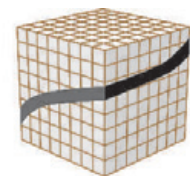




A Tale of Two Cities

By
Fred Martin, CFA, and Nick Hansen, CFA, CAIA



DISCIPLINED
GROWTH
INVESTORS

The Way Wealth Is Built

A Tale of Two Cities

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(Note: After we began writing this piece, Steve Jobs passed away, succumbing to pancreatic cancer. What a loss. We believe Mr. Jobs will be regarded as one of the great giants of American business, alongside such greats as John D. Rockefeller, Alfred Sloan, and Sam Walton.)

Every once in a while, two major news items occur within a brief time span and tell a worthwhile story. This past month was one of those times. Here are the two:

“Steve Jobs resigns as CEO of Apple for health reasons”

“Standard and Poor’s downgrades U.S. Treasury debt”

These two events crystallize the state of affairs today in America. Non-financial corporate America is thriving. Government America is staggering under a variety of self-inflicted wounds.

Apple

The announcement by Apple that Steve Jobs was relinquishing his CEO duties was received with sadness by the investment team at Disciplined Growth Investors. We have closely followed the company since Jobs returned to Apple in 1997.

Steve Jobs’ resignation had nothing to do with his effectiveness or his age. The operating performance of Apple over the last decade has been breathtaking, surpassing anything we have seen in our investment history. In the fiscal year ended September of 2001, Apple reported revenues of \$5.4 billion and a small net loss of \$37 million. Ten years later, for the twelve-month period ended June 25, 2011, Apple reported revenues of \$100.3 billion and net earnings of \$23.6 billion. Apple’s revenues increased by 20 times during the decade. Cash and marketable securities on hand is another measure of progress: as of June, 2011, Apple had accumulated \$76.2 billion of cash and marketable securities.

Apple’s progress has put the company at the top of the leader board for major technology companies. Here is a list of revenue and income statistics on leading technology companies:

	LTM Revenues	LTM Earnings	Net Cash on Hand
Apple	\$100.3 B	\$23.6 B	\$76.2 B
Microsoft	\$69.9 B	\$23.2	\$51.8 B
Cisco	\$43.2 B	\$6.5 B	\$27.8 B
Hewlett-Packard	\$128.1 B	\$9.4 B	(\$11.4) B
Oracle	\$36.5 B	\$9.0 B	\$17.0 B
Verizon	\$107.4 B	\$6.3 B	(\$47.2) B
AT&T	\$114.2 B	\$19.6 B	(\$62.8) B
Nokia	\$61.7 B	\$1.8 B	\$6.0 B
IBM	\$104.6 B	\$15.4 B	(\$18.0) B
Sony	\$85.9 B	(\$3.7) B	\$22.3 B

Apple now leads the list in earnings and cash on hand and is rivaling the largest in revenues. Apple’s progress over the last decade is even more remarkable when considered against the quality of the comparable companies. The list above is arguably the best of the best, yet Apple has eclipsed them all.

Apple’s progress has not gone unnoticed by investors- to a certain extent. The company’s stock recently surged past Exxon/Mobil as the largest capitalization company in the world. Apple’s fundamental progress has been so extreme that the stock has remained reasonably valued during the last 10 years. Apple’s stock has not experienced the typical valuation revision which accompanies extreme success.

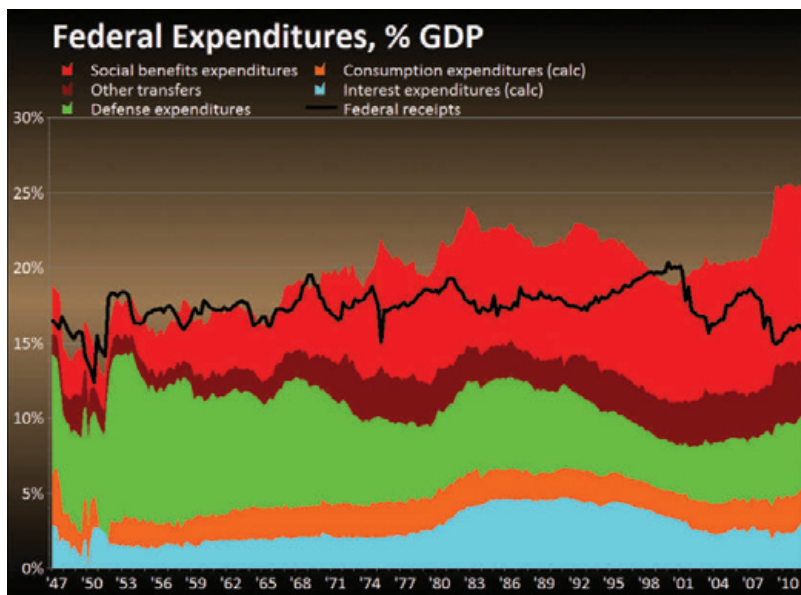
To a lesser—but no less remarkable—extent has been the progress of non-financial corporate America. In spite of a tech recession in 2001, a financial meltdown in 2008, and a sluggish recovery since 2008, corporations have managed their businesses well. Two years removed from one of the worst profit recessions in the last 50 years, corporate profits and cash flow are at record highs.

To evaluate the second headline, we looked at the long-term finances of the U.S. Federal Government. The numbers and assumptions involved are complex, so we restricted ourselves to the most significant aspects of the problem. We opted to compare the figures on an apples-to-apples basis; that is, we compared the current value of all future government funding shortfalls to the current value of all future years’ U.S. GDP. This should give a cleaner sense of the proportion of future GDP which has been implicitly committed to government expenditures.

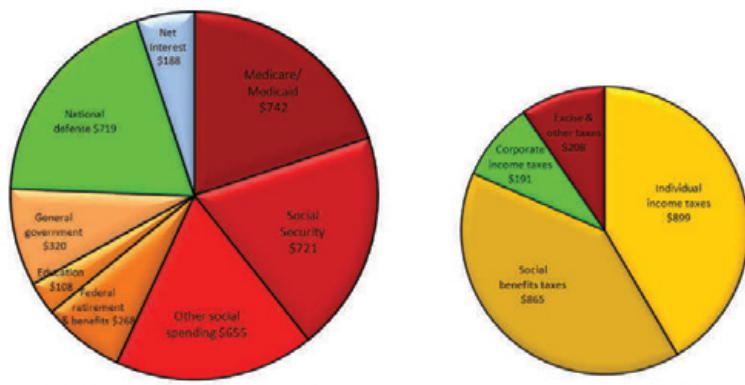
The Federal Deficit

The federal government incurred a \$1.6 trillion deficit in 2010, amounting to over a tenth of U.S. GDP. This was partially a consequence of the 2008 recession, which caused a drop in government receipts and a rise in government spending, due to discretionary and automatic expenditures (such as stimulus programs and unemployment benefits, respectively).

While the deficit has been exacerbated by the recession, it is representative of the longer-term shortfalls faced by the U.S. government. In 2010, social benefits spending accounted for over half of expenditures; defense represented just below a fifth of spending; the remainder went to cover interest payments on the national debt and general government expenditures.

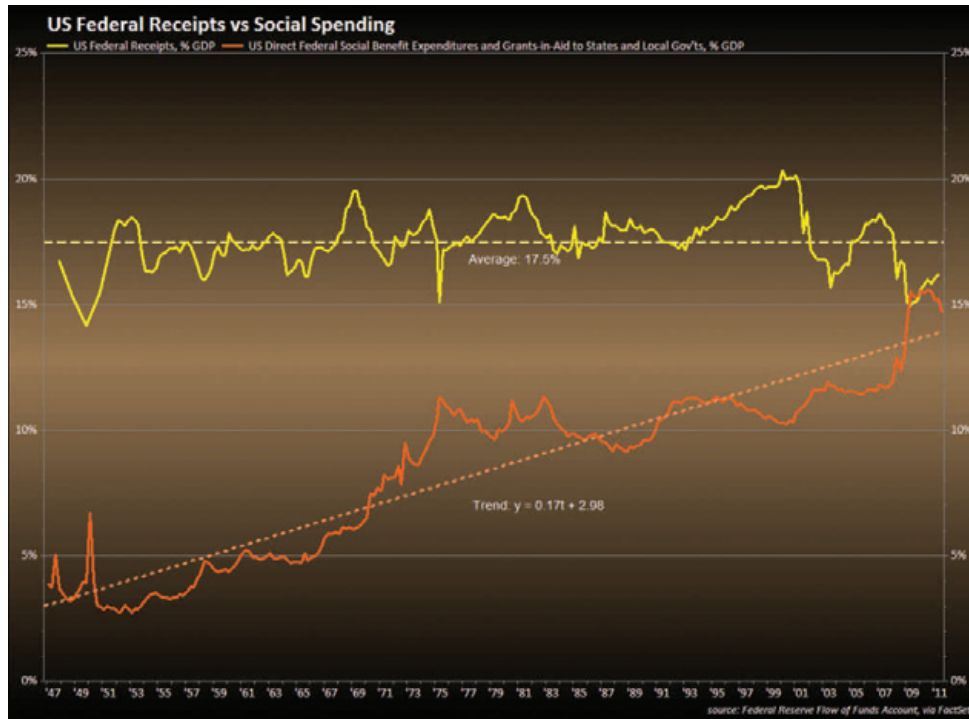


2010 Federal Receipts and Spending



An Irresistible Force and an Immovable Object

The crux of the federal budgetary problem is, as a percentage of GDP, the projected collision of a static level of federal receipts and a steadily growing rate of social benefits spending. These trends have remained intact through various administrations and tax regimes. The projected deficits they entail represent a significant fiscal shortfall.



The U.S. government’s future liabilities are made up of the official national debt—money already borrowed and spent: ~\$14.8 trillion¹—and unfunded social spending promises, including Medicare, Medicaid, Social Security, and programs such as federal employee and veterans’ retirement and benefits plans. An “unfunded” status here means that the government owns no external assets supporting these promises, and for accounting purposes either assumes that an “unfunded” trust fund (Social Security and Medicare Part A²) or future receipts (Medicaid and Medicare Parts B and D³) will satisfy these obligations.

Since social benefits are not hard debt currently owed to others, but less-definite promises owed to beneficiaries, why aren’t future defense and general government expenditures also considered unfunded future liabilities? The answer is that the U.S. government has not explicitly committed to any long-term spending in these categories. However, the government arguably does have an implicit liability to fund its own administration and national defense.

Medical social expenditures are projected to make up the bulk of unfunded spending obligations. Social Security represents the next largest slice, while the national debt and other programs constitute the remainder. While the national debt is simple to compute, estimating the future unfunded amounts due the various social programs is difficult, subject to many assumptions.

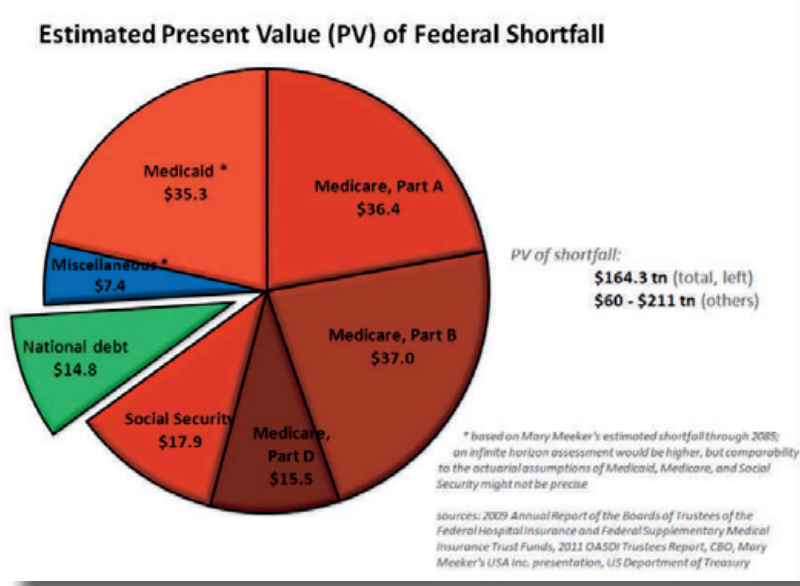
A survey of independent estimates places the total fiscal shortfall in a range between \$60 trillion and \$211 trillion⁴. These estimates are the “net present value” of actuarial estimations of future annual shortfalls. They rely upon critical assumptions—including future GDP growth, medical cost inflation, demographic factors, and government receipts—and a “net present value” summation that discounts each year’s shortfall in proportion to that shortfall’s distance in the future. This calculation expresses a series of payments in the future as a dollar amount today, much like a mortgage.

Looking at the categories which compose the shortfall is illuminative (see chart below). The 2009 Medicare Trustees' report⁵ estimates the Part A trust fund to be underfunded by \$36.4 trillion, while Parts B and D require \$37.0 trillion and \$15.5 trillion of future funding from general revenues⁶. Medicaid is funded from general revenues; Mary Meeker's "U.S.A Inc." report estimates Medicaid to be underfunded by \$35.3 trillion through 2085⁷. Social Security is underfunded by \$17.9 trillion according to the 2011 OASDI Trustees' report⁸. Another several trillion can be added to account for other program shortfalls, and further adding \$14.8 trillion of national debt leads to an estimate of a \$164 trillion total shortfall. This number changes significantly based upon adjustments to available future receipts, key assumptions, and unanticipated spending or cost increases⁹.

Whether total federal liabilities are \$60 trillion or \$211 trillion, it represents a significant shortfall. The Medicare and OASDI Trustees' reports estimate the U.S. economy to have a present value of roughly \$1,400 trillion. This number could be higher or lower if the economy does not grow at the projected ~4% annual rate¹⁰.

If the federal government is expected to collect a baseline of ~\$250 trillion present value in future federal receipts¹¹, a 25% to 100% permanent rise in federal taxation would be needed to satisfy the future unfunded obligations. This rise in federal tax receipts—to as high as ~40% of GDP—would further need to assume (strongly) no resulting adverse economic impact. Instead of potentially doubling federal taxes, future social spending promises could be cut by in many cases more than half¹², or some combination of these prescriptions could be implemented.

These problems are substantial, but not insurmountable. Their scale will require a revision in long-term planning and consumption patterns across broad swathes of American society, which, whether the shortfall is absorbed by spending cuts or receipts increases, will be a socially and economically disruptive process.



Conclusion

As the country debates solutions to the issues facing the Federal government, it strikes us that there is much to be learned from Apple's success.

- 1) One of Steve Jobs many contributions to business thinking was his unwillingness to accept limits. Why couldn't Apple become a \$100 billion-per-year company?
- 2) Apple's purpose became much larger than simply profits. The company wanted to change how we interact via technology. Profits would follow.
- 3) No organization is ever permanently down unless the key decision-makers accept failure as a normal condition. Apple went from an also-ran to a mega-star in 10 short years.
- 4) Great companies change the world.
- 5) Very few people forecast the effectiveness of Steve Jobs.

Contrast the fun and hope associated with Apple with the hopelessness and dreariness of the federal government. America remains a great country. The resurgence of Apple is just one example of what can happen when real potential is unleashed. Similarly, the federal budget is fixable and can be fixed much more quickly and thoroughly than we think. There is more than one leader who is capable of restoring America's greatness and sense of purpose.

Footnotes

Note: Information in this article is not intended to be used as investment advice. References to securities and/or companies in this article are for illustrative purposes only.

1. The U.S. Federal Debt can be divided into debt held by the public, and debt the government owes to itself (intragovernmental debt): these figures are approximately \$10 trillion and \$5 trillion respectively. Social Security, Medicare, and various federal employees' and other social benefits funds hold U.S. government debt which is counted as assets. This special issue debt, which is redeemable at will by the programs, offsets the overall underfunded amount of these programs; therefore we have opted to include intragovernmental debt in the overall assessment since it is, as noted, not supported by external assets.

2. See (1) above. Medicare Part A is funded by the Federal Hospital Insurance Trust Fund, which contained \$381 billion in special issue U.S. Treasury securities as of the 2009 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf), which was used as the reference report (see (5) below). Social Security is funded by the OASI and DI Trust Fund accounts, which contain \$2.4 trillion in special issue U.S. Treasury securities, according to the 2011 OASDI Trustees Report (www.ssa.gov/OACT/TR/2011/trTOC.html).

3. 2009 Annual Report of the Board of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf), excluding the SMI trust fund.

4. Summary of survey of fiscal shortfall estimates:

- Meeker 2010: \$82.5 trillion (www.businessinsider.com/mary-meekers-web-2010-11)
- Kotlikoff 2011: \$211 trillion (www.npr.org/2011/08/06/139027615/a-national-debt-of-14-trillion-try-211-trillion)
- Gokhale & Smetters 2005: \$65 trillion (Treasury methodology: http://search.yahoo.com/r/_ylt=A0oG7l7OdmDOS0QAnoNXNy0A;_ylu=X3oDMTE1NjRuaHE4BHNIYwNzcgRwb3MDMQRjb2xvA2FjMgR2dGlkA1NNRTAzNl8yMTA-/SIG=14mi2iaj9/EXP=1315432270/**http%3a//www.philadelphiafed.org/research-and-data/events/2005/fed-policy-forum/papers/Smetters-Assessing_the_Federal_Government.pdf)
- Moylan 2010: \$60 trillion (www.nypost.com/p/news/business/trillion_in_debt_ZIrWsnLp5l9MAQGe8YTG8J)
- Walker 2010: \$60 trillion (www.politicsdaily.com/2010/02/01/what-every-american-should-know-about-the-national-debt/)
- Heritage 2010: \$60.3 trillion (http://search.yahoo.com/r/_ylt=A0oG7m9jgmdOUmWAMChXNy0A;_ylu=X3oDMTE1NjRuaHE4BHNIYwNzcgRwb3MDMQRjb2xvA2FjMgR2dGlkA1NNRTAzNl8yMTA-/SIG=12u8b2ilm/EXP=1315435235/**http%3a//www.heritage.org/BudgetChartbook/PDF/All-Budget-chart-book-2010.pdf)
- Fisher 2008: \$110 trillion+ (www.dallasfed.org/news/speeches/fisher/2008/fs080528.cfm)
- Tanner 2011: \$119.5 trillion (www.cato.org/pubs/pas/pa673.pdf)

5. We have selected the 2009 Medicare Trustees' report (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf), instead of the 2010 report (www.cms.gov/ReportsTrustFunds/downloads/tr2010.pdf), for several reasons. The report was initially delayed in order to incorporate (roughly 165) provisions from Patient Protection and Affordable Care Act, or ACA. As noted in the overview, however, many of the assumptions imposed by the ACA which underpin the cost savings to be achieved by the act have not been designed, tested, or evaluated, and their future impact is very uncertain. Further, it notes, restricting payment increases to health providers by imputing a rate of productivity improvement from the overall economy is theoretically difficult, given the higher qualified, labor-intensive nature of health care provision when compared to the overall economy. These price increase restrictions might prove extremely impracticable, and in the long-term, unrealistic. As the overview further notes, "[t]hese outcomes are far from certain, however. Many experts doubt the feasibility of such sustained improvements and anticipate that over time the Medicare price constraints would become unworkable and that Congress would likely override them, much as they have done to prevent the reductions in physician payment rates otherwise required by the sustainable growth rate formula in current law." The report states that it must be based on current law, so it incorporates many of the

Footnotes (CONTINUED)

assumptions it considers unrealistic, and notes “that actual costs are likely to exceed those shown by current law projections in this report.” To avoid the pervasive, controversial, and apparently unrealistic assumptions introduced into the modeling parameters in the 2010 report, as prominently noted in the introduction to it, we simply opted to use the prior year’s report in our own summary. If the ACA-modified 2010 report’s figures are used, Medicare Part A is actually overfunded by \$0.6 trillion, Part B requires \$21.1 trillion of general revenue funding, and Part D requires \$15.8 trillion in general revenue contributions (against a PV of the U.S. economy of \$1,404.4 trillion). The sum of these figures is \$36.3 trillion, compared to the 2009 estimate of \$88.9 trillion.

6. Table III.B10 (p75), Table III.C15 (p117), Table III.C23 (p133) (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf)

7. Mary Meeker, Kleiner Perkins Caufield & Byers (KPCB), slide IX (9), U.S.A. Inc. (www.kpcb.com/usainc/U.S.A.Inc.pdf)

8. Long-range projections, IV.B6 (www.ssa.gov/OACT/TR/2011/trTOC.html)

9. The estimates for Medicare Parts’ B and D shortfalls will be partially offset by an implied base level of spending out of future baseline tax revenues. This mitigation effect is offset by the presumed extension of Medicaid shortfalls to an infinite horizon. The levels of all the major variables are, further, heavily reliant upon the assumptions noted above, and the actuarial methodologies utilized by the various sources cited.

10. Table II.C1, (p13) (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf)

11. $18\% * \$1,400 \approx \250 , where 18% approximates historic federal receipts as a percentage of GDP. Further calculations of necessary receipts increases are based on ranges of GDP, receipts, and shortfall estimates. For two examples, consider $\$60/\$1,460 = 4.1\%$ versus 17.5%, or a roughly 25% hike, while $\$211/\$1,313 = 16.1\%$ vs 17.5%, roughly a 100% hike.

12. For example, see p19 of the 2009 Medicare report (www.cms.gov/ReportsTrustFunds/downloads/tr2009.pdf), which states: “Note, however, that these changes would require an immediate 134-percent increase in the tax rate or an immediate 53-percent reduction in expenditures.” The assertion is footnoted, adding: “Under either of these two scenarios, tax income would initially be substantially greater than expenditures, and trust fund assets would accumulate rapidly. Subsequently, however, financing would be increasingly inadequate, and assets would be drawn down to cover the difference. At the end of the 75-year period, tax income would cover only about 65 percent of annual expenditures. Level changes in either taxes or benefits, accordingly, would not permanently address the long-range financial imbalance and would result in unusual patterns of asset accumulation and redemption.”

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About Disciplined Growth Investors

Disciplined Growth Investors is a Minneapolis-based investment management firm specializing in prudently exploiting investment opportunities in publicly held small cap and mid cap growth companies. Founded in 1997, the firm remains employee owned and completely independent.

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Fred Martin is Disciplined Growth Investors' founder and Chief Investment Officer. Fred has been managing portfolios since 1976 and is the primary architect of the investment philosophy employed by the firm.

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