

Debt Limit Analysis

JULY 2011

 Congress does not raise the debt limit before recessing on August 5, 2011

 Estimates for daily receipts and payments constructed from publicly available data from Daily Treasury Statements



1. What is the date after which Treasury will not have sufficient cash to pay ALL of its bills (the "X Date")?

If we pass the X Date, and Treasury is forced to "prioritize" its payments to avoid a debt default:

- 2. What would be the effects on government operations?
- 3. What would be the market risks?



- The US hit the debt ceiling on May 16, and Treasury then began tapping into \$232 b of emergency borrowing authority – referred to as "extraordinary measures" – to allow for a few additional months of fully-funded government operations
- As Treasury Secretary Geithner wrote on May 2,
 - "These extraordinary measures would allow the Treasury to extend borrowing authority until about Aug 2."
- This indicates that by Aug 2, Treasury will have completely utilized all of its \$232 b in emergency borrowing authority, leaving only two sources from which to continue funding government operations:
 - Remaining cash on hand (including any leftover funds from the emergency \$232 b)
 - Daily cash inflows (federal revenues received each day)



• The X Date is the date after which Treasury can no longer pay all of its bills

- In other words, the remaining two funding sources (cash on hand and daily incoming cash flows) are insufficient to pay for all government obligations after the X date
 - After the X Date, bills must be paid solely out of incoming cash flows, which will not be able to cover all government obligations



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LAYERS OF DEFENSE

Layer #1



Extraordinary Measures:

•\$232 b in emergency borrowing authority

- Allows Treasury to borrow an additional \$232 b in cash
- Can use this money to continue funding government as long as the \$232 b lasts

Began May 15 and will run out Aug 2



Layer #3

Cash On Hand:

 Once "extraordinary measures" are exhausted, Treasury will have a limited amount of remaining cash on hand

•Treasury can draw from this remaining supply of cash to continue funding the government, but it is a finite amount that cannot be replenished

Allows for full funding of obligations for a short additional amount of time

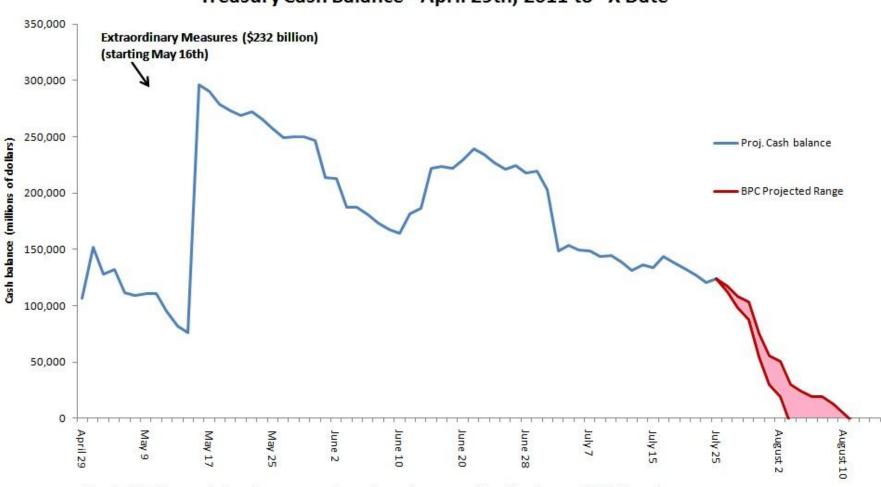
Daily Cash Flows:

• Once "extraordinary measures" and cash on hand are exhausted, Treasury will only have daily revenue flows with which to fund the government

• These daily inflows are often insufficient to cover all obligations

Allows partial funding of obligations thereafter





Treasury Cash Balance - April 29th, 2011 to "X Date"

For simplicity, Treasury "extraordinary measures" occur in one lump sum on May 16, and generate \$232 b in cash



- Our analysis also shows that the X Date will fall between August 2 and August 10
- The 14th Amendment does not provide a reasonable basis for challenging the constitutionality of the debt ceiling
 - The Administration will not attack the debt ceiling on this basis
- Treasury has no secret bag of tricks to finance government operations past the X Date
 - Treasury will not attempt to "firesale" assets during a crisis
 - Other ideas are impractical, illegal and/or inappropriate (gold loans, IOUs)





Prioritization



- There is no precedent; all other debt limit impasses have been resolved without passing the X Date
 - Treasury has never failed during a debt limit impasse to meet any payment obligation
- The government shutdown of 1995 96 does not provide a precedent:
 - Mandatory spending continued without interruption
 - Defense, Transportation, Treasury, and legislative branch spending was fully appropriated
 - Disruption of government services was modest



• Rating agencies:

- S&P: "[If you] prioritize payments ... you would have to contract your payments in a massive way overnight [creating a] very sharp negative fiscal impulse." (4/18/11: Credit Watch Negative)
- **Fitch**: "If the debt ceiling is not raised ... and timely and full payment of its obligations, including Treasuries, is not secure, the U.S. sovereign rating will be placed on Rating Watch Negative."
- Moody's: "...the probability of a default on interest payments [is] low but no longer de minimis. An actual default, regardless of duration, would fundamentally alter Moody's assessment ... and an Aaa rating would likely no longer be appropriate."

Bernanke concurs:

 "[Going past the X Date] would no doubt have a very adverse effect very quickly on the recovery. I'm quite certain of that."



- Treasury would have to choose from well over 80 million monthly payments so that 40-45% of bills are not paid
 - Inflows and outflows do not match up well and are quite "lumpy," as our daily analysis shows

The reality would be chaotic:

- Unfair results, unanswered questions
- Treasury picking winners and losers
- Public uproar
- Intense global media focus
- We assume that prioritization will happen after August 2, either passively or actively
 - If the Administration is unable to find legal authority to prioritize, it will pay the bills in the order in which they are due, when and as cash is available to do so



Two areas of risk evaluation:

Effect on Federal Government operations

- Month of August
- Day by day analysis
- Market Risk





August 2011 Analysis



PRIORITIZATION: MONTHLY TOTALS

Month/Year	Inflows	Outflows	Deficit	Business Days
August 2009	173,254	316,299	143,045	21
August 2010	194,280	342,381	148,101	22
August 2011*	203,327	362,674	159,348	23
Truncated (3 rd – 31 st) August 2011*	<u>172,400</u>	<u>306,713</u>	<u>134,312</u>	21

All numbers are pro forma for the exclusion of net debt issuance

* BPC Projections (in millions of dollars)

If you choose to pay...

Program	Cost
Interest on Treasury Securities	\$29.0 b
Social Security Benefits	\$49.2 b
Medicare / Medicaid	\$50.0 b
Defense Vendor Payments	\$31.7 b
Unemployment Insurance Benefits	\$12.8 b

For a total of \$172.7 billion



Then you can't fund these programs, worth \$134 b...

Program	Cost
Military Active Duty Pay	\$2.9 b
Veterans Affairs Programs	\$2.9 b
Federal Salaries + Benefits	\$14.2 b
Dep. of Education (e.g., Pell grants, special ed. programs)	\$20.2 b
Food/Nutrition Services + TANF	\$9.3 b
Dep. of Labor (e.g., training and employment services)	\$1.3 b
Dep. of Justice (e.g., FBI, federal courts)	\$1.4 b
Dep. of Energy (e.g., energy research, national nuclear programs)	\$3.5 b
Health and Human Services Grants	\$8.1 b
Federal Highway Administration	\$4.3 b
Environmental Protection Agency	\$0.9 b
IRS Refunds	\$3.9 b
Small Business Administration	\$0.3 b
Federal Transit Administration	\$1.3 b
HUD Programs (e.g., housing assistance for the poor)	\$6.7 b
Other Spending	\$52.8 b

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Inflows: \$172.4 b			
Outflows:	\$ 30	6.7 b	Running Total:
 Interest on Treasury Securities: 		\$29.0 b	
 Social Security Benefits: 	+	49.2 b	78.2 b
Medicare/Medicaid:	+	50.0 b	128.2 b
Defense Vendor Payments:	+	31.7 b	159.9 b
Unemployment Insurance Benefits:	+	12.8 b	<u>172.7 b</u>
• Military Active Duty Pay:	+	2.9 b	175.6 b
 Veterans Affairs Programs: 	+	2.9 b	178.5 b
• IRS Refunds:	+	3.9 b	182.4 b
 Food/Nutrition Services + TANF: 	+	9.3 b	191.7 b
 Federal Salaries + Benefits: 	+	14.2 b	205.9 b
 Small Business Administration: 	+	0.3 b	206.2 b
 Education Department: 	+	20.2 b	226.4 b
 Housing and Urban Development Programs: 	+	6.7 b	233.1 b
• Other Spending*:	+	73.6 b	306.7 b
TOTAL	3	306.7 k	306.7 b

*e.g., Justice, Labor, General Services Administration, Commerce, NASA, Health and Human Services, Energy, EPA, Interior, Federal Transit Administration, Federal Highway Administration, AID, etc. 18

If you choose to pay...

Program	Cost
Interest on Treasury Securities	\$29.0 b
Social Security Benefits	\$49.2 b
Medicare / Medicaid	\$50.0 b
Food/Nutrition Services + TANF	\$9.3 b
HUD Programs (e.g. housing assist. for the poor)	\$6.7 b
Veterans Affairs Programs	\$2.9 b
Unemployment Insurance Benefits	\$12.8 b
Special Education Grants	\$3.6 b
Tuition Assistance	\$10.4 b

For a total of \$173.9 billion



Then you can't fund these programs, worth \$132.8 b...

Program	Cost
Military Active Duty Pay	\$2.9 b
Defense Vendor Payments	\$31.7 b
Federal Salaries + Benefits	\$14.2 b
Dep. of Education	\$6.2 b
Dep. of Labor (e.g., training and employment services)	\$1.3 b
Dep. of Justice (e.g., FBI, federal courts)	\$1.4 b
Dep. of Energy (e.g., energy research, national nuclear programs)	\$3.5 b
Health and Human Services Grants	\$8.1 b
Federal Highway Administration	\$4.3 b
Environmental Protection Agency	\$0.9 b
IRS Refunds	\$3.9 b
Dep. of Interior	\$1.2 b
Federal Transit Administration	\$1.3 b
Centers for Disease Control	\$0.5 b
Other Spending	\$51.4 b



Inflows: \$172.4 b			
Outflows:	\$ 30	6.7 b	unning Total:
Interest on Treasury Securities:		\$29.0 b	
Social Security Benefits:	+	49.2 b	78.2 b
Medicare/Medicaid:	+	50.0 b	128.2 b
 Food/Nutrition Services + TANF: 	+	9.3 b	137.5 b
 Housing and Urban Development Programs: 	+	6.7 b	144.2 b
Veterans Affairs Programs:	+	2.9 b	147.1 b
 Unemployment Insurance Benefits: 	+	12.8 b	159.9 b
 Special Education Grants 	+	3.6 b	163.5 b
• Tuition Assistance	+	10.4 b	<u>173.9 b</u>
•Defense Vendor Payments:	+	31.7 b	205.6 b
Military Active Duty Pay:	+	2.9 b	208.5 b
• IRS Refunds:	+	3.9 b	212.4 b
• Federal Salaries + Benefits:	+	14.2 b	226.6 b
 Other Education Department: 	+	6.2 b	232.4 b
• Other Spending*:	+	73.9 b	306.7 b
TOTAL		306.7 b	306.7 b

*e.g., Justice, Labor, General Services Administration, Commerce, NASA, Health and Human Services, Energy, EPA, Interior, Federal Transit Administration, Federal Highway Administration, AID, etc.



Housing/Urban Development – \$6.7b total

- Rental assistance: \$3.9 billion
- Public Housing Fund (operates and maintains public housing areas for 1.2 million American households): \$900 million

Dep. of Education – \$20.2b total

- Federal Pell grants (tuition assistance for qualifying college students): \$10.4 billion
- Special education state grants: \$3.6 billion

Food and Nutrition Services – \$6.7b total

 Food stamps, Child nutrition programs, and the Women, Infants, and Children program: \$6.7 billion



To create your own scenario, visit this link, which we developed jointly with Bloomberg Government:

Try It Yourself http://bit.ly/pAorgl





Daily Analysis: August 3rd – 15th, 2011



Scale (\$)	Treasury Cash Flow:	Wednesday August 3 rd , 2011 Running Cash Deficit: \$20 b
40 b	Daily Inflow	Daily Outflow
 ✓ 32 b 20 b ✓ 12 b • \$12 0 b 	Billion in revenues	 \$32 Billion in committed spending 23 b Social Security Payment 1.4 b Defense Vendors 1.8b Dep. of Education 500m Federal Salaries/Benefits 2.2b Medicare / Medicaid 1.4b Food/HUD/Welfare/Unemp 100m Veteran's Affairs Programs 100m IRS Refunds to Businesses 1.5b Other Spending

Note: all daily figures assume zero cash balance on Aug 3; numbers may be off slightly due to rounding



DAILY CASH FLOW ANALYSIS

ale (\$) Debt Maturing: Treasury Cash Flo	Thursday August 4th, 2011 Running Cash Deficit: \$26 b		
Daily Inflow	Daily Outflow		
0 b			
0 b			
— 10 b			
— 10 b	• \$10 Billion in committed spending:		
— 10 b	• 1.4b Defense Vendor		
	 1.4b Defense Vendor 3.1b Medicaid/Medicare 		
4 b	 1.4b Defense Vendor 3.1b Medicaid/Medicare 500m Federal Salaries/Benefits 		
	 1.4b Defense Vendor 3.1b Medicaid/Medicare 		



cale (\$)	Treasury Cash Flo	N: Friday August	5 th , 2011	Running Cash Deficit: \$31 b
40 b	Daily Inflow	Daily O	utflow	
0 b — 12 b				
7b • \$7 E	Billion in revenues	• 2b • 2.2b • 3.4b • 1.1b	Federal Sala Food/HUD/	ndor Aedicare aries/Benefits 'Welfare/Unemp
) b		• 1b • 2.3b	Dep. of Edu Other Spen	



cale (\$)	Treasury Cash Flow: Mo	onday August 8 th , 2011	Running Cash Deficit: \$31 b
40 b	Daily Inflow	Daily Outflow	
20 b			
11 b	\$11 Billion in revenues	 \$11 Billion in committed 1.4b Defense Vendor 2.2b Medicaid/Medica 1.5b Dep. of Education 1.6b Federal Salaries/B 1.8b Food/HUD/Welfare 2.5b Other Spending 	re Senefits



cale (\$)	Treasury Cash Flow	Running Cash Deficit \$38 b	
40 b	Daily Inflow	Daily Outflow	
20 b			
← 11 b		 \$11 Billion in committed 1.4b Defense Vendor 2.5b Medicaid/Medi 1.5b Dep. of Education 	care
← ^{4 b} • \$4 Bil	<i>llion</i> in revenues	 1.5b Dep. of Education 1.4b Food/HUD/Wel 500m Federal Salaries 	fare/Unemp

ale (\$)	easury Cash Flow: Wea	lnesday August	10 th , 2011	Running Cash Deficit: \$47 b
	Daily Inflow	Daily Out	tflow	
20 b ← 19 b ← ^{10 b} • \$10 Billion i	n revenues	• 8.5b • 1.4b • 2.2b • 1.4b • 800m	in committed a Social Securit Defense Vend Medicaid/Me Food/HUD/W Dep. of Educa Federal Salar Other Spendi	y lor edicare /elfare/Unemp ation ies/Benefits



DAILY CASH FLOW ANALYSIS

cale (\$)	Debt Maturing: \$93 b	rsday August	11 th , 2011	Running Cash Deficit: \$55 b
	Daily Inflow	Daily Ou	utflow	
40 b				
20 b				
← 11 b			n committed sper	nding:
3 b	\$ <i>3 Billion</i> in revenues	• 1.4b [• 1b] • 1b] • 600m [Medicaid/Medicare Defense Vendor Federal Salaries/Ber Food/HUD/Welfare, Dep. of Education Other Spending	



Scale (\$)	Treasury Cash Flov	v: Friday August 12 th , 2011	Running Cash Deficit: \$54 b
40 b	Daily Inflow	Daily Outflow	
20 b			
←9b • \$10 0 b	<i>Billion</i> in revenues	 \$9 Billion in committed sp 2.2b Medicaid/Me 2b Defense Vend 3b Food/HUD/V 1.8b Other Spend 	edicare dor Velfare/Unemp



DAILY CASH FLOW ANALYSIS

Scale (\$) Debt Maturing: \$27 b Daily Inflow	ay August 15th, 2011 Daily Outflow
22 <i>b</i> 20 b 20 b • \$22 Billion in revenues	 \$41 Billion in committed spending: 29b Interest Payment 2.2b Medicaid/Medicare 1.4b Defense Vendor 500m Federal Salaries/Benefits 2.1b Food/HUD/Welfare/Unemp 2.8b Military Active Duty Pay 800m Dep. of Education 200m IRS Refunds 2b Other Spending



Scale (\$)	<i>Treasury Cash Flow:</i> Daily Inflow	Tuesday August 16 th Daily Outfle	-	Running Cash Deficit: \$81 b
40 b				
20.1				
20 b				
← 10 b		• \$10 Billion in co	mmitted so	ending:
			/ledicaid/N	
		• 1.4b C	efense Ve	ndor
3 b				aries/Benefits
\leftarrow				Welfare/Unemp
• \$3 B	illion in revenues	• 800m E	Dep. of Edu	cation
0 b		• 3.4b C	Other Spen	ding



Scale (\$)	Treasury Cash Flow: И Daily Inflow	/ednesday August 1 Daily Outf	Running Cash Deficit: <mark>\$88 b</mark>
40 b 20 b ← 17 b 10 b		• \$ <i>17 Billion</i> in co • 8.6b	rity
• \$10 E	<i>Billion</i> in revenues	• 500m • 1.4b • 1b	aries/Benefits /Welfare/Unemp ucation



DAILY CASH FLOW ANALYSIS

cale (\$) Debt Maturing: \$87 b Daily Inflow	<i>: Thursday August 18th, 2011</i> Daily Outflow
40 b	
20 b	
← 11 b	• \$11 Billion in committed spending:
	• 3b Medicaid/Medicare
	• 1.4b Defense Vendor
3 b	• 500m Federal Salaries/Benefits
• ¢2 Pillion in royonyos	• 1.1b Food/HUD/Welfare/Unemp
• \$ <i>3 Billion</i> in revenues	• 600m Dep. of Education
) b	• 4.4b Other Spending



Scale (\$)	Treasury Cash Flow: Frid Daily Inflow	ay August 19th, 20 Daily Outflow	Running Cash Deficit: \$103 b
40 b			
20 b ← 14 b ← 7 b • \$7 0 b	7 <i>Billion</i> in revenues	 1.9b Defense 3.4b Federal 1.1b Food/H 500m Dep. of 	id/Medicare e Vendor Salaries/Benefits IUD/Welfare/Unemp



cale (\$)	Treasury Cash Flow: I Daily Inflow	Monday August 22 nd Daily Outflo	Ś101 h
40 b			
20 b			
13 b			
<mark>←</mark> •\$13	Billion in revenues		
11 b		• \$11 Billion in comm	itted spending:
		• 2.2b Medi	caid/Medicare
			nse Vendor
			ral Salaries/Benefits
			/HUD/Welfare/Unemp
		• 1.2b Dep.	of Education
0 b		• 2.4b Othe	r Spending



Scale (\$)	Treasury Cash Flow: 7 Daily Inflow	Juesday August 23rd, 201 Daily Outflow	Running Cash Deficit: \$108 b
40 b			
20 b			
← 10 b		• \$10 Billion in committed spendin	g:
← 10 b		• \$10 Billion in committed spendin • 2.5b Medicaid/Medica	
		• 2.5b Medicaid/Medica • 1.4b Defense Vendor	ire
3 b		• 2.5b Medicaid/Medica • 1.4b Defense Vendor • 500m Federal Salaries/I	ire Benefits
3 b	<i>Sillion</i> in revenues	• 2.5b Medicaid/Medica • 1.4b Defense Vendor	re Benefits re/Unemp



Scale (\$)	Treasury Cash Flow: V Daily Inflow	Vednesday August 24 th , 2 Daily Outflow	2011 Running Cash Deficit: \$116 b
40 b 20 b			
< 17 b < 9 b ● \$9 0 b	<i>Billion</i> in revenues	• 8.5b Social Se • 1.4b Defense • 500m Federal	d/Medicare ecurity Vendor Salaries/Benefits UD/Welfare/Unemp Education



DAILY CASH FLOW ANALYSIS

Debt Maturing: \$106 b \$106 b		Running Cash Deficit: \$125 b
cale (\$) Daily Inflow	Daily Outflow	
40 b		
20 b		
← 12 b	 \$12 Billion in committed sp 3b Medicaid/Med 1.4b Defense Vende 1b Federal Salarie 	licare or es/Benefits
<a><i>3 b</i> <i>• \$3 Billion</i> in revenues 	 1.1b Food/HUD/We 1.7b Dep. of Educate 3.8b Other Spendimeter 	ion



Scale (\$)	Treasury Cash Flow Daily Inflow	: Friday August 26th, 2011 Daily Outflow	Running Cash Deficit: \$129 b
40 b 20 b ← 12 b ← 8 b		• \$ <i>12 Billion</i> in committed sp • 2.2b Medicaid/Med	
• \$£ 0 b	<i>3 Billion</i> in revenues	 1.9b Defense Vende 500m Federal Salarie 1.1b Food/HUD/We 1.3b Dep. of Educate 5.0b Other Spendire 	es/Benefits elfare/Unemp tion



Scale (\$)	Treasury Cash Flow:	Monday August 29 th , 2011	Running Cash Deficit:
	Daily Inflow	Daily Outflow	\$130 b
40 b 20 b ↓ 13 b ↓ 12 b • \$12 0 b	Billion in revenues	 \$13 Billion in committed sp. \$2.2b Medicaid/Me. \$1.4b Defense Vend. \$500m Federal Salari. \$1.4b Food/HUD/W. \$1.8b Dep. of Educa. \$5.7b Other Spendir. 	dicare or es/Benefits elfare/Unemp tion



Scale (\$)	Treasury Cash Flow: Daily Inflow	<i>Tuesday August 30th, 2011</i> Daily Outflow	Running Cash Deficit: \$135 b
40 b			
20 b ← 12 b 7 b		• \$12 Billion in committed sp • 2.5b Medicaid/Me	dicare
	<i>illion</i> in revenues	 1.4b Defense Vend 500m Federal Salari 1.4b Food/HUD/W 1.0b Dep. of Educa 5.1b Other Spendir 	es/Benefits elfare/Unemp tion



DAILY CASH FLOW ANALYSIS

	Wednesday August 31 st , 2011 Running Cash Defices \$137 b
le (\$) Daily Inflow	Daily Outflow
0 b	
b	
— 11 b	c ¢44 Dillion in committed on and in m
• \$9 Billion in revenues	 \$11 Billion in committed spending: 2.2b Medicaid/Medicare
	•1.4b Defense Vendor
	• 500m Federal Salaries/Benefits
	• 1.4b Food/HUD/Welfare/Unemp
	• 500m Dep. of Education



 Handling all payments for important and popular programs (e.g., Social Security, Medicare, Medicaid, Defense, active duty pay) will quickly become impossible

• Economic disruption:

- Immediate 44% cut in federal spending would affect broader economy
- Many service providers unpaid
 - Medicare and Medicaid providers
 - Defense vendors
- Individuals not receiving government checks
- Widespread uncertainty as decisions are made day by day





Market Risk



- Treasury must "roll over" almost \$500 b in debt that matures during August 2011
 - When a Treasury security matures, Treasury must pay back the principal plus interest due. Under normal circumstances, Treasury would simply "roll over" the security
 - As one security matures, the principal + interest for that security would be paid for with cash from the issuance of a new security
- During prioritization, this operation may not run as smoothly
 - Two elements of market risk:
 - Treasury will have to pay higher interest rates to attract new buyers
 - It is possible, if unlikely, that not enough bidders would appear



Securities Maturing in August 2011

Maturity Date	Amount (billions of dollars)
8/2	12.0
8/4	90.8
8/11	93.3
8/15	26.6
8/18	87.0
8/25	106.0
8/31	60.8
SUM	476.5

Based on actual maturities for all securities, <u>except</u> for our conservative estimates of one month bills to be issued in July 2011

- If the debt ceiling is not raised by August 2, all three ratings agencies will put the United States on watch for a downgrade, at a minimum (S&P and Moody's already have)
- The affects of a single downgrade (by S&P) are uncertain
- Even without downgrade, it is likely that rates would increase, perhaps significantly
 - Less likely, but possible, that Treasury would lose market access during such an unprecedented event and default



Conclusions

- The risks are real:
 - The Treasury market, interest rates
 - Level and status of the dollar
 - Our economy
 - The global financial system

No guarantee of the outcome; risks are risks



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