



What Goes Up Must Come Down!

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A Little Detour into My Murky Past

Nearly a quarter of a century ago, I was a young, naïve, and foolish believer in an economic concept known as rational expectations – an elegant, mathematically beautiful theory with no practical use. In Star Wars parlance, I had effectively been seduced by the dark side. Thankfully, several of my university lecturers were determined to save me from this terrible fate. They insisted on teaching me a very wide variety of approaches to economics including the Marxist perspective and the something known as post-Keynesian macro. I owe them a huge debt of gratitude.

I thought at the time that these were at best esoteric distractions. Little did I know that they were going to provide some of the most profound insights into financial markets, illuminating many of the flaws that conventional thinking ignores. Early on in my career I was fortunate enough to interact with a number of colleagues who used some of these tools to uncover observations that the mainstream had completely missed. This made an indelible impression upon me, and these tools are still the ones I reach for when faced with trying to understand the world.¹

Profit Margins as a Case in Point

Today I find myself once again digging through this toolkit, searching for a way to understand the development of profit margins. Currently, U.S. profit margins are at record highs according to the NIPA data (see Exhibit 1). More freakish still is that these record high profit margins are coming during the weakest economic recovery in post-war history.

At GMO, we are firm believers in mean reversion, and as such record elevation in profit margins causes us much consternation. Of course, we are constantly on the lookout for sound arguments as to why we might be wrong in our assumption of margin reversion. After all, believers in mean reversion are always short a structural break, and such a break clearly matters. For instance, Exhibit 2 shows that in simple trailing P/E terms the U.S. market isn't actually expensive. However, the P/E is only one part of a valuation – it also depends upon the state of earnings. It is the margin component that is dragging our return forecast down. If we are incorrect on our assumption of mean reversion in profit margins, then our forecast radically alters. For instance, if instead of falling to 6% over the next 7 years margins stayed at today's levels, our forecast would be closer to 4.5% p.a.

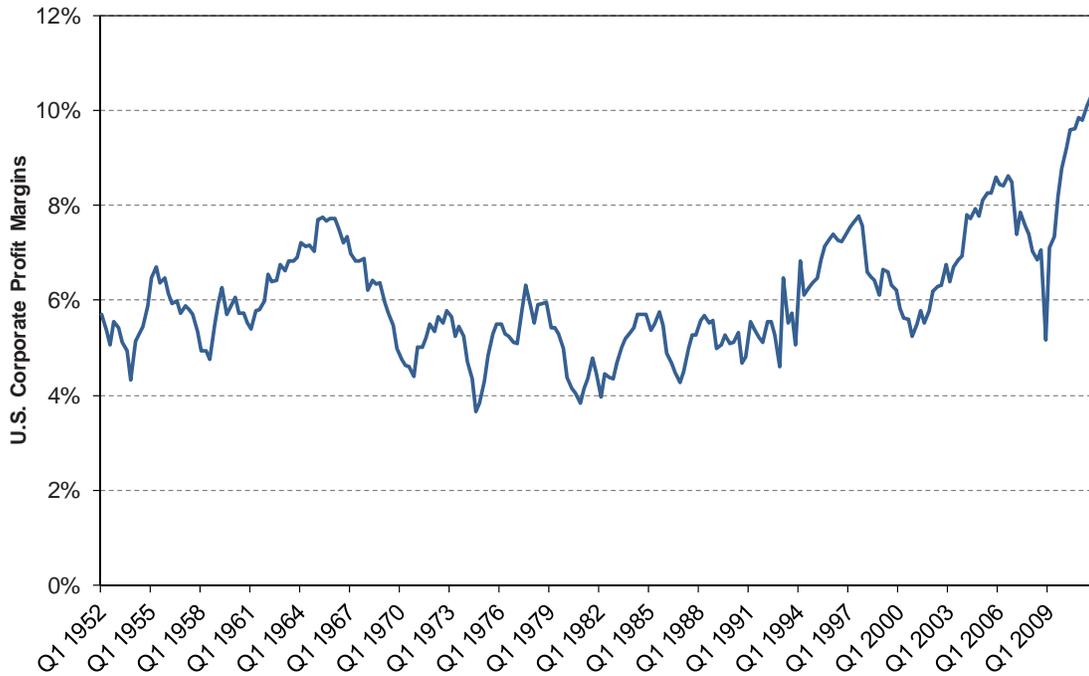
Clearly the first two elements of Exhibit 2 are all about cyclical adjustment: we are assuming that the market goes to a "normal" P/E based on "normal" E. Therefore, it is no surprise that we see the same point from a different perspective when we look at a comparison of the simple trailing P/E using the Graham and Dodd P/E (Exhibit 3). The latter tries to smooth out the business cycle's impact upon earnings by using a 10-year moving average of earnings. Hence, differences between the two measures are a statement of how far earnings are from their "trend." The simple trailing P/E is around 15x and the Graham and Dodd P/E is around 24x, again highlighting the divergence of profits from their long-run normal levels.

Whilst we at GMO fret over evidence of the strained nature of profit margins, the ever bullish Wall Street analysts expect profit margins to continue to rise! Witness Exhibit 4. In our search for evidence of a structural break, this simple-minded extrapolation gives us some comfort because the Wall Street consensus has a pretty good record of being completely and utterly wrong.

¹ In "Is Austerity the Road to Ruin?", a white paper I wrote in July, 2010, I laid out one of those tools, the sectoral balance approach. This white paper is available to registered users at www.gmo.com.

Exhibit 1

U.S. Corporate Profit Margins – Highest Ever!



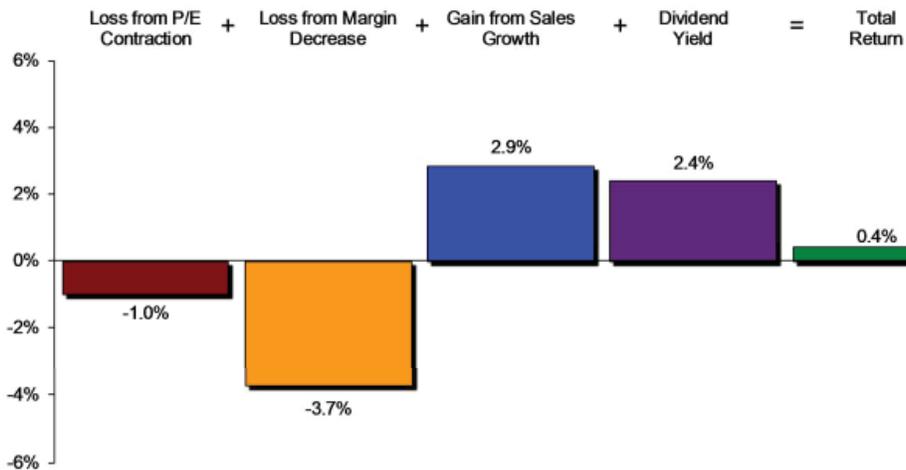
Source: NIPA, Flow of Funds As of 9/30/11

Exhibit 2

S&P 500 7-Year Real Return Forecast

Components of annual return of S&P 500, with regression over 7 years

	P/E	Profit Margin	Real Sales per Share Growth	Dividend Yield
1926-1999 Averages	14.0	4.9%	1.8%	4.3%
Starting Levels	16.1	7.8%	1.9%	2.0%
Assumption for Next 7 Years	15.0 (Terminal Value)	6.0% (Terminal Value)	2.9%	2.4%

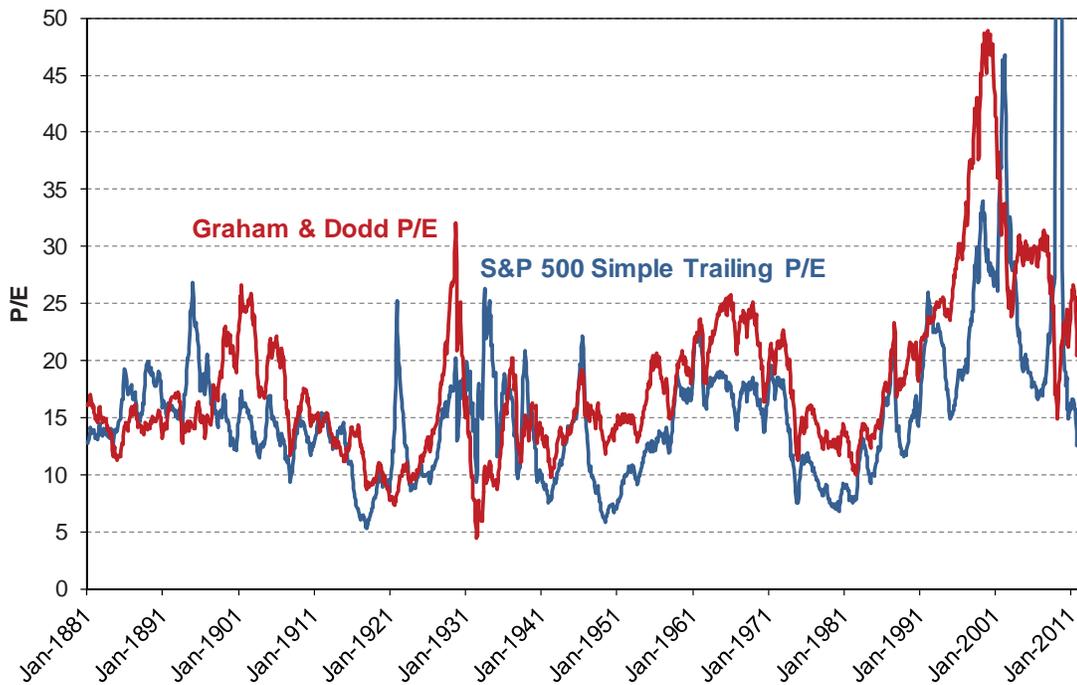


The chart includes forecasts that are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance. Actual results may differ materially from the forecasts above.

Source: GMO As of 2/29/12

Exhibit 3

S&P Simple Trailing P/E and Graham and Dodd P/E

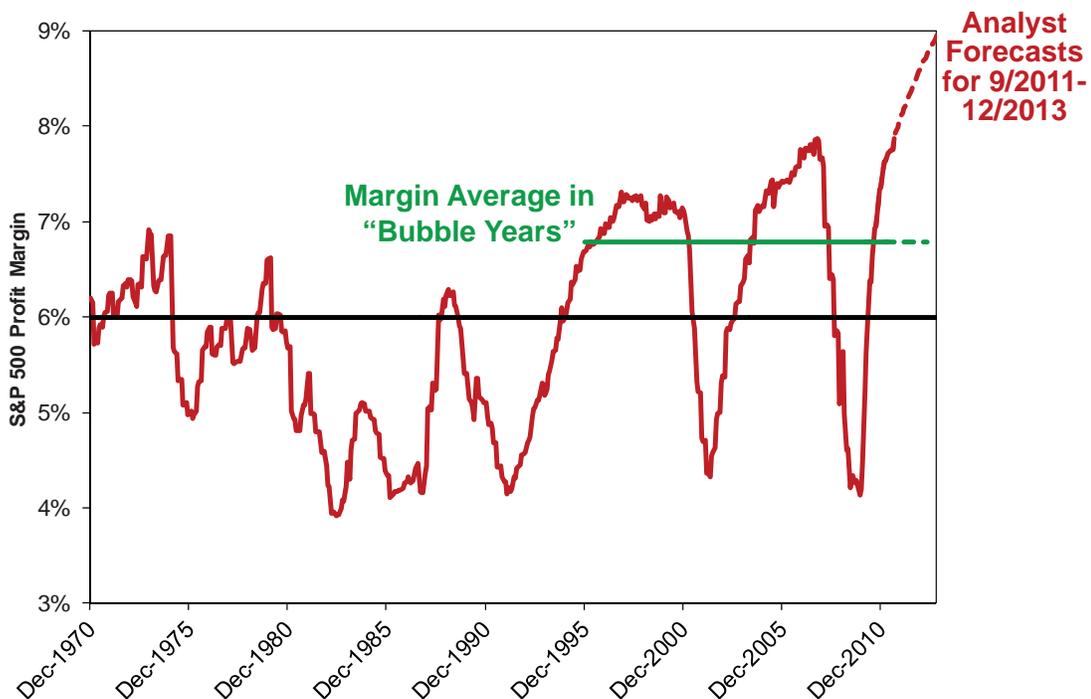


Source: GMO As of 2/29/12

Exhibit 4

S&P 500 Return on Sales

Something's up...



Projections regarding future targets or expectations are only current as of the date indicated. Statements concerning financial market trends are based on current market conditions, which will fluctuate. There is no assurance that such targets will be achieved, and may be significantly different than those shown here.

Source: S&P, Compustat As of 8/31/11

Macro Drivers of Profits

In order to explore what Alan Greenspan would no doubt have referred to as the profit margin “conundrum,” we need to use a framework rarely taught, I fear, in universities these days. It goes by the name of the Kalecki profits equation.² Kalecki was a Polish economist and a contemporary of Keynes. In fact it transpires that the Kalecki profits equation was discovered at least three times, first by Jerome Levy a decade prior to Kalecki, then by Keynes and Kalecki in the 1930s.

Kalecki’s derivation was perhaps the easiest to understand. He used the flow of funds framework and national income accounting to ground his understanding of profits.

As an example let’s take the simplest economy from a macroeconomic perspective, one in which there is no government and no external trade (a private, closed economy in the language of economists).³ In such an economy, total income must equal total expenditure.

Income = Expenditure

If income can be partitioned into profits and wages, and expenditures can be split between investment and consumption, then we have:

Profits + Wages = Investment + Consumption

Rearranging this gives us:

Profits = Investment + Consumption – Wages

Assuming no income is distributed to households from the corporate sector (i.e., no dividends), household savings can be defined as:

Household Savings = Wages – Consumption

Inserting this into the profits equation we now get:

Profits = Investment – Household Savings

This is, of course, an identity – a truism by construction. However, it can be interpreted with some causality imposed. After all, profits are a residual; they are the remainder after the factors of production have been paid. Thus it can comfortably be argued that the left-hand side of the equation is determined by the right-hand side.

The equation can be generalized to an economy that does have a government sector and in which international trade occurs, and in which the corporate sector does pay some of its profits to the household sector. To spare the reader from potentially terminal boredom, I will skip the derivation (to a collective sigh of relief no doubt) and merely present the following:⁴

Profits = Investment – Household Savings – Government Savings – Foreign Savings + Dividends

Let’s briefly examine the logic behind these drivers of profits. Investment (technically, investment net of depreciation) drives profits because when a firm or a household decides to invest in some real asset they are effectively buying the good from another firm, creating profits for that entity. Remember that this is aggregate; any single firm (even the

² For those who have attended the GMO client conferences in the last couple of years, this is the framework that Ben Inker has used to explore profit margins.

³ One of my colleagues pointed out that this is a bit “wonkish,” so I’ve made an attempt to make the profits equation a little more intuitive in the appendix.

⁴ For those interested in learning more about the profits equation and its derivation, I would suggest reading “Where Do Profits Come From,” by Levy, Farnham, and Rajan (1997); www.levyforecast.com/assets/Profits.pdf

world's largest) is minuscule relative to the total amount of investment that occurs, so it isn't possible for any given firm to bootstrap itself into profitability via investment.

Household savings are a drag on profits. This should be fairly obvious. Wages are paid by corporates to households, forming income from the household perspective. If some of this is saved, it is clearly not recycled into spending and, hence, is lost from the corporates' year-by-year profits point of view.

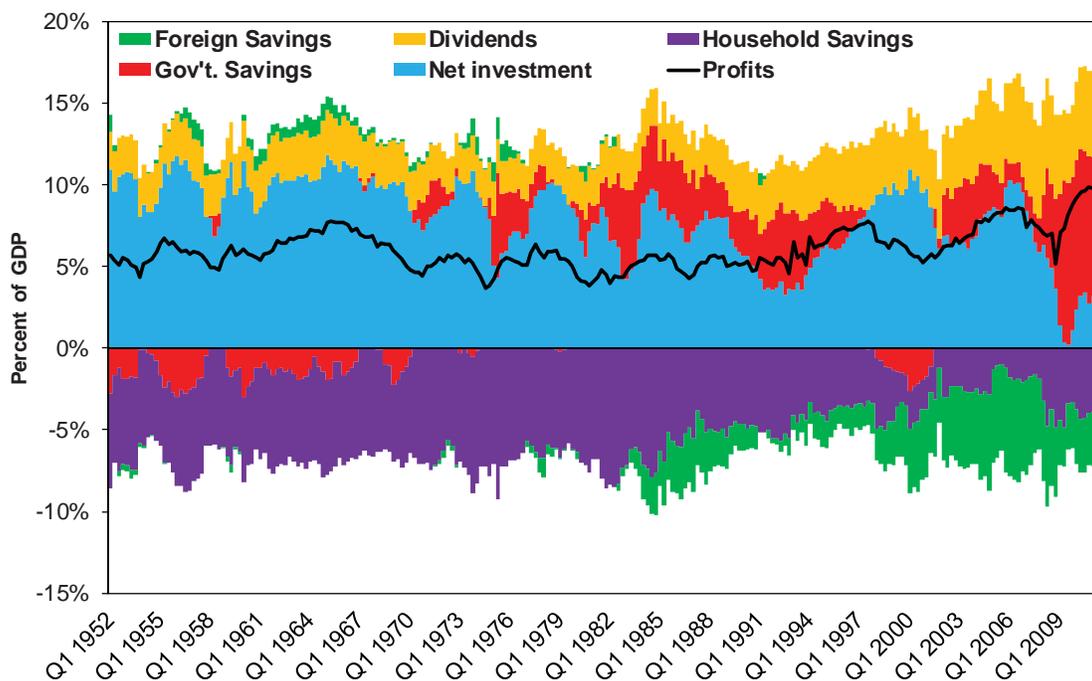
Just like the household sector, government sector savings are a drag on profits. There are many transmission mechanisms between the government sector and the business sector, some reducing profits, some increasing profits. There is the tax route, whereby personal income tax reduces the amount of profits available to the business sector. Conversely, the government is also an employer, paying its employees who in turn spend and create profits. Plus, of course, there is direct interaction between the government sector and the business sector when the government is buying goods and services. All of these interactions (plus others) can be summarized into the government sector savings.

Foreign savings (also known as the current account balance) are also a drag on profits. Remember that the current account balance measures the amount that the U.S. owes to the rest of world (in terms of both actual goods and services purchased and investment flows) minus the amount that the rest of the world owes to the U.S. (again in terms of payments for goods and services and investment flows). If the U.S. is running a current account deficit, then it owes the rest of the world, and this is lost potential profits from the perspective of the domestic business sector.

Finally, we have dividends. This may seem like a counterintuitive source of profits since these are paid out by the business sector to households. However, from the perspective of the household sector, these are a form of income, which can be spent, thereby creating profits for the business sector.

With this brief tour of the drivers of macro profits complete, we are now in a position to see how the various sources have interacted to generate the profits we have actually witnessed. This decomposition is shown graphically in Exhibit 5. Even a cursory glance at the exhibit reveals that net investment has generally been the biggest driver of corporate profitability over time. However, the stand-out engine of corporate profits of late has been the fiscal deficit.

Exhibit 5
U.S. Corporate Profit Margins and Their Macro-Drivers



Source: NIPA, Flow of Funds, GMO As of 9/30/11

To further highlight this dependence of profits upon the fiscal deficit, Exhibit 6 shows the breakdown of profits during 2011. The massive impact that the fiscal deficit has had becomes immediately clear. Government savings have a negative effect on profits; a fiscal deficit is just negative government savings, hence the double minus sign in the table below.

Exhibit 6

Breakdown of 2011 Profits

Driver	% of GDP
+ Investment	+3.2%
– Household Savings	-3.4%
– Government Savings	--7.6%
– Foreign Savings	-2.7%
+ Dividends	+5.5%
= Profits	10.2%

Source: NIPA, Flow of Funds As of 12/31/11

Prognosis for Profits: Not a Pretty Picture

Not only can the profits equation help us understand the drivers of past performance, but it can also help us frame the likely outlook for margins. Corporate investment may increase slightly from today's levels, but to really surge would require a strong economic recovery and the return of Keynes's infamous animal spirits. Leading economic indicators don't suggest that this is currently on the horizon. Likewise, the housing starts data suggests that housing investment is likely to be essentially flat.

The government deficit may stay high this year, due largely to it being an election year. However, it is almost unthinkable that it will remain at current levels over the course of the next few years. As such, unless households start to re-leverage or the current account improves significantly, and assuming that the government moves toward some form of deficit reduction plan, corporate profits are likely to struggle. From this perspective, a structural break in profit margins looks to be difficult to support. So, for the time being we will continue to base our forecasts on the mean reversion of profit margins.

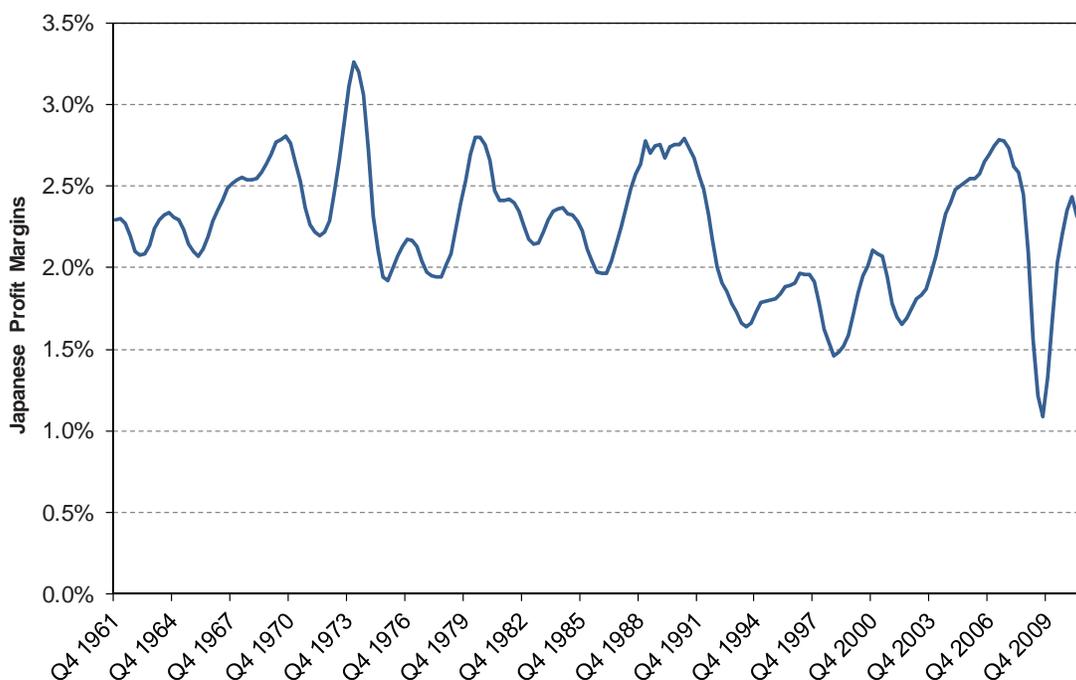
Not Just the U.S.

Of course, exceptionally high profit margins are not the sole province of the U.S. European, U.K., and Japanese margins are all high relative to their own historical averages. Like the U.S., they will be subject to the same drivers of profits at the macro level.

In Japan, we find a situation where the household sector is saving very little, there is a current account surplus, and the government is running a massive fiscal deficit. On these grounds, one would expect Japanese profit margins to be soaring. However, this isn't what we find. As Exhibit 7 shows, Japanese profit margins have been far below those seen in other nations. Given the massive tailwinds listed above, this can really only imply that net investment must have been massively negative (effectively, depreciation has outstripped any new investment). One can only ponder just how appalling Japanese profit margins would have been without all of the government help over the last two decades! Of course, if net investment were to turn positive (or even stop being quite so negative), then Japan could witness a marked improvement in margins.

Exhibit 7

Japanese Profit Margins



Source: Japanese NIPA, GMO As of 12/31/11

In the U.K., the situation is very similar to that of the United States. However, the government is trying its hand at austerity, with an aim to reduce the government deficit by 8% of GDP by 2016/17. Of course, this is easier said than done because it requires other sectors to take up the slack (see Footnote 1). As with the U.S., the household sector is likely to be in deleveraging mode for some time, and a surge in net investment looks unlikely against this weak demand backdrop. Hence, it is likely to be that profit margins will have to fall.

Europe is likely to provide its usual mixed picture. Those nations that embark upon austerity (think the periphery) are likely to see their profit margins collapse (alongside their economies), creating a double whammy for the corporate sector.

Conclusions

To us, the macro profits equation is a simple but powerful tool for understanding the drivers of profits, and helps us assess their sustainability. It is a useful organizing framework for thinking about the possibility of a structural break in profit margins. When we look at the drivers of today's high profit margins, we find fiscal deficits behind the high profit margins of many countries. There is nothing "wrong" with this per se, but it does suggest that moves toward fiscal retrenchment will bring margins back toward more normal levels. It seems unlikely that "this time is different" when it comes to mean reversion in margins: what goes up must come down.

Mr. Montier is a member of GMO's asset allocation team. Prior to joining GMO in 2009, he was co-head of Global Strategy at Société Générale. Mr. Montier is the author of several books including Behavioural Investing: A Practitioner's Guide to Applying Behavioural Finance; Value Investing: Tools and Techniques for Intelligent Investment; and The Little Book of Behavioural Investing. Mr. Montier is a visiting fellow at the University of Durham and a fellow of the Royal Society of Arts. He holds a B.A. in Economics from Portsmouth University and an M.Sc. in Economics from Warwick University.

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Appendix: A More Intuitive Profits Equation

One of my colleagues uttered a groan when I asked him to read a draft of this paper. He said he had never understood this profits equation, pointing out that it wasn't at all intuitive. He challenged me to write a version that didn't contain the terms so beloved by economists. This short appendix attempts to at least partially meet that challenge.

Let's start with a really simple economy that has just two types of participants, firms and households. For this economy as a whole, everything that's earned in total must equal everything that's spent in total. This is simply a truism because if firms are employing households, they are paying them, and household spending goes to these firms because there is nothing else in this economy.

What's earned can be broken down into firms' income and household income. What's spent can be split into spending on "real assets" such as houses, factories, and equipment (which we will call "real spend") and spending on stuff that is used now – food, clothing, etc. (which we will call "spend now"). Of course, these can be split into household and firm real spend and spend now.

From here we can begin to get some insights into a "profits equation" wherein a firm's income must equal all of the spending on real assets (both by households and firms) and spend now (which we can assume is largely the domain of households) minus the amount that firms have to pay households for their work (which is, of course, household income). This is the essence of the profits equation.

In Economist Speak	In English
Two-Sector Private, Closed Economy	Just Two Parts to an Economy: Firms and Households
Income = Expenditure	What's Earned = What's Spent
Income = Profits + Wages	What's Earned = Firm Income + Household Income
Expenditure = Investment + Consumption	What's Spent = Real Spend + Spend Now
Profits = Investment + Consumption – Wages	Firm Income = Real Spend + Spend Now – Household Income
Let Household Savings = Wages – Consumption	Let Household Savings = Household Income – Spend Now
Profits = Investment – Household Savings	Firm Income = Real Spend – Household Savings