Using The Natural Order
Projected Fibonacci Targets

Here's a new technique for determining price targets after a breakout from a previous price swing.

by Mohab Nabil

Fibonacci analysis, which is employed by practitioners of various sciences such as astronomy, mathematics, and architecture, also has a role in projecting price targets of financial securities. After working with Fibonacci ratios for several years, I developed a new technique for determining price targets after a breakout (up or down) from previous price swings, which I call *projected Fibonacci targets* (PFT).

THE BASICS

Before applying the PFT, it is important to understand that broken support levels often become resistance levels during subsequent rallies, especially if a broken support level coincides with a Fibonacci retracement level.

Figure 1 shows a hypothetical example of a price downswing from point A to point B, followed by a consolidation area, and finally a breakdown to point C (a classic example of a downtrend). The broken support level established during the consolidation now acts as resistance for the subsequent rally. The resistance at $60 also represents a 50% retracement of the move from A to C ($100 to $20).
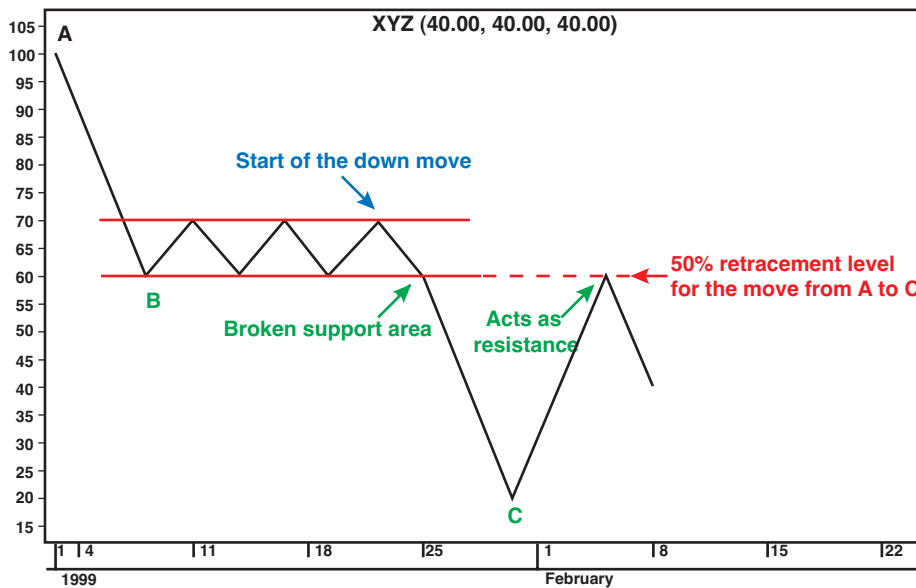

FIGURE 1: CLASSIC EXAMPLE OF A DOWNTREND. Once a support level is broken, it acts as a resistance level.

Figure 2, the chart of Xilinx, Inc. (XLNX), from October 4, 2000, to November 2001 shows a downswing from point A to point B. The trend halted temporarily and formed a consolidation area with support at around $58. After breaking below $58, the new downswing reached a low of $35. Prices then rallied from this low back to $58 — an important level, because it was the support level of the previous consolidation. It has now reversed its role and is acting as resistance. The move from $35 to $58 is approximately a 38.2% retracement of the move from $92 to $35 ($92 - $35 = $57 * 0.382 = $21.77 + $35 = $56.77).

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FIGURE 2: XILINX, INC. (XLNX). The breaking of support and resistance levels coincides with Fibonacci retracements

This example reveals that when a resistance level (or a support level) is formed by breaking previous support (or breaking previous resistance), it often coincides with a Fibonacci ratio (of 23.7%, 38.2%, 50%, or 61.8%) of the whole move, resulting in a resistance (or support) level that is not easily breached.

THE TECHNIQUE

The major premise behind the P$_{FT}$ is that market swings in the same direction relate to each other from the point of breakout. Hence, the move from B to C in Figure 2 relates to the move from A to B by a Fibonacci ratio. It is important to note the relationship between the two swings originates from the breakout of the support or resistance level, and not from the beginning of the second swing in the same direction.

Based on this principle, we can conclude that breakout points represent important Fibonacci retracement levels for subsequent corrections. Therefore, price targets can be derived by assuming that a breakout point is one of the Fibonacci retracement levels, and that the trend should continue till it breaks a support/resistance level (established by the Fibonacci retracement levels) and starts a countertrend correction.

By using this technique, you will be able to project future price targets:

Projected Fibonacci targets (PFT) use only four Fibonacci ratios: 23.7%, 38.2%, 50%, and 61.8%. If prices break out of a horizontal support/resistance level, apply the following formula:

PFT = (Fibonacci ratio * A – B) / Fibonacci ratio – 1

Where:

A is the point where the first price swing started
B is the point where the first price swing ended (horizontal support/resistance)
Fibonacci ratio is one of the following: 23.7%, 38.2%, 50%, or 61.8%

You will have to solve for four targets, one for each of the four Fibonacci ratios. An example of P$_{FT}$ application is displayed in the chart of the Dow Jones Industrial Average (D$_{JIA}$) in Figure 3.

DOW JONES INDUSTRIAL AVERAGE (9,587; 9,630; 9,520; 9,608)

PFT4 —————————

PFT3 —————————

PFT2 —————————

PFT1 —————————

B ——————————

A

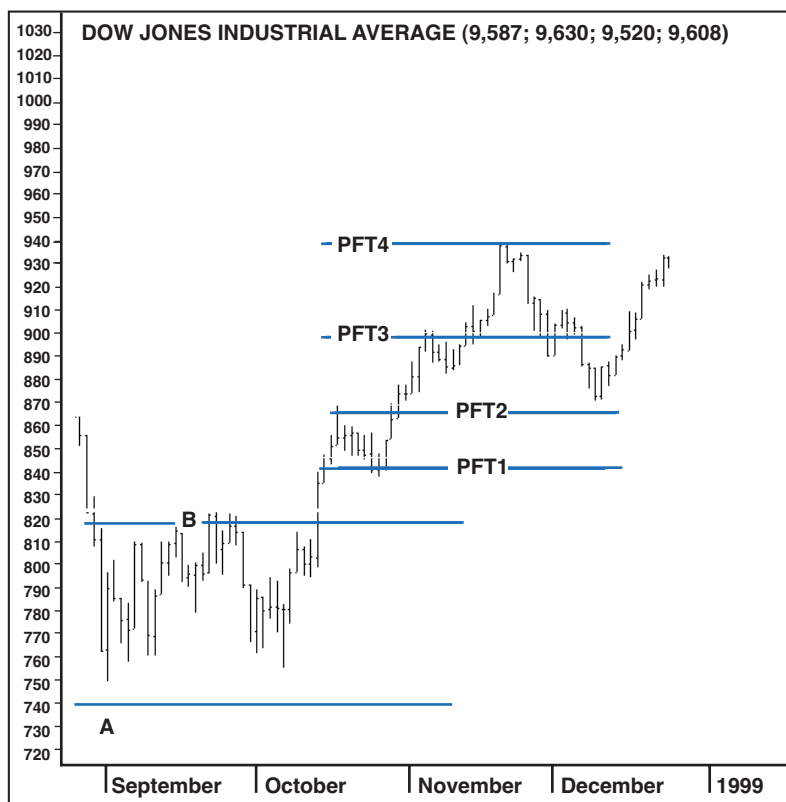September   October   November   December   1999

FIGURE 3: PROJECTED FIBONACCI TARGETS IN AN UPTREND. These four levels are calculated from the breakout point. Note how price levels coincided with the four levels.

An upswing beginning from point A (7400) to point B (8180) was followed by a downside correction. It is only after prices break out above the resistance level that you can apply the PFT. Then you can calculate the four target levels using the PFT formula:

23.7% retracement or 0.237
(0.237 * 7400 – 8180) / 0.237-1 = PFT1
PFT1 = **8420**

38.2% retracement or 0.382
(0.382 * 7400 – 8180) / 0.382-1 = PFT2
PFT2= **8662** (which halted the advance temporarily)

50% retracement or 0.50
(0.50 * 7400 – 8180) / 0.50-1 = PFT3
PFT3= **8960** (which halted the advance temporarily)

61.80% retracement or 0.618
(0.618 * 7400 – 8180) / 0.618-1 = PFT4
PFT4= **9440** (which halted the advance temporarily)

You can apply this technique to a downswing in a similar way. The weekly chart of the FTSE 100 index in Figure 4 shows a downswing starting at point A (6951) and ending at point B (5973), followed by a congestion area that lasted for more than 10 months. After this consolidation, prices broke out below the support level.
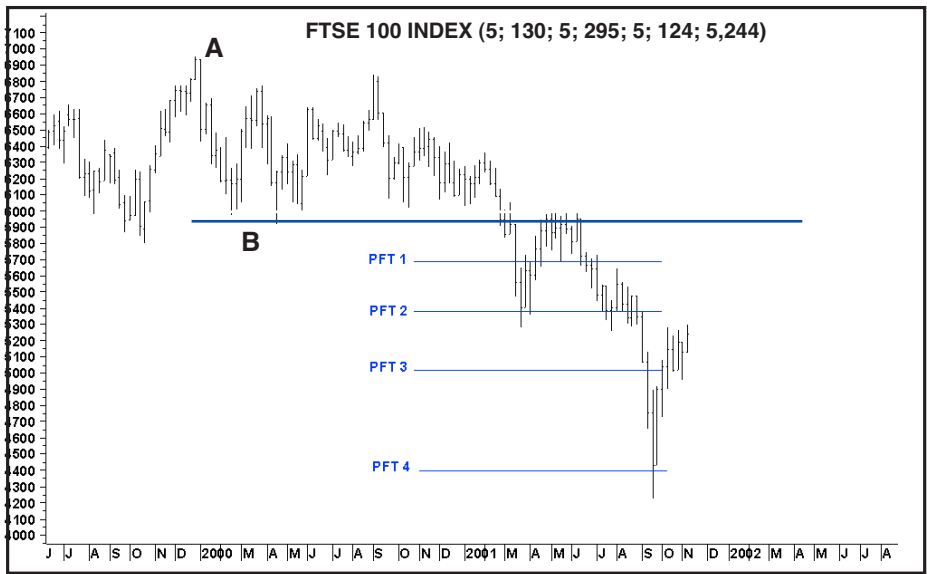
FIGURE 4: PROJECTED FIBONACCI TARGETS IN A DOWNTREND. After support is broken, the four PFT levels can be calculated.

By applying the P<small>FT</small> formula, you come up with the following price targets:

23.7% retracement or 0.237
$(0.237 * 6951 - 5973) / 0.237 - 1 = PFT1$
PFT1 = **5670**

38.2% retracement or 0.382
$(0.382 * 6951 - 5973) / 0.382 - 1 = PFT2$
PFT2 = **5368** (which halted the decline temporarily)

50% retracement or 0.50
$(0.50 * 6951 - 5973) / 0.50 - 1 = PFT3$
PFT3 = **4995**

61.80% retracement or 0.618
$(0.618 * 6951 - 5973) / 0.618 - 1 = PFT4$
PFT4 = **4391** (which halted the decline temporarily)

MONEY MANAGEMENT
The P<small>FT</small> points may also signal trend reversals, making them a handy tool for applying money management strategies. The chart displayed in Figure 5 illustrates how this can be done.
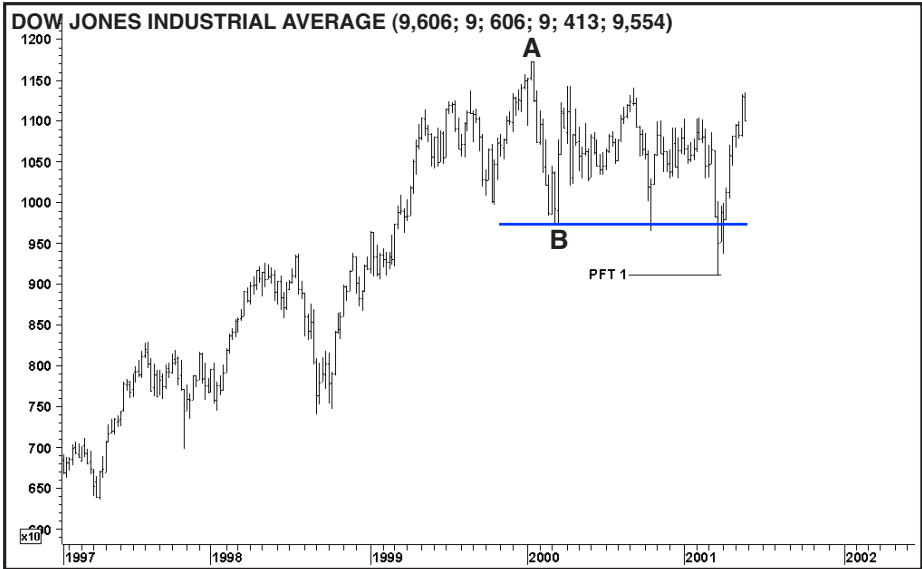

FIGURE 5: PFT AS A MONEY MANAGEMENT TOOL. The first PFT identified a reversal point that could be used as an exit point.

A downswing starts at point A (11,750) and ends at point B (9732), followed by an upward reaction, and ultimately a breakdown through support at B. If you apply the Pꜰᴛ formula, you can calculate the value for the first projected target:

23.7% Fibonacci retracement:
$(0.237 * 11750 – 9732) / 0.237-1 = PFT1$
PFT1 = **9105**

The first Pꜰᴛ was reached, as the low for the Dᴊɪᴀ was 9107, only two points away from Pꜰᴛ1. As can be seen in Figure 5, Pꜰᴛ1 marked an important reversal in the weekly trend as the Dᴊɪᴀ rallied again, suggesting that you could use it as your exit point.

Conclusion
Like all indicators, the projected Fibonacci target (Pꜰᴛ) is not a stand-alone technique, but because of its effectiveness and accuracy in projecting price targets, it should be one of the many tools in a trader's toolbox. It works because same-direction market swings are often related by Fibonacci ratios from the breakout point of previous support or resistance levels. These points can be combined with sound money management strategies to minimize risks and maximize profits.

Mohab Nabil, a full member of the Society of Technical Analysts UK, has published numerous articles on technical analysis for both Egyptian and international journals. He teaches a technical analysis course at Regional Information Technology Institute (Rɪᴛɪ) in Cairo, Egypt. He trades the US equity markets and carries out his own research, with his main focus on pattern recognition and cyclic analysis. He may be reached at mohab12@yahoo.com. With special thanks to Mr. Norris.

Suggested reading
Beckman, Robert [1992]. *Power Timing*, Probus Publishing.
DiNapoli, Joe [1997]. *Trading With DiNapoli Levels: The Practical Application Of Fibonacci Analysis To Investment Markets*, Coast Investment Software.
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Pesavento, Larry [1997]. *Fibonacci Ratios With Pattern Recognition*, ed. Steven Shapiro, Traders Press.
Sklarew, Arthur [1980]. *Techniques Of A Professional Commodity Chart Analyst*, Commodity Research Bureau.
‡Product name (Company name)

Sidebar
FIBONACCI RETRACEMENT LEVELS
1 **23.7%**
2 **38.2%**
3 **50.0%**
4 **61.8%**