## **Time Steps Indicator**

Time Steps utilise a proprietary algorithm to gauge the strength and extent of a trend in any time frame and instantaneously tells the user how many time frames are trending. At least 2 time frames with steps at 2 or more are sufficient to warrant the beginning of a trend. The user has access to short (2,5,15,30 min), medium (60,120,240,480 min) and long term steps (Daily, Weekly, Monthly) for both positive and negative direction The more time frames that are trending, the stronger the overall trend. Trends that extend in time require extension to higher time frames. Statistical evaluation of the Time Step historical analysis reveals bull and bear units of 3, 5, 7, 9,11,13,18 steps however at 7 is considered rare historically.

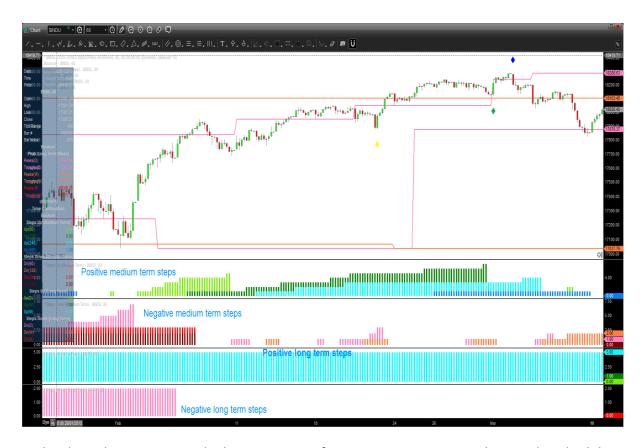
By considering higher time frames whilst using a lower time frame chart, noise is filtered and the underlying trend revealed. The more concurrent time frames trending, the more powerful the trend. Extremes of trend become apparent after steps reach 7 although in any given time frame this may reset to provide a further trend acceleration provided the higher time frame is still trending. Shorter time frame exhaustions (pullbacks) in sustained higher time frame trends become trend trading opportunities.



Above is a 60 minute chart of the Nikkei. The top indicator shows positive medium term steps (60,120,240,480 min). The bottom shows the same time frames in negative direction. The trend begins when 60 minute and 240 minute time frames join forces with both reaching 2 at the same time. The 60 minute time frame exhausts having reached 8 (steps back to zero), but underlying 240

minute trend is still in place with positive steps at 2. Then the 480 minute time frame joins the trend indicating a powerful move is potentially underway. This is confirmed by short term acceleration upward in the form of the 60 minute positive steps accumulating to the upside again.

As trends develop, the focus time frame shifts higher enabling the trader to move timeframe with the trade. The trader should choose the time frame to best suit their level of risk appetite but the higher time frame will always show the likely extent of the trend remaining. As trends evolve traders can also employ Range Deviation Pivots and Volatility Time Bands from the new higher time frame to assess when the trend is likely to be over, or if further trading opportunities are available.



In the chart above we see multiple positive time frame steps occurring simultaneously in both long term and medium term indicating a strong up trend. In such a situation short term pullbacks into support can be used. There are a variety of methods that Dimension 4 provides the trader with to transact on short term pullbacks against the higher trending time frame. These include Divergence, Range Deviation Pivot extremes, shorter time frame Time Step Count Exhaustion (steps go from at least 5 to 0) and extremes of Volatility and Time average bands in the opposite direction of the trend (buying dips in uptrend and selling rallies in downtrend) and executing at Peak Energy or Peak Expansion support/resistance.



In the middle section of the chart above we see a typical sideways period which is reflected by simultaneous positive and negative steps in both medium term and long term. This provides identification of an opportunity to trade the recent range using 4<sup>th</sup> Dimension Peak Expansion and Peak Energy indicator lines as support and resistance. Later we see the negative medium and long term steps disappear. With positive steps then dominating, price goes on to accelerate to the upside.



In the chart above an uptrend dominates early with multiple medium term positive steps reaching 8 (blue and green -120 min and 480 min). The end of the uptrend in the current time frame is marked by a close below the 2<sup>nd</sup> down volatility time band. Although not illustrated for clarity, there was also subsequently a close below the 3<sup>rd</sup> down range deviation pivot further confirming the end of the intermediate trend. The downtrend then begins as negative medium term step time frames accumulate simultaneously (120 min, 240 min and 480 min). Divergence sell signals or price hitting higher range deviation pivots in the current time frame would be tradable opportunities. The end of the trend is marked by a close above second up volatility time band and multiple time frame positive medium term steps accumulating.

Within the Set-Up parameters, the Time Frames can be adjusted in each of the three studies (Short Term, Medium Term, Long Term). The default settings are recommended.

