The Boom Bust Cycle *is a feature of global equity markets. Hyman Minsky's approach to economic cycles can be used to explain why investors may be motivated to produce booms even in the absence of economic growth and precipitate busts because of market gains. Current zero bound interest rates and constraints on pension fund investments could be exacerbating this effect.*

The Minsky Financing Classification

Hyman Minsky attempted to explain the economic cycles of boom and bust in terms of three types of investment financing: Hedge Financing, Speculative Financing and Ponzi Financing.

Hedge Financing characterises an investment whose cash flows can meet both interest and principal repayments. This sort of financing is all that is available in hard times, when banks have tight lending requirements.

As times improve, the combination of increasingly optimistic entrepreneurs and relaxation of lending requirements allows the emergence of Speculative Financing. In this phase cash flows will meet interest payments but some capital gain (or rolling over of borrowing) is required to pay the loan principal.

As prosperity increases, ever easier credit and ever more hopeful entrepreneurs launch the Ponzi Financing phase in which even the interest payments require capital gains or more borrowing.

Minsky argued that the emergence of Ponzi Financed investment created instability. An economic shock that Hedged Finance investments could withstand inevitably leads to higher default rates from Ponzi financed investments. The resulting tightening of credit wipes out the Ponzi investors, and turns the most Speculative of the Speculative Finance investments into forced sellers and the system spirals down into a recession.

In this phase only Hedge Financing is possible and the cycle begins again.

Financing the Income Requirement of Large Investment Funds

Large investment funds typically have both capital preservation and income mandates. In the case of trusts and pension funds the capital preservation mandate may be a legal obligation or the consequence of responding to the regulatory impact of even temporary reductions of capital.

If the income requirement could be met by 'risk-free' fixed income assets, no investment would be made in equity markets. We can think of any allocation to equities as having been financed by borrowing from the fixed income pot and apply Minsky's criteria.

The income requirement corresponds to the interest in Minsky's analysis while the capital borrowed from the fixed income pot corresponds to the principal to be repaid.

As equity investments *always* carry the risk of capital loss, the financing of the investment can never be better than Speculative.

If 'smart money' pools enter the market at the bottom after a bust, their dividend stream may meet their income requirements. If it falls short, then some capital gain is needed. In this case the investment financing declines from Speculative to Ponzi.

Later entrants receive the same dividends but a lower percentage return. They will always need a capital gain to make up the missing income and so are Ponzi financed from the outset.

The next boom begins as the market recovery persuades more investors to buy equities. As it continues, early entrants have a strong incentive to sell shares, simply because the market has gone up. Selling out locks in their capital gains for guaranteed income. Latecomers are immediately under pressure to sell shares each year just to make their income needs.

The participation of both early entrants and latecomers is inherently unstable. Once the accumulated gains are sufficient to fund income needs for an extended period, a capital preservation mandate will incentivise the 'smart money' to exit the equity markets. If it does so in sufficient volume it will depress prices. This will lead to forced selling by later entrants which can trigger the next bust and start the cycle again.

(cont.)

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The Current Boom

In order to obtain an estimate of what this analysis would predict in the current world wide equity market boom, we can simplify the problem by assuming that fixed income and equities are the only investment classes available. We will also assume that large investment pools have income requirements of 7% per year and that half of their assets are available for equity investment. Because the fixed income assets earn aproximately nothing, the required return on an equity investment is 14% per year.

The Stoxx® Global Total Market Index is meant to include approximately 95% of the free float market capitalisation of the world's equity markets. This index experienced a boom which peaked in 2007 followed by a loss of almost 59% to its subsequent low in March 2009 when the current boom began.

From the bottom of the market in 2009, the Global Total Market Index rose 138% by the end of 2013. During that time, an investor who entered the market in March 2009 had dividend income, net of withholding tax, of just under 5% per year. So even selecting the optimal point for entry, capital gains of over 9% per year would have been needed to achieve the income requirement. Even the smartest of the smart money invested in the equity market during the current boom was Ponzi financed.

Share sales each year to make up the missing income would have reduced the dividend income and also reduced the capital growth relative to the index. By the end of 2013, this would have reduced the capital gain from 138% to 85% even if the equity purchase was made at the optimal point. Realising the remaining gain would provide about 6 years' income of 14% per year. A fund manager in this situation at the end of 2013 who believed that the market would go through a bust and begin to recover in less than 6 years would have been highly motivated to liquidate his equity holdings and wait for the next 'smart money' entry point.

A latecomer, making an equity investment at the end of 2012, would have had dividend income of less than 2.5% in 2013. The price appreciation of the index was just over 20% in the year, so the income requirement would leave just 8% – only 7 months' income. This Ponzi financed investor would face high pressure to sell if faced with even a moderate market reversal.

When even the investors who found the optimal entry point have an incentive to cash out and the latest of the latecomers are in danger of being forced out, the next bust cannot be too far off.

Equity Booms With No Economic Growth

If sufficient weight of money were to be employed under the income and capital preservation constraints described here, one should expect equity market booms which were not accompanied by any significant growth in the economies whose equity markets are booming. This is precisely what we are observing.

The world's 500 largest asset managers have approximately $80 trillion in AUM. The current free float market cap of the world's equity markets is approximately $43 trillion. This suggests that with interest rates locked at zero, the equity market boom bust cycle will continue despite the background economic conditions.

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