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# Sheer Lunacy staring at the Heavens

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- This paper presents a study of correlations between the moon phases and behaviour of financial markets, and suggests a medium-to-long term trading strategy, which can significantly increase profits. It also takes a quick look at planetary alignments and what could be significant in terms of timing for the coming weeks (really bad for stocks).
- For many years, people have been monitoring relations between natural phenomena and industrial performances or markets behaviour in order to be able to estimate future performance and adapt to changes to either maximise the profits or minimise losses. In many cultures, it is well accepted that moon phases could influence peoples' behaviour, (90 countries in the world today use the Lunar calendar as the basis for time measurement), whereas scientists established its relation to rising and low tides. New moon traditionally symbolise the period of low energy, or energy accumulation period, whereas the time of full moon is the period of high energy or spending period. The question arises of whether this observation could be extended to markets behaviour.
- In this paper, we study the performance of 6 indices FTSE 100, S&P 500, DAX, EUROXX 50, Hang Seng, CAC 40 for a period of several decades.
- The **first observation** is that the **daily change in an index is significantly higher on the new moon days than on average**. Thus, for FTSE 100 the average daily change since 1986 was 0.5522 points, which corresponds to 0.02%, whereas the average change on the new moon day was 6.42 or 0.13%, which is 12 times higher than the average change in absolute values. On the full moon the figure was also high, 5.17 points or 0.11%, meaning 9-times higher than average. However, there was no observation of a particular direction of the markets movement on the new or full moon.
- **A more interesting picture is observed if trading indices on a particular day.** We considered trading twice per month, once on the new moon day, or on the next trading day if new moon falls into a non-trading day, and the other is on the full moon.
- Three scenarios are studied: investing £1000 in an index and holding it for the considered period, and two types of trading strategies, which are described below. The first strategy is buying an index worth of £1000 on the new moon, selling it on the next full moon (usually it is in 14-16 days) and then repeating the process: buying the index worth of the money left after the previous transaction on new moon and selling it gain on the full moon. The second strategy is opposite to the first one, implying buying an index worth of £1000 on the full moon, selling it on the next new moon, and repeating these steps further.

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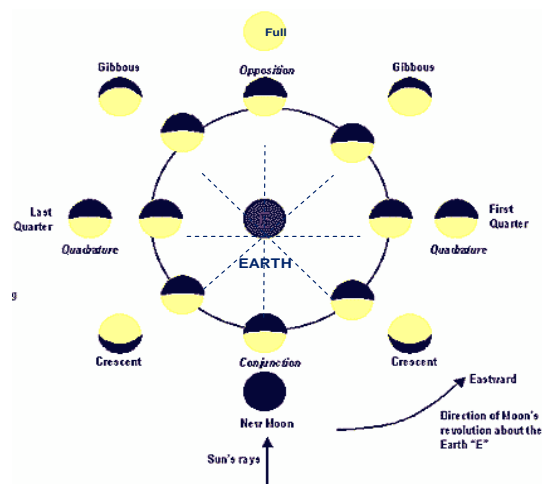
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- If an investor had invested £1000 in FTSE in 1984, by now he would have approximately £5,130 by holding the index, which represents index performance. Whereas trading FTSE according to moon phases would make a big difference. First, consider buying FTSE on the new moon and selling on the full moon, this would result in £12,116 overall figure for the same period (Figure 1). It means more than double the profits: £11,116 versus £4,130. Contrary, buying on full moon and selling on the new moon would result in only £2,036 overall, as shown in the same Figure. This analysis supports the theory of a correlation between index prices and moon phases.
- The similar behaviour is observed in other markets. Figure 2 presents the study of S&P 500 index versus moon phases for the period since 1928 till 2010. Having invested £1,000 in S&P in 1928, by now would outcome in holding £63,864 worth portfolio, while by implementing the proposed moon trading strategy, the value of portfolio would have been £1,502,689.
- The summary of moon trading of indices for different periods is presented in the table below and in the figures 1-6.
- ***As can be observed from the figures, the outperformance of the moon-investing over the ordinary investing is raised on an increasing rate in rising markets, however, it also falls sharply in falling markets. If the overall performance of the market is positive, the strategy significantly outperforms the index. The question arises how this strategy would behave in pure falling markets?***
- Figures 1a, 2a, 4a, 4b, 5a, 5b show the strategy behaviour in falling markets. As can be seen from the figures, the proposed strategy generally enhances the scale of market moves, as movements on the new/full moon tend to be much higher than on average. The effect of applying the strategy in falling markets is generally similar to holding the index, as observed in Fig. 1a, 4a however, could have some positive (Fig. 2a, 5a) or negative (Fig. 4b, 5b) effect depending on the time period and previous performance.
- Consequently, the proposed strategy allows to significantly outperforming an index in the rising market, while having limited effect in the falling market. The latter observation could be implemented as shorting the index on the new moon and going long on the full moon in order to make profits in the falling markets.
- The proposed trading strategy can be summarised as follows: buy an index on the new moon (if this is a non-trading day, buy on the next trading day), hold till the full moon (usually 14-15 days), sell the index on the full moon (similarly, if non-trading day, sell on the next trading day), repeat the investment of the overall amount on the next moon cycle (usually in 14-16 days), enjoy your profits!

The Lunar Cycle – The Moon’s phases. Phases seen from Earth (E)



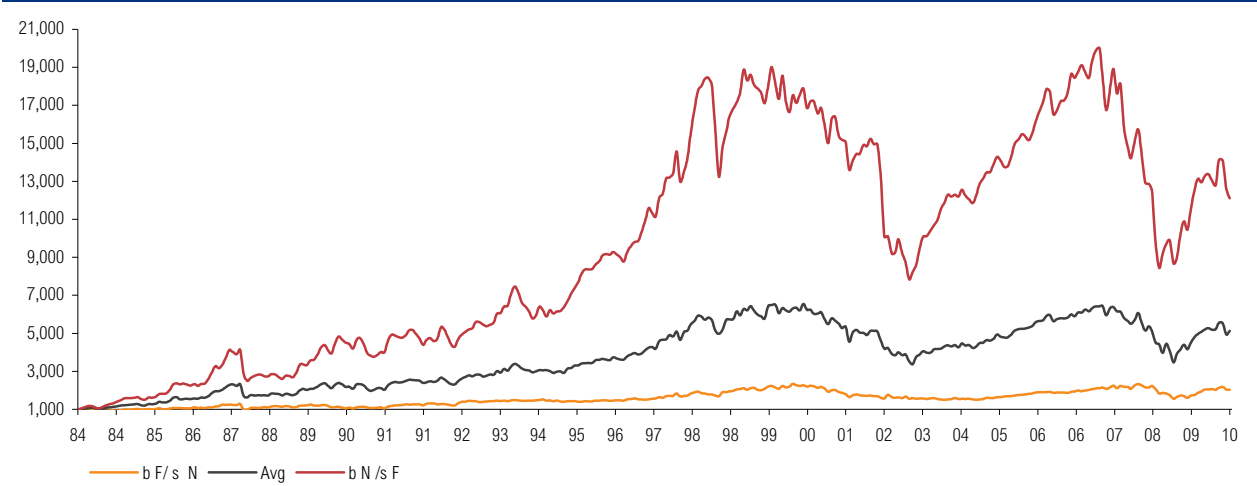
Source: Encyclopedia Americana International

Relative performance of the various stock indices and using moon trading dates

	Period	Amount invested	Index Performance	Moon trading (buy new/sell full)	Compare with index %	Moon trading (buy full/sell new)	Compare with index %
FTSE 100	1984 - 2010	£1,000	£5,130	£12,116	269	£2,036	25
S&P 500	1928 - 2010	£1,000	£63,894	£1,502,689	2388	£2,571	2
DAX	1959 - 2010	£1,000	£17,361	£75,689	457	£3,971	18
EUROXX 50	1986 - 2010	£1,000	£3,084	£4,918	188	£1,770	37
Hang Seng	1964 - 2010	£1,000	£202,867	£778,722	385	£52,801	26
CAC 40	1987 - 2010	£1,000	£2,477	£3,698	183	£1,554	38
Average				645%		24%	
				>100%		<100%	
Conclusion		Over perform the index		Underperform compared to the index			

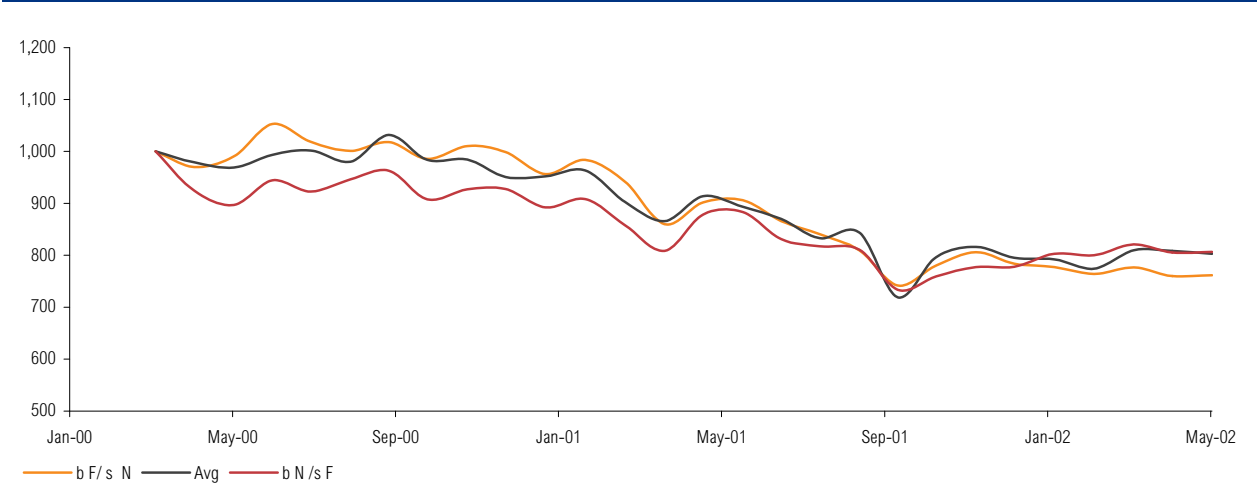
Source: RBS

**Fig. 1. FTSE 100. Data since 1984. If invested £1000 in 1984, by now would have £5130. If carry moon trading buying on the new moon, selling of the full moon, would have £12116**



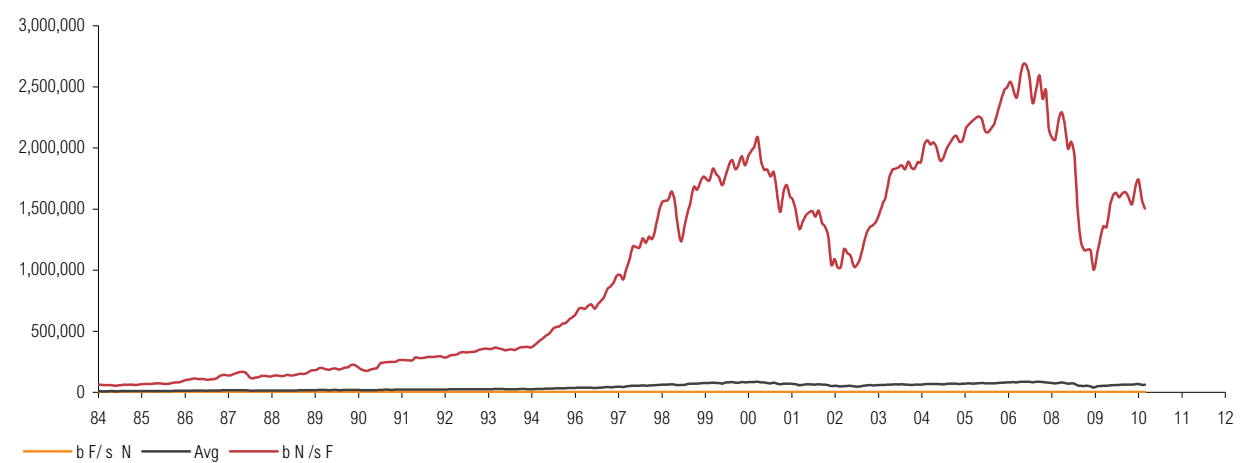
Source: RBS

**Figure 1a. FTSE 100 Falling Markets 2000-02. If £1,000 was invented in 06/03/2000, by 12/05/2002 it would be worth £802. Buying on a New Moon, selling on a Full Moon it would be £806.**



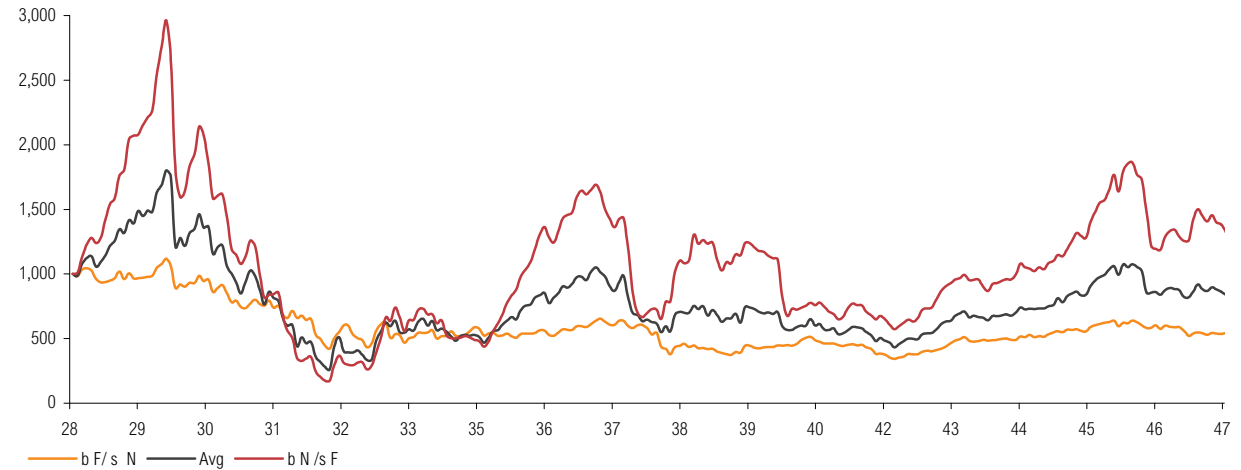
Source: RBS

**Figure 2. S&P500 Data since 1928. £1,000 invested in 1928 would be £63,894 today but by buying on the New Moon and selling on the Full Moon it would return £1,502,689**



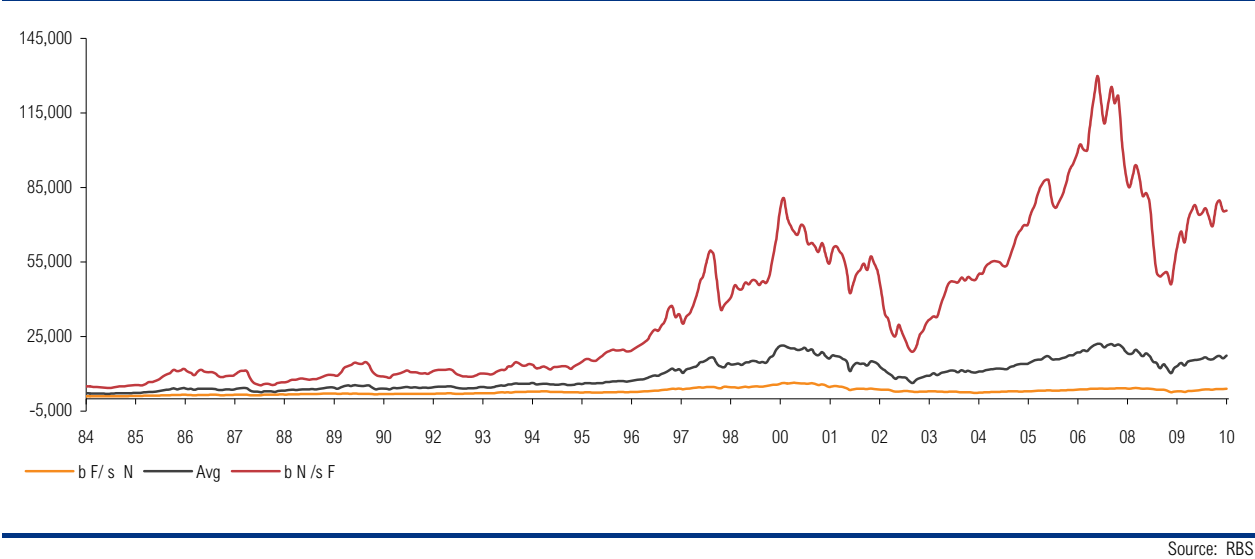
Source: RBS

**Fig. 2a. S&P 500 (Falling markets). Data since 1928. If invested £1000 in 1928, by 1947 would have £867 If carry moon trading buying on the new moon, selling of the full moon, would have £1407**



Source: RBS

**Fig. 3. DAX. Data since 1959. If invested £1000 in 1959, by now would have £17361. If carry moon trading buying on the new moon, selling of the full moon, would have £75689**



**Fig. 4. EUROXX50. Data since 1987. If invested £1000 in 1987, by now would have £3084. If carry moon trading buying on the new moon, selling of the full moon, would have £4918**

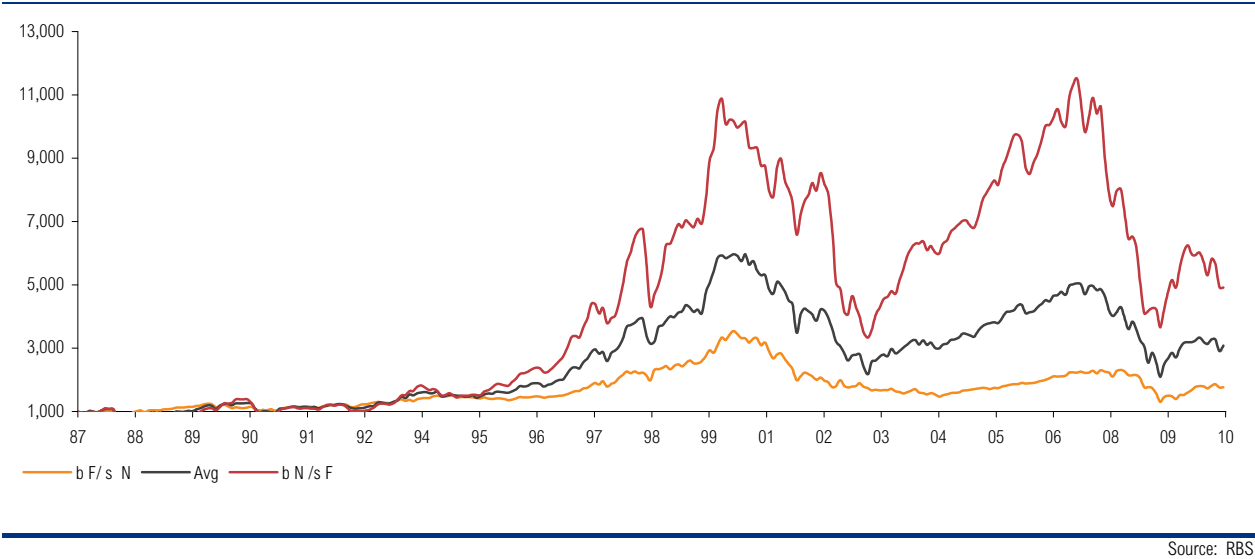


Fig. 4a. EUROXX50 (Zoomed, falling markets)

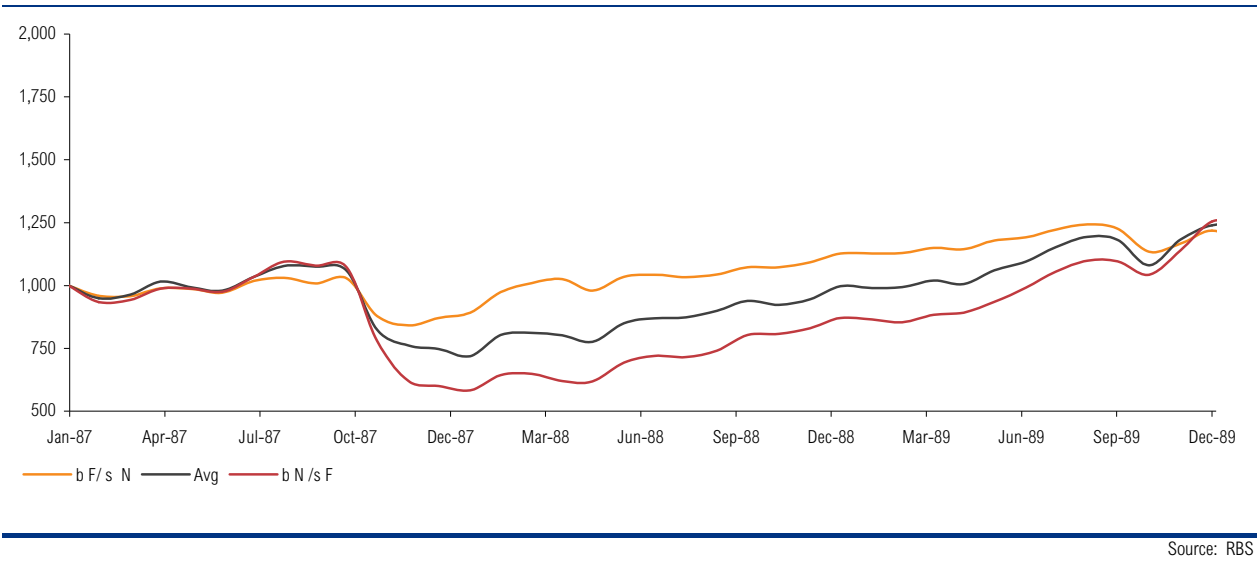
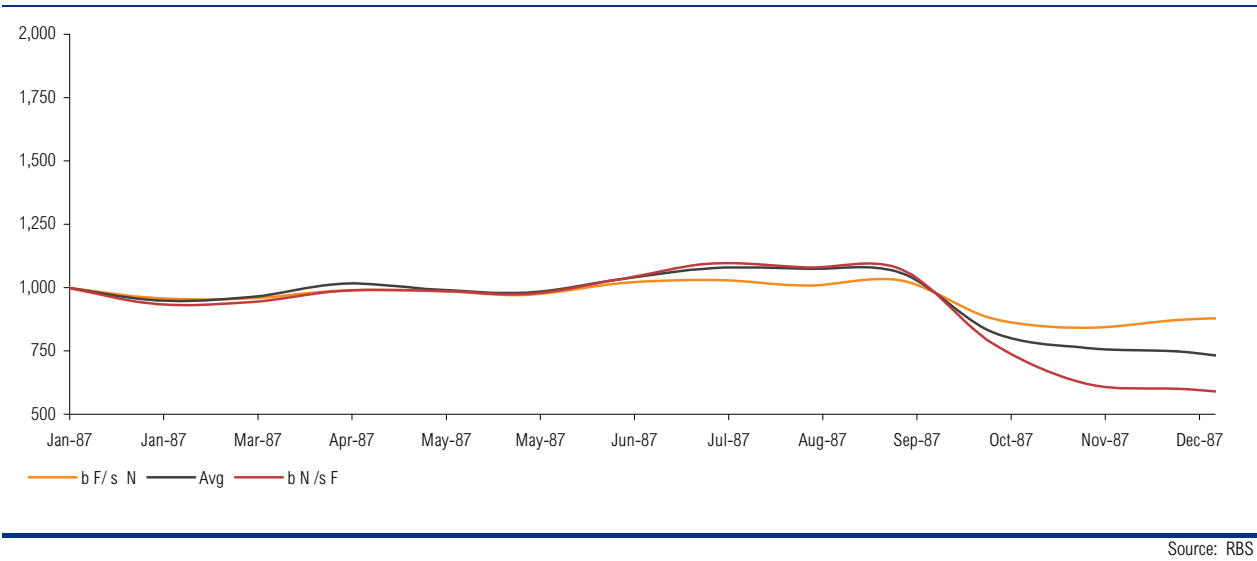
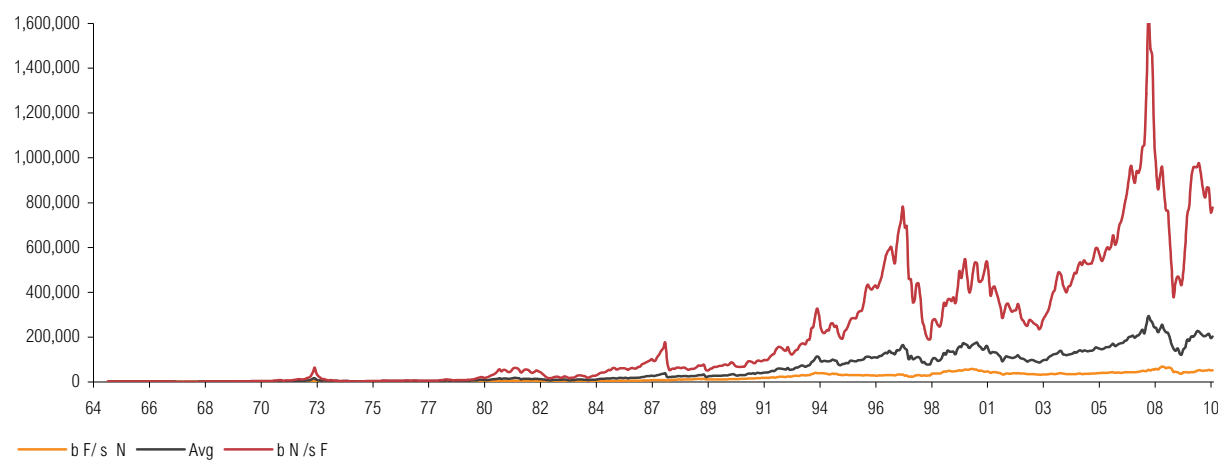


Fig. 4b. EUROXX50 (Zoomed, falling markets)

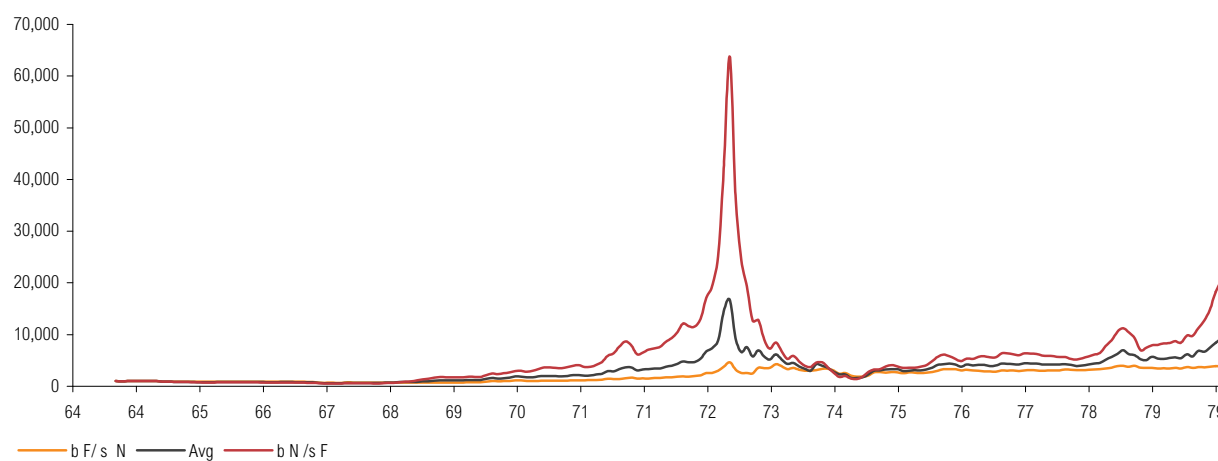


**Fig. 5. Hang Seng. Data since 1964. If invested £1000 in 1964, by now would have £202 867. If carry moon trading buying on the new moon, selling of the full moon, would have £778 722**



Source: RBS

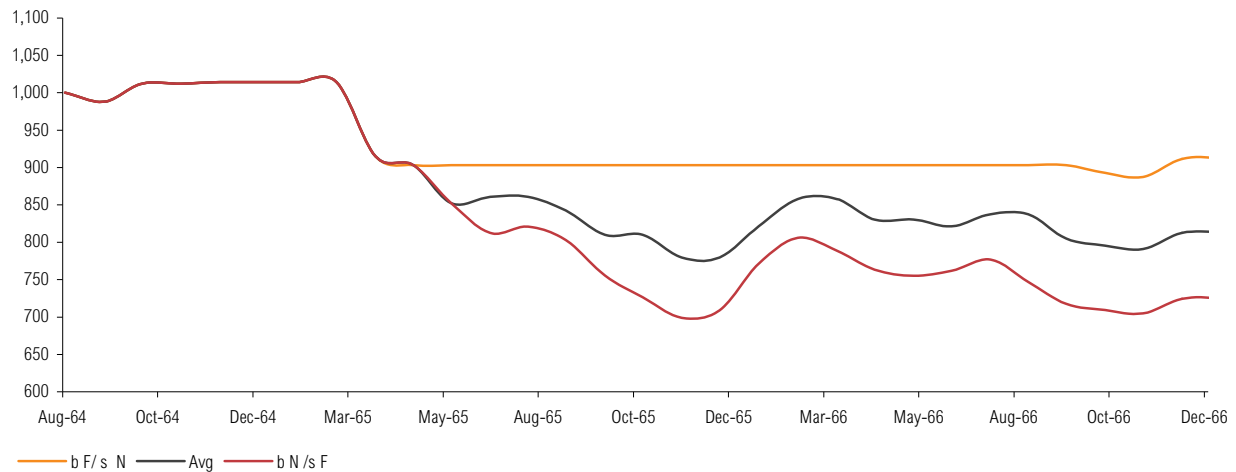
**Fig. 5a. Hang Seng (ZOOM, falling markets)**



Source: RBS

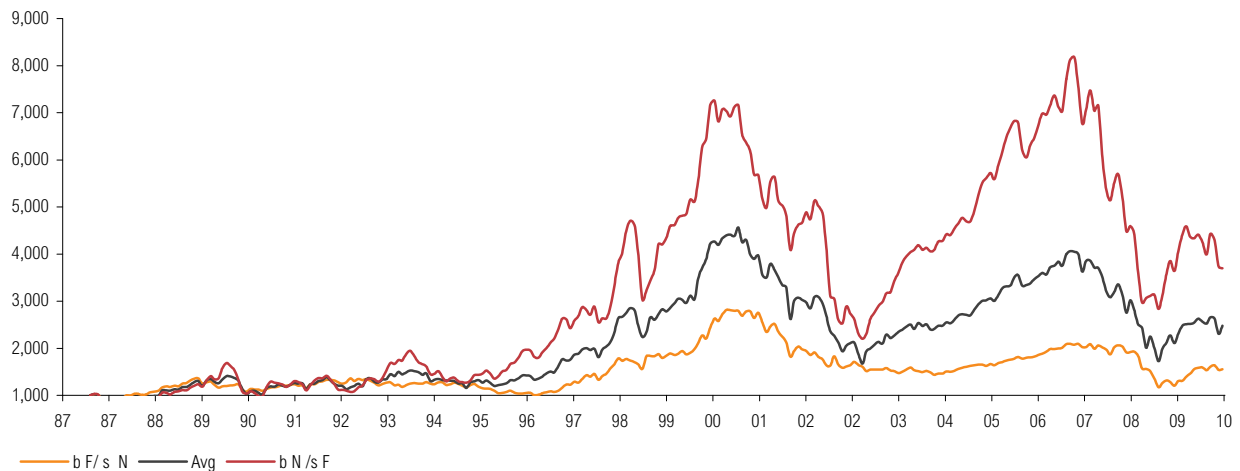


**Fig. 5b. Hang Seng (ZOOM, falling markets)**



Source: RBS

**Fig. 6. CAC 40. Data since 1987. If invested £1000 in 1987, by now would have £2477. If carry moon trading buying on the new moon, selling of the full moon, would have £3697**



Source: RBS

## WHAT ABOUT THE PLANETS?

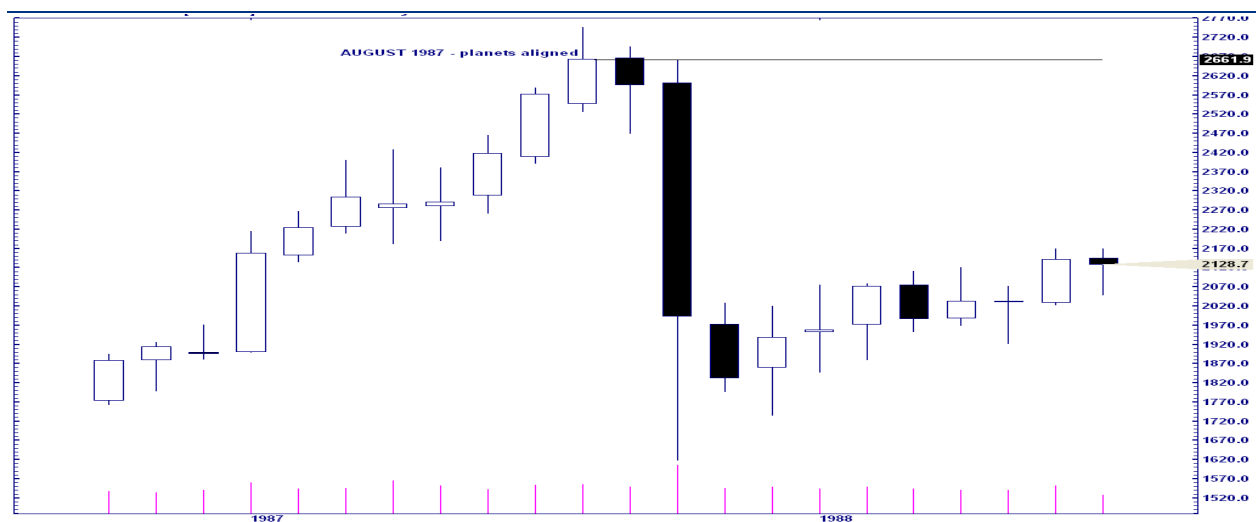
So that's looking as the moon, but what about something even more distant for a bit of fun, but also some consideration is looking at the movement of our heavenly bodies ie, planetary alignments for clues. When the Earth is at the mid-point between 2 planets of 45 90 135 and 180 degrees these are considered as difficult angles and tends to be tough times for stocks.

**On August 24th 1987** - 5 planets were on the same elliptical longitude this last happened 800 years ago. This move preceded the 1987 crash.

**On August 6<sup>th</sup> 2008** - Mars-Uranus had a crash cycle preceding the 2008 collapse.

**This August 1<sup>st</sup> +/- 1 week 5 planets will be aligned** this will equal a cardinal climax and has not happened in 1,000 years ,so watch out stocks markets. The S&P500 index having formed a Head and Shoulders pattern suggests a breakdown target of 880 in the cash market the 61.8% retracement of the move since the 2008 lows, and for the Dow to 8,300. This is my call to happen by early October so a short sharp decline in stocks is potentially brewing and in turn August should be very positive for Fixed Income products and decent flattening of the curve to continue (favourite fly is 2s10s30s) in the US for Swaps 22bp flatter.

Monthly Dow Jones (Aug 24 1987 5 planets were aligned)



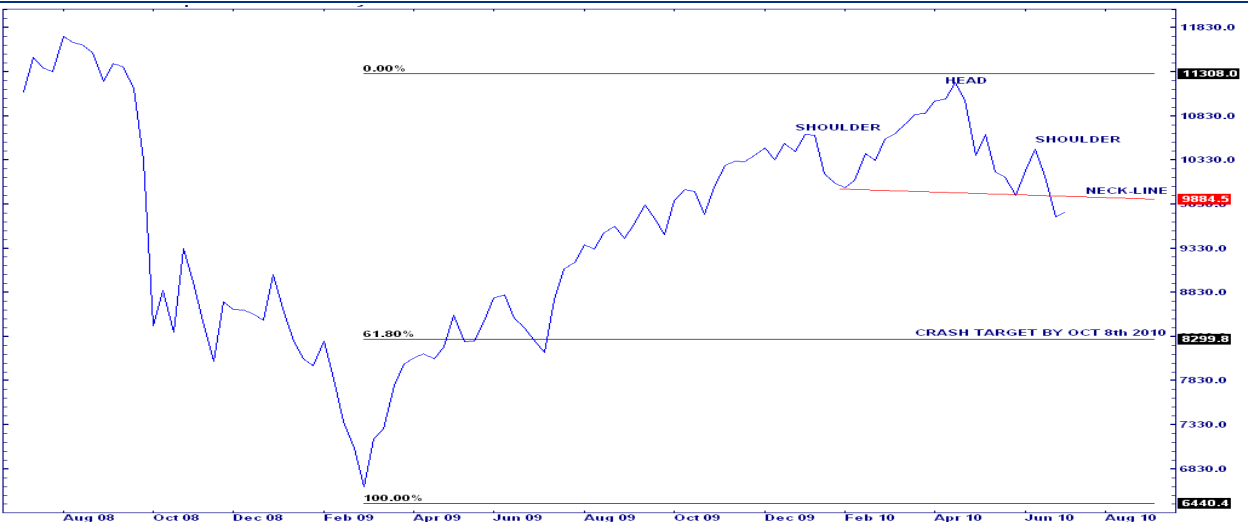
Source: Trademade

Monthly Dow Jones (Aug 6<sup>th</sup> 2008 Mars – Uranus crash cycle)

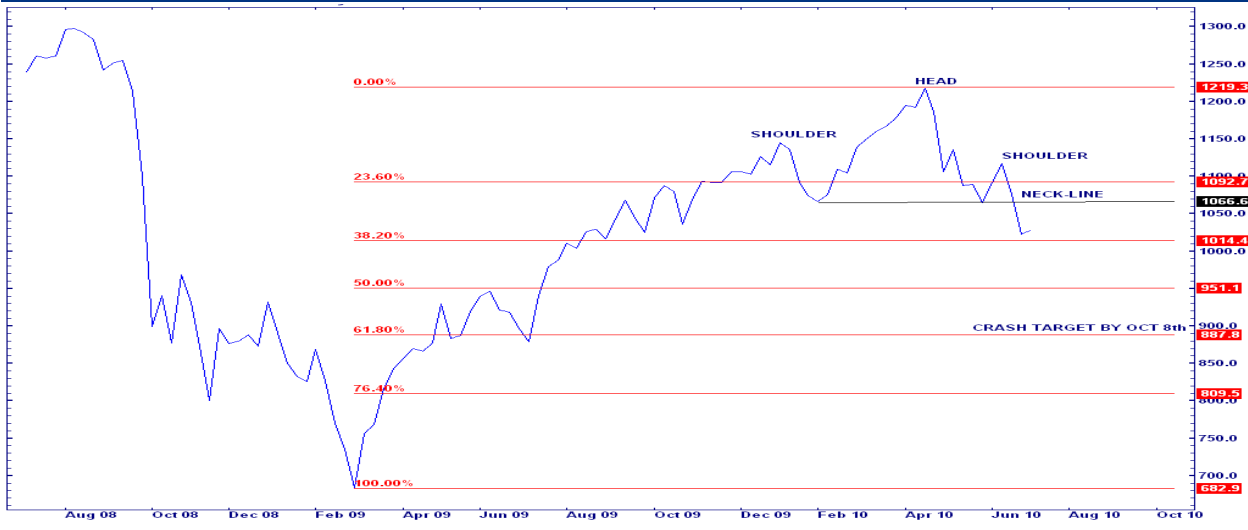


Source: Trademade

Current weekly Dow Jones (line chart) with 8,300 by Oct 8<sup>th</sup> as a crash cycle target depicting a H+S pattern.



Current weekly S&P500 cash (line chart) with 887.00 by Oct 8<sup>th</sup> as a crash cycle target depicting a H+S pattern.



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