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### Introduction

If the Clinton administration's forecasts are correct, the federal deficit will go the way of the dodo bird within the next 10-15 years. This is a dramatic turnaround from just a few years ago when the federal budget deficit drove fiscal and monetary policies and was an omnipresent force in both the domestic and international capital markets.

Ironically for investors, it may turn out that a government awash in cash may create even more investment uncertainty than when it was just one step ahead of debtor's prison. While the retirement of the federal debt may be cause for celebration in political circles, investors may find themselves adrift. For example, what will investors use as the risk-free benchmark? How and where will the government invest its surplus without affecting the private markets? While other government debt instruments will be available, all of them are subject to contingency claims making them less than an ideal substitute for government bonds.

Furthermore, how would the government invest in the equity markets? Would it buy index funds or would it actively manage its money? Would it be a short-term investor or would it plan for its retirement? Perhaps it might increase public spending and cut taxes instead of investing it all. What does that mean for inflation and how will the Federal Reserve react? Perhaps it will use the surplus to invest overseas to stabilize economies or perhaps it may horde the cash and do save it for a rainy day.

Certainly with little history on which to formulate a conclusion anything is possible. The most obvious answer may be that the economy will ultimately experience a major recession and all this talk about a disappearing deficit will turn out to be nothing more than election year hyperbole. Absent a major economic correction, fiscal policy, through a combination of tax cuts, additional spending, and the ever increasing demands of the social security system will combine to prevent any systematic and sustainable elimination of the nation debt.

### Background

Let's face it. We are a nation of debtors. Without borrowing and the positive leverage it can create, our industrial growth and subsequent wealth creation would most likely have been stunted. On the other hand, leverage magnifies risk as many an investor and even nations can attest. In the case of government deficits, there are strong arguments to be made on both sides of the debate.

Analyzing the pros and cons of deficit spending is an industry unto itself and should probably be awarded its own Standard Industrial Classification Code. It has generated an untold number of articles, textbooks, and doctoral dissertations and has made the cover of most popular press as often as Princess Diana.

This paper is divided into three sections. The first briefly gives a very brief description of the history and size of the current national debt. The second section offers a simply model as to why the elimination of the debt may not be optimal for financial markets. The final section poses several possible scenarios/complications facing the government if indeed the national debt were to be eliminated.

### The Ultimate Lay Away Plan

The Federal Government has long been comfortable with its role as a net borrower. In fact, the last time the Federal government actually faced a net surplus was in 1835. President Jackson unsure of what to do with the excess, sent a \$42,000 rebate to each state. In fact, to date, President Jackson is the only President not to be encumbered by debt.<sup>1</sup> Since that time, the Federal Government has been dependent on its borrowing capacity to cover its deficit spending in both times of war and peace, prosperity and recession.

Deficit spending is also nonpartisan. Democrats do it. Republicans do it. As Exhibit I shows, there is little correlation between political affiliation and the size of the deficit either in absolute terms or as a percentage of GDP. Ronald Reagan for all his talk of smaller government was at the helm in 1983 when the budget deficit soared to almost 5% of GDP. Deficits were also large during the Nixon/Ford years. By the late 1990s, the total cumulative deficit (both public and privately held) was over 50% of GDP.

However, modern deficits pale in comparison to 1862 when the Federal deficit was over 800% of revenues, over four times the rate incurred during the largest

<sup>&</sup>lt;sup>1</sup> In 1829, the year Andrew Jackson was elected, the Federal deficit stood at approximately \$50 million. Singular in his goal, Jackson eliminated the deficit by 1835 when the Treasury had a surplus of \$440,000. But the government slipped back into deficit soon thereafter as the country fell into economic decline.

imbalance during World War II. By 1866, the government was able to reduce spending with the war's end. The debt shrank by two-thirds by the 1890s, but grew again with the economic troubles of the 1890s.

In the 20<sup>th</sup> century, wars and depressions once again put the government behind the eight ball. Peaking during the later part of the last decade at approximately \$5.7 trillion, the debt is expected to shrink over the coming years.<sup>2</sup> Budget surpluses have arisen due to the combined effects of a strong economy generating higher than expected tax receipts and legislative gridlock preventing traditional pork barrel spending. Furthermore, the twin partisan problems of Social Security and health care reform have forced Congress to move cautiously.



#### Exhibit 1. Annual Federal Budget Deficit as a Percentage of GDP

The latest White House and Congressional Budget Office (CBO) estimates suggest that under their current assumptions, the non- Social Security portion of the national deficit is expected to disappear within the next 10-15 years. In contrast, at least one major forecasting firm, Economy.com, is not as sanguine. Its current betting line is that within four to five years the federal government will once again be in the red, effectively eliminating most of the gains accrued over the past several years. In addition to a recession, tax cuts, and/or a government spending spree, Economy.com also believes the CBO and White House estimates contain overly optimistic estimates of the relationship between the

<sup>&</sup>lt;sup>2</sup> Generally the term deficit is used to describe the current year shortfall between government spending and government receipts. In addition to the spending/revenue gap, the Government also borrows from the Social Security Trust Fund in effect issuing it private IOUs (e.g. private Treasuries) The national debt is defined as the unpaid cumulative deficit, including the non-public securities held by the Social Security Trust Fund. The time series used in this paper is from the National Income and Product Accounts and includes both public debt and non-public treasury debt held by the Social Security Administration. This time series differs from the series put out by the U.S. Treasury because of its exclusion of the cost of the Saving and Loan bailout.

equity market and tax revenues. A more realistic assumption according to their estimates would have much smaller capital gains and wealth-created tax revenues. As shown in Exhibit 1, they believe a most likely scenario is for government deficits to be the norm within five years.

All else being equal, reducing and eventually eliminating the national debt would lead to lower interest rates as government borrowing, all else being equal, declines. Lower interest rates would spur additional and most likely more productive private sector investing, which in turn would bolster economic growth thereby shifting from a 'crowding out' to a 'crowding in' scenario as the federal government no longer drains investment dollars away from the private sector.

However, all is not equal. For example, over 20% of the public debt is held by foreigners and the Social Security System. In essence their willingness to hold U.S. long-term debt has had the effect of reducing our borrowing costs, thereby providing indirect subsidies. The absence of a national debt would force the banking and insurance sector to seek other forms of long-term risk free assets. Households would also loose a favorite savings vehicle, the venerable U.S. Savings Bond.

### Exhibit 2. Ownership of National Debt



Regardless of what unfolds, even the theoretical possibility of a debt-free federal government raises a host of implications for investors and an even larger

conundrum for policy analysts.<sup>3</sup> For investors, it opens up a Pandora's box of issues involving by the bond and equity markets. For the Federal government, questions concerning how to spend the surplus and its impacts on areas as diverse as monetary and foreign policies, to Social Security and national security need to be understood. It also dulls an important arrow in the Federal Reserve policy quiver.

# The Basic Formula

Every non risk-free security whether it be a corporate bond or a home mortgage is priced using a variant of the following familiar, albeit simplified, formula:

### Exhibit 3. Basic Pricing Model

 $\mathsf{R}_{id} = \mathsf{R}_{fitd} + \beta_{Itd}$ 

Where:  $R_{ltd}$  = Rate for Security i in period t for duration d  $R_{fitd}$  = Risk-free rate benchmark for Security i in period t for duration d  $\beta_{ltd}$  = Risk Premium for Security i in period t for duration d

The required rate of return is the sum of the risk-free of equal duration plus a security-specific risk premium. Almost without exception, the risk-free rate is the either the comparable Treasury instrument or some derivative. The risk-premium varies according to a number of factors including the credit worthiness of the borrower, covenants, and the instrument's liquidity to mention a few.

However, in addition to providing a risk-free benchmark, Treasuries, unlike private market issuances, also have the added and unique feature of direct discovery. In direct discovery, prices are determined via an auction process. Allowing the market forces to directly and immediately determine pricing. Given the immense secondary market for Treasuries, this has two very desirable effects for non-risk free borrowers.

First, price discovery in the public market allows relative pricing in the private market. Underwriters can forward price based on a spread (e.g.  $\beta_{tt}$ ) plus the risk-free interest rate of equal duration as of the day of the sale. This effectively allows the price of the bond to float until issuance. Because neither underwriters and investors know with certainty what will the price of treasuries will be tomorrow, the ability to price based on spreads, is increases efficiency and

<sup>&</sup>lt;sup>3</sup> Even if the national debt were entirely eliminated, this would not take the Federal Government out of the borrowing game. Since tax collections are seasonal and does not match spending patterns, the Federal Government will always have short-term borrowing needs.

reduces transaction costs by eliminating the hedging that would be needed without active price discovery.

Second, the absolute size and international acceptance of the Treasury instruments ensures its liquidity and cash equivalency for investors. The elimination of Treasuries would de facto force investors to seek substitutes.

While local and state government agencies as well as foreign governments also issue debt, they are also less than perfect substitutes for Treasuries. First, they are all risk-rated by rating agencies, and therefore not considered risk-free. Second, different capital structures and economic cycles make these instruments less than perfect substitutes. It is unlikely that an U.S. investor will opt to purchase a Japanese long bond at the cost of hundreds of basis points simply because of its duration. Finally, foreign securities also are subject to currency risk, requiring hedging strategies.

Quasi-government backed securities such as Sallie Mae, Fannie Mae, Freddie Mac, etc. are also actively bought and traded, but are all subject to contingency claims and are not back by the full faith and credit of the Treasury. Because they are callable, not truly government obligations, and may be also prepaid, these securities fail to meet the true litmus test of a risk free security.

For portfolio managers, extinguishing the national debt begs the question as to what benchmark to use for allocation purposes. What is the Sharpe ratio if no risk-free rate is available? While the Treasury market would not disappear overnight, the market would not be infinitely sustainable over time and eventually atrophy.

On the positive side, the environment in which the economy would be operating would be one of sustainable growth. Real rates would be lower than current rates and government spending would be, by definition, in line with revenue. However, using the basic model described above, it is likely to create a number of inefficiencies that will keep rates above what they would be with a minimal government borrowing program as can be seen in Exhibit III.

Again imagine a world with no government borrowing. Investors would most likely turn to quasi-government securities as Treasury substitutes. To do so, they would require on a prepayment risk premium in addition to a market/credit risk premium in addition to what they would have been willing to pay for a comparable Treasury at auction. Moreover, investors realizing that while both the economy and government spending are currently balanced, there are no guarantees that some idiosyncratic event or structural imbalance may occur that would force the government back in the borrowing business. Therefore, investors would require a second premium to compensate them for the risk that the government may be forced back into the debt market.

#### Exhibit 4. Pricing Model Without Treasuries

 $\mathsf{R}_{i} = \mathsf{R}_{fit} + \beta_{lt} + \beta'_{lt} + \beta''_{lt}$ 

Where:

R<sub>*lt*</sub> = Rate for Security i in period t

R<sub>fit</sub> = Risk-free rate benchmark for Security i in period t

 $\beta_{lt}$  = Risk Premium for Security i in period t

 $\beta'_{lt}$  = Contingency Claims Premium

 $\beta''_{lt}$  = Re-entry premium

The size of that premium will change over time and over the cycle. As market's perceptions shift the premium will change. As market expectations deteriorate, the premium will grow. Therefore, imperfect knowledge comes with a price and investors worried that the government will reenter the market, are apt to drive bond prices lower then would be the case if the government were still present in the market. However, since there are no priors with which to quantify the impact of a sudden government reentry into the credit markets, investors would rather be safe then sorry.

The bottom line, even with optimal economic conditions, bond prices may remain lower that they would otherwise be if the government were still active in the debt market. Finally, with little on which to price expectations, the re-entry risk premium may effectively drive bond prices lower and by extension interest rates higher. The irony is that that what benefits the government sector may once again end up costing the private sector.

# And Now for Something Totally Different

Perhaps the biggest irony of a debt free government is the number of policy dilemmas it creates. Deficits are one thing. Borrowing and printing money are second nature to the public sector, but the threat of having to invest a surplus is clearly alien to the public mind set. Worse yet, it cleaves Washington between those who would seek reduced tax rates, those wishing to reinvest in various government social and infrastructure programs, and those wanting to save for a rainy day.

Assuming a true surplus occurs, what does the Treasury do with it. Stuffing it in a very large mattress is one option. But this would reduce potential output by reducing investment. However, investing the money has significant pitfalls. First, its absolute size would impact market pricing and disrupt capital flows.<sup>4</sup> Second, how should the Federal Government invest? Should it even be allowed to invest

<sup>&</sup>lt;sup>4</sup> A federal surplus in the range of \$250 billion would approximate 2000 mutual fund purchases.

in the public market at all and if should it be restricted to index funds. While the Chrysler bailout may have been good policy at the time, the idea that a wellintentioned government could shape the success or failure of a particular company and/or industry is a form of socialism that most Americans would find hard to swallow. Finally, what should its risk/return hurdle be?

Other questions abound. What rules would the government have to play by? How would it buy shares and who would receive the commission? Could it buy corporate debt and what would happen in the case of a bankruptcy?

On the flip side, imagine the pricing disruptions if and when the government were to liquidate its holdings. Is an orderly retreat even imaginable?

Foreign policy questions also arise. Should the government use the surplus to support friendly governments by purchasing their debt. Should it use the surplus to help developing countries by issuing interest free loans? Should it invest and perhaps take majority positions in foreign companies developing new technologies?

The possibilities are endless and trigger a flood of economic and policy implications. The political implications would be even more Byzantine. Could and would the Executive Branch act alone or would an independent investment board have to be created and how could you find enough unconflicted members to form a quorum? The bottom line may be that the national debt is not that bad after all.

# Conclusion

The national debt is its own national institution. It is so ubiquitous that even the man on the street is likely to have formulated an opinion. Everyone seems to be in favor of eliminating it, but few have thought about the ancillary consequences of a debt free government. The national debt plays an important benchmarking role for the financial marketplace by providing the necessary foundation for the pricing of financial assets. Perhaps even more important, it prevents the government from having to deal with the policy implications of being a net saver. While the debt does indeed crowd out certain private sector investments that is not sufficient to believe that is should be eliminated. We also need to remember that government spending/investing does have collateral value.

In reality, there is little chance that the national debt will actually disappear. Tax cuts, recessions, and additional government spending will all conspire against it. Furthermore, it is not clear that being in debt is all that bad. Andrew Jackson may not have liked it, but time has proven that the benefits may outweigh the costs.