Is US Debt Brinkmanship a Debt Crisis Without Default?

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Abstract

Under the backdrop of increasing public debt, "debt crisis without default" and safe asset shortages, we investigate how US debt brinkmanship plays a role into mentioned topics.

Keywords: safe asset shortage, increasing public debt

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1 Literature

1.1 Increasing Public Debt

Constantly increasing public debt has been a recent development throughout recent history (Mitchener & Trebesch 2023). This raises the question of how will governments deal with rising debt burdens going forward. As debt increases, cost of borrowing increases. Will governments internalize the increase of cost of borrowing?

1.2 Debt Crisis Without Default

It has also been noted we have debt crisis without default has become more common, wherein there was a near missed payment but never a default has a negative effect on output, as exemplified in Greece Portugal and Spain during 2010-2012 (Mitchener & Trebesch 2023) . Going a step further some have propose to change the definition of debt crises to yield spreads of 1000 basis points, also known as spread spikes (Broner et al. 2013, Aguiar et al. n.d., Krishnamurthy & Muir n.d.).

What makes this even more poignant is that the output decline happens in anticipation of a default rather than the default itself (Yeyati & Panizza 2011).

What makes this an important topic to study is the body of evidence proving a decline in output associated with the high yields that accompanies a debt crisis. There are varying reasons for this such as the relationship between external financing and importers (Mendoza & Yue 2012), the decrease in external domestic firm borrowing(Corsetti et al. 2012, Das et al. 2010, Gourinchas et al. 2016) or the tightening of credit against loses on bank balance sheets(Arellano et al. n.d., Ferrando et al. 2017).

There has also been work on how credit rating agencies downgrading reduces leverage and

investments (Almeida et al. 2017). Similar conclusions were drawn using CDS risk premium instead of bond yield spreads (Brutti & Sauré 2015, Bahaj 2020).

Interestingly, despite the fact that US debt brinkmanship raises borrowing cost and treasury yields (Nippani & Parnes 2017), the current literature has yet to consider if US debt ceiling brinkmanship falls under this category.

1.3 Safe Asset Shortage

Another pertinent question is the many creditors willing to lend to highly indebted sovereigns. Currently we are in a safe asset shortage, such that we are coming closer to the effective lower bound, wherein central banks could not decrease interest rates any further as needed. This shortage is a key source of fragility in the economy, dubbed the "safety trap" (Caballero et al. 2017) . Similarly, the current literature has yet to consider if US debt ceiling brinkmanship contributes to this phenomenon.

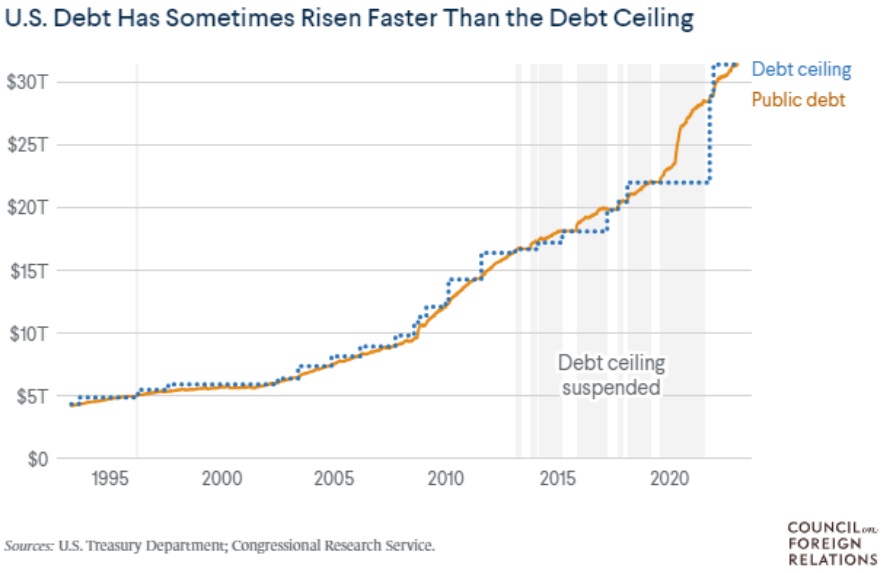
2 Introduction

The US treasury yield occupies the status as the biggest and most liquid market, wherein its yield is a significant determinant of yields globally. This phenomenon would be described as the "global factor" becoming increasingly more important determinant of yields ,against specific "country" factors (Mauro et al. 2002). Thus, studying the properties of US' yields would be important. (Rozada & Yeyati 2006, González-Rozada & Yeyati 2008, Longstaff et al. 2011). We shall study US' yields in the context of debt ceiling brinkmanship. Furthermore, current literature on debt focuses on events like Greece or Argentina, less work has been done with consideration to US debt ceiling.

2.1 Public Debt and Debt Brinkmanship

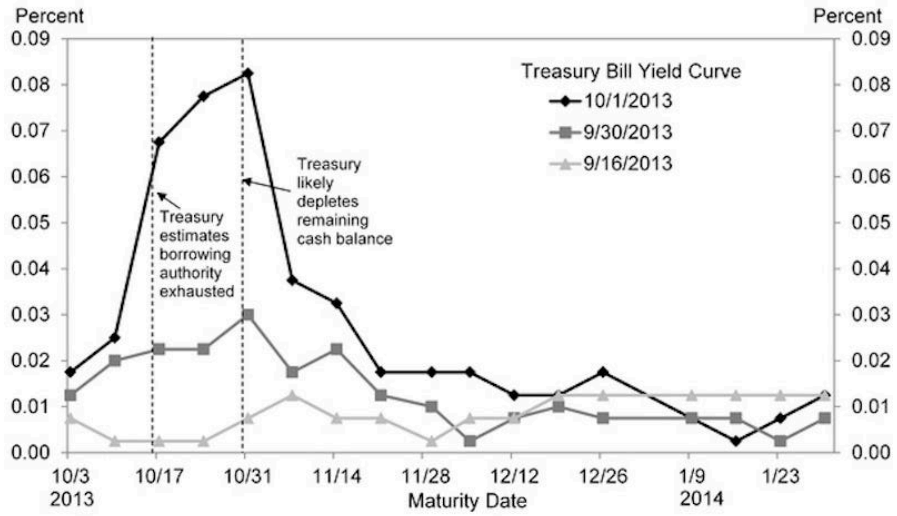
Previous literature establishes the recent development of increasing high public debt[Mitchener & Trebesch (2023)]. While others note that debt brinkmanship has become more and more worse (Berman n.d.) , evident by the increasing trend of passing debt limit suspension vs raises. Insiders and analyst mention how normalized brinkmanship has become (Bivens & Sanders n.d.) . We investigate the link between the two.

We plot US debt limit increases along with world global change in debt/GDP ratios. We also plot the frequency of debt raises/suspensions to identify trends. We will also take note of rating agency negative outlooks from the top 3 rating agencies. Taking inspiration from



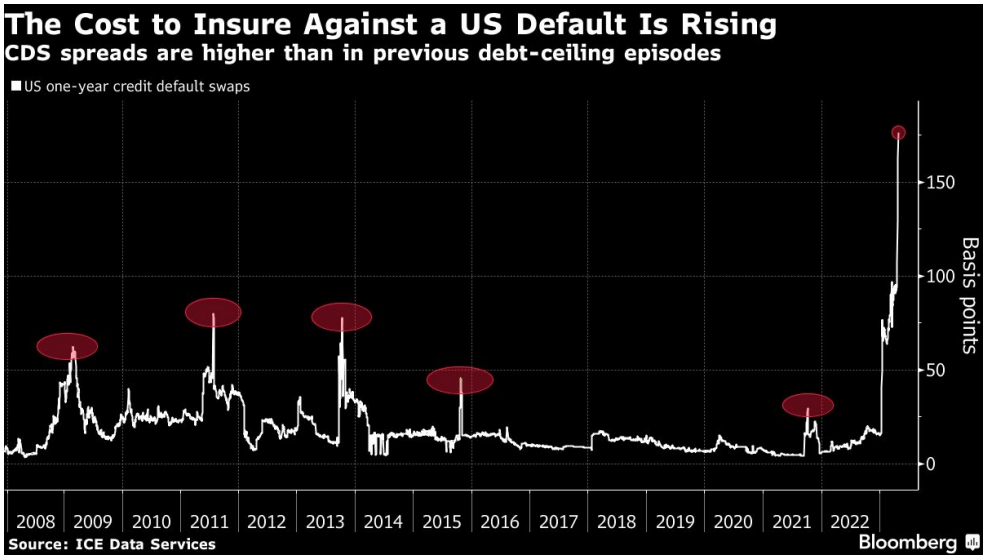
2.2 How will governments react to the increasing cost of borrowing?

We construct a data set of X-dates, dates where the US government will supposedly run out of money. This is done by analyzing the maximum ex ante yield curves and CDS prices. An example would be



[Boesler (n.d.)](Steinmetz-Silber & Edelberg n.d.) .

In here we see the peak of the yield curve would correspond to the "x-date". Similarly,



[Rao et al. (2023)](Benzoni et al. n.d.) .

In here we see the peaks of CDS prices correspond to the "x-date".

We then analyze changes in CDS prices and yields, using data from Bloomberg. We use official whitehouse data to get dates of debt limit increase. We build on prior work which uses the 1000 basis points as a benchmark. We isolate brinkmanship with a 1000 basis

point increase against those without. An example would be

X-date	Date of Increase	Negotiation length=(X-date)-Date of Increase	CDS	CDS1000(1000 basis points or more)	Yields
x_1	d_1	$n_{1,yes} = x_1 - d_1$	c_1	yes	y_1
x_2	d_2	$n_{1,no} = x_2 - d_2$	c_2	no	y_2
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We investigate if debt ceiling negotiations settle faster given a sharp increase in cost. We compute $\bar{n_y}$, average negotiation length with a spread spike and compare this to $\bar{n_n}$, negotiation length with no spike.

We also run regression $NegoLength = \beta_1 \Delta CDS + \beta_2 \Delta Yields + \beta_3 D_{neg-outlook}$, such that we investigate weather debt ceiling negotiations will settle earlier given a bigger increased in cost of capital. We split cost of capital into three components CDS prices, yields and rating agency downgrades.

We investigate trends overtime by **plotting** negation length on the y axis against date of increase on the x axis.

We study how brinkmanship affects country yield spreads. we take inspiration from the data set by (Meyer et al. 2022) as it relates data on debt ceiling brinkmanship (Reinhart & Rogoff 2008).

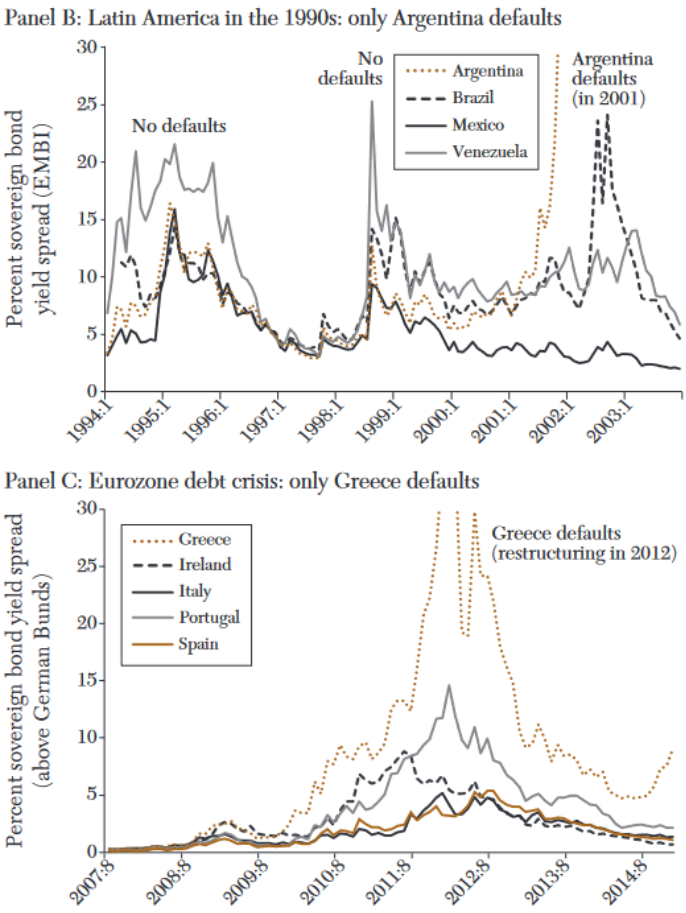
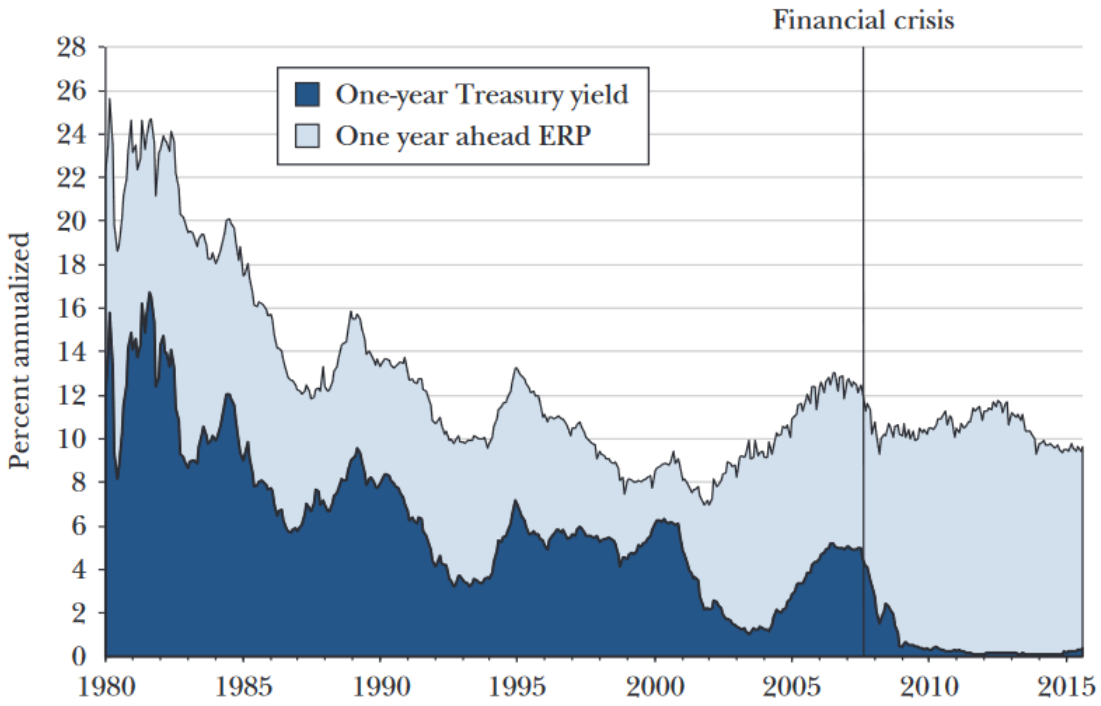


Figure 8. Selected Episodes of Debt Crises without Default

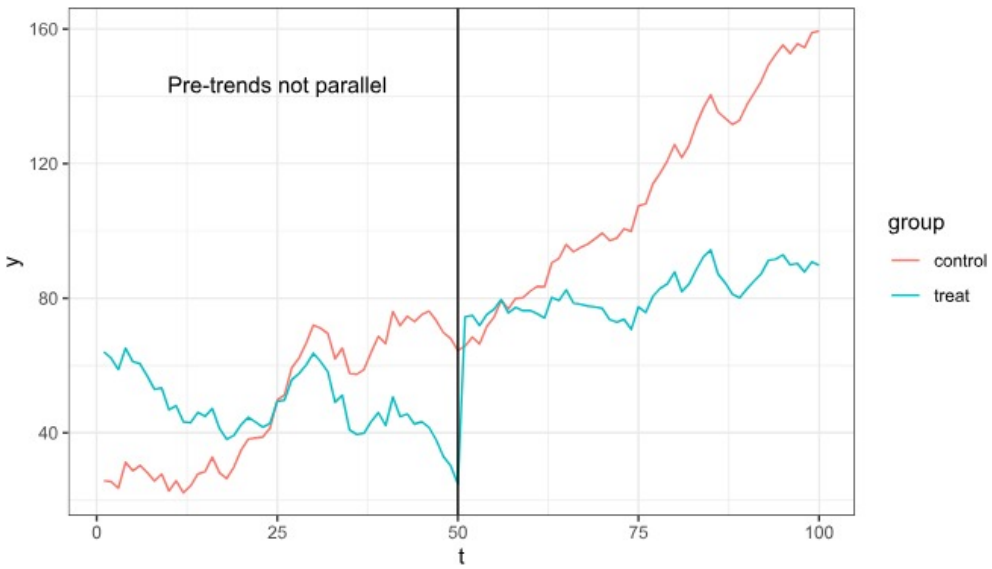
2.3 Contributor to safe asset shortage?

Ever since the 2008 financial crisis risk premiums have not returned to prior levels(Caballero et al. 2017).We investigate if debt brinkmanship contributes to this phenomenon as well. If so then there would be an argument to abolish the system on a global welfare standpoint. We take inspiration from



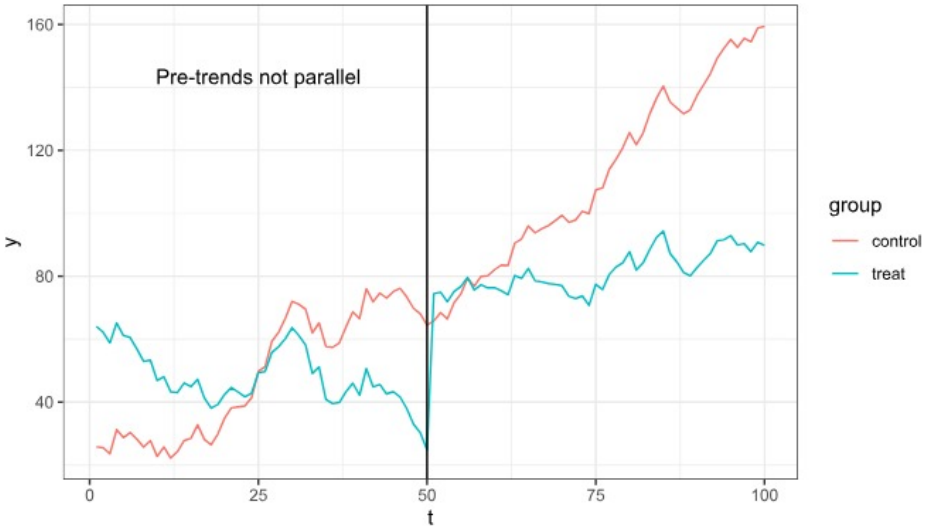
We construct a similar graph as above taking debt ceiling dates.

Using time t, as the time of debt increase. We graph a line representing the average change in 1 year expected risk premium. Another line represents the average change in 1 year treasury yields. We construct the graph below with mentioned variables (Duarte & Rosa 2015).



2.4 Debt Crisis without Default?

We then investigate if debt ceiling brinkmanship can be characterized as a debt crisis without default, as defined by prior literature. We graph



the y axis would represent GDP. We then make 3 lines corresponding to the following attributes advanced countries, developing countries and China. We will use IMF definition and ifs data-set to accomplish this. By doing this, we investigate if the output decline (Yeyati & Panizza 2011) is present.

We consider China for the following reasons. China's rise to the world stage has been marked with capital exports that significantly alter global yields (Alfaro et al. 2014, Gourinchas & Jeanne n.d.). In fact, China's lending portfolio surpasses that of the World Bank (Horn et al. 2021) . We use horns data-set. to analyze this.

We also propose a similar graph using imports on the y axis in line with (Mendoza & Yue 2012). Similarly, We investigate debt/market cap levels by firms (Corsetti et al. 2012, Das et al. 2010, Gourinchas et al. 2016) and investments (Almeida et al. 2017).

Lastly, there is work that shows US debt brinkmanship directly increase treasury yields and

borrowing cost (Nippani & Parnes 2017). We investigate and compare the increased cost in borrowing and treasury yield of the US against countries the defaulted or are under the category of "debt crisis without default". Examples of such countries would be Argentina, Spain, Venezuela, etc. The study would be implemented in a parallel trends assumptions test as shown in the figure above.

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