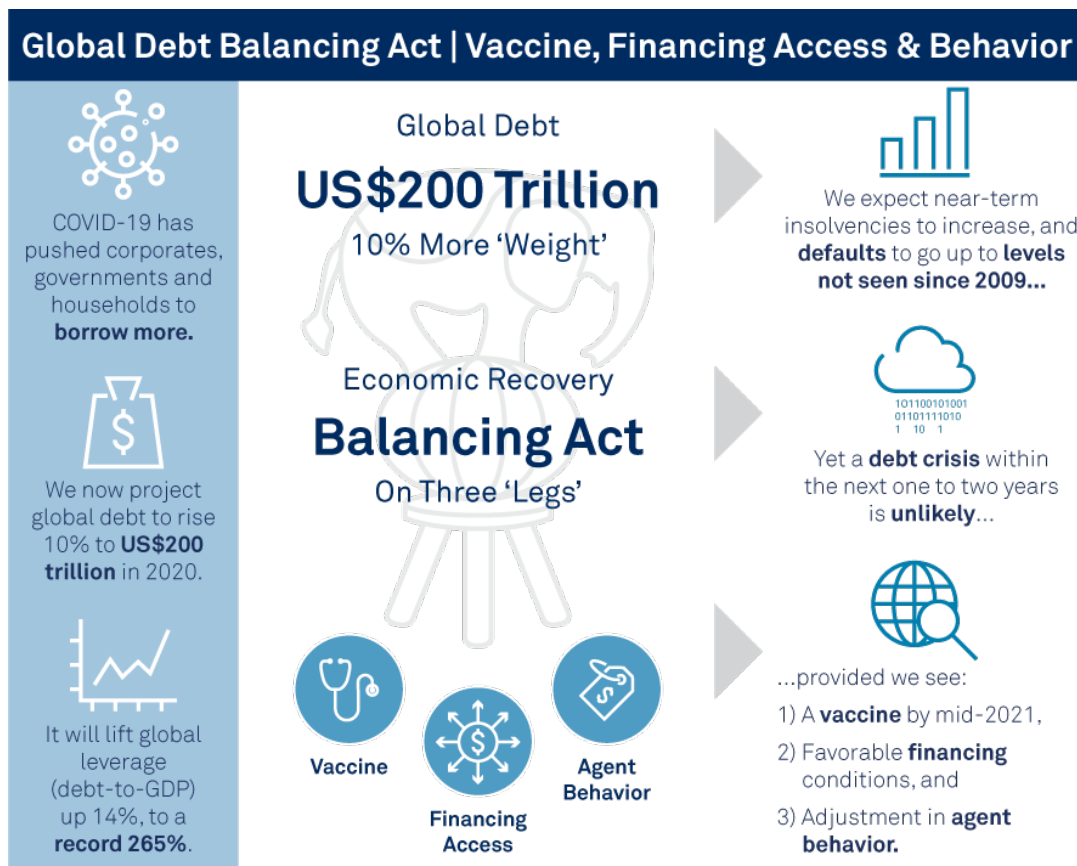
Joe Maguire
joe.maguire
@spglobal.com

Yucheng Zheng
yucheng.zheng
@spglobal.com

Contents

Debt Surge	3
Economic Recovery	5
COVID-19 Vaccine	6
Financing Conditions	7
Governments	9
Corporates	11
Households	12
Related Research	13
Appendix	14

Chart 1



Source: S&P Global Ratings. See appendix 1 for sources and notes.

The **higher household debt-to-GDP ratio in 2020 is driven in part by the decline in GDP**.

Households often initially take on more debt as they cope with income loss. Observing their behavior in past downturns, we expect households to turn conservative thereafter and slow down debt growth. After some incremental improvements in 2021, we expect global household debt-to-GDP to end 2023 at 66%, the same as our projection for end-2020.

There are significant risks to our base case. These include economic shocks slowing the return to pre-pandemic income levels, accelerated infection rates or poor vaccine distribution, rising interest rates and a sustained dramatic widening of credit spreads, continuing debt growth, and consumption demand rebounding less than we expect as a result of structural shifts.

The **short-term outlook remains stressful**, particularly for borrowers at the lower end of the credit scale or in industries most exposed to social distancing measures and the economic downturn. Indeed, our baseline is for the **12-month trailing speculative-grade corporate default rate to double in the U.S. to 12.5% by June 2021** (from a preliminary 6.3% in September 2020) and **to 8.5% in Europe** (from 4.3%). Globally, the 12-month trailing speculative-grade corporate default rate hit 4.9% in September 2020.

Here, it's worth noting that looking only at the absolute level of debt offers an incomplete view—especially given that borrowing costs are very low, and appear likely to remain so, for a protracted period. Whether a debt load is too heavy depends as much on a borrower's ability to pay off that debt as it does on its absolute amount. It's also important to recognize the feedback loop involved, given that the **debt surge is helping to drive the very same economic recovery that is crucial to borrowers' ability to pay off debt**. This is especially true for sovereigns, whose fiscal stimulus measures (while adding significantly to their debt burdens) have helped make the economic downturns in their countries or regions far shallower than they might otherwise have been.

Debt Surge

Higher Insolvency Risk, Even After Recovery

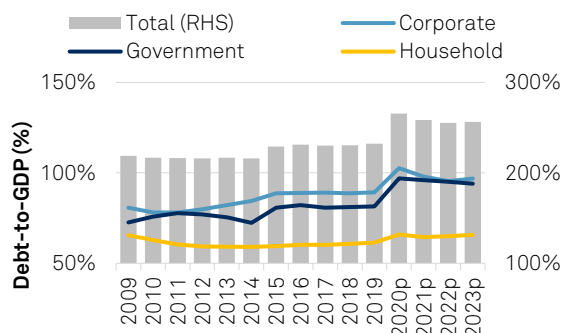
Key Takeaways

- We project **global debt-to-GDP to surge 14% to 265% in 2020** before easing to 256% by 2023. Higher debt contributes two-thirds to the 2020 surge; lower GDP, the remainder.
- **Debt growth after 2020 is expected to ease** with corporates rethinking business opportunities, governments rebuilding balance sheets, and households turning conservative.
- That said, leverage in the medium-term will likely remain higher (by a decile) compared to the pre-COVID (10 years to 2019) trajectory implying a **higher insolvency risk environment**.

Global leverage trajectory. Global debt-to-GDP has been trending up for many years; the pandemic simply exacerbated the rise (see charts 2 and 3). But after the surge this year, we expect global leverage to moderate and flatten toward 2023, with governments scaling back stimulus, corporates slowly repairing their balance sheets, and households becoming more conservative.

Chart 2

Global: COVID-19 Aggravates Debt Rise

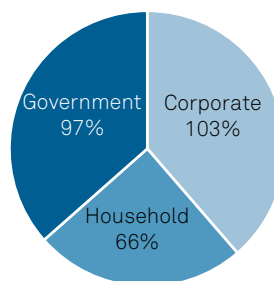


p—projection. See appendix 1 for sources and notes.

Chart 3

Global: Corporates, Governments Highest

Debt-to-GDP, 2020p



Shape of economic recovery. Naturally, the shape of the post-pandemic recovery will factor into how much and how quickly these three borrower cohorts can trim debt, if at all. Our baseline projection that a global economic rebound will pick up speed next year is not without risks (see, [“Economic Research: A Double-Digit Rebound Has Begun, But It’s No Time To Celebrate”](#) and [“Global Credit Conditions: The K-Shaped Recovery,”](#) published Oct. 6). Additional waves of COVID-19, or a delayed vaccine, could alter the trajectory to a W-shaped or saw-tooth shaped rebound.

Earnings still weak. The unprecedented fiscal and monetary stimulus—along with lenders’ loan forbearance—have stabilized capital markets. However, the stimulus has been less effective in spurring demand, compounding the multiyear downtrend of corporate earnings (see [“Next Debt Crisis: Earnings Recession Threat,”](#) published Sept. 30, 2019). As debt grows faster than earnings (and thus the retained earnings portion of equity), this raises the risk of corporate insolvency.

Variation in leverage trends. There’s significant variation in leverage trends among economies—as well as differences in sovereigns’ abilities to absorb the debt without a hit to credit quality. The nominal jump in government debt looks set to be highest in North America (see chart 4). This is mostly driven by government debt in the U.S., with the Fed and legislators reacting quickly and aggressively to the pandemic-related economic shutdown. We foresee similar leverage patterns for Europe (see chart 5). Governments on the continent moved fast to fight the deleterious economic effects of shutdowns and to prop up financial markets. Although China was hit by COVID-19 first, the health and economic effects have been limited compared to the rest of the world. This has led to comparatively subdued increase in leverage for Asia-Pacific and capped the growth in leverage for emerging markets (see charts 6 and 7).

Credit Research

Terence Chan, CFA

Melbourne

terry.chan

@spglobal.com

+ 61-3-9631-2174

Jose Perez-Gorozpe

Mexico City

jose.perez-gorozpe

@spglobal.com

+52-55-5081-4442

David Tesher

New York

david.tesher

@spglobal.com

+1-212-438-2618

Paul Watters, CFA

London

paul.watters

@spglobal.com

+44-20-7176-3542

Global Debt Leverage: Risks Rise, But Near-Term Crisis Unlikely

Chart 4

North America: 22% Leap In Government

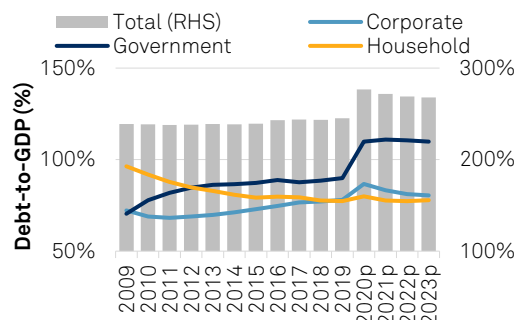


Chart 5

Europe: Up Across The Board In 2020

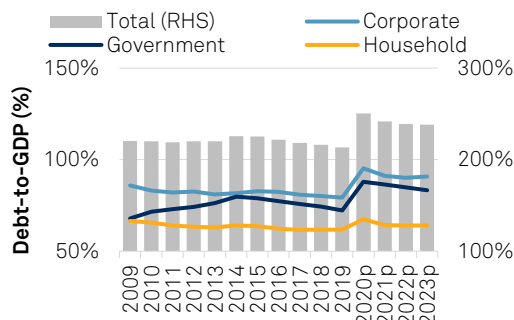


Chart 6

Asia-Pacific: Corporates Surge, Then Level

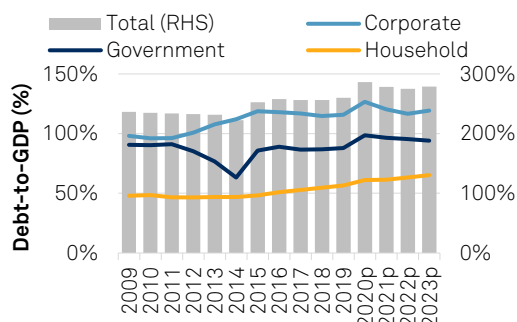
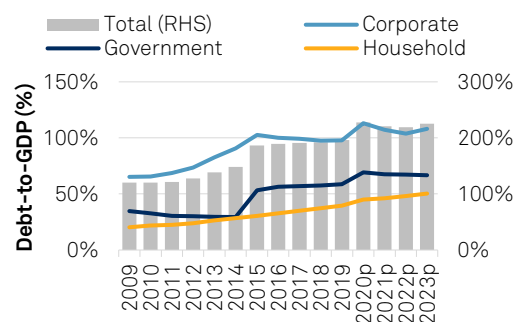


Chart 7

Emerging Markets: Low China Increase Caps Overall Growth



p—projection. See appendix 1 for sources and notes.

Projections to 2023. Our debt-to-GDP projections for the three borrower cohorts show that while Europe will likely see the biggest percentage-point jump in total debt-to-GDP this year (from 213% to 251%, or 38 percentage points), Latin America will see the largest proportional increase (from 125% to 159%, or 28%) (see table 1).

Table 1

Projected Debt-To-GDP (%) By Region And Borrower Sector, 2019-2023

Geography	Sector	2019	2020p	2021p	2022p	2023p
North America	Corporate	78%	87%	83%	81%	80%
	Government	90%	110%	111%	111%	110%
	Household	77%	80%	78%	77%	78%
	Total	245%	277%	272%	269%	268%
Europe	Corporate	79%	95%	91%	90%	91%
	Government	72%	88%	86%	85%	83%
	Household	62%	67%	64%	64%	64%
	Total	213%	251%	242%	239%	238%
Asia-Pacific	Corporate	116%	127%	120%	117%	119%
	Government	88%	99%	96%	95%	94%
	Household	57%	61%	61%	63%	65%
	Total	260%	286%	278%	275%	279%
Latin America	Corporate	39%	58%	56%	53%	55%
	Government	61%	75%	76%	74%	73%
	Household	25%	26%	27%	27%	27%
	Total	125%	159%	158%	155%	155%
Emerging Markets	Corporate	98%	113%	107%	104%	108%
	Government	59%	69%	68%	67%	67%
	Household	40%	45%	46%	48%	50%
	Total	196%	228%	221%	219%	225%
Global	Corporate	89%	103%	98%	95%	97%
	Government	82%	97%	96%	95%	94%
	Household	61%	66%	64%	65%	66%
	Total	232%	265%	258%	255%	256%

p—projection. See appendix 1 for sources and notes.

Economic Recovery

The Next Leg Will Be More Difficult

Key Takeaways

- **Fiscal policy is key to the shape of recovery.** It cushions the blow, incentivizes workers and firms to stay as connected as possible, and creates a bridge to eventual recovery.
- **Baseline risks include premature austerity and reopening.** As private demand recovers, public demand can be withdrawn. Reopening too soon risks additional waves of infections.
- **The next leg of recovery will be more difficult.** Challenges include protecting those hardest hit, keeping viable firms afloat, and facilitating necessary structural changes.

Our revised forecasts. Our global GDP forecast for full-year 2020 is for a contraction of around 4% (see table 2). The outlook for advanced economies has generally improved, and we have raised our forecasts for the U.S. and eurozone on the back of a stronger-than-expected rebound in the third quarter. We have also raised our forecast for China, although the rebound there occurred in the second quarter. These improvements have been offset by much lower expectations for India, as well as lower growth prospects for the U.K. and Japan.

Table 2

GDP Growth Forecasts

	Current forecast (%)					Difference from previous forecast (percentage points)				
	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
U.S.	2.2	-4	3.9	2.4	2.6	-0.2	1	-1.2	-0.6	-0.2
Eurozone	1.3	-7.4	6.1	3	2	0	0.4	0.6	0	0
China	6.1	2.1	6.9	4.8	5.2	0	0.9	-0.5	0	-0.1
Japan	0.7	-5.4	3.2	1	0.9	0	-0.5	-0.2	0	0
India*	4.2	-9	10	6	6.2	0	-4	1.5	-0.5	0
Brazil	1.1	-5.8	3.5	3	2.9	0	1.2	0	-0.4	0
World**	2.8	-4.1	5.3	3.8	4	0	-0.3	0	-0.2	0

*The fiscal year for India is April of the reference year to March the following year. **This is calculated with purchasing power parity exchange rates. Sources: S&P Global Economics and Oxford Economics.

Fiscal policy key to recovery. Already, momentum we saw in the third quarter has begun to fade. We believe the role of fiscal policy should be to cushion the blow, keep (or incentivize) workers and firms to stay as connected as possible, and create a bridge to the eventual recovery. As economies begin to recover from the depths of the crisis, the risks to our baseline remain on the downside.

Risk of premature austerity. Our view is that as long as COVID-19 is with us, and with the prospects of a vaccine improving, premature austerity is a main risk. As private demand recovers, public demand can be withdrawn and fiscal sustainability plans should begin in earnest. Some emerging market governments may be forced by the markets to start consolidating their fiscal positions before that, which could create cliff-edge effects and derail the recovery.

Risk of reopening too soon. The temptation of policymakers to reopen too soon is very real. The risk is the potential for second waves of infections and possible reversals in restrictions and their negative effects on activity as well as health outcomes.

Next leg of recovery. The current juncture of rebounding activity while waiting for a vaccine presents a host of challenges. Economic pain remains widespread as certain sectors continue to run well below capacity, putting strain on business survival and, by extension, employment and credit outcomes. Emerging markets recovery is underway but, excepting China, is losing steam. Policy becomes important at such a juncture, with fiscal policy needing to be the big—but not the only—game in town. Targeted interventions to keep affected firms afloat and their workers employed will pay dividends by ensuring a more rapid and equitable recovery. A failure or inability to do so will make the damage larger and the recovery less robust.

Global Chief Economist

Paul Gruenwald

New York

paul.gruenwald

@spglobal.com

+1-212-438-1710

Economics

Asia-Pacific

Shaun Roache

Singapore

shaun.roache

@spglobal.com

+65-6597 6137

Emerging Markets

Tatiana Lysenko

Paris

tatiana.lysenko

@spglobal.com

+33-1-4420-6748

Europe

Sylvain Broyer

Frankfurt

sylvain.broyer

@spglobal.com

+49-69-33-999-156

North America

Beth Ann Bovino

New York

bethann.bovino

@spglobal.com

+1-212-438-1652

COVID-19 Vaccine

Even If Developed, Billions Of Doses Are Needed

Key Takeaways

- While we assume the **development of a COVID-19 vaccine by mid-2021**, equally critical is its widespread availability.
- There will be the **challenges of manufacturing of billions of doses**, cost of distribution, availability to emerging markets, and people's willingness to be inoculated.
- In addition, the **long-term efficacy of any vaccine is uncertain**.

Potential availability by mid-2021. Countries and companies around the world are working with unprecedented commitment to develop a coronavirus vaccine. With roughly 150 currently being tested, we are operating under the assumption that it's likely one or more will move past clinical trials by year-end—and potentially be available for use around mid-2021.

From an economic standpoint, this would be a critical milestone. Beyond alleviating the burden on countries' health systems, a proven vaccine would, for the most part, obviate the need for the sorts of social restrictions that brought activity to a virtual standstill earlier this year.

Distribution network is a constraint. But the development of effective immunization is merely the first step toward this goal; equally critical is its widespread availability. While manufacturing and distribution will most likely be faster than typical, neither will it be instantaneous.

Even assuming availability early next year, there will likely be uneven distribution (perhaps initially to healthcare workers and first responders such as police and firefighters). Nor would any vaccine likely be equitably available on a country-to-country basis; richer countries are more likely to have complete access, despite efforts at the international level to develop plans in which a vaccine is distributed to poorer countries with the same speed and scope.

As it stands, some vaccines are being "pre-manufactured"—that is, manufactured before they've completed clinical trials—as companies consider the downside financial risk if a vaccine ultimately fails as less than the upside of having a jump-start if it proves safe and effective.

Long-term efficacy is unknown. By its very nature, the accelerated timeline to develop a vaccine means that the long-term efficacy is unknown. Once a vaccine is being used, the scientific community will assess how long protection lasts, especially since the evidence suggests it's difficult to gain lifelong (or even long-term) immunity against other coronaviruses. This increases the likelihood that people will need subsequent immunizations or booster shots after a first vaccination.

On the other hand, it appears that this coronavirus isn't mutating very quickly (compared with, say, most flu viruses), so a vaccine won't likely become obsolete as fast. Finally, there's a spectrum of "effectiveness," from universally protective to only partially preventive. Either way, there remains a range of possible outcomes with some downside risks to our base case, but also some upside possibilities.

Global Head of Research

Alexandra Dimitrijevic

London

alexandra.dimitrijevic

@spglobal.com

+44-20-7176-3128

Global Chief Economist

Paul Gruenwald

New York

paul.gruenwald

@spglobal.com

+1-212-438-1710

Financing Conditions

Into The Medium Term, Low Rates, Ready Access

Key Takeaways

- We expect **borrowing rates to remain low into 2023** (although those of deep speculative grade remains volatile) despite tapering of government monetary and fiscal policies.
- We anticipate **low inflation to prevail**, which implies that central banks may not be encouraged to raise policy rates significantly any time soon.
- **Near-term refinancing pressure is not high.** Most industries are not facing maturity walls into 2021, after record issuance so far this year—especially in investment grade.

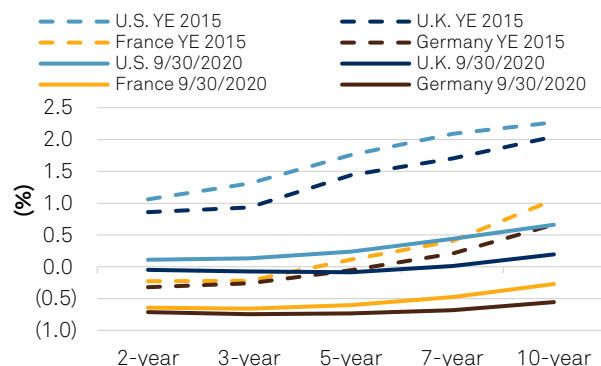
Government and central bank response remarkable. The response of governments and central banks around the world to combat the economic toll of the coronavirus and incumbent social restrictions was remarkable in its size, scope, and speed. Monetary policies greased the wheels of the financial markets, ensuring that many corporate borrowers that would otherwise have been shut out could not only find willing buyers of their debt, but at favorable prices. Fiscal measures shored up labor markets and put money directly into the pockets of consumers, whose spending accounts for the bulk of global GDP.

Lower borrowing costs. In short order, central banks lowered borrowing costs to zero (if they weren't there already) or to fresh all-time lows, and intervened in commercial paper and money markets to ensure orderly trading, liquidity, and price discovery (see chart 8). In addition, they stepped up government bond purchases through so-called quantitative easing to lower yields, ease financial conditions, and support asset prices. Notably, this went beyond public debt to high-quality corporate debt—and the speed and agility with which they moved has made for a V-shaped recovery for many key financial variables. Asset-purchase programs that have ballooned central bank balance sheets will likely remain large, although buying will taper off.

Expectations of low inflation. Inflationary pressures seem a distant threat for now—and, in any case, central banks may focus more on full employment, as we heard in Fed Chairman Jerome Powell's recent announcement that the U.S. central bank would likely allow inflation to run hotter than its previous target of 2% to foster job creation. By most estimates, inflation will continue to run cold for some time (see chart 9).

Chart 8

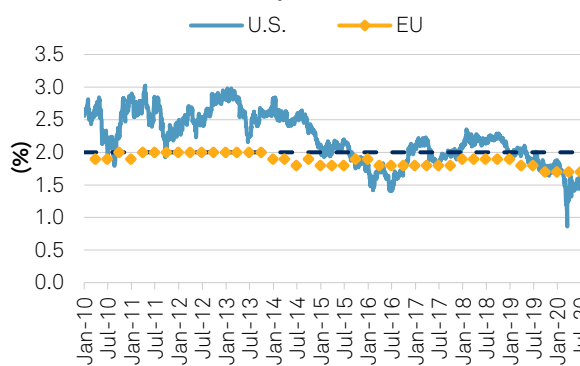
Benchmark Yields Now In The Basement



Sources: IHS Global Insight, S&P Global Ratings.

Chart 9

5-Year Forward Inflation Expectation Rate



Note: U.S. inflation expectations are based on TIPS and Treasury yields. EU inflation expectations are based on quarterly European Central Bank (ECB) survey. Sources: IHS Global Insight, ECB, S&P Global Ratings.

No near-term maturity wall. Most industries aren't facing maturity walls into 2021, after record issuance so far this year—especially among investment-grade issuers—although 'BB' companies too have benefited from various central bank actions. Investor confidence is also a key beneficiary as benchmark indices for equities hit new highs and credit spreads tighten across the curve, though not uniformly as default risks remain elevated for many low-rated borrowers.

Credit Markets Research

Sudeep Kesh

New York
sudeep.kesh
@spglobal.com
+1-212-438-7982

Cross-practice

Patrick Drury Byrne

Dublin
patrick.drurybyrne
@spglobal.com
+353-1-568-0605

Ratings Performance Analytics

Nick Kraemer, FRM

New York
nick.kraemer
@spglobal.com
+1-212-438-1698

Sovereigns

Roberto Sifon-arevalo

New York
roberto.sifon-arevalo
@spglobal.com
+1-212-438-7358

Most Banks To Continue Lending

Key Takeaways

- We expect **banks globally to be largely able to continue lending**, given most major banks' ability to absorb credit losses, before moving back to business as usual by 2023.
- Regulators' **relief measures have bolstered banks' ability** to support customers. There is the risk of an overly fast reversal of such measures, but we expect a gradual withdrawal.
- Borrower forbearance could be **masking declining asset quality**. This risk could be unveiled in the downside scenarios of a slower recovery, or a surge in inflation or interest rates.

Most major banks can absorb credit losses. Because most major banks will likely be able to absorb pandemic-related credit losses arising this year and next, we expect banks globally to be largely able to continue lending, moving back to business as usual by year-end 2023 for many major banking systems (see "[Global Banking: Recovery Will Stretch To 2023 And Beyond](#)," published Sept. 23).

For banks around the world, we forecast credit losses of about \$2.1 trillion for 2020-2021, with \$1.3 trillion this year—more than double the 2019 level (see "[The \\$2 Trillion Question: What's On The Horizon For Bank Credit Losses](#)," published July 9). We expect pre-provision earnings will offset these increases, although further upticks would weigh on banks' ratings; inevitably, some banks will incur net operating losses.

Regulatory relief supports banks' ability to lend. Regulators' response to the economic shock has been swift and decisive, and includes numerous clarifications and relief measures on minimum capital requirements and buffers. In our view, these are positive for banks and have supported their ability to lend. They give lenders flexibility to navigate the worst of the crisis, and are generally in line with the original intentions of these buffers.

From a credit-risk perspective, perhaps the greater danger now is the premature pull-back of government fiscal support, resulting in a longer and deeper economic contraction, and further impairing banks' asset quality and increasing credit losses. However, we think the withdrawal or reversal of these relief measures will be gradual.

Borrower forbearance may mask declining asset quality. Many banks around the world have introduced payment moratoriums or other forms of borrower forbearance whether mandated by authorities or led by the banking industry. The scale of the current forbearance is unprecedented. Regulators and standard-setters have demonstrated a relatively transparent and flexible approach in the application of accounting and regulatory rules in relation to forbearance.

Forbearance isn't necessarily an indication of a decline in asset quality. Even so, we note there have been extensions to original payment holidays in a number of countries, as the end of lockdowns and the starting path to recovery comes later than initially anticipated. That is why we are mindful of the risk that protracted forbearance could end up masking declines in underlying asset quality, though we are not in that scenario now, in our view.

Downside risks. In a downside scenario, the outlook for bank credit quality could worsen materially. Whether there's an unexpectedly slow recovery in which government fiscal support and regulatory easing become less effective (or expire) or, conversely, there's an unanticipated surge in inflation and interest rates, banks' alternate prospects look fairly grim from a credit perspective. Moreover, any major dislocation in markets, akin to that which occurred in the Great Financial Crisis, would be problematic for bank credit.

Financial Institutions

Gavin Gunning

Melbourne
gavin.gunning
@spglobal.com
+61-3-9631-2092

Emmanuel Volland

Paris
emmanuel.volland
@spglobal.com
+33-14-420-6696

Agent Behavior

Governments: Two-Thirds Of Higher Debt Is G-7

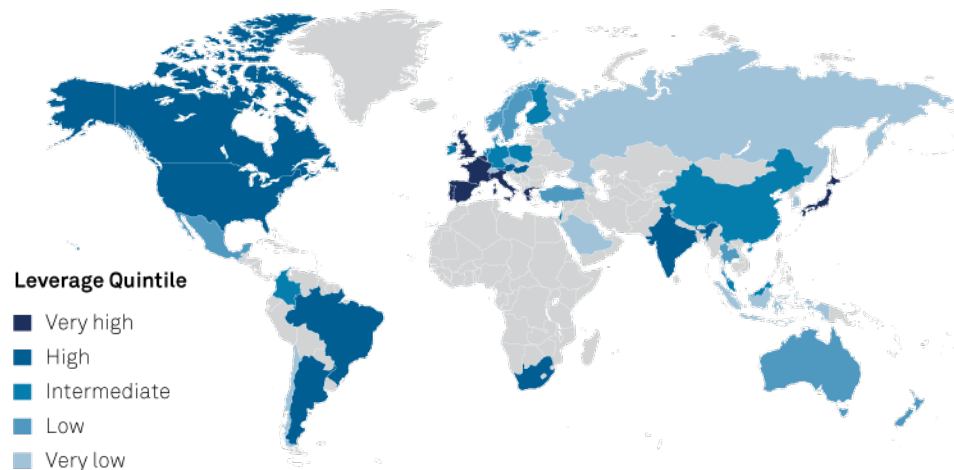
Key Takeaways

- Governments globally are doing the **heavy lifting providing liquidity as well as direct support to businesses and individuals** of unprecedented magnitudes.
- We project **global sovereign debt-to-GDP to surge 19% to 97% in 2020** with two-thirds of this year's build-up concentrated among G-7 sovereigns, which have strong financial markets and monetary flexibility.
- Nonetheless, the higher debt burden poses **risks including exposing sovereigns to sudden spikes in interest rates**, loss of access to funding, and lackluster GDP growth pace.

Drivers of higher debt. Governments globally are doing the heavy lifting of providing liquidity for financial markets and support to businesses and individuals with cash transfers of historic size. This has driven the jump in government deficits and debt this year (see chart 10). That said, the largest share of the debt build-up has been among wealthy, highly rated sovereigns with strong financial markets and monetary flexibility. The U.S., the eurozone, and Japan will likely account for more than half of the rise globally. After 2020, global leverage growth should ease as debt growth slows and GDP performance improves.

Chart 10

Government Debt-To-GDP (%), 2020p



p—projection. See appendix 1 for sources and notes.

Fiscal stimulus versus monetary stimulus. We distinguish between fiscal stimulus (money spent by the government through its budget) and monetary stimulus (lending facilities offered by the central bank to institutions). Additionally, we focus on how much of the announced stimulus is actually disbursed, as headline numbers can be deceiving—while also estimating how much of the monetary stimulus will never be repaid by borrowers, which could result in more sovereign debt. We evaluate the higher debt burden in the context of the underlying economic and political resilience of the sovereign, in particular, its financial and economic health before the pandemic.

Different pre-COVID structural conditions. Since different countries entered the recession with different structural economic conditions, the large increase in debt poses more risks for some (those that already had high debt, as well as a weak capacity to implement significant and effective monetary and fiscal policies) than for others.

Investment-grade sovereigns. Generally, we expect investment-grade sovereigns to show more flexibility to withstand the shock. Governments in this category that show greater economic resilience, stronger financial profiles, and better policy-making are likely to come under less—or at

Sovereigns

Roberto Sifon-arevalo

New York

roberto.sifon-arevalo

@spglobal.com

+1-212-438-7358

Joydeep Mukherji

New York

joydeep.mukherji

@spglobal.com

+1-212-438-7351

least more manageable—pressures. After reviewing almost all of the sovereign ratings portfolio since mid-March, we haven't lowered the ratings or assigned negative outlooks on any G-7 country.

Speculative-grade sovereigns. In contrast, speculative-grade sovereigns are more vulnerable to downgrades, given their inherently weaker finances and higher susceptibility to shocks imbedded on their lower ratings levels. Many emerging and frontier markets, most of which are spec-grade, fit this description. They have limited fiscal and monetary flexibility, or large external imbalances, giving them less room to issue debt or to extend central bank credit without risking increased economic instability—including heightened exchange rate volatility and higher inflation. The number of negative outlooks on such sovereigns has grown since the beginning of the pandemic (especially in Latin America and sub-Saharan Africa) (see table 3).

Key assumption. The key assumption for all rated sovereigns is that these large amounts of new debt will fund productive activity and help boost national incomes and government revenues in the medium to long term. However, we could lower ratings if events lead us to lower our expectations for economic performance and policies. For example, we put Australia's 'AAA' rating and Spain's 'A' on negative outlook to reflect the risk that the economic damage from the downturn could be more severe and longer lasting than we expect, delaying the process of repairing the government balance sheet.

Table 3

Sovereigns With Negative Outlooks Or On CreditWatch Negative (Oct. 26, 2020)

EMEA	Americas	Asia-Pacific
Azerbaijan	Aruba	Australia
Belarus	Bahamas	Fiji
Botswana	Chile	Indonesia
Cape Verde	Colombia	Malaysia
Ethiopia	Costa Rica	
Kenya	Curacao	
Kuwait	Dominican Republic	
Montenegro	Jamaica	
Morocco	Mexico	
Romania	Panama	
Rwanda		
Slovakia		
Spain		
Uzbekistan		

Source: S&P Global Ratings.

Risks. Some sovereigns are more exposed to the risk of a spike in interest rates, sudden loss of access to funding, and disappointing GDP growth. Current benign conditions in the financial markets reflect massive liquidity injections and backstops from central banks, huge fiscal stimulus to sustain demand, and an assumption of economic recovery from the pandemic next year. A deterioration in market conditions would likely damage comparatively weak sovereigns.

Emerging markets, likely to benefit from capital flows looking for yield in a context of low or negative interest rates in the developed world, are more vulnerable to the loss of cheap funding, as many of them rely heavily on foreign-currency funding. This exposes them to the double risk of a sudden rise in interest rates and a depreciation of their own currencies.

This is not the case across all emerging sovereigns. One of the key achievements of the last two decades on many emerging economies have been the adoption of flexible exchange rates and the development of large domestic capital markets to fund their fiscal deficits, partially reducing their vulnerability to these risks and placing them well to recover strongly in a post pandemic scenario.

Corporates: Some New Debt Is Precautionary

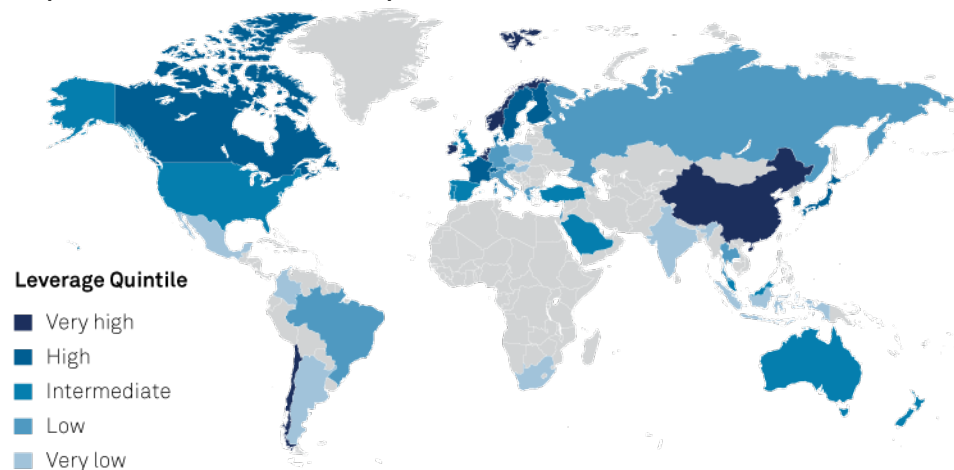
Key Takeaways

- We project **global corporate debt-to-GDP to surge 15% to 103% in 2020** before declining steadily to 97% by 2023 as revenues rebound, initially sharply and then incrementally.
- This year's massive corporate debt issuance is driven not only by borrowers **offsetting steep revenue falls** but also those **building precautionary reserves** or refinancing at low rates.
- **Defaults will likely rise substantially** as government support measures taper. The higher debt will **delay the recovery of credit metrics beyond 2022** for the harder-hit sectors.

Pandemic response allows debt build-up. The pandemic triggered a rapid suite of emergency measures from authorities in developed markets. That helped to stabilize financial markets and ushered in a massive increase in corporate debt issuance and thus debt leverage (see chart 11). Year to date, nonfinancial corporate (NFC) debt issuance reached roughly \$2.5 trillion globally through mid-October—14% more than the total volume in 2019, and a new record high.

Chart 11

Corporate Debt-To-GDP (%), 2020p



p—projection. See appendix 1 for sources and notes.

How companies are using debt raised. Many borrowers have used the debt proceeds to put cash on their balance sheets or to refinance. Overall, we estimate that U.S. investment-grade NFCs have kept about three quarters of funds raised in the first half of 2020 through debt issuance on their balance sheets. In Europe, that equivalent proportion is just over 50%. The uncertain outlook over the next year could lead corporations to keep cash on hand for insurance, particularly as the opportunity cost is so low.

Others have used proceeds to counter cash outflows caused by the steep drop in revenues. Borrowers in sectors hit hardest by the pandemic-induced slump—including airlines, hotels and other travel and leisure segments—may find it more difficult to service their debt or to avoid downgrades. This is especially true for issuers at the lower end of the ratings ladder. We expect a substantial increase in defaults that could remain elevated for some time, with some companies with unsustainable balance sheets holding on for longer thanks to accommodative credit markets. For the vast majority of companies that survive the health crisis, material higher net debt levels could delay the recovery of credit metrics beyond 2022.

Future debt growth. For full year 2020 we expect outstanding NFC debt to grow 15%. However, as the global economic recovery picks up, the need to strengthen balance sheets will act as a headwind, causing debt growth, particularly in developed markets, to be subdued. Assuming debt growth remains below nominal global GDP growth we anticipate a modest recovery in global NFC debt-to-GDP to around 97% by 2023 from 103% at end-2020. That said, low interest rates will likely keep debt attractive relative to equity, tempering the decline in leverage in emerging markets.

Corporates

Jeanne Shoesmith, CFA

Chicago

jeanne.shoesmith

@spglobal.com

+1-312-233-7026

Gregg Lemos-Stein

New York

gregg.lemos-stein

@spglobal.com

+1-212-438-1809

Paul Watters, CFA

London

paul.watters

@spglobal.com

+44-20-7176-3542

Gareth Williams

London

gareth.williams

@spglobal.com

+44-20-7176-7226

Households: May Turn Conservative After 2020

Key Takeaways

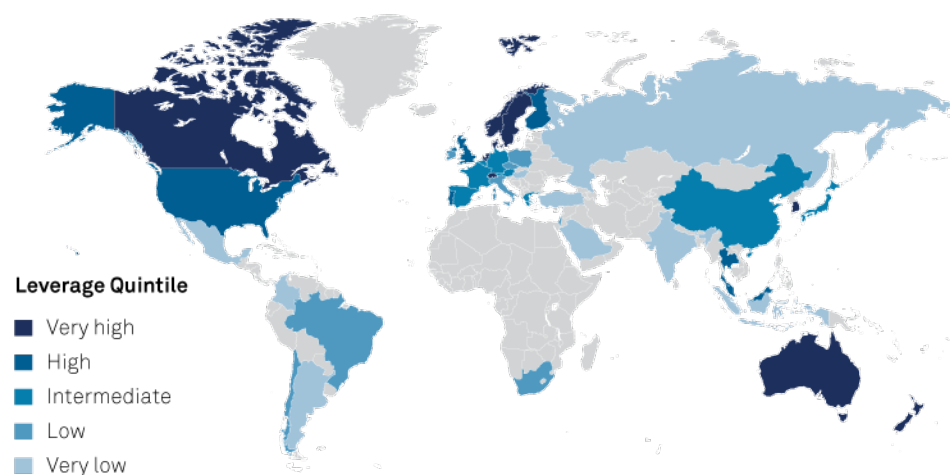
- We project **global household debt-to-GDP to rise 7% to 66% in 2020** and then remain flat to 66% by 2023 as households turn conservative based on historical behavior in downturns.
- **Three-fifths** of the increased household leverage in 2020 is **driven by the decline in GDP**.
- Furthermore, the **most indebted households tend to be in developed countries**, which enjoy superior average earning capacity compared to those in emerging markets.

We expect households globally to take on more debt this year as they **defer repayments to cope with the loss of some or all of their regular income**, even as new household borrowing may be sluggish. A key driver of the expected increase in household debt-to-GDP is the decline in GDP. We expect debt to level off as the economic recovery gains momentum and labor markets rebound.

In the aftermath of financial and economic crises, **consumers tend to take less aggressive fiscal stances** and, in any case, find it harder to borrow. However, this time around the process may take longer than usual, especially if the economic recovery fails to gain traction or stalls entirely, or if labor markets don't rebound. Consequently, after some incremental improvement in 2021, we expect the debt-to-GDP ratio to end 2023 at 66%, flat compared with 2020, but with geographical differences (see chart 12).

Chart 12

Household Debt-To-GDP (%), 2020p



p—projection. See appendix 1 for sources and notes.

The **most indebted households tend to be those in developed countries**, owing to their superior average earning capacity compared to households in most emerging markets. We expect Australia, Canada, Denmark, Netherlands, New Zealand, Norway, South Korea, Sweden and Switzerland to be in the highest quintile of gross indebtedness among the 43 geographies we looked at (see appendix 5).

Financial Institutions

Gavin Gunning

Melbourne
gavin.gunning
@spglobal.com
+61-3-9631-2092

Emmanuel Volland

Paris
emmanuel.volland
@spglobal.com
+33-14-420-6696

Related Research

Credit Conditions

- [Global Credit Conditions: K-Shaped Recovery](#), Oct. 6, 2020
- [Credit Conditions Asia-Pacific: Recovery Roads Diverging](#), Sept. 29, 2020
- [Credit Conditions North America: Potholes On The Road To Recovery](#), Sept. 29, 2020
- [Credit Conditions Europe: Ill Prepared For Winter](#), Sept. 29, 2020
- [Credit Conditions Emerging Markets: Fragile And Uneven Recovery, Virus Resurgence Looms](#), Sept. 29, 2020

Corporate Ratings

- [COVID-19 Heat Map: Updated Sector Views Show Diverging Recoveries](#), Sept. 29, 2020

Economic Research

- [A Double-Digit Rebound Has Begun, But It's No Time To Celebrate](#), Oct. 6, 2020
- [Emerging Markets: A Tenuous And Varied Recovery Path](#), Sept. 29, 2020
- [Latin America's Pre-COVID-19 Growth Challenges Won't Go Away Post-Pandemic](#), Sept. 24, 2020
- [The U.S. Economy Reboots, With Obstacles Ahead](#), Sept. 24, 2020
- [The Eurozone Is Healing From COVID-19](#), Sept. 24, 2020
- [Asia-Pacific's Recovery: The Hard Work Begins](#), Sept. 24, 2020

Financial Institutions Ratings

- [Global Banking: Recovery Will Stretch To 2023 And Beyond](#), Sept. 23, 2020
- [The \\$2 Trillion Question: What's On The Horizon For Bank Credit Losses](#), July 9, 2020

Next Debt Crisis

- [Next Debt Crisis: Earnings Recession Threat](#), Sept. 30, 2019
- [Next Debt Crisis: Will Liquidity Hold?](#), March 12, 2019

Rating Actions

- [COVID-19- And Oil Price-Related Public Rating Actions On Corporations, Sovereigns, And Project Finance To Date](#), Oct. 20, 2020

Sovereign Ratings

- [Sovereign Risk Indicators](#), Oct. 12, 2020

S&P Global Ratings acknowledges a high degree of uncertainty about the evolution of the coronavirus pandemic. The current consensus among health experts is that COVID-19 will remain a threat until a vaccine or effective treatment becomes widely available, which could be around mid-2021. We are using this assumption in assessing the economic and credit implications associated with the pandemic (see our research here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

This report does not constitute a rating action.

Appendix 1: Assumptions, Data And Approach

This appendix discusses the assumptions, data sources, and approach adopted in the article.

Borrowing, credit, debt	Used interchangeably. Refers to gross debt. Includes loans and debt securities (e.g., bonds) that are both short-term and long-term.
Corporates	Where debt data for nonfinancial corporations is sourced from the Bank for International Settlements (BIS), it should be noted that the term ‘corporation’ includes, based on the United Nations System of National Accounts 2008 (SNA), all entities that are capable of generating a profit or other financial gain for their owners, recognized at law as separate legal entities from their owners who enjoy limited liability, and/or set up for purposes of engaging in market production. Consequently, the BIS data may differ from those provided by national or multinational authorities or statistical bodies.

Data sources and assumptions for chart 1-7, 10-12, A1-A9, and table 1, 4-7

Debt

- Corporates. For 2009-2019, we sourced “total credit to nonfinancial corporations” data from BIS’s long series on credit to the non-financial sector. Data on Austria, Belgium, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Spain and Sweden are based on ECB’s statistics on nonfinancial corporations (on a consolidated basis).
- Governments. For 2009-2019, we sourced the gross government debt data from our “Sovereign Risk Indicators.”
- Households. For 2009-2019, we sourced “total credit to households and non-profit institution serving households (NPISH)” data from BIS’s long series on credit to the non-financial sector.

Please note the BIS and ECB data may not necessarily be the same as the data we use in arriving at issuer ratings. The latter data needs to accord with our ratings methodologies. In addition, we exclude debt of financial institutions because such institutions are intermediaries.

Debt growth

- Corporates. For 2020-2023, we applied growth rates estimated by our analytical teams.
- Governments. For 2020-2023, we applied growth rates based on gross government debt projections available in our “Sovereign Risk Indicators,” published Oct. 12.
- Households. For 2020-2023, we applied growth rates estimated by our analytical teams.

GDP

We sourced the nominal GDP data from our “Sovereign Risk Indicators.”

Global sample

Global refers to a sample of 43 geographies: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong SAR, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom and United States. These geographies are estimated to represent over 80% of world GDP.

Quintile thresholds based on debt-to-GDP 2020 projections

	Corporate	Government	Household	Total
Very high	140%	112%	95%	315%
High	109%	76%	69%	273%
Intermediate	82%	56%	51%	227%
Low	59%	40%	31%	157%
Very low	17%	5%	5%	81%

Regional
classification

- **North America:** U.S. and Canada.
- **Europe:** Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland and U.K.
- **Asia-Pacific:** Australia, China, Hong Kong SAR, India, Indonesia, Japan, Malaysia, New Zealand, Singapore, South Korea and Thailand.
- **Latin America:** Argentina, Brazil, Chile, Colombia and Mexico.
- **Emerging Markets:** Latin America; Israel, Poland, Russia, Saudi Arabia, South Africa and Turkey (collectively EM-Europe, Middle-east and Africa); and China, India, Indonesia, Malaysia, Thailand (collectively EM-Asia-Pacific).

Appendix 2: Debt-To-GDP

Table 4

Debt-To-GDP (%) By Region, Geography And Borrower Sector, 2019–2023

Region	Geography	Sector	2019	2020p	2021p	2022p	2023p
North America	United States	Corporate	75%	83%	80%	78%	77%
		Government	91%	111%	113%	112%	111%
		Household	75%	77%	75%	75%	75%
		Total	241%	272%	267%	265%	264%
	North America	Corporate	78%	87%	83%	81%	80%
		Government	90%	110%	111%	111%	110%
		Household	77%	80%	78%	77%	78%
		Total	245%	277%	272%	269%	268%
	Europe	Corporate	79%	94%	90%	90%	91%
		Government	70%	84%	83%	81%	79%
		Household	58%	63%	60%	60%	60%
		Total	208%	242%	234%	231%	230%
Europe	Europe ex-U.K.	Corporate	79%	94%	90%	90%	91%
		Government	70%	84%	83%	81%	79%
		Household	58%	63%	60%	60%	60%
		Total	208%	242%	234%	231%	230%
	United Kingdom	Corporate	80%	101%	96%	92%	92%
		Government	85%	113%	106%	107%	108%
		Household	84%	94%	88%	88%	87%
		Total	248%	308%	290%	287%	287%
	Europe	Corporate	79%	95%	91%	90%	91%
		Government	72%	88%	86%	85%	83%
		Household	62%	67%	64%	64%	64%
		Total	213%	251%	242%	239%	238%
Asia-Pacific	China	Corporate	149%	154%	149%	145%	151%
		Government	67%	75%	73%	73%	72%
		Household	55%	60%	63%	67%	71%
		Total	271%	289%	285%	284%	294%
	Asia-Pacific ex-China	Corporate	82%	96%	89%	85%	85%
		Government	109%	126%	122%	120%	119%
		Household	58%	62%	60%	59%	59%
		Total	249%	284%	271%	265%	263%
	Asia-Pacific	Corporate	116%	127%	120%	117%	119%
		Government	88%	99%	96%	95%	94%
		Household	57%	61%	61%	63%	65%
		Total	260%	286%	278%	275%	279%
Emerging Markets	Latin America	Corporate	39%	58%	56%	53%	55%
		Government	61%	75%	76%	74%	73%
		Household	25%	26%	27%	27%	27%
		Total	125%	159%	158%	155%	155%
	EM EMEA	Corporate	48%	74%	70%	68%	72%
		Government	28%	39%	38%	38%	39%
		Household	21%	24%	24%	24%	25%
		Total	97%	137%	132%	131%	135%
	EM APAC	Corporate	121%	130%	123%	119%	124%
		Government	65%	74%	72%	71%	71%
		Household	47%	52%	54%	56%	59%
		Total	233%	256%	248%	247%	254%
	EM ex-China	Corporate	43%	60%	55%	54%	56%
		Government	50%	62%	61%	61%	60%
		Household	23%	25%	25%	25%	26%
		Total	115%	147%	141%	139%	142%
Global	Emerging Markets	Corporate	98%	113%	107%	104%	108%
		Government	59%	69%	68%	67%	67%
		Household	40%	45%	46%	48%	50%
		Total	196%	228%	221%	219%	225%
	Global	Corporate	89%	103%	98%	95%	97%
		Government	82%	97%	96%	95%	94%
		Household	61%	66%	64%	65%	66%
		Total	232%	265%	258%	255%	256%

p—projection. See appendix 1 for sources and notes.

Appendix 3: Government Sector Debt-To-GDP

Table 5

Debt-To-GDP (%), Government Sector By Geography, 2019-2023

	2019	2020p	2021p	2022p	2023p
Argentina	88%	103%	98%	86%	74%
Australia	37%	44%	56%	54%	53%
Austria	69%	83%	76%	74%	72%
Belgium	97%	114%	112%	108%	107%
Brazil	76%	92%	97%	96%	96%
Canada	76%	96%	90%	88%	88%
Chile	29%	37%	40%	41%	41%
China	67%	75%	73%	73%	72%
Colombia	50%	65%	62%	62%	61%
Czech Republic	31%	40%	41%	40%	39%
Denmark	33%	40%	42%	41%	41%
Finland	58%	69%	63%	63%	62%
France	96%	114%	112%	112%	111%
Germany	58%	67%	67%	65%	63%
Greece	177%	197%	185%	179%	173%
Hong Kong SAR	4%	5%	4%	4%	4%
Hungary	66%	79%	75%	74%	72%
India	74%	91%	85%	85%	84%
Indonesia	30%	36%	37%	37%	36%
Ireland	59%	68%	70%	66%	62%
Israel	60%	74%	72%	72%	71%
Italy	133%	159%	158%	156%	154%
Japan	211%	239%	233%	234%	234%
Luxembourg	21%	28%	27%	26%	24%
Malaysia	65%	75%	70%	68%	66%
Mexico	43%	52%	51%	52%	53%
Netherlands	47%	56%	61%	58%	55%
New Zealand	35%	43%	48%	48%	49%
Norway	41%	44%	43%	42%	40%
Poland	46%	60%	54%	54%	54%
Portugal	118%	141%	130%	127%	124%
Russia	16%	23%	23%	23%	23%
Saudi Arabia	20%	35%	39%	42%	46%
Singapore	129%	129%	130%	128%	129%
South Africa	64%	84%	85%	89%	91%
South Korea	31%	36%	34%	33%	32%
Spain	93%	117%	112%	110%	108%
Sweden	35%	43%	44%	41%	39%
Switzerland	26%	29%	33%	31%	30%
Thailand	34%	45%	47%	46%	46%
Turkey	33%	40%	37%	36%	35%
United Kingdom	85%	113%	106%	107%	108%
United States	91%	111%	113%	112%	111%
Asia-Pacific	88%	99%	96%	95%	94%
Europe	72%	88%	86%	85%	83%
Emerging Markets	59%	69%	68%	67%	67%
Latin America	61%	75%	76%	74%	73%
North America	90%	110%	111%	111%	110%
Global sample	82%	97%	96%	95%	94%

p—projection. See appendix 1 for sources and notes.

Appendix 4: Corporate Sector Debt-To-GDP

Table 6

Debt-To-GDP (%), Corporate Sector By Geography, 2019-2023

	2019	2020p	2021p	2022p	2023p
Argentina	14%	17%	18%	19%	22%
Australia	73%	84%	83%	79%	77%
Austria	70%	81%	77%	77%	78%
Belgium	124%	144%	136%	136%	137%
Brazil	44%	69%	67%	64%	66%
Canada	114%	130%	126%	121%	120%
Chile	108%	149%	141%	134%	138%
China	149%	154%	149%	145%	151%
Colombia	34%	51%	49%	47%	48%
Czech Republic	51%	59%	57%	56%	56%
Denmark	107%	121%	116%	116%	117%
Finland	116%	132%	128%	128%	130%
France	91%	110%	104%	103%	104%
Germany	52%	61%	58%	58%	59%
Greece	53%	64%	61%	61%	61%
Hong Kong SAR	226%	263%	247%	241%	239%
Hungary	49%	58%	59%	59%	61%
India	43%	53%	47%	46%	49%
Indonesia	23%	26%	23%	23%	24%
Ireland	161%	183%	180%	179%	179%
Israel	69%	74%	68%	65%	65%
Italy	66%	77%	73%	73%	74%
Japan	104%	119%	113%	110%	108%
Luxembourg	223%	259%	243%	242%	244%
Malaysia	69%	83%	75%	72%	75%
Mexico	25%	39%	37%	35%	36%
Netherlands	134%	155%	148%	148%	149%
New Zealand	83%	95%	92%	87%	85%
Norway	136%	160%	175%	156%	149%
Poland	40%	46%	49%	49%	50%
Portugal	86%	104%	97%	97%	97%
Russia	46%	67%	62%	60%	63%
Saudi Arabia	47%	91%	84%	81%	82%
Singapore	124%	150%	142%	139%	137%
South Africa	39%	57%	51%	49%	52%
South Korea	102%	116%	111%	103%	101%
Spain	73%	89%	81%	80%	81%
Sweden	117%	132%	137%	133%	130%
Switzerland	122%	132%	137%	140%	145%
Thailand	47%	59%	54%	52%	52%
Turkey	66%	108%	98%	94%	103%
United Kingdom	80%	101%	96%	92%	92%
United States	75%	83%	80%	78%	77%
Asia-Pacific	116%	127%	120%	117%	119%
Europe	79%	95%	91%	90%	91%
Emerging Markets	98%	113%	107%	104%	108%
Latin America	39%	58%	56%	53%	55%
North America	78%	87%	83%	81%	80%
Global sample	89%	103%	98%	95%	97%

p—projection. See appendix 1 for sources and notes.

Appendix 5: Household Sector Debt-To-GDP

Table 7

Debt-To-GDP (%), Household Sector By Geography, 2019-2023

	2019	2020p	2021p	2022p	2023p
Argentina	5%	5%	6%	6%	6%
Australia	122%	123%	125%	123%	123%
Austria	49%	52%	50%	50%	50%
Belgium	62%	68%	67%	67%	67%
Brazil	30%	33%	34%	36%	37%
Canada	101%	113%	113%	113%	113%
Chile	47%	47%	48%	48%	48%
China	55%	60%	63%	67%	71%
Colombia	28%	30%	31%	31%	32%
Czech Republic	32%	36%	36%	36%	36%
Denmark	112%	117%	113%	113%	112%
Finland	66%	71%	71%	71%	71%
France	62%	67%	63%	63%	63%
Germany	55%	57%	55%	55%	55%
Greece	53%	53%	47%	47%	46%
Hong Kong SAR	81%	89%	83%	85%	87%
Hungary	19%	20%	19%	19%	19%
India	12%	12%	13%	13%	13%
Indonesia	17%	19%	18%	19%	19%
Ireland	38%	40%	39%	39%	38%
Israel	42%	44%	43%	42%	41%
Italy	40%	45%	43%	43%	43%
Japan	59%	64%	62%	62%	62%
Luxembourg	66%	72%	70%	71%	72%
Malaysia	68%	73%	68%	68%	68%
Mexico	16%	18%	18%	17%	17%
Netherlands	100%	104%	100%	99%	99%
New Zealand	97%	103%	106%	106%	106%
Norway	105%	113%	108%	108%	107%
Poland	35%	35%	35%	35%	35%
Portugal	64%	72%	69%	68%	68%
Russia	19%	22%	23%	24%	25%
Saudi Arabia	12%	17%	17%	18%	18%
Singapore	52%	59%	58%	57%	55%
South Africa	34%	32%	30%	30%	30%
South Korea	95%	99%	98%	97%	97%
Spain	57%	63%	59%	59%	58%
Sweden	89%	95%	93%	93%	93%
Switzerland	132%	141%	137%	136%	135%
Thailand	69%	74%	75%	75%	75%
Turkey	15%	19%	19%	19%	20%
United Kingdom	84%	94%	88%	88%	87%
United States	75%	77%	75%	75%	75%
Asia-Pacific	57%	61%	61%	63%	65%
Europe	62%	67%	64%	64%	64%
Emerging Markets	40%	45%	46%	48%	50%
Latin America	25%	26%	27%	27%	27%
North America	77%	80%	78%	77%	78%
Global sample	61%	66%	64%	65%	66%

p—projection. See appendix 1 for sources and notes.

Appendix 6: Debt-To-GDP By Geography

Chart A1

U.S.

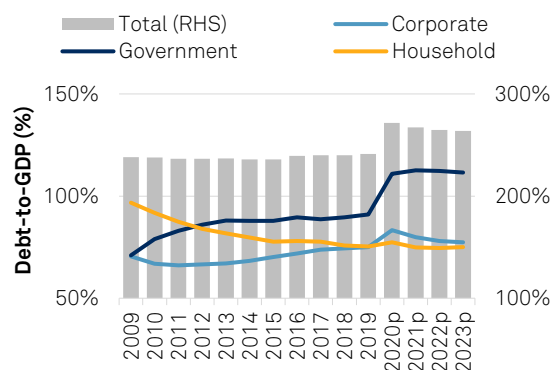


Chart A2

Europe Ex-U.K.

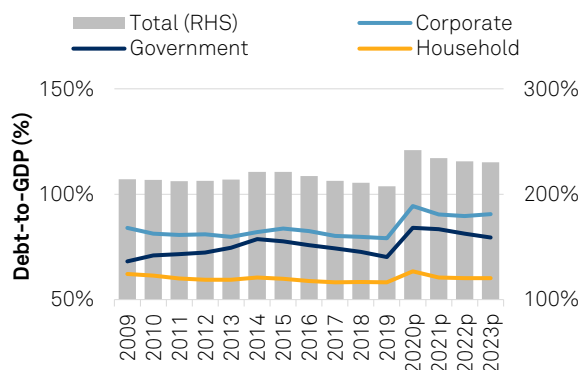


Chart A3

U.K.

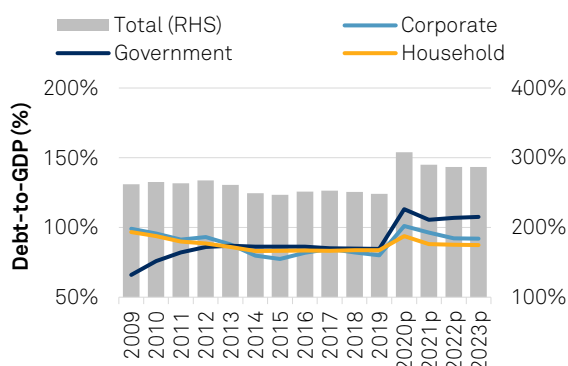


Chart A4

Asia-Pacific Ex-China

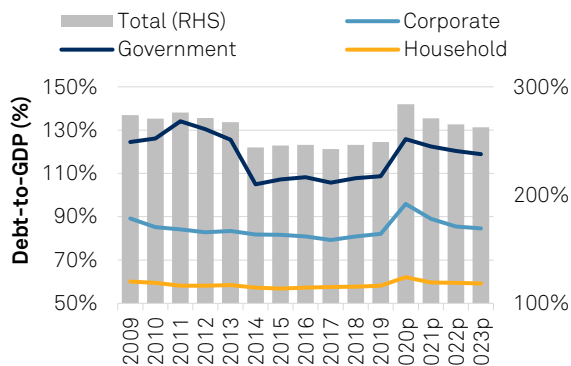


Chart A5

China

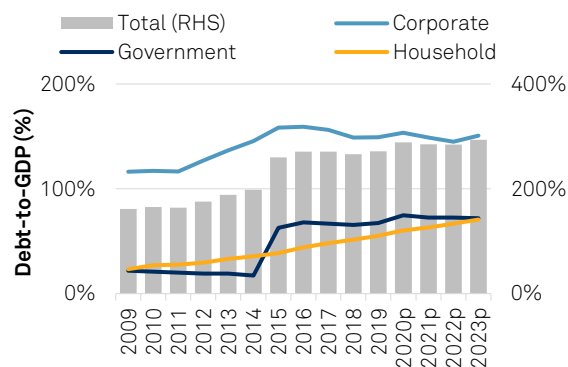
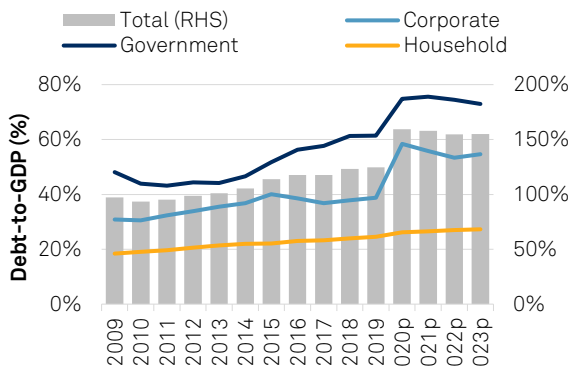


Chart A6

Latin America



Global Debt Leverage: Risks Rise, But Near-Term Crisis Unlikely

Chart A7

Emerging Markets Ex-China

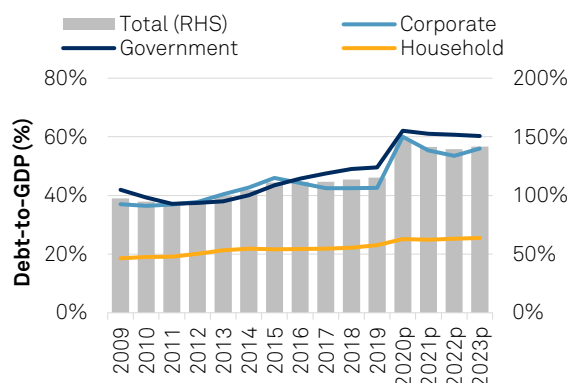


Chart A8

Emerging Markets Europe, Middle-East and Africa

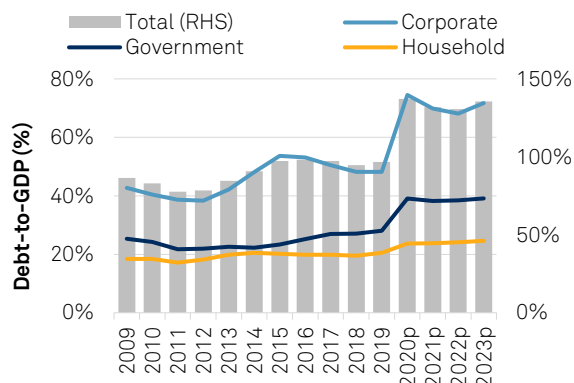
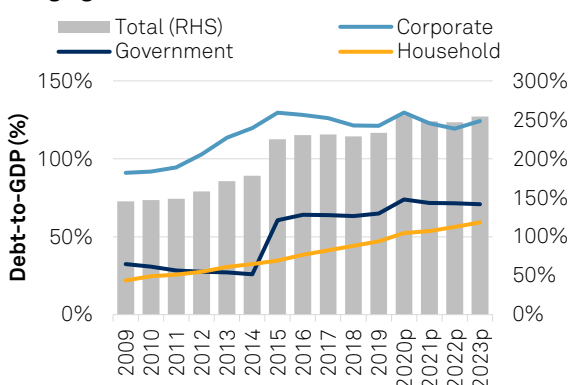


Chart A9

Emerging Markets Asia-Pacific



p—projection. See appendix 1 for sources and notes.

Copyright © 2020 by Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED, OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses, and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw, or suspend such acknowledgement at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal, or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain nonpublic information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.spcapitaliq.com (subscription) and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.

STANDARD & POOR'S, S&P and RATINGSDIRECT are registered trademarks of Standard & Poor's Financial Services LLC.

spglobal.com/ratings