

CAPCO

ASSET MANAGEMENT

Over the years, we have written about inflation on a number of occasions, addressing its likelihood, its measurement, and most importantly, what an investor can do for protection. The following piece includes excerpts from our letters from the First Quarter of 2008 and the First and Third Quarters of 2011:

Inflation, Low Interest Rates and Financial Repression (Third Quarter, 2011)

It is easy for an investor these days to feel trapped between unpalatable investment options. On the one hand, stocks, though cheap, have lost their appeal to many. On the other hand, low-risk investments (like Treasuries and bank FDIC products) offer yields that are almost invisible to the naked eye. This quandary may persist for some time. Investor interest in stocks may return, but if history is any guide, that is likely to be *after* stock prices have risen. The prospects for a rise in interest rates are not promising: we discuss below an excellent recent article that argues persuasively that low rates can persist even in the face of inflation.

Squeezed on both sides, many investors may be “reaching for yield”: choosing investments based primarily on a higher current income stream, such as certain stocks with higher dividend yields, higher yielding junk bonds, rents from farms and real estate. But focusing too much on today’s dividend can be like staring into the sun, blinding one to risk. The phrase “reaching for yield” exists precisely because it has so often led to losses.

Low Interest Rates and Inflation

The Federal Reserve has been suppressing interest rates for over three years now, and has recently signaled at least two more years of the same. These low rates are intended to do a variety of things: stimulate the economy, support home prices, re-build bank balance sheets, and push investors to take more risk. But there is *never* a free lunch in economics, and much of this is being done at the expense of savers.

Conversely, there are *always* unintended consequences, and one such is the greater risk of inflation. Because inflation reduces the real burden of debt to the borrower, and because the US is both a huge borrower and the source of inflationary behaviors, we view inflation as a significant probability. But we have actively puzzled over the problem of how the US could inflate without the benefits being negated by higher interest rates, which are a normal consequence of inflation.

“Financial Repression” Means Low Interest Rates are Likely to Persist

Carmen Reinhart has recently published an excellent paper demonstrating how this has been managed in the past. It suggests to us that the problem of low yields that causes investors to “reach” may persist for years, and could easily be coupled with an inflation that makes low yields even more painful.

Reinhart’s recent paper, “The Liquidation of Government Debt”¹, focuses on the period 1945-1980, a period which began with many countries in very heavy debt from World War II, but during which many countries significantly reduced their debt burdens (relative to GDP) without defaulting. She describes in some detail the combination of inflation and “financial repression” that allowed them to achieve this.

Even a moderate but sustained inflation can dramatically reduce the real burden of debt. The US economy is roughly \$15 trillion of GDP, about equal to the federal debt. If the economy inflates at 5% a year for 10 years, GDP will grow to \$25 trillion. If debt is otherwise held constant, the ratio of debt-to-GDP will fall from 100% to 60%, a much more manageable figure (as tax revenues should grow with GDP). And note that the debt ratio would fall even though real growth was zero, and not one dime of debt was repaid.

Just as the US would benefit from its burden being eased, its lenders would suffer. In the normal course, lenders would therefore demand a higher interest rate, to offset inflation. But if the government has to pay an extra 5% in interest to compensate its lenders for inflation, the additional cost will negate the benefit of inflation. For inflation to reduce the real debt burden, the government must restrain interest rates. “Financial repression” is a catch-all term for the measures used to achieve that goal.

Reinhart summarizes numerous examples from 25 different countries over the 35 years covered by her paper, including “directed lending to government by captive domestic audiences (such as pension funds), explicit or implicit caps on interest rates, regulation of cross-border capital movements and (generally) a tighter connection between government and banks.” The specifics vary widely, but their common effect, direct or indirect, is to artificially suppress interest rates.

For example, in the 1940s and early 1950s, the Federal Reserve directly restrained interest rates by fixing the price at which it would buy Treasuries. An indirect example, one that may be more familiar to some readers, was the heavy government regulation (until the 1980s) of the interest rates that banks could pay depositors. This was intended to remove the incentive for banks themselves to “reach for yield”, by making riskier loans of the sort that had caused problems in the 1930s. But low rates on deposits also helped Treasury rates by making deposits a less attractive alternative.

¹ Even better, you can read the original. “The Liquidation of Government Debt”, by Carmen Reinhart and M. Belen Sbrancia, © 2011, <http://www.nber.org/papers/w16893>. While somewhat academic the paper is very readable, and well worth the \$5 cost to download it. Reinhart is also the co-author of “This Time It’s Different.”

Reinhart's paper is historical, not a comment on current events. But consider the degree to which these current measures might be inflationary and/or repressive of interest rates: the Fed's massive purchases of government and mortgage debt (including the current "twist" to reduce long-term rates); the "captive buyers" of Treasuries in government trust funds, such as Social Security; increased government lending to small businesses at subsidized or guaranteed rates; the effective guarantee of Fannie and Freddie, to maintain low mortgage rates; recent SEC regulations on the type of assets money market funds can hold; and higher capital requirements for banks, which expand the demand for "risk free" assets like US debt.

Lest it sound otherwise, we don't interpret her argument as requiring large government conspiracies. Rather, we see it as a natural process, where various financial problems lead to one government intervention, which creates pressures that lead to new interventions, and so on, ultimately providing the large effects she documents.² The inflation-repression choices are generally easier than the alternatives. Raising taxes, cutting spending or defaulting would each require acts of massive political will. Reinhart estimates that a powerful combination of inflation and repression improved the debt-to-GDP ratio by at least 3% or 4% a year in postwar America. Such an effect today would be the equivalent of \$600 billion in debt reduction per year, progress that it is hard to see our politicians achieving in other areas. For the US, with a 100% debt-to-GDP, a decade or so of 3 to 4% annual impacts could make a big difference.

There is no certainty that this is our future. But there are striking similarities between the past she describes and measures that have already been taken. We do not believe that savers and investors should expect much relief from low interest rates. That does not mean they must passively accept repression, but they do need to be selective about the alternatives.

Identifying Businesses that can Withstand Inflation (First Quarter, 2011)

We've been writing about the potential risk of inflation for some years now, and have often talked about owning inflation-resistant businesses. In this letter we expand on what we mean by that. As always, specific discussion of this quarter's portfolio activity is in the "client only" portion of the letter.

Our thinking on inflation resistance owes a heavy intellectual debt to Warren Buffett. The model we present here, and which we have long used, draws heavily on his letters and comments over many decades. We discuss it here to shed light on why we own what we own, and because it may be useful to those clients who are themselves business owners.

² For instance, in another context: FDIC insurance relieves depositors of the need to think about bank creditworthiness. This gives rise to moral hazard, so the government appoints regulators to police bank lending. The regulators may then impose credit judgments, perhaps by tightening lending. This could cause other government agencies to expand their own lending activities, which could lead to bad loans, which could lead to further remedial measures. And so on.

There is a widespread belief that hard assets (like gold, land or commodities) are the best hedge against inflation. But any hard asset is going to be subject to its own vagaries of supply and demand; their prices can be (and often are) extremely volatile for reasons that may have nothing to do with inflation. Knowing the price of such an asset at any given time is easy; knowing what it is really worth is not. Stock prices are also volatile, but their underlying businesses are more susceptible to valuation, to a judgment about whether the price has (or hasn't) already anticipated significant inflation.

For inflation protection, our focus is on businesses that have both *pricing power* and *capital efficiency*. A number of commentators have mentioned pricing power as a protection against inflation, but capital efficiency has received little attention.

Pricing Power

Pricing power is simple: can the business raise prices in line with cost increases, and still sell the same unit volume? This is a fairly common sense test of competitive position, regardless of inflation. But it is important to realize that if unit costs go up by \$1, it is not enough to simply raise prices by \$1. For a business to be truly inflation protected, it must be able to raise prices at the same *percentage rate* its overall costs are increasing, so that its profits are also increasing with inflation.

The following table compares two businesses, each of which experiences 100% inflation in its costs (from \$500 to \$1,000). Company A increases its revenues just enough to cover the additional costs (which is only a 50% increase), whereas Company B raises prices and increases profits by the full 100% inflation rate.

	<i>Base Case</i>	<i>Company A</i>	<i>Company B</i>
Revenue	1,000	1,500	2,000
Costs	500	1,000	1,000
Profits	500	500	1,000
Profit Margin	50%	33%	50%

Company A has protected its profit dollars (not a trivial accomplishment) – but after 100% inflation, that \$500 will no longer buy what it used to, and its owners have lost ground to inflation. Its pricing power was insufficient. At Company B, the profits actually kept up with inflation, as \$1,000 will now buy what \$500 once did.

So far, so good. But even if a business can increase *profits* at the same rate as its cost inflation, we still have to determine if its actual *cash flows* to owners keep up with inflation, which brings us to capital efficiency.

Capital Efficiency

By *capital efficiency* we mean: how much additional capital is required to support the inflationary increase in sales? Company B's increased profits seem adequate, but if

they are not available to the owners, the owners have actually lost ground. Just as inflation increased sales and profits, it will also increase the investment in receivables, inventory or plant. Whether a company retains the benefit of its inflationary profits depends on how inflation impacts these other uses of cash.

Below we compare two retailers in a simplified presentation, to illustrate the impact of capital efficiency. Assume they are both like Company B in the example above: both endure 100% inflation in a single year and both are able to double their profits. While their profit margins reflect two very different businesses, the salient difference is that one turns its inventory very quickly, the other very slowly. The table below illustrates how a business with slow turning inventory could see its profits consumed by its inflating inventory account.

	<i>Company w/ Fast Turns</i>		<i>Company w/ Slow Turns</i>	
	(Before)	(After)	(Before)	(After)
Sales	1,000	2,000	1,000	2,000
Cost of Goods Expense	900	1,800	400	800
Operating Expense	75	150	400	800
Operating Profit	25	50	200	400
Inventory Turns	12	12	1	1
Payables Turns	12	12	12	12
Net Inventory Investment	0	0	365	730
Increase in Cash Profits		+25		+200
Cash Used for Inventory		0		(365)
Change in Cash to Owners		+25		(165)

For both, profits appear to have kept pace with inflation. But the retailer with slower inventory turns is forced to make a \$365 net investment in inventory to support a \$200 increase in profits. The difference is night and day: at one company, the shareholders get to keep the inflationary profits; at the other, they have to add capital to do the same unit volume and earn the same inflation-adjusted profits.

Note that one business is high margin, and one business is low margin. By itself, this tells us nothing about the impact of inflation: profits simply doubled in both cases. While the ratio of margin dollars to net inventory dollars determines the *magnitude* of the impact, as long as there is *any* net inventory investment at all, it will devour some of the inflationary profits. In this example, the low margin business is superior because of its lower capital intensity.

Finally, the real world impact of inflation is much worse than this simple example depicts, because in the real world you can't ignore taxes. Taxes reduce the inflationary profits, but the needed investment in inventory remains the same. Inflation is relentlessly destructive for a business which is not capital efficient.

Some Real World Examples

We've used a very specific example to illustrate capital efficiency, a retailer with high inventory turns compared to one with low turns. But that is only one example of capital efficiency (and a company can have high inventory turns but be inefficient in other respects). We must examine the whole picture, and companies can achieve capital efficiency in a wide variety of ways.

With this background on pricing power and capital efficiency, it should be easier to understand the inflation resistance of a company like Costco (the rough basis for our "fast turns" example above). As the low cost provider of a variety of consumer goods, it has pricing power when rising costs make buyers more sensitive about price. It has virtually no net investment in inventory (because it sells its inventory almost as fast as it pays its vendors), no receivables (because it is paid with cash or credit card), and little store maintenance (because the shopping experience is concrete floors, steel racks and wood pallets). We expect Costco to fare much better against inflation than most retailers.

We often use Costco as an example because it is simple to understand. Our portfolio contains other examples which may not be as simple to demonstrate, but which have tremendous inflation resistance just the same. One crude way to look at capital efficiency across a wide variety of businesses is to analyze capital as a percentage of sales or profits. To show how striking the differences in capital intensity can be across companies and industries, we highlight in the table below several of our most capital efficient businesses, as well as some well-known companies that are more capital intensive. For each, we show the net working capital and net investment in plant as a percentage of sales. These are summed in the last column, with a low number being more capital efficient. Of course, profit margins vary in part because of the differences in capital intensity, but as we noted above, a high profit margin is not a defense to inflation.

<i>Company</i>	<i>Net WC %</i>	<i>Net PP&E %</i>	<i>Total</i>
<i>Capco:</i>			
Costco	-4%	15%	11%
Microsoft	-10%	12%	2%
Danaher	6%	9%	15%
Landstar	5%	6%	11%
Factset	-6%	12%	6%
Costar	-11%	9%	-2%
Ritchie Bros.	-2%	17%	15%
<i>Others:</i>			
Tiffany's	58%	22%	80%
Home Depot	6%	37%	43%
Texas Instruments	14%	26%	40%
3M	11%	27%	38%
JB Hunt	4%	39%	43%
Toyota	20%	35%	55%
MGM Casinos	-7%	242%	235%

We believe severe inflation in this country could be anywhere from a bad outcome to an outright catastrophe. It is likely to be very messy and confusing, not a smooth progression like our illustration above. And the reaction of stock market prices is likely to be even more volatile.

No one should conclude from this discussion that our companies are immune to inflation, or that a simple net capital calculation is a complete analysis. Even very capital efficient companies tend to require some level of investment. We do not believe we have found a perfect solution, but we firmly believe it is the best one available to long-term investors. Our businesses have always been carefully selected to meet a number of tough criteria, one of which is inflation-resistance. But inflation is not a certainty. One of the great advantages to this approach to inflation is that these are wonderful businesses to own even if severe inflation does not occur.

On the CPI and the Measurement of Inflation (First Quarter, 2008)

While the credit crisis triggered by the housing debacle continues to unfold, and dominates the headlines, we don't have much new to say about these subjects. We have written extensively about both of these in the past, and we don't believe they will be resolved any time soon. We do believe inflation could be a bigger topic soon, and in this letter we discuss our thoughts on the imperfect way inflation is measured and how we think about the impact of inflation as investors.

The last time we discussed inflation was in 2006, when we expressed our opinion that inflation was already a substantial factor in the economy and that the CPI (the Consumer Price Index) was not properly measuring it. Inflation has worsened since then, and while inflation fears have risen too, they are usually expressed as fears of something that *might* happen, not something that *is* happening. Where we see (and many companies report) inflation as a current fact, the CPI continues to report that inflation is mild, in effect asking us Groucho Marx's question, "who are you going to believe, me or your own eyes?"

The CPI is widely relied upon by investors to develop inflation expectations and valuations, by businesses and labor to set prices and wages, and by government to adjust various expenditures like entitlement programs. It is obviously important that it be as accurate as possible, yet we perceive a substantial gap between what the CPI reports and what is actually happening in prices. Consider the following inflation trends:

	1999	2000	2001	2002	2003	2004	2005	2006	2007
CPI Housing Inflation	2.2%	3.5%	4.0%	2.2%	2.5%	2.5%	3.3%	3.8%	3.1%
CPI Overall	2.2%	3.4%	2.8%	1.6%	2.3%	2.7%	3.4%	3.2%	2.8%

According to the CPI, housing costs have inflated at 2% to 4% for the last nine years. Considering what actually happened to housing prices in recent years, you may find this as surprising as we do. The reason is that the CPI uses rents to measure the cost

of home ownership, rather than house and land prices, so to the CPI, the housing bubble never happened. We focus on housing because it is by far the CPI's largest component, over 40% of the measurement, but there are other examples as well. Our point here is not to begin an exhaustive analysis of the CPI (at most we are interested amateurs), but rather to show how relatively simple methodological decisions can produce misleading results. We don't know what the correct figure for inflation should be, but we conclude it has been higher than the CPI suggests.

While that is obviously looking backwards, actual inflation seems unlikely to abate, despite the decline in housing prices. Fundamentally, inflation is the expansion of the money supply. The Fed faces the impossible task of fighting both inflation and the credit crisis with tools that work in opposite directions on each problem. By lowering short term rates and easing credit (expanding the money supply), it can help the credit crisis but aggravate inflation. By raising rates and tightening money, it can fight inflation (and probably strengthen the dollar) but given the state of some large bank and brokerage balance sheets, it may trigger a banking collapse. By its actions to date, the Fed has decisively come down on the side of risking inflation to save our credit system. We aren't criticizing that choice, which may well be the lesser of two evils right now, just recognizing its implications.

Ongoing inflation has many consequences. For one thing, high levels of inflation suggest that the yields on most interest-bearing investments are negative in real, inflation-adjusted terms. To the extent that expectations for future inflation rise, so too will interest rates, which will drive down the value of fixed rate investments.

Inflation also has important implications for business and equity investment. Inflation inevitably destroys value everywhere it touches – in Buffett's words, it is “a gigantic corporate tapeworm.” In order to produce the same level of real, economic earnings, the average company must invest more money in inventory, receivables, replacement machinery and so on, not to grow but simply to stay even. A business may also have trouble matching raising prices with costs, or may suffer reduced demand because of its higher prices.

The traditional method for hedging inflation is ownership of hard assets, such as gold, real estate, and commodities. In theory, as the dollar deflates, the assets hold their “real” value, by going up in dollar price. In practice, each has its own valuation economics and its own supply and demand characteristics. In other words, hard assets are not inflation hedges *at all times and at any price*. We think this is a crucial point. A good current example of this is to look at two finite resources, land and oil. Land was bid up in the housing boom on the basis of scarcity; as fundamental demand now weakens, land values are not protecting against today's inflation. Oil (and other commodities) are also being bid up on the basis of scarcity, but there is plenty of evidence that many of these commodities contain elements of financial speculation. Should demand for commodities weaken (whether due to slower economic growth, less speculative demand, or both), it is not hard to imagine commodities prices following the same path that land prices have. It is possible for hard asset prices to fall, even as inflation nonetheless worsens in other areas.

There is no perfect investment refuge from inflation, but there are “less worse” choices one can make. We believe the best defense against inflation is to own a business that can raise prices ahead of costs (without reducing demand), and earn those “inflated” returns on past capital costs, rather than having to fund ever higher levels of capital investment (such as higher dollar values of inventory or receivables or replacement machinery). This is what avoids the “tapeworm” of inflation, the need to pour ever more capital into the business just to maintain the status quo. Such a theoretically “perfect” business may not exist in the black and white way we just described, but businesses fall all along a spectrum of greater or lesser pricing power and capital efficiency.

It is not easy to find such businesses (or to find them priced cheaply), but they do on occasion present themselves. These characteristics will not seem new to regular readers, because this is what we are always looking for. They are the same characteristics that make for a wonderful business in stable times as well: the competitive position to raise prices without impairing demand, the ability to grow in a capital-efficient way. If inflation unexpectedly recedes, we will rejoice, and these types of businesses will do quite well. If inflation persists, or worsens, it will not leave them unscathed, but they will be able to adjust to their rising costs without the value-destroying need for excessive capital to support growth which is inflationary rather than real.