

# CAPCO

## ASSET MANAGEMENT

October 12, 2012

“If something can’t go on forever, it won’t.” (Herb Stein)

Dear Partners, Clients & Friends,

In this letter, we tackle a formidable subject: the federal government’s budget. Huge budget numbers are often cited casually and without context, sometimes as one year numbers and sometimes as ten year numbers. Rarely are they presented in a uniform, coherent way. So we present our analysis here, as if it were the income statement of a business. We are not going to assign blame or prescribe solutions. Our goal is simply to provide some comprehensible numbers, highlight some key points, and then share what we think it means for investors.

Annual federal deficits have surged, rising from \$200 billion to \$1.3 trillion since 2007. We looked at the causes of this large change, to determine whether the passing of the recession and “one-time” events (wars, TARP, the stimulus package, and the so called “fiscal cliff”) would cause deficits to decline on their own.

Our conclusion is that meaningful improvements are unlikely. Deficits are set to continue at an alarming pace. The cause of the spending and deficits is far more structural than “one-time.” The government budget crisis is not a problem for our grandchildren, or even our children. It is a problem for this generation and the next five to ten years are likely to increase the problem significantly.

The investment implications are not surprising: we believe all but the oldest investors should have guarded expectations about Social Security and Medicare; all investors should expect higher taxes; and all should expect inflation. We cannot do much about the first one, but we certainly have thoughts about the last two.

### The Income Statement<sup>1</sup>

Below we show our version of an income statement for the federal government. We start with the last peak in tax revenue in 2007, because lower tax revenues, due to the recession, contributed to the rising deficits. In addition, we provide a column that shows the total change from 2007 to 2011 (in billions of dollars), and a final column that shows how each item has multiplied over the last 40 years. This last column highlights what examples of compounding always do: small differences in compounding, over long periods, produce enormously different results.

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<sup>1</sup> Sources for this analysis include CBO.gov, CMS.gov, BLS.gov, IRS.gov, GPO.gov, USA Inc., and other publicly available sources. Government accounting data is imperfect (for example, reported deficits do not fully explain the increase in debt), but a generally coherent picture is possible.

This table presents the major types of tax revenue and expenses. One can readily see a rapid growth of expenses, deficits and debt, a modest decline in taxes, and a modest increase in interest cost. We explore each of these below.

	2007	2008	2009	2010	2011	5 Year Change	40 Year Change
Individual Income Taxes	1,163	1,146	915	898	1,091	(72)	12x
Corporate Income Taxes	370	304	138	191	181	(189)	6x
Social Insurance & Retirement Receipts	869	900	890	864	818	(51)	18x
Excise Taxes	65	67	62	67	72	7	5x
Other	100	106	98	141	140	40	15x
<b>Tax Receipts</b>	<b>2,567</b>	<b>2,523</b>	<b>2,103</b>	<b>2,161</b>	<b>2,302</b>	<b>(265)</b>	<b>12x</b>
National Defense & VA Benefits	624	701	756	802	833	209	9x
Entitlement & Social Programs	1,685	1,811	2,060	2,278	2,288	602	35x
Other Spending	214	258	398	312	322	108	11x
Net Interest	237	252	186	196	230	(7)	16x
Other	(32)	(40)	117	(132)	(69)	(37)	16x
<b>Total Outlays</b>	<b>2,728</b>	<b>2,982</b>	<b>3,517</b>	<b>3,456</b>	<b>3,603</b>	<b>875</b>	<b>18x</b>
Reported Surplus (Deficit)	(161)	(459)	(1,414)	(1,295)	(1,301)	(1,140)	
Additional Unexplained Surplus (Deficit)	(46)	(309)	(327)	(179)	191		
Debt Held by the Public	5,035	5,803	7,544	9,018	10,128		
Implied Interest Rate	5%	4%	2%	2%	2%		

## Spending

Expenses have climbed \$875 billion over the five years, representing 77% of the increase in the annual deficit. Expenses have risen almost across the board. Defense spending and VA benefits are up \$200 billion. Social and entitlement spending is up \$600 billion (across virtually all programs). A range of other spending is up \$100 billion. One-time items are spread throughout and are not concentrated in a particular line item or year. For example, \$150 billion of TARP bailouts for Fannie and Freddie, probably permanent losses, were spread out across years. TARP itself was spread out across years, a mix of outlays and recoveries (as most of the loans were repaid). Similarly, the 2009 “stimulus” spending was not all spent in 2009: it has taken years to spend (and some of the stimulus was not spending, but rather reduced taxes). The key point is that the surge in spending cannot be attributed to one-time costs. The underlying cost structure has risen sharply in recent years and it is not set to decline.

### 1. Entitlement & Social Programs

The largest component of spending growth is represented by entitlement and social programs. In 1970, this spending was *one-third* of the federal budget, whereas today, it is *two-thirds* of all federal spending. Its \$600 billion contribution to increased deficits is spread across all programs: Social Security is up \$150 billion, Medicare is up \$110 billion, Medicaid is up \$85 billion, Unemployment Compensation is up \$85 billion, Food Stamps are up \$50 billion and virtually all the smaller social programs have risen.

While some programs are supported by specific taxes, the tax rates have little relationship to the costs: Social Security was overfunded until recently, Medicare is underfunded and Medicaid is unfunded. Social Security’s overfunding subsidized

previous deficits, so those past payments are irrelevant. That money is gone (we likewise ignore the portion of the federal debt held by internal agencies like Social Security, which is why we view the real debt as \$ 10 trillion, not \$15 trillion. The extra \$5 trillion of internally owed debt we capture as part of future deficits, where it belongs).

To make this spending more understandable, we broke down the key programs into the relevant number of participants and the average benefit:

	# People (mm)	Avg Annl Benefit	Program Cost (\$B)
Current Program Cost			
Social Security	52	\$ 12,000	731
Medicare	46	\$ 8,000	486
Medicaid (Fed Gov't portion only)	49	\$ 5,000	275
Food Stamps	45	\$ 1,600	103
Unemployment Comp			121
All other social programs			572
			2,288
Cost of Health Care Expansion:			
ACA - Medicaid (Fed Gov't portion only)	15	\$ 6,000	90
ACA - Exchanges	15	\$ 9,000	135
	30		225

Using simple figures like these, it is easy to “guesstimate” that during the next 10-20 years, as Social Security and Medicare add 15-30 million people, we will add \$300 billion - \$600 billion to the expense base. With rising health care costs and likely some inflation, the actual number would be larger. Some of these program costs will moderate with an improved economic recovery and associated job gains (unemployment and food stamps), but because of the relative size of the programs, cyclical improvements in the smaller programs cannot overcome the demographics of the larger ones.

The Patient Protection and Affordable Care Act (health care reform or “ACA”) was intended to provide an additional 30 million people a health benefit, so that will expand costs significantly as well. As initially enacted, 15 million people were expected to be added to Medicaid at \$6,000 per year (\$90 billion annually) (plus a similar amount paid by states) and 15 million were to join new insurance exchanges at \$9,000 per year (\$135 billion annually). Eventually, that would add \$225 billion to expenses per year. After the Supreme Court decision, the states are busy trying to push more of the \$6,000 Medicaid recipients (where they share part of the costs) back onto the \$9,000 exchanges (where they don’t). As states respond by limiting coverage, the CBO estimates that fewer participants will obtain coverage at all. As a result, it has lowered its estimate to an average \$170 billion per year over the next ten years.

Various measures are intended to offset these costs (the ACA is supposed to have no net cost). Undoubtedly, some of those offsets will occur. However, a large portion are planned reductions in Medicare payments to doctors, while expecting them to provide the same service. These cuts are estimated to be \$50 billion - \$70 billion per year. There is no reason to believe these will actually occur. Savings from cuts such as these have

been over-ridden by Congress every year since 2003, primarily because they are so extreme some doctors would refuse Medicare patients. Medicare's 2010 Annual Report doesn't expect these to happen either: ". . . reductions in Medicare payment rates for physician services, totaling 30% over the next 3 years, are assumed to be implemented as required under current law, despite the virtual certainty that Congress will continue to override these..." As such, we consider the ACA a net additional cost.

## 2. National Defense & VA Benefits

Defense spending and VA benefits are up \$200 billion over the last five years. The costs of the wars of the last ten years will fall as the wars wind down. Twenty years ago, after the Cold War, Defense spending stabilized, falling slightly to just under \$300 billion per year for nearly ten years, the so-called "peace dividend." Today Defense spending totals about \$600 billion, including about \$100 billion per year for the wars, so expectations of a decline to \$500 billion are reasonable. However, VA Benefits are expected to continue to climb, offsetting some of those reductions. Any reductions, in total, seem unlikely to be material to the deficits.

## 3. Debt & Interest Expense

Finally, interest expense has been flat. With deficits driving public debt from \$5 trillion to \$10 trillion in just 5 years, one would think interest cost should also have doubled. But interest rates have been abnormally low, so we have twice as much debt at half the rate. The debt is permanent and growing, the low rate is temporary. The low rate is a combination of action by the Federal Reserve and the state of mind of global investors, their willingness to lend at low rates (and negative real rates). As we've said before, liquidity (access to credit or capital) is a state of mind. As such, it is fickle and changeable, though it often feels durable right up until the moment things turn (ask Greece, or the US subprime mortgage market). Should it change, federal borrowing is extremely short term, and so a change in rates would be felt very quickly. The potential for higher interest rates is a ticking time bomb with an unknown fuse.

How problematic could interest expense be? Since all deficit spending is borrowed, every year of trillion dollar deficits adds that much to the debt. In five to ten years at this (highly probable) pace the debt grows to \$15 to \$20 trillion. The debt numbers are so large that even small changes in interest rates hurt a lot. In five years, if our debt is \$15 trillion and rates rise from just 2% to 4%, interest expense will triple to \$600 billion. And 4% is still cheap. *Interest expense could easily match the cost of each of the largest entitlements, with significant risk of outpacing them.* All of this increased interest expense would be added to deficits and thus debt, compounding against us.

## 4. "Fiscal Cliff"

The 2013 "fiscal cliff" is a combination of tax increases and spending cuts. The spending cuts are estimated to be \$100 billion, with about half of this from Defense. However, its implementation is uncertain and the savings are small. So despite

widespread concerns, we do not consider the spending component of the “fiscal cliff” to be particularly helpful to deficit reduction (or particularly alarming for the economy).

## Tax Revenues

We now turn our attention to tax revenues. Tax receipts fell from \$2.6 trillion to \$2.1 trillion before recovering to \$2.3 trillion. This decline represents \$265 billion or 23% of the increase in the annual deficit since 2007. Tax receipts declined in the downturn, as the recession reduced individual incomes, employment, small business owner profits and corporate profits (the main sources of federal taxes). In addition, there were tax cuts intended to “stimulate” the economy (such as reducing payroll taxes).

To evaluate whether rising tax revenues can close the deficit gap, we consider employment levels and the recovery, the “fiscal cliff” impact on taxes, a normalized economy ten years out, and the viability of different tax policies.

### 1. Employment Levels

A key driver of tax receipts is employment levels, which drives both individual income taxes and Social Security/Medicare payroll taxes. The table below summarizes how employment fell during the recession.

	2007	2008	2009	2010	2011
# Employed (mm)	146	145	140	139	140
# Unemployed	7	9	14	15	14
# Workforce	153	154	154	154	154
# Not in Labor Force	79	80	82	84	86
Working Age Population	232	234	236	238	240
Unemployment Rate	4.6%	5.8%	9.3%	9.6%	8.9%

Reported unemployment rose sharply from 5% to 10% during the recession. The workforce base also stagnated as some dropped out of the labor force. If all those who dropped out of the labor force were instead counted as unemployed in 2010, then 20 million (rather than 15 million) were actually out of jobs and the unemployment rate would have been 13%. Employment and incomes are recovering slowly, and this should continue to improve tax receipts, but there are few signs of an impending surge in hiring.

### 2. “Fiscal Cliff”

The 2013 “fiscal cliff” has tax ramifications as well. Current tax law is expected to increase taxes by \$400 billion per year (\$200 billion from the expiration of the Bush tax cuts, \$100 billion from the expiration of the “stimulus” payroll tax cut for employees, plus \$100 billion of other tax increases). All else being equal, this would raise tax revenues to \$2.7 trillion from \$2.3 trillion and reduce the deficit to \$900 billion, raising tax collections from 15% to 18% of GDP (the 18% level is more consistent with the

history of the last 30 years). But all else is not equal, and there may be consequences to employment and GDP, thereby shrinking the tax base.

### 3. One Possible Future Economy, Ten Years Out

	1980	1990	2000	2010	2020E
GDP	2,724	5,735	9,821	14,508	19,500
Annual Growth Rate	10%	8%	6%	3%	3%
Tax Receipts	517	1,032	2,023	2,161	3,900
% of GDP	19%	18%	21%	15%	20%
Spending	591	1,253	1,789	3,456	5,400
% of GDP	22%	22%	18%	24%	28%
(Deficit)/Surplus	(74)	221	234	(1,295)	(1,500)
% of GDP	-3%	-4%	2%	-9%	-8%

Expenses are mostly driven by policy and demographics, so we can make some guesses at what they might look like in the future without having to predict a future economic scenario. Taxes, on the other hand, do require an estimate of the economy. As a large, developed country, America is unlikely to double in size every decade as it once could. We assume the economy grows at a 3% nominal rate. Tax receipts almost double by 2020, driven by the improved economy and additional unspecified tax increases, so that taxes rise to 20% of GDP, matching the highest levels in 30 years.

We assume program expenses grow by \$50 billion per year (\$500 billion annually by the end of ten years), plus 2% inflation. In addition, we assume debt reaches \$15 trillion and that interest rates climb steadily to 4% from 2%. This raises interest cost from \$200 billion to \$600 billion.

We consider this a conservative scenario, relative to how bad future deficits could be. In 2020, this produces a deficit of \$1.5 trillion, or about 8% of GDP. However, if current deficits continue, debt and interest expense could be materially higher. If debt is instead \$20 trillion and interest rates are 8%, interest expense grows to \$1.6 trillion (adding another \$1 trillion to the annual deficits shown above).

Even with taxes at 20% of GDP, it's not close to overcoming the rising expenses. This scenario is not a prediction, it is just some simple assumptions to frame a reasonably plausible outcome. Faster economic growth would help, but we are not willing to assume it. And to the extent that growth is inflation rather than real, the gap is likely to widen.

### 4. Viability of Additional Tax Increases

Can we close the gap with still more tax increases, above 20% of GDP? We analyzed IRS data<sup>2</sup> to get a feel for the income dollars that might be available.

<sup>2</sup> 2009 data is the latest available. As that was a recession year, we chose 2008 data as more representative of income available to taxation. 2008 incomes and taxes were approximately 25% higher than 2009.

What we found is that the problem is now so large, it is hard to find enough income to do so. Of those that file a tax return, 36% paid no federal income tax. A further 31% made less than \$50,000, and paid modest federal income taxes (though they also bear payroll taxes, state and local income taxes, sales taxes, property taxes, and a variety of special levies on things like alcohol, tobacco, gas, phones and lotteries). So we assume these 67% of filers are not a likely source of additional dollars.

That leaves 46 million tax returns (from a population of 310 million). Of these, 30% of filers (42 million returns) earn between \$50,000 and \$200,000. This group had Adjusted Gross Income of \$3.9 trillion and paid federal income taxes of about \$400 billion, or 11%. These people also pay payroll taxes and the rest, so they really pay more like 25%; and of course we've already assumed some tax increases in our scenario that moved taxes from 15% of GDP to 20%. But that still leaves something like \$2.5 trillion. Given the size of the deficits, if we are going to close them with taxes, mathematically some of the money must come from this group. But neither political party seems willing to propose higher taxes on anyone earning below \$250,000.

That leaves us with the top 3% (4 million returns), earning over \$200,000 (or an average of \$625k each). Despite high income per person, this group is too small to produce enough total income to close the gap. Together, they had Adjusted Gross Income of \$2.5 trillion, and paid \$540 billion in federal income tax, leaving \$2 trillion (some of which is consumed by payroll, state and other taxes listed above). Therefore, it would take virtually all remaining income to close the deficit. Obviously it is unrealistic to take 100% of any group's income.

Of course, annual earnings are not the only source. Another option is to tax wealth. The Forbes 400, representing the 400 wealthiest Americans, together have \$1.7 trillion in net worth. So taxing 100% of the net worth of the 400 wealthiest Americans, thereby creating the Forbes 0, would cover the deficits just once.

We could raise corporate income taxes (though our rates are already the highest in the developed world, and both parties are talking about reducing them, not raising them). It would take a tax rate of approximately 100% on the entire S&P 500 (the 500 largest US companies) to partially close the deficit. Here too, a 100% tax rate is unrealistic, and higher corporate taxes would have significant consequences for employment and for the value of pensions and retirement savings.

The deficit problem is now so large that taxes alone cannot solve it.

### Conclusion

*The fundamental problem is that the government's expenses, the cost of its promises, are not tethered in any way to the country's underlying economic results, income or wealth* As long as that is the case, nothing prevents the promises from outstripping the ability to fulfill them. And so they have, in case after case: this is the

fundamental problem faced not just by the federal government, but also many public employee pensions, corporate defined benefit plans, US state and local governments, and by many developed, and some developing, countries. This model of “promise now, pay later” has been in existence for only one generation, and is really being put to its first test as the recipients come of age. Clearly, it is failing the test.

Our initial question was whether expenses might recede in the near future. We conclude they will not. For the most part, expenses are set to rise, possibly dramatically. Expense decreases are dependent on the exercise of considerable political will and leadership, whereas expense increases are dependent only on the near certainties of demographics and passage of time. Higher taxes seem almost a given to us, yet even that cannot solve the problem. At over \$1 trillion per year, our deficits are increasing the national debt at a rapid clip. And our ability to fund them is dependent on a fragile state of mind, the collective willingness and ability of the Federal Reserve and other investors to lend at rates near zero.

In 1970, entitlement and social programs were one-third of federal spending. Today they are two-thirds, and still growing faster than any other line item. Their demographics are set to overwhelm federal spending, almost regardless of how quickly we come out of this economic slump. And this problem is no longer decades away, it is well under way. The primary difference between the United States and Greece is not that our budget and debt are on a sounder financial footing. It is that we print the currency in which our debts are due and that for a variety of reasons, there is still a market for it.

While our politicians show few signs of willingness to grapple with the problem, in the timeless words of Herb Stein, “if something can’t go on forever, it won’t.” Whether it changes because we act voluntarily, or because interest rates serve up their disciplinary medicine, we believe it will change, because it must change. There are only four real levers on the deficit equation: (1) economic growth; (2) higher taxes; (3) lower spending; and (4) inflation with financial repression. All four will likely be factors; in fact, all four are already in play. The process of resolving all these conflicting claims on our nation’s productivity is going to be messy: the size of the problem is going to require the sacrifice of some sacred cows, and the fights to determine who loses are bound to be messy. It is worth noting though that, of these, all are “zero sum” except for economic growth. To the extent that, in fighting over taxes and spending and inflation, we impair our ability to grow, we increase the pain that has to be borne by all of us as a whole.

As investors, we can’t control what the government and the larger economy do. But we can control how we anticipate and respond. For thoughtful investors, it seems to us that certain conclusions are probably obvious. The prospect for *reduced spending* or altered social policies suggests that Americans should be planning to rely more on their own resources, and therefore saving more for their future retirement and health care. The prospect of *higher taxes* suggests that earning and investing in tax efficient ways will become even more valuable in the future. And as much as we are debt averse, the prospect for *inflation* favors long-term, fixed rate borrowing (and disfavors lending and

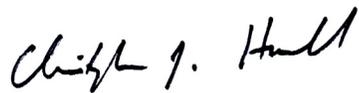
bonds), and has significant implications for winners and losers in various businesses (a topic we have dwelt on at some length in the past).

The situation is serious, but we do not agree with some of the more extreme conclusions and reactions. This is still an immensely productive country with huge strengths, and, as Adam Smith said, “there is a great deal of ruin in a nation.” Anticipating hyper-inflation, for instance, tends to produce extreme, one-way bets on what we think is a low probability outcome. But ten years of 5% inflation might do a great deal, if accompanied by financial repression. Carmen Reinhart has demonstrated that this was an important piece of resolving the (similarly enormous) US debts after World War 2, as we discussed in a prior letter.

Similarly, vivid predictions that the dollar will “collapse” seem to trigger strong visceral reactions. But the dollar has been “collapsing” for most of the twentieth century, since the time when the milk and gasoline were priced in pennies not dollars. And yet the twentieth-century United States was fabulously wealthy and productive.

Long-time readers will be unsurprised by our choice of investment policy. We favor tax-efficient investing, which means long ownership periods, and that in turn calls for high quality businesses run by high quality people. And we favor inflation-resistant businesses, of the sort we have discussed in the past, with the ability to raise prices and be highly capital efficient.

If you’ve made it this far, we salute you. This letter was longer and more detailed than most, but we thought it worth it to share the analysis with those who might find it useful. We look forward to writing you next quarter.



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