US Rates Viewpoint

Debt limit FAQ: late spring 2023 update

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Rates Research
United States

Debt limit FAQ

Clients have questions on the debt limit and impact on markets. The debt limit caps outstanding US federal debt, currently at $31.38tn. The debt limit was last increased $2.5tn in December 2021 and hit that limit on January 19th '23. This has forced Treasury to enter a debt issuance suspension period (DISP) where they are limited to their remaining cash balance and extraordinary measures (EM) to meet their outlays. We estimate EM allowed approximately $340bn of additional net debt issuance through June 1. Treasury can still issue to replace maturing debt in addition to headroom from EM.

Debt limit base case

The US Treasury recently updated its debt limit forecast, stating they may run out of cash to meet their outlays as early as June 1. We recently updated our projection for this so-called "X-date", which now aligns with Treasury's estimate, due to (1) lower tax receipts (2) higher projected deficit and (3) lower EM.

Our baseline is the debt limit will be resolved prior to a technical default. However, the current US political polarization risks a resolution only occurring at the last minute, likely after an adverse market reaction. Risks are high for a potential breaching of the X-date.

Market reaction

Short term funding markets will likely be most sensitive to debt limit discussions. The UST bill curve already has a pronounced hump around the June 1 X-date & US CDS have reached or are close to historic wide levels. Closer to the Treasury's forecasted X-date of June 1 we will likely see broader market reaction. Our econ team discusses potential Fed responses in Debt limit standoff: The Fed cannot solve every problem

Once the debt limit is resolved, we expect Treasury to issue a large amount of bills to help rebuild their depleted cash balance. This bill supply will likely lead to bill cheapening & see a sharp reduction in the Fed's overnight reverse repo facility (ON RRP). We expect investors will shift into higher yielding alternatives as they digest the large bill supply

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In this note, we address the following topics:

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- Debt limit specifics
- Debt limit unthinkable events
- Debt limit market impact
- Life after the debt limit is resolved

Debt limit 101

What is the debt limit?

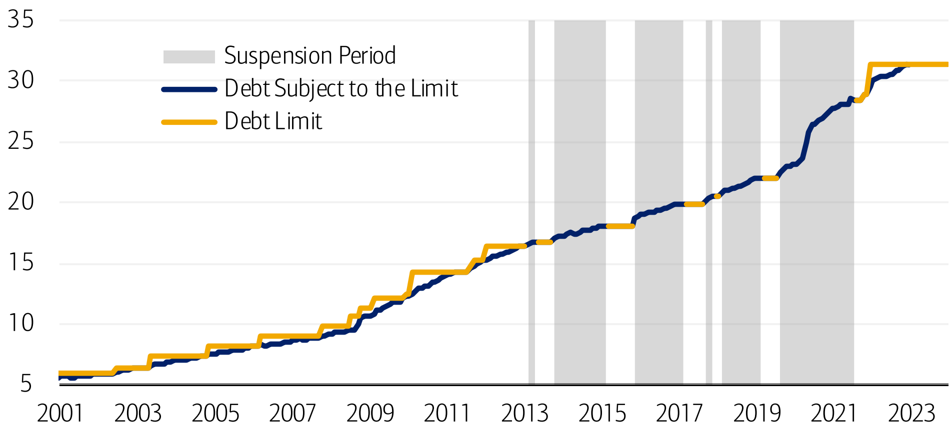
The debt limit, decided by Congress, sets the maximum amount of debt Treasury can have outstanding to the public and other federal agencies. The debt limit has been modified nearly 100 times since it was first enacted in 1917.

When government spending exceeds revenue from taxes, Treasury must issue debt to meet that difference. Although the government has already agreed on spending, the debt, which is necessary to pay for that spending, is voted on separately. Raising the debt limit does not authorize future spending but rather funds existing spending. A failure to increase the debt limit would mean Treasury is unable to pay for the spending Congress has previously agreed to.

Congress can modify the debt ceiling either by (1) increasing the debt limit by a particular dollar amount or (2) suspend the debt limit to a particular date. We discuss the important differences between the two options in more detail in increase the debt limit by a specific dollar value or temporary suspension?.

Lawmakers have suspended the debt limit seven times since February 2013 when they first suspended the limit rather than increasing the limit by a specific amount. The last suspension ended on July 31, 2021. More recently, in December 2021, lawmakers raised the debt limit by $2.5t, returning to increasing the debt limit by a specific dollar amount.

Exhibit 1: US debt subject to the debt limit ($tn)
The Treasury has modified the DL nearly 100x since 1917, including 6 suspensions



Source: BofA Global Research, US Treasury

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Once the government hits the debt limit and exhausts all available extraordinary measures, the US could become unable to pay all of its obligations including debt payments, social security, healthcare, government salaries and contractor bills.

While we still expect the debt limit will be increased before we reach the X-date we acknowledge greater risks around passing the X-date without a resolution due to the current US political polarization. Crossing the X-date means the government must immediately balance its books on a day-to-day basis, which could mean cutting government outlays considerably & result in a temporary economic contraction.

We discuss risks around crossing the X-date in debt limit unthinkable events.

Are the debt limit & federal budget or continuing resolution the same thing?

No. Simply, the debt limit is an agreed amount of borrowing Treasury can issue to meet any gaps between tax revenue and government spending. The federal budget / continuing resolutions are an agreed amount of government spending.

An appropriations bill is a law passed at the start of each fiscal year that provides spending approval or appropriations to government agencies and all parts of the government. Continuing resolutions are a stripped down form of an appropriations bill that provide temporary funding measures that Congress can use to fund the federal government for a limited amount of time until they agree on a larger appropriations bill.

Congress passed a large $1.7tn appropriations bill on December 23rd '22 after a continuing resolution was passed on September 30th '22 and another on December 16th '22. In passing these continuing resolutions, the government avoided a government shutdown while they ironed out details on the larger appropriations bill.

Debt limit increases are often coupled with federal budgets or continuing resolutions. However, these pieces of legislation are separate and distinct. There have been discussions recently by GOP lawmakers to push a debt limit deadline to September 30th to line it up with the timing of an appropriations bill. We discuss this in detail below.

An appropriations bill approves government spending while the debt limit which caps debt needed to pay for the spending that Congress has already approved.

Is the debt limit the same as a government shutdown and what are the economic effects of each?

The debt limit and a government shutdown are different, but both affect the ability of the federal government to function. A government shutdown occurs when Congress fails to pass appropriations legislation for a federal budget or a continuing resolution. This means existing appropriations and non-essential government functions must stop.

The economic impact of a government shutdown is more limited than failing to increase the debt limit. Shutdowns result in a temporary furlough of non-essential government workers, who typically receive back pay after a shutdown is resolved. A failure to increase the debt limit could result in broad based financial market dislocations & would see the government temporarily run a balanced budget / sharply tighten fiscal policy.

Our US economists estimate the economic effects of federal government shutdowns as modest - at about 0.1pp of GDP growth per week the government is shut down. In the national accounts, the main effect on GDP of a shutdown arises through reduced compensation of federal employees deemed non-essential (about 38% of the 2.1mn non-postal federal employees during the most recent shutdown). There are also secondary effects from reduced government spending on goods and services.

Exhibit 2: Revenue and outlays of the federal government ($bn)

Revenues and outlays are lumpy. The federal government regularly finances monthly deficits through debt issuance

	2015-2019 (avg.)		2020-2022 (avg.)	
	Net Revenue	Net Outlays	Net Revenue	Net Outlays
Jan	333	304	407	433
Feb	161	366	242	496
Mar	224	362	273	597
Apr	482	318	515	733
May	225	341	342	541
Jun	332	356	384	759
Jul	229	329	365	557
Aug	223	362	265	462
Sep	358	291	440	647
Oct	233	329	280	459
Nov	209	359	251	446
Dec	329	347	429	513

Source: US Treasury Department, BofA Global Research

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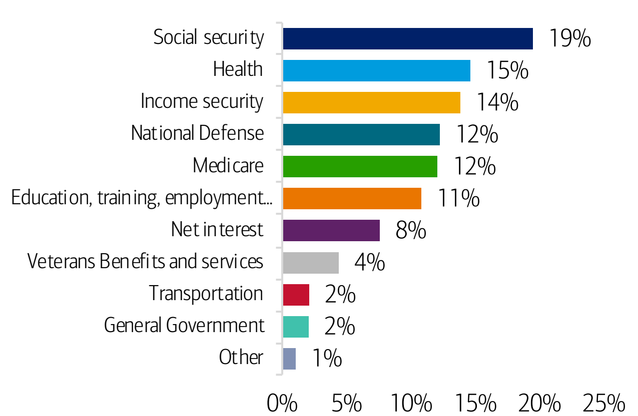
Exhibit 3: Fiscal Year 2022 share of Federal Government outlays

Entitlement programs like social security and Medicare make up roughly a third of government spending



Source: US Office of Management and Budget, BofA Global Research

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Depending on the timing of any shutdown, much of the lost activity can be made up in the current or subsequent quarter, though spending on services cannot be inventoried and may result in a permanent loss. On net, federal government shutdowns bring limited economic fallout so long as they do not extend past several weeks, which may explain why they have been incurred regularly as part of fiscal negotiations in recent decades. In addition, shutdown risk is not likely to emerge soon, since the government is funded through the current fiscal year (for more detail see Return of fiscal brinkmanship).

A violation of the debt limit, or a government default, meanwhile, constrains the government's ability to pay all its obligations to both creditors and other expected recipients. The direct effect on economic activity from a government default is a function of timing, duration, and prioritization.

A default forces the Treasury to run a balanced budget for the duration of the default. Since revenue and outlays are seasonal, the timing of a government default is critical to determining the direct effect on economic activity from any potential default. A default in June, for example, would likely result in fewer reductions in outlays due to corporate tax collections than a default in July or August (Exhibit 2).

Duration also plays a role, a short-lived default (e.g. one week or less), would mean the Treasury is only running a balanced budget for a short period of time. Also, many of the missed payments are likely to be made up following any resolution. Therefore, the direct effect from a brief default would likely be difficult to see in the economic data. However, the longer the default lasts, the more adverse the shock is to economic activity.

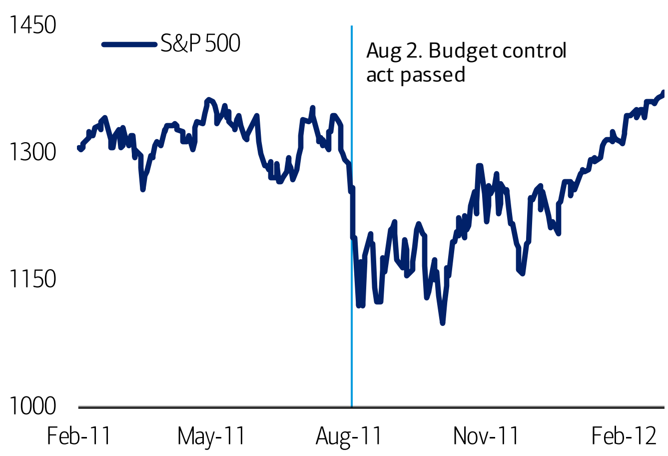
Whether or not Treasury decides to prioritize payments is also key for determining the direct effect of a default on economic activity. Should Treasury choose to prioritize interest payments to guard against downside risks to financial markets, then it will be forced to make more significant cuts to spending elsewhere.

In 2022, interest payments accounted eight percent of total outlays (Exhibit 3). Moreover, interest payments have continued to climb this year due to higher rates. Therefore, prioritizing interest payments would lead to larger cuts to programs like social security, income security and Medicare which could affect consumption due to lost income.

Importantly, the direct effect is likely to be similar to a government shutdown in the event of a short default. That said, a default is likely to have severe, though uncertain, financial market and indirect effects that would dwarf the direct effects and add downside risks to our economic outlook.

Exhibit 4: S&P 500

The 2011 fight over the debt ceiling led to a sharp drop in stock prices



Source: Bloomberg, BofA Global Research

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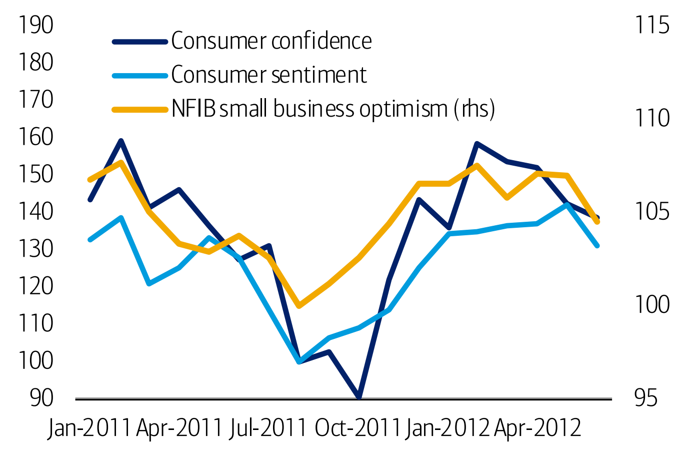
Exhibit 5: Consumer and business sentiment (Aug 2011 = 100)

Sentiment for consumers and businesses fell during the debt limit episode



Source: Conference Board, University of Michigan, National Federation of Independent Businesses (NFIB), Haver Analytics, BofA Global Research

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To gauge these effects, we look at developments in financial markets and sentiment measures around the 2011 debt limit crisis. Equity prices declined ahead of Congress singing the Budget Control Act of 2011 into law on August 2 by close to 8% (Exhibit 4). Volatility also spiked and mortgage and credit spreads widened. Similarly, confidence for businesses and consumers fell ahead of the resolution. (For more information, see: What has been the impact on financial markets?)

We think this provides a good starting point, but likely understates the financial and sentiment response of any actual government default no matter how short lived. Adverse shocks to both financial markets and sentiment would likely lead to significant pullbacks in investment and consumption that could easily tip the economy into a recession.

Indeed, analyses of the potential economic fallout from a default from the Federal Reserve in 2013 and the Council of Economic Advisors in 2023, both find a default would be a significant adverse shock for the economy. The 2013 analysis from the Fed estimated that a default that lasted a few weeks would trim 1.3ppt from growth in the immediate year of the default and 1.7ppts in the following year. Moreover, the Fed estimated that the unemployment rate would remain above its baseline projections over the long run (Exhibit 6).

Meanwhile, the Council of Economic Advisors recently estimated the effects of a protracted default, a short default and a period of brinkmanship. They found that a protracted default could drive the unemployment rate up by five percentage points in 3Q 2023, while a short default would push the unemployment rate up by 0.3 percent (Exhibit 7)

We think these estimates are good guideposts of the potential economic consequences from a government default. Though admittedly the error bands around these estimates are likely wide given the lack of a true historic analogy and numerous unknowns. Nevertheless, what is undisputable is that a government default poses a downside risk to our current forecast for a mild recession.

Exhibit 6: Simulated Macroeconomics Effects of a Temporary Federal Debt Default by the Federal Reserve in 2013 (change from baseline ppt)

An analysis by the Fed in 2013 found that a debt default would lead to weaker GDP growth, elevated unemployment and lower inflation vs. its baseline.

	2013	2014	2015	2016	2017
Real GDP (Q4/Q4 % ch.)	-1.3	-1.7	-0.5	0.4	1.2
Unemployment rate (Q4 level)	0.2	1.3	1.7	1.5	0.8
Core PCE (Q4/Q4 % ch.)	0	0	-0.2	-0.3	-0.4

Source: "Possible Macroeconomic Effects of a Temporary Federal Debt Default", Engen E., Follette G., Lafort J., October 4 2013

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Exhibit 7: CEA estimate economic effects of Debt ceiling standoff: 3Q 2023

The CEA estimates that even brinkmanship around the debt ceiling would be a drag on growth and create job losses

	Brinkmanship	Short default	Protracted default
Jobs, millions	-0.2	-0.5	-8.3
Real GDP % annualized growth	-0.3	-0.6	-6.1
Unemployment, percentage points	0.1	0.3	5.0

Source: CEA

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Where are we in the debt limit process?

Treasury hit the $31.38tn debt limit on January 19th. This triggers a debt issuance suspension period (DISP) where Treasury cannot issue debt that would bring them above that limit. The Treasury now has to use its cash balance and extraordinary measures to meet its obligations on a temporary basis (Exhibit 8).

Extraordinary measures (EM) are inter-governmental accounting maneuvers that allow Treasury to issue a limited amount of marketable debt to the public for a short time without going over the debt limit. In other words, it helps to add headroom under the debt limit that can otherwise be used to issue marketable debt and meet existing outlays or refill some of their cash balance. The largest EM accounting maneuver essentially sees the US Treasury issue an "IOU" to an inter-governmental retirement fund in exchange for the USTs held by the fund. These USTs can then be issued to the public.

Exhibit 8: Extraordinary Measures as of May 10 ($b)
This excludes the $8.3b from the CSRDF/PSRHBF at the start of each month and the $145.5b on June 30

Impacted Funds	Measures Authorized	Measures Used	Measures Remaining
CSRDF/PSRHBF	21	-21	0
G Fund	295	-223	72
ESF	17	0	17
Totals	333	-244	88

Source: US Treasury

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The period of time that extraordinary measures may last is subject to considerable uncertainty due to a variety of factors, including the challenge of forecasting the payments and receipts of the U.S. government. Secretary Yellen has projected that the US Treasury will have used up its extraordinary measures and cash balance by June 1st, their projected X-date, and will be unable to fund all of its obligations. BofA recently updated our projected X-date which now aligns with the Treasury's forecast. We discuss this in more detail in: When is the debt limit X-date?

The next step is for Congress to agree on a debt limit resolution before the X-date.

Debt limit specifics

When is the debt limit X-date?

Secretary Yellen has stated the Treasury will run out of cash to pay all of its obligations by June 1. This is called the X-date. It means that once past this date, the Treasury will no longer be able to pay all of its expenses without issuing more debt.

We recently revised forward our X-date projections which now aligns with Treasury's June 1 X-date. This revision was driven by (1) lower tax receipts (2) higher deficit projections (3) lower EM remaining.

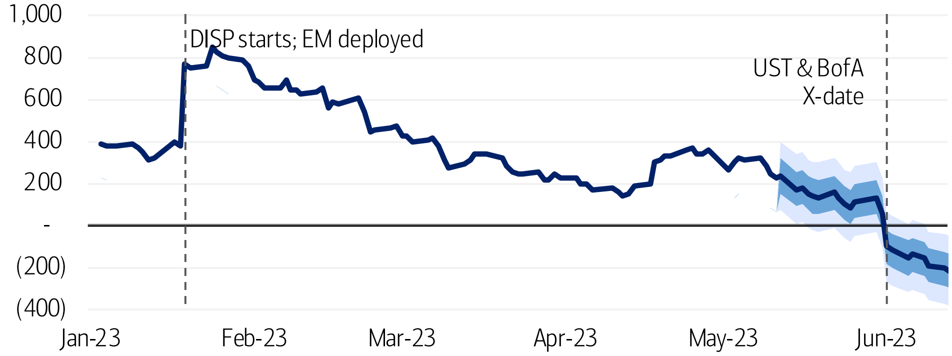
Our numbers previously implied that UST would run dangerously close to running out of money in early June. If Treasury can make it to mid-June, when they can partially refill the cash balance from corporate tax receipts, we believe they could make it through at least the first week of July due to a large one-time increase in extraordinary measures of $145b at June month-end.

We now see the balance of risk skewed towards an earlier X-date. After adjusting for higher Treasury financing needs, which either must come from higher debt issuance or larger withdrawals from the Treasury's cash balance, we now believe Treasury will run out of cash sooner than previously expected.

Due to large outflows typically seen on the first business day of June, the Treasury is likely to run out of money on June 1 (Exhibit 9). Our base case is that the US government would begin to miss some government payments by June 1 but will likely continue to make interest payments on their debt.

Exhibit 9: Treasury cash balance & extraordinary measures ($bn)

The UST and BofA X-date forecast is June 1, when they run out of cash and EM



Source: BofA Global Research, US Treasury

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How will the debt limit be resolved?

It is unclear how the debt limit will eventually be resolved. A debt limit increase this year is complicated by divided government (Ds = White House, Senate; Rs = House). A similar White House & Congressional composition drove some of the most contentious debt limit standoffs in the past, especially in 2011 (Ds = White House, Senate; Rs = House).

We think that any resolution of the debt ceiling will come at the last minute and there is a significant risk that the ceiling is briefly violated and some payments are missed. As long as there is no significant political or other cost to the standoff, neither side has an incentive to compromise. Both sides know that the outcome of this battle set a precedent for future battles.

Hence, our economists believe that resolving the debt ceiling will require some kind of outside pressure. That could come from the public learning how dangerous it is to violate the ceiling and expressing their concern in public opinion polls. It could also come from a sharp sell-off in the equity market as concerns about a default rise. The debt market is already starting to recognize the risks. US CDS pricing is the highest ever for this early in a debt limit standoff (Exhibit 10). For more detail on debt limit risks see Upside to debt ceiling risk.

Exhibit 10: US CDS pricing (bps)

US CDS have spiked with increased debt limit concern

Source: Bloomberg

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To increase the debt limit today the legislation must be passed in a standard manner through both the House & Senate. The composition of Congress provides no possibility of a reconciliation work around. The House will require a majority vote to advance the legislation while the Senate will likely require a 60-vote majority.

Clients have recently asked a number of procedural questions related to potential debt limit passage. The two most common: (1) does a DL bill have to start in the House? (2) what happens if there is no House speaker? We address below.

DL bill point of origination: either the House or Senate can originate debt limit legislation. The House has already passed a debt limit plan, but it is not expected to pass the Senate. If the Senate were to originate and pass legislation with 70+ votes, we expect this would place increased pressure on the House to pass (this is because the 70+ vote threshold would include a number of Republicans in support).

Implications of no House speaker: under current House rules only one member of Congress — Democrat or Republican — is needed to bring a "motion to vacate," which forces a vote on removing the speaker. If the speaker is removed it could materially slow down legislative progress & could delay House business until a new speaker is chosen.

The most likely outcome is a bi-partisan deal to increase the debt limit but there are some non-standard steps that could be taken. We review some of these non-standard steps below, including parliamentary maneuvers & other more legally contentious steps:

Small increase or temporary suspension: It is possible that if the government cannot agree on a debt limit resolution prior to the X-date that they pass a small resolution to kick the can down the road until they can agree on a larger resolution. Congress last did this in October 2021, when they increased the debt limit by $480b, which only pushed the X-date back two months, but this gave them enough time to agree on a much larger resolution. This has also typically led to a reset of extraordinary measures, which Treasury refills when the DL is increased but can spend again once the new limit is hit.

We have already heard media chatter considering this scenario. Media reports suggest some Republicans would like to tie the debt limit to government spending. Republicans could therefore force a temporary resolution to kick the debt limit to September 30th. In this scenario, Republicans would likely want to tie a debt limit resolution to an appropriations bill to cut government spending. Democrats may be resistant to this scenario since it would tie the debt limit more clearly to spending cuts. However, if the debt ceiling goes down to the wire, there may have no other choice.

A temporary debt limit push to Sept 30 matters for 2 reasons: (1) a likely near-term bill supply (2) decreased odds of a very bad debt limit outcome.

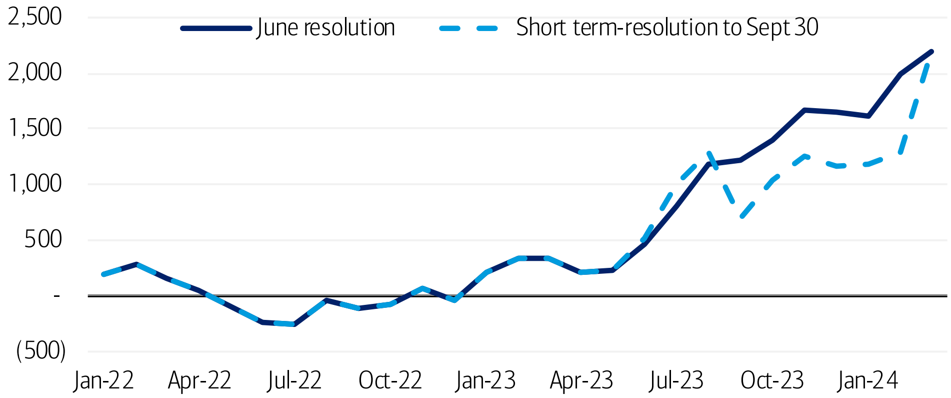
Bill supply: To forecast bill supply based on this risk scenario, we assume a May 31 short-term resolution, TGA quickly ramping up to $500b over the summer, before falling back to ~$70b by Sept month-end to align with the assumed TGA level when the resolution was passed. Based on this, we see the X-date pushing back to Feb '24.

This temporary resolution would result in $50b more bill supply over Q2, but $450b lower than our base case over FY'23 (Exhibit 11). The lower relative bill supply forecast from Sept '23 – Feb '24 will likely result in less cheapening in bills vs OIS, a weaker drop in ON RRP, and less cheapening in broader money market rates.

We assume the TGA will have to return to the level it was at when the temporary debt limit resolution was passed, which we currently estimate will be around $70b on May month-end.

Exhibit 11: Bill supply forecasts under different scenarios ($b)

A short-term resolution may initially lead to higher bill supply but likely to result in less bill supply over the FY



Source: BofA Global Research, Treasury

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Lower odds of bad outcome: bad outcome odds drop b/c (a) X-date is likely pushed to Feb '24 with replenishment of extraordinary measures (b) a lapse in appropriations spending after Sept 30 would shut down the government & tie more closely gov't opening + debt limit. This could pull forward a spending fight that would likely be resolved well before the X-date. For context, the longest government shutdown in US history was 34 days ('18-'19). It would require a government shutdown that is likely 4-5x the longest in history to risk breaching a Feb '24 X-date. Importantly, we assume that a resolution to the gov't shutdown + debt limit are achieved at the same time.

Discharge petition: this is a parliamentary maneuver that would allow a majority of the House to advance legislation that the House Speaker has otherwise ignored. Here is how the petition works, according to Indivisible.org:

After a bill has been introduced and referred to a standing committee for 30 days, a member of the House can file a motion to have the bill discharged, or released, from consideration by the committee. In order to do this, a majority of the House (218 voting members, not delegates) must sign the petition. Once a discharge petition reaches 218 members, after several legislative days, the House considers the motion to discharge the legislation and takes a vote after 20 minutes of debate. If the vote passes (by all those who signed the petition in the first place), then the House will take up the measure.

This maneuver would require some House Republicans to defect from the leadership to support a debt limit increase. Our reading of Congressional reporting suggests the odds of a successful discharge petition are quite low but remain a non-zero probability.

Ignore the debt limit: if no legislative solution can be found some Constitutional scholars have argued for invoking the 14th Amendment to prevent default. The 14th Amendment is primarily intended to grant citizenship to most individuals born or naturalized in the US but has a notable clause in section 4. Section 4 states "the validity of the public debt of the United States…shall not be questioned". In essence, these Constitutional scholars argue that the 14th Amendment renders the debt limit illegal.

It is possible that in the event of no resolution the President could instruct to the Treasury Secretary to ignore the debt limit & continue paying government obligations / issuing additional debt citing the 14th Amendment. Any such action would almost certainly face swift legal challenges. We are not legal experts but are unaware of any material Constitutional challenge against the debt limit using the 14th Amendment.

Ignoring the debt limit & invoking the 14th Amendment would likely only be pursued in an extreme scenario. We have no strong sense of the potential success for such a legal challenge; the fact it has not been employed in the past suggests reasonably long odds.

Mint a $1tn platinum coin: another untested option includes the idea of minting a $1 trillion or other very large denomination platinum coin. The idea would involve the US Treasury minting a $1 trillion platinum coin that the US government could use to pay their obligations. The Treasury would deposit the coin at the Federal Reserve, crediting their account for the coin's full face value. The coin and the proceeds it generated would not be counted as debt subject to the debt ceiling rule. The Treasury Secretary would then direct the Fed to transfer the funds to the Treasury General Account (TGA), at which point the money could be used to cover outlays. This exercise would result in a $1tn increase in the Fed balance sheet.

This maneuver has never been tried before and has questionable legal grounds but is another potential way around the debt limit. The potential legal justification for this action can be found in the United States Code. The US Code "is the codification by subject matter of the general and permanent laws of the United States."[1] The provision can be found in U.S. code, title 31, subtitle IV, chapter 51, subchapter II and specifies "denominations, specifications, and design of coins". Language in this section states that *"the Secretary may mint and issue platinum bullion coins and proof platinum coins in accordance with such specifications, designs, varieties, quantities, denominations, and inscriptions as the Secretary, in the Secretary's discretion, may prescribe from time to time."* The Treasury Secretary discretion is what allows for the possible minting of a large value platinum coin. We cannot opine on legal grounds for such action but it is a potential action that could work as a last line of defense against a technical default.

Treasury Secretary Yellen has called this maneuver a "gimmick" in late Jan '23, which reduces the odds this administration will pursue the option.

Increase the debt limit via a specific dollar value or suspend the limit until a particular date?

Congress passed debt limits with a specific dollar value until February 2013. This practice was adopted after UST debt outstanding exploded following the 2008 financial crisis when it became more difficult to forecast.

Since 2013 and until 2021, Congress suspended the debt limit until a future date (usually several months after a mid-term or Presidential election). The level of debt on the date the suspension expires becomes the new debt limit and Treasury immediately becomes constrained by this limit. This reduces the uncertainty around the timing of debt limit episodes and insures they are not close to election dates.

Congress reverted to increasing the debt limit by a specific dollar amount in December 2021. Republicans claimed they wanted to hold Democrats accountable for a specific dollar amount of debt. The issue with increasing the debt limit by a dollar amount is that there is significantly more uncertainty regarding when the debt limit will next hit, which we experienced in January.

In increasing the debt limit by a particular amount, the day Treasury will next hit the debt limit is therefore dependent on Treasury's difficult to predict income and outlays. As we saw this last December, Treasury can temporarily delay hitting the debt limit by cutting bill supply and using up their cash balance. In January, Treasury reversed course once their cash balance was approaching $300b; Treasury increased bill supply to grow their cash balance, finally hitting the debt limit.

In either scenario, Treasury still has some time between initially hitting the debt limit and the X-date due to what remains in their cash balance and extraordinary measures. What is important to distinguish is suspending the debt limit removes one layer of uncertainty by providing the exact timing of when Treasury will hit the debt limit.

[1] See "United States Code", United States Code | govinfo

Debt limit unthinkable events

What happens if the debt limit is not raised or suspended?

If we reach the X-date and the debt limit is not extended, the US Treasury would run out of money to pay all of its obligations. This would force Treasury to default to either its debtors or other federal payment recipients. We believe that ratings agencies would only consider the US "in default" if it missed an interest payment on its debt.

Congress has never allowed for this situation to come to pass but due to previous debt limit episodes, the market knows a bit about what such a scenario might look like. Prior debt limit episodes have shed light on: (1) ability to prioritize UST debt payments; (2) possibility of delaying UST payments; (3) potential Fed actions.

UST debt payments prioritization ability: during the 2011 and 2013 debt limit episodes, the public transcripts from the surrounding FOMC conference calls suggest the US government has the technical ability to prioritize UST debt payments. The Fed presenter suggests two key principles around a debt limit impasse: (1) UST principal & interest payments would continue to be made on time; (2) Treasury can decide every day whether to make or delay other government payments.

Based on these comments, it seems the US government has ability to prioritize UST debt payments. However, debt or other spending prioritization has never been tested in practice and it is possible there could be unforeseen plumbing issues with the practice.

Equally important to payment prioritization ability is political willingness. Prioritizing UST interest payments over other obligations (eg. social security or military) could be politically unpopular. However, missing debt payments could have more disastrous economic impacts. We believe prioritization willingness rests solely with the US President. However, choosing which payments to prioritize seems a "lose-lose" choice.

Social Security Clause: Our understanding is that Social Security and Medicare obligations will not be disrupted in the event we cross beyond the X date, with or without a prioritization plan in place. A report by economist Steve Robinson who was a policy adviser for the Social Security Administration discusses a 1996 law (Public Law 104–121 March 29, 1996) that explicitly protects Social Security and Medicare payments by allowing Treasury to tap their associated trust funds if needed to make payments to recipients. While this could potentially be done in a parallel with prioritization, we believe it would be operationally simpler to do it without a prioritization plan in place.

Possibility of delaying UST payments: if Treasury decides not to prioritize UST payments, it could potentially delay the payment on a bill or coupon. The Securities Industry and Financial Markets Association (SIFMA) & the Treasury Market Practice Group (TMPG) each created best practices in the event of a delayed UST payment after the 2013 debt limit scare. SIFMA's documents stress the importance of early Treasury communication to the public around an intention to delay payment for settlement & process purposes. The TMPG document discusses logistics around how a technical adjustment to Fedwire could roll forward the maturity date of UST securities so that they can still be transferable and avoid being frozen on trading systems. The benefit of continuing to make a security transferable is to promote liquidity, market making, and allowing for potential transfer to the Fed. We believe rolling forward of maturity dates would count as a selective default by ratings agencies.

Fed actions: The October 2013 FOMC conference call transcript also suggested a series of steps the Fed could take to promote market functioning in the face of a debt limit episode (Exhibit 12). There were a number of options proposed using the Fed's existing authority or expanding it with the aim of ensuring the stability of the Treasury market. Most of the actions discussed would involve the Fed taking potentially delayed payment securities permanently out of the market (at their presumably discounted price) or swapping them for non-delayed payment securities already held by the Fed.

Exhibit 12: 2013 Fed responses to debt limit market functioning issues
Fed also has standing repo facility & overnight RRP today

Existing Authority	Money market strains	Outrights
Outright purchases	Reverse repos	CUSIP swaps
Securities lending	Dealer repos	
Rollovers		
Repos		
Discount window lending		

Source: BofA Global Research, Federal Reserve

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The transcript offers a range of views around the willingness of the Fed to engage in such actions back in 2013; we assume the Fed's more proactive role in responding to 2020 Treasury market dislocations might make them more willing to step in and ameliorate debt limit market strains though it would come with moral hazard risks.

The Fed's expanded toolkit since 2013, including the overnight reverse repo facility (ON RRP) and standing repo facility (SRF), provide more automatic stabilizers to address market dislocations. We expect both facilities to see greater use as the X-date approaches: money market funds would likely want to invest with the Fed at ON RRP rather than own a potentially delayed payment UST security & dealers might seek funding from the Fed via SRF rather than pay up to finance a delayed payment UST security. We fully expect the Fed will not deliver delayed payment UST collateral to ON RRP users in a debt limit standoff; only well performing USTs would likely be used as ON RRP collateral. The SRF rate could also be lowered to limit extent of a funding spike.

See more from our Econ team in Debt limit standoff 09 May 2023

Is the US sovereign rating at risk?

Current US ratings are stable for S&P and Moody's (Exhibit 13). The outlook is negative for Fitch "*to reflect the ongoing deterioration in the U.S. public finances and the absence of a credible fiscal consolidation plan*". If Congress waits too long or fails to pass a debt limit resolution by the X-date, the US sovereign credit rating may be downgraded like it was in 2011 by S&P from AAA to AA+. While a single notch downgrade is unlikely to result in forced selling from any major indices, a selective default or restricted default rating could result in some forced selling from investors that are not able to hold securities with such ratings. Our understanding is that the main index programs that are used as benchmarks across global portfolios have adopted rule changes to remove ratings requirements which would reduce the index-related impacts. We also believe that CME would continue to accept as collateral Treasury securities that were experiencing delayed payments. This would reduce margin calls in the extreme event of delayed payments or maturities.

Exhibit 13: Current US ratings
Rating by credit agencies

	Rating	Outlook	As Of
S&P	AA+	Stable	Mar-2021
Fitch	AAA	Negative	Jul-2020
Moody's	Aaa	Stable	Jun-2020

Source: Fitch, Moody's, Reuters

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What are the implications of a US downgrade on fixed income indices?

We focus on two major providers across both their Treasury & broad fixed income indices, including: (1) BofA ICE, (2) Bloomberg / Barclays.

BofA ICE: The Treasury index (G0Q0) contains no specific ratings requirement. The broad fixed income index (US00) explicitly exempts "local currency sovereign debt" from ratings requirements. These rules were modified after the 2011 debt ceiling episode to accommodate ratings volatility caused by debt ceiling negotiations.

Bloomberg / Barclays: Prior to March 2023, Treasury & aggregate fixed income indices required that securities must be investment grade but Bloomberg announced index rule changes in March 2023 to essentially minimize any index impact to delayed payments. The current index rules specify that coupon payments will be treated as paid on the coupon dates and maturities will be treated as having matured on the maturity date. As a result, we expect no forced selling from index rules in the BofA ICE or Bloomberg/Barclays indexes.

Debt limit market impact

How concerned is market & what will impact be?

The market is starting to show signs of concern around an X-date on June. Historically we have seen the clearest evidence of concern through a bill market “kink” and increase in US credit default swap (CDS) pricing.

Investors typically reflect a desire to shun potentially impacted paper, thus leading to the bill market “kink” (Exhibit 14). Usually this coincides with cheapening of potentially impacted UST coupon securities, which is not yet priced in.

There has already been a sharp widening of 1Y & 5Y US CDS contracts as a result of the debt limit (Exhibit 10). US CDS contracts are denominated in euros & traded outside the US. These contracts have limited liquidity but clearly reflect acute concerns over potential US default. CDS levels have reached new highs in this episode, but because the payoff on these contracts is assumed to be the 1 – price of lowest-priced UST bond, the probability of default implied by CDS is more in line with the 2011 markets.

We are closely monitoring for any cheapening of UST coupon securities with potentially delayed payments vs surrounding issues. To date, there has been only a very modest impact on these securities (Exhibit 15).

Clients have also asked about the expected impact on broader US rates in the event of a UST default. We have thought about this impact as: (1) US OIS curve (2) UST-OIS spread. We expect that most UST yields will decline & curve bull steepen with DL stress.

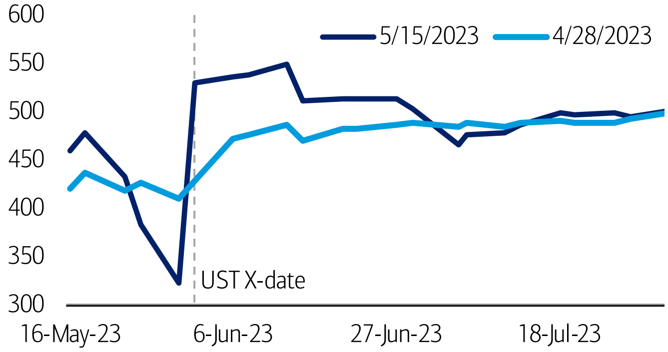
US OIS curve: any technical UST default will likely see the US OIS curve bull steepen. The US OIS curve bull steepening will be driven by financial stress & increased recession risk with sharp fiscal tightening (e.g. delayed social security payments). The market will likely price increased probability of Fed rate cuts or intermeeting cuts in this scenario. Historically, rates have declined around debt limit standoffs.

UST-OIS spread: we expect material dislocations on the UST curve with any technical UST default. Delayed payment UST securities are likely to cheapen materially vs OIS, including short-dated bills & coupons with impacted payments. However, USTs that have recently received coupon payments should rally (lower yield) in any scenario. We believe investors will likely still use non-delayed payment USTs as flight to quality instruments.

Delayed payment UST securities will also likely be more difficult to fund in repo & may end up trading as their own cheaper segment of the UST repo market. In the event of technical UST default, we expect the Fed to use all available tools to fund these dislocated securities (via repo, securities lending, lower discount window, outrights).

Delayed payment securities are likely to be valued in relation to where they can be funded at the Fed. In the event of UST technical default, we expect the Fed will be willing to accept defaulted collateral through their standing repo facility (SRF). SRF is currently at the top of the fed funds target range or 5.25%. Dealers who facilitate the movement of technically defaulted securities to the Fed would likely require some compensation from clients, which we estimate at max might total 25bps. Therefore, the upper bound for how cheap defaulted securities might trade is 5.5% (SRF = 5.25% + dealer balance sheet cost = 25bps). We might suspect the Fed will lower the SRF rate or increase the total repo size to promote market functioning & move the defaulted USTs out of the market.

Exhibit 14: Treasury Bill Curve (bp)
Market is now reflecting concentrated risk in bills maturing after Jun 1 X-date



Source: BofA Global Research, Bloomberg

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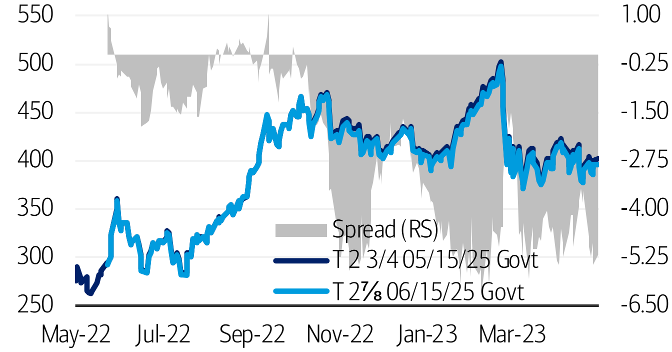
Exhibit 15: Yields of Tsys paying coupons on May 15 & June 15 (bp)
Spread does not currently show much change



Source: BofA Global Research, Bloomberg

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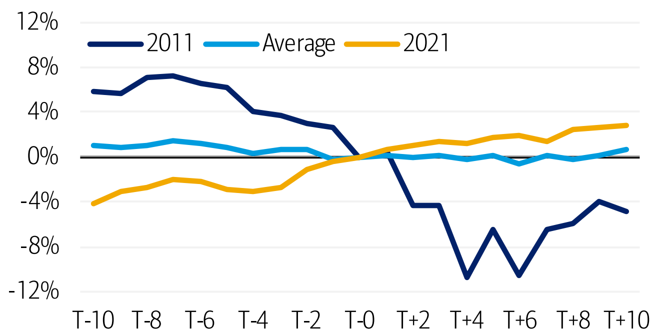
What has been the impact on financial markets?

Previous debt limit episodes imply that markets don't seem to price in debt limit scenarios until two weeks before the projected X date. In 2011, the debt limit was not resolved until the projected X-date, which weighed heavily on investor sentiment, leading to lower equity prices and higher volatility (Exhibit 16, Exhibit 17). However, in later debt limit scenarios, especially those in which the debt limit was resolved several days or weeks before the projected X-date, the impact on risk assets was less severe.

Exhibit 16: S&P 500 around previous X-dates (% change)
S&P performance around X-dates is mixed



Source: BofA Global Research, Bloomberg

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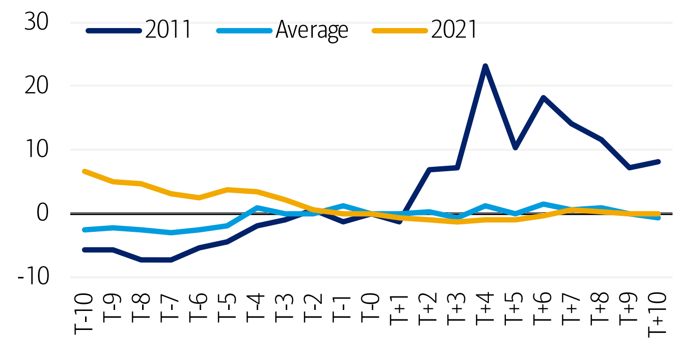
Exhibit 17: VIX around previous X-dates (ppt chg)
DL impact on vol limited outside of 2011



Source: BofA Global Research, Bloomberg

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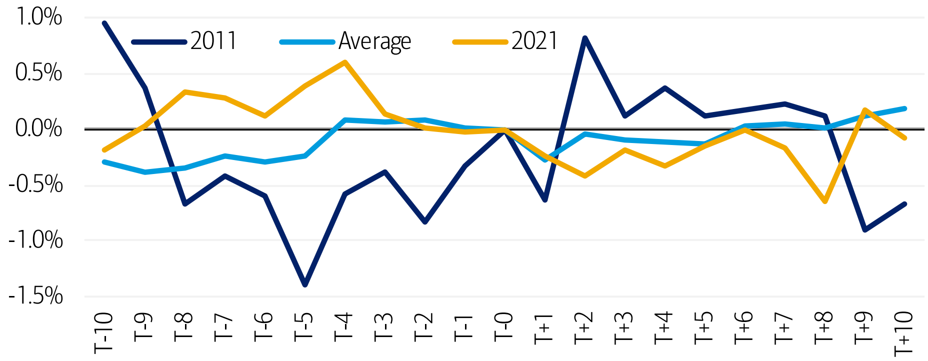
The impact on the dollar appears to be modest in either scenario (Exhibit 18). Past instances of debt ceiling related stress have not produced material or sustained FX price action. Most notably, the USD was broadly stable/slightly higher throughout the 2011 episode, amid a large decline in US equities around S&Ps downgrade of the US credit rating. However, this time could present more cross-currents for the USD, with a key differentiating factor being the stance of Fed policy. In 2011, with fed funds at the lower bound, Fed guidance pointed to "exceptionally low levels for the federal funds rate for an extended period of time". With fed funds now likely at or near the terminal rate of 5-5.25%, and over 75 basis points of cuts priced in for later this year, a market shock could easily bring this (and additional) easing forward. All else equal, this would be a headwind for the dollar, and serve as a potential/partial offset to a more traditional "risk-off" reaction. It is likely the case where a shock scenario were to see the USD outperform high-beta currencies, while underperforming other traditional safe havens, such as the JPY, CHF and potentially EUR.

Exhibit 18: DXY around previous X-dates (% chg)

Debt limit impact on DXY appears mixed



Source: BofA Global Research, Bloomberg

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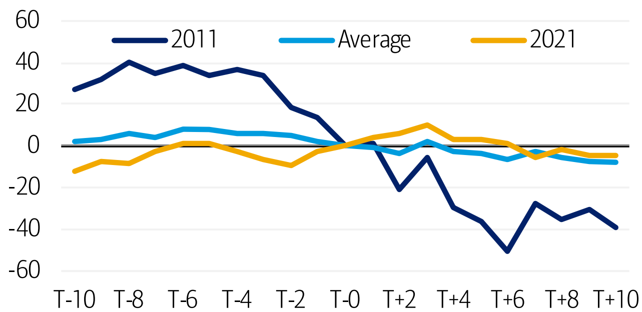
Due to concerns about the fiscal outlook, one might expect upward pressure on Treasury yields but in three out of the past seven debt limit scenarios, yields actually fell going into the X-date (Exhibit 19). The reason for UST yield decline is likely due to worse market & economic sentiment that would necessitate easier monetary policy. We might expect the FF OIS curve to bull steepen amidst any acute debt limit concern today.

Pressure in short term funding markets tends to be more pronounced. In GCF repo, rates have increased up to 20bps going into previous X-dates (Exhibit 20) primarily due to flows out of Treasury-only MMFs. However, any spike would likely be capped at or slightly above the Fed's standing repo facility (SRF) rate. 1m Bills have cheapened relative to 1m OIS in the few days prior to previous X-dates (Exhibit 21).

Exhibit 19: US 10yr yield around prior X-dates (bp chg)

Risk off flows likely to lead to lower yields



Source: BofA Global Research, Bloomberg

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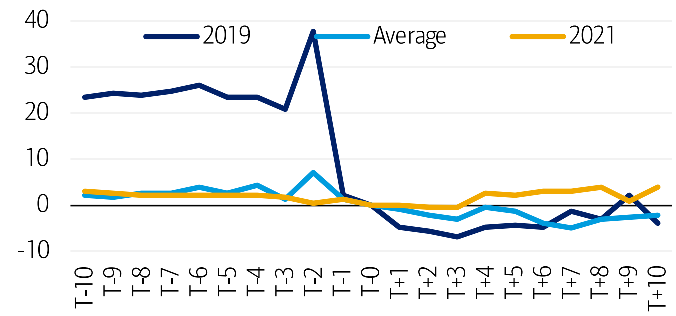
Exhibit 20: GCF repo around previous X-dates (bp chg)

GCF repo spiked in the week leading into '11, '13, '19 debt limits



Source: BofA Global Research, Bloomberg

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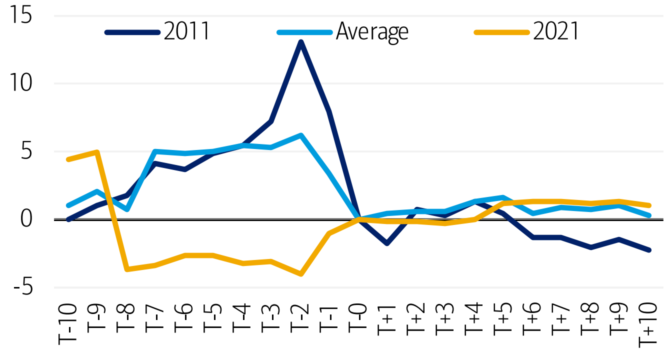
Exhibit 21: 1mo Bill - OIS spread in prior X-dates (bp chg)
Bills typically cheapen to OIS ahead of projected X-dates



Source: BofA Global Research, Bloomberg

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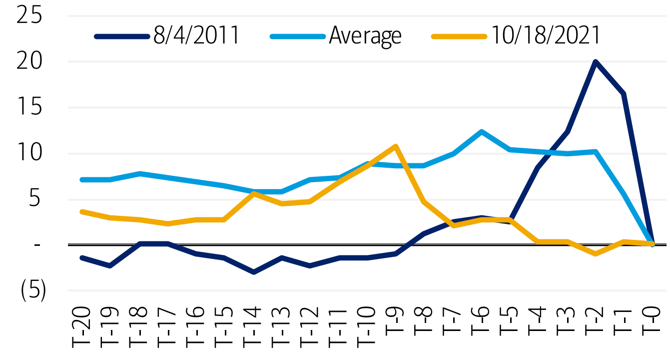
Exhibit 22: Bill levels around prior X-dates (bp chg)
Bills historically have shown material cheapening 10-15 days ahead of X date



Source: BofA Global Research, Bloomberg

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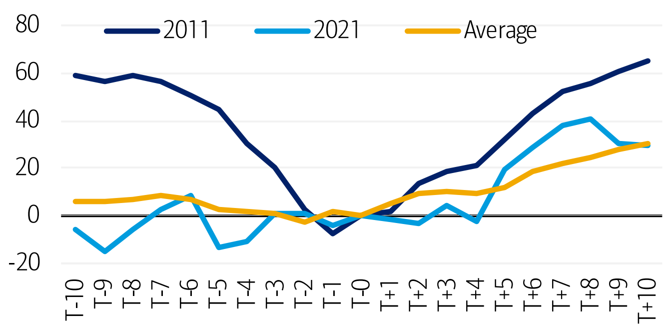
Historically, bills maturing closely following a projected X-date cheapen significantly leading up to the X-date in most debt limit scenarios (Exhibit 22). Investors tend to shun these bills for fear of technical default or internal accounting complications. The debt limit has never led to widespread Treasury disruptions but can strain the market.

Outside of the impact on asset prices, investors' concerns about the debt limit can have detrimental effects on liquidity and functioning for some financial markets. Most notably, in 2011 and 2013, money market funds and other market participants began to hoard significant amounts of liquidity. There were pronounced outflows from MMF funds in the 2011 & 2013 episodes (Exhibit 23, Exhibit 24). Money market funds would likely be concerned about potential redemptions and therefore would choose to move into more liquid assets such as the Fed's ON RRP facility and away from bills. We also expect that MMF will prefer to own agency debt vs potentially impacted USTs (agencies are not subject to the debt limit & can continue to issue or service debt uninterrupted).

Exhibit 23: Gov't MMF AUM in prior X-dates ($bn chg)
Govt MMF AUM declined leading up to X date but quickly reversed



Source: BofA Global Research; iMoneyNet

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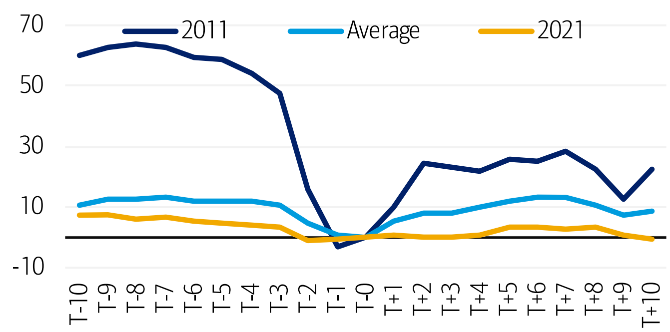
Exhibit 24: Prime MMF AUM in prior X-dates ($bn chg)
Prime MMF AUM declined leading up to X date but quickly reversed



Source: BofA Global Research; iMoneyNet

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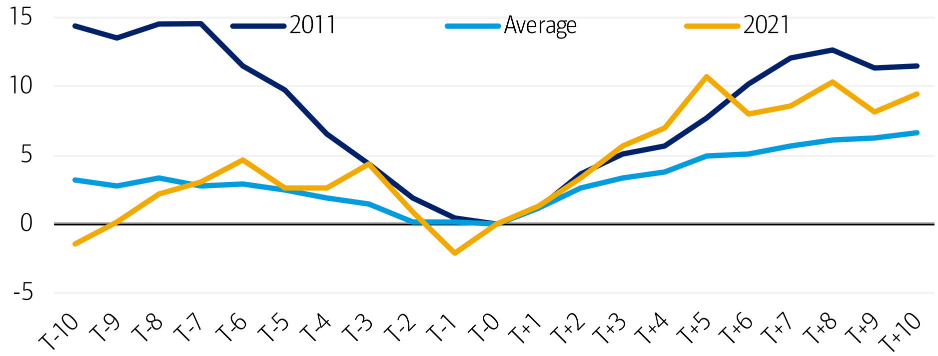
"Treasury only" MMF outflows (Exhibit 25) could be a concern. Treasury only MMFs cannot invest in ON RRP, only in UST. The risk here is that Treasury only MMFs may see large outflows and will therefore need to sell UST collateral. This collateral then gets more difficult to finance, pushing repo and FF higher. Government MMFs have the ability to use the Fed ON RRP, which provides a liquidity outlet so that in the case of outflows they can pull funds from the Fed instead of having to sell UST. The MMF outflows likely go into bank deposits (Exhibit 26).

Exhibit 25: Tsy only Inst'l MMFs around prior X-dates ($bn chg)

Treasury-only inst'l MMFs saw outflows leading up to debt limit resolution



Source: BofA Global Research; Haver Analytics

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Exhibit 26: Bank deposits surrounding previous debt limit episodes ($bn)

Domestic banks saw positive deposit flows around debt limit dates

	All Commercial Banks			Domestic Banks			Large Domestic			Small Domestic			Foreign		
	2011	2021	Average	2011	2021	Average	2011	2021	Average	2011	2021	Average	2011	2021	Average
W-6	-214	-44	-120	-364	-59	-143	-315	-32	-108	-49	-26	-35	150	15	22
W-5	-158	-8	-73	-282	-16	-93	-242	11	-66	-40	-27	-27	124	8	20
W-4	-81	-178	-86	-169	-166	-106	-157	-109	-79	-12	-57	-27	88	-11	21
W-3	-112	-74	-73	-195	-37	-92	-171	-20	-68	-24	-17	-25	83	-37	20
W-2	-190	-1	-96	-256	13	-116	-216	21	-91	-39	-8	-25	65	-14	20
W-1	-105	59	-55	-159	66	-72	-131	58	-55	-28	8	-17	54	-7	17
W-0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W+1	-25	45	-16	-18	34	-22	-20	20	-20	1	14	-1	-7	12	6
W+2	-43	178	-14	-12	160	-17	-12	100	-19	0	60	2	-32	19	3
W+3	-99	228	1	-57	186	1	-44	107	-11	-12	79	12	-42	41	0
W+4	-15	308	55	13	285	59	11	170	30	2	115	29	-28	23	-4
W+5	20	310	88	46	298	91	25	184	54	21	114	37	-26	12	-3
W+6	29	459	86	40	458	96	22	311	55	18	147	40	-11	1	-10

Source: All values relative to W-0. A negative value before W-0 implies deposit inflows. A negative value after W-0 implies deposit outflows

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Life after the debt limit is resolved

What happens when the debt limit standoff is resolved?

Assuming the debt limit is suspended or increased in a large & durable way, Treasury is likely to rapidly rebuild the cash balance & issue additional debt to fund depleted intra-governmental accounts from EM.

After the debt limit is resolved, we expect a large bill supply wave to follow so that Treasury can rebuild the cash balance back up to around $700bn by year-end (Exhibit 30, Exhibit 31, Exhibit 32). Our estimates currently project over $800b of bill supply after an August debt limit resolution into year-end '23 (see February refunding).

At the same time, we expect the increase in the TGA to be offset by a decline in ON RRP take-up and reserves. In our projections, we offset the increase in the TGA with a 90/10 decline in ON RRP/reserves.

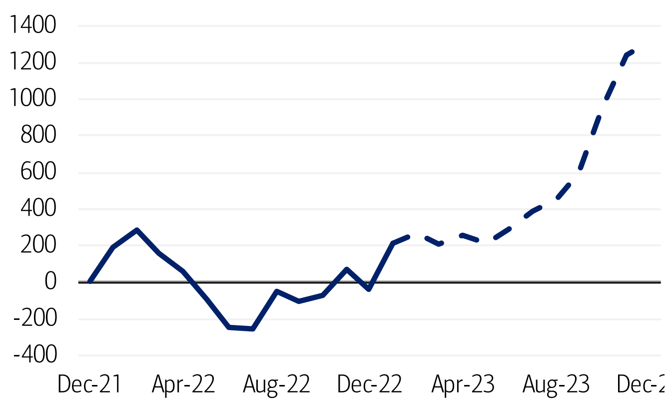
We expect the large bill supply wave will cheapen bills & other short-dated coupons. The cheapening of this paper will pull cash out of ON RRP as MMF & other users extend into higher yielding alternatives. The large bill supply wave will likely cause some market indigestion, leading to significant cheapening in bills, in our view.

Potential economic implications from a bipartisan agreement

While negotiations are in their initial stages, there have been some broad outlines emerging. The outline includes clawing back of unspent COVID funds, energy permitting, and caps on spending. Negotiations over caps could be one of the more contentious issues as Republicans are seeking a cap over the next ten years while Democrats are looking for caps over the next two years.

We believe the caps on future discretionary spending growth would have the largest effect on economic activity. The caps on spending were an important aspect of the Limit, Save, Grow Act of 2023 — the House Republican proposal that passed the House. An earlier score of the bill from the Congressional Budget Office shows that the caps would reduce discretionary spending by more than $3tn over the ten-year period. As a share of nominal GDP, the caps would shave roughly 0.5% - 1.2% from nominal GDP per year, which could have knock-on effects through higher unemployment rates. That said, the caps would also reduce the deficit which could help put downward pressure on inflation and spur more private investment.

Exhibit 27: Cumulative bill supply ($bn)
We project bill supply to ramp up quickly post DL resolution



Source: BofA Global Research, US Treasury

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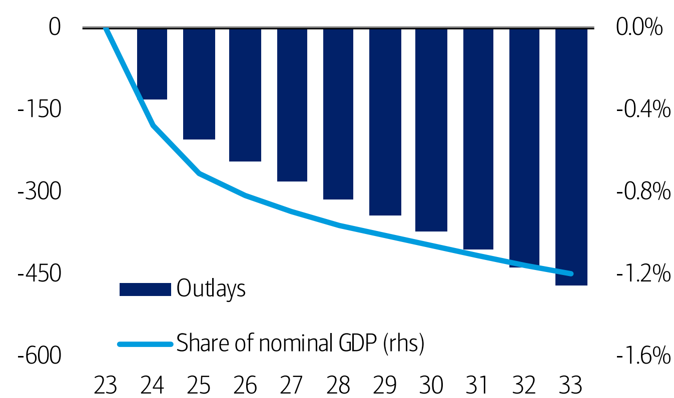
Exhibit 28: Changes to CBO's Projections of Discretionary Spending Under the Caps in the House Republican bill to rais the debt ceiling ($bn)
The caps to spending proposed by House Republicans would be a meaningful reduction to government discretionary outlays



Source: CBO

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Exhibit 29: TGA and bill & coupon net issuance forecasts by month ($bn)
Forecasts assuming a June 1 clean debt limit resolution

	Financing Need	TGA EOP	TGA Change	Marketable Borrowing	Net Coupon	Net Bills	Fed Coupon maturities	Fed Bill maturities	Net Coupons to the Public	Net Bills to the Public
	1		2	3 = 1 +2	4	5	6	7	4+6	5+7
Jan-23	71	568	121	192	-49	241	55	5	6	246
Feb-23	313	415	-153	160	41	119	60	0	101	119
Mar-23	322	178	-237	85	74	11	56	4	130	15
Apr-23	-305	316	138	-167	-41	-126	60	0	19	-126
May-23	299	70	-246	53	43	10	60	0	103	10
Jun-23	118	250	180	298	77	221	48	12	125	233
Jul-23	230	300	50	280	-56	335	50	10	-6	346
Aug-23	305	400	100	405	25	380	60	0	85	380
Sep-23	-96	600	200	104	91	13	39	21	130	33
Oct-23	196	600	0	196	26	170	52	8	78	178
Nov-23	252	650	50	302	35	267	60	0	95	267
Dec-23	32	700	50	82	108	-26	46	14	154	-12

Source: BofA Global Research, US Treasury

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Exhibit 30: Fed balance sheet projections ($bn)
As TGA refills, ON RRP and reserves will decline

		Asset								Liabilities						
		UST	MBS	CMBS	Repo	Discount Window & PDCF	Fed Facilities	FX Swap Lines	Other	Currency	TGA	Foreign RRP	ON RRP	Other	Reserves	Total
	Apr-23	5266	2576	8	0	74	253	0	436	2324	296	359	2325	176	3132	8613
25% Reserves / 75% ON RRP	May-23	5206	2551	8	0	5	301	0	437	2336	70	360	2405	177	3159	8508
10% reserve / 90% ON RRP	Jun-23	5146	2525	8	0	5	291	0	438	2349	250	362	2145	178	3130	8413
	Jul-23	5086	2501	8	0	5	281	0	439	2362	300	363	2003	179	3114	8320
	Aug-23	5026	2474	8	0	5	271	0	440	2375	400	364	1813	180	3093	8224
	Sep-23	4966	2453	8	0	5	261	0	441	2387	600	365	1538	181	3062	8134
	Oct-23	4906	2431	8	0	5	251	0	442	2400	600	366	1442	182	3052	8043
	Nov-23	4846	2411	8	0	5	241	0	443	2413	650	368	1304	183	3036	7955
	Dec-23	4786	2392	8	0	5	231	0	444	2426	700	369	1166	184	3021	7866

Source: BofA Global Research, Bloomberg, Federal Reserve H.4.1. Note: we use Wednesday end of month values.

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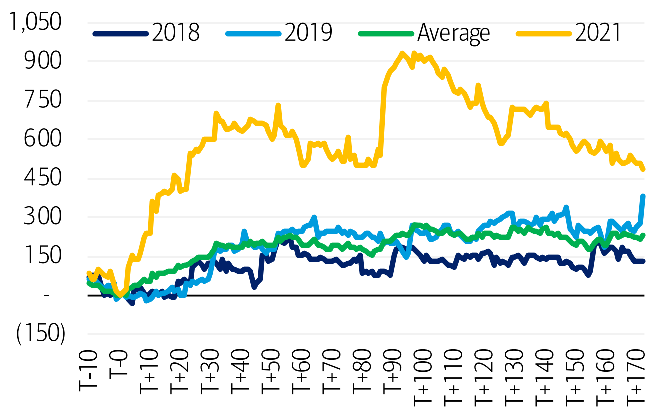
Exhibit 31: TGA surrounding DL resolution periods ($bn chg)
TGA will likely rebuild quickly following DL resolution



Source: BofA Global Research, Haver Analytics

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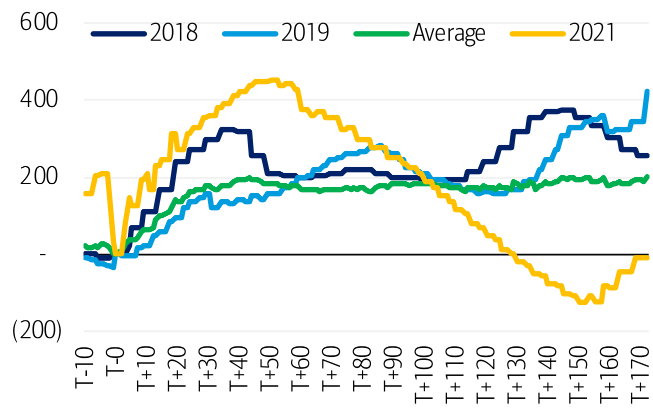
Exhibit 32: Cumulative bill supply surrounding DL periods ($bn chg)
We expect a large bill supply wave following DL resolution



Source: BofA Global Research, Haver Analytics

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Appendix

Exhibit 33: Broad market response to prior debt limit episodes

Market typically doesn't react until 2 weeks prior

		SPX*	DXY*	VIX**	10Y***	GCF***	3m bill-OIS***
2011	2 Weeks Prior	6%	1%	-5.6	26.9	-22.1	-8.9
	1 day prior	3%	0%	-1.1	13.2	4.9	-6.0
	1 day post	1%	-1%	-1.4	0.9	-13.2	-9.6
	2 Weeks Post	-5%	-1%	8.1	-39.2	-18.0	-9.0
2013	2 Weeks Prior	-2%	-1%	1.9	-4.6	-18.4	-7.6
	1 day prior	-1%	0%	4.0	6.4	-3.6	-1.2
	1 day post	1%	-1%	-1.2	-7.4	-6.8	-7.0
	2 Weeks Post	2%	-1%	-1.1	-12.6	-17.5	-5.3
2015	2 Weeks Prior	-3%	-2%	0.8	-14.8	6.9	-17.0
	1 day prior	-1%	0%	0.9	-2.9	3.6	-17.7
	1 day post	0%	0%	0.4	-4.0	4.8	-15.6
	2 Weeks Post	-2%	3%	4.0	9.7	5.8	-16.6
2017	2 Weeks Prior	0%	2%	-0.8	16.2	-4.4	-15.8
	1 day prior	0%	0%	-0.6	-1.2	0.6	-11.7
	1 day post	1%	1%	-1.4	8.0	2.1	-12.3
	2 Weeks Post	2%	1%	-2.5	19.9	-5.7	-16.2
2018	2 Weeks Prior	10%	-2%	-18.0	-19.1	2.8	-10.9
	1 day prior	-1%	0%	4.4	-2.7	2.9	-0.3
	1 day post	1%	0%	-3.5	0.7	-1.3	2.0
	2 Weeks Post	6%	-1%	-13.3	1.1	4.0	3.3
2019	2 Weeks Prior	2%	-1%	-3.2	21.0	23.6	-0.4
	1 day prior	1%	0%	0.3	4.8	2.1	4.3
	1 day post	-3%	-1%	7.0	-13.8	-4.8	6.2
	2 Weeks Post	-1%	0%	0.9	-29.1	-4.0	3.2
2021	2 Weeks Prior	-4%	0%	6.7	-12.1	3.0	-5.1
	1 day prior	0%	0%	0.0	-3.0	1.4	-3.3
	1 day post	1%	0%	-0.6	3.7	-0.1	-3.4
	2 Weeks Post	3%	0%	0.1	-4.5	3.9	-3.6

***= % change, **= ppt change, ***= bps change**

Source: BofA Global Research, Bloomberg

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Exhibit 34: Debt limit resolutions

Congress has suspended or increased the debt limit 20 times since 2000

Date	Resolution
12/16/2021	$2.5tn increase
10/14/2021	$480b increase
8/2/2019	Suspends debt limit through July 31 2021
2/9/2018	Suspends debt limit through March 1 2019
9/8/2017	Suspends debt limit through December 8 2017
11/2/2015	Suspends debt limit through March 15 2017
2/15/2014	Suspends the debt limit through March 15 2015
10/16/2013	Suspends the debt limit through February 7 2014
2/4/2013	Suspends the debt limit through May 18 2013
8/2/2011	$2.1tn increase
2/12/2010	$1.9tn increase
12/28/2009	$290b increase
2/17/2009	$789b increase
10/3/2008	$700b increase
7/30/2008	$800b increase
9/29/2007	$850b increase
3/20/2006	$781b increase
11/19/2004	$800b increase
5/27/2003	$984b increase
6/28/2002	$450b increase

Source: BofA Global Research, Treasury

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