

For your information, this is the sample chapter inside Price Action and pattern Trading Course (Mastering the Fifth Regularity for the Financial Trading).

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### 3. The Five Regularities in the Financial Market

The Financial Market is the place where different investors are trading securities like equities, bonds, currencies and derivatives. It is the market place to facilitate the exchange of securities between buyers and sellers. Loosely speaking, the financial market works like the auction market where buyers enter competitive bids and where sellers enter competitive offers at the same time. However, unlike auction market, in the financial market securities are often traded without delivering actual physical goods. Although some companies can use financial market to hedge their physical positions, in this book, we will assume that you are more of speculator who wants to profit from the market dynamics. Various buyers and sellers with different attributes, different geographic location, different purchasing power and different financial goals, forms the daily transactions of the financial market. Therefore, the dynamics of financial market can be represented as the crowd behaviour. It is not necessarily perfectly rational place but the fundamentals play some important role behind the market dynamics up to some degree.

For traders and investors, it is important to develop the right trading strategy for the market. Good trading strategy never comes blindly. Understanding the

underlying dynamics for the financial market is the important requirement to build a solid trading strategy. Then, what is the underlying dynamics for the financial market and how can we study them to benefit our trading and investment? Scientists had a strong interest in the dynamics of the financial market for many decades. They have extensively studied the dynamics of the financial price series in the Stock and Forex market. The simplest but most effective way to study the dynamics might be the decomposition approach. In decomposition, literally we are breaking down some complex system into the simple and digestible bits. Then we use this decomposed bits to predict the behaviour of the complex system.

When we apply the decomposing technique for price series, the price series can be decomposed into several sub price patterns. In fact, the sub price patterns are the regularities that constitute the dynamics of the financial price series (Figure 3-1). For trading and investment, we make use of the knowledge of these regularities to predict up or down movement of the financial market. All the known trading strategies, including simple and complex ones, are based on some of these regularities existing in the price series. Remember that none of trading strategies is merely created to offer you just some luck or based on some random theory.

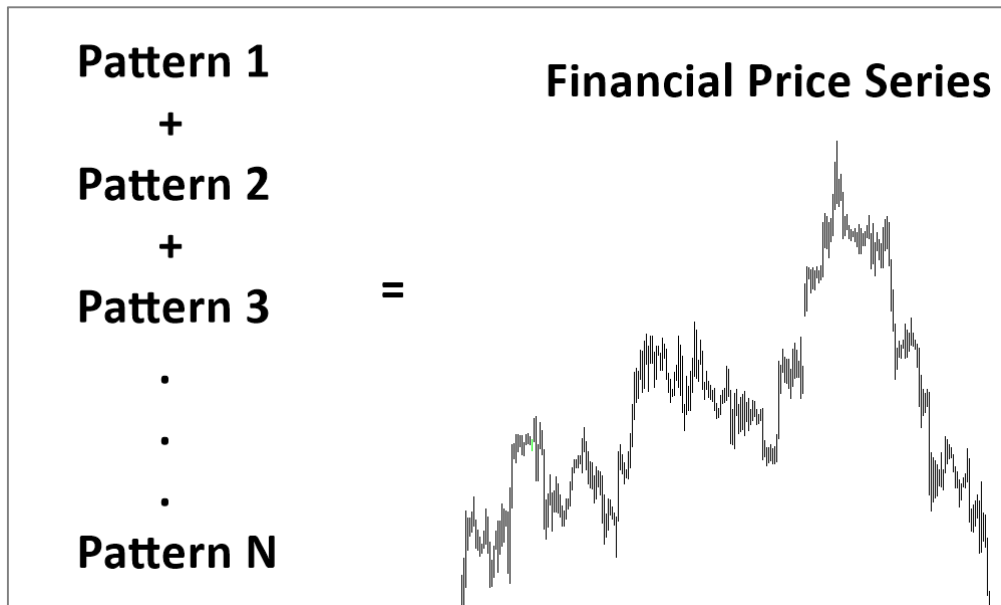


Figure 3-1: The concept of the decomposition for the financial price series.

In Figure 3-1, what could be the pattern 1, pattern 2, pattern 3 and pattern N making up the real world financial price series? Yet, many different version of decomposition techniques exist to describe the price patterns in the financial market. Among them, Gardner’s version considers the trend and seasonality as the main underlying components of the price series data (Gardner, 1987, p175). Many traders are already familiar with trend in the financial markets. For example, many technical indicators like moving average and MACD were developed to visualize trend in the financial markets. Seasonality is literally seasonal fluctuations in the market. It is also used by many traders. For example, because the sales of Ice Creams increase during summer, stock price for Ice Creams Company can go up due to the increased profits during summer. This sort of patterns will make up the seasonal fluctuations.

The Gardner's framework is intuitive and easy to understand because trend and seasonality are the backbone of many analysis techniques used for the univariate price series in many scientific fields. Although Gardner's framework does not mention about random process explicitly, his framework already assumed that any price series include some random process.

Depending on their underlying dynamics, the price series can show the multitude of behaviours because real world price series are made up from different magnitude of each price pattern. For example, sometimes, the price series can exhibit strong trend without seasonality and vice versa. Sometimes the price series can exhibit some trend with some seasonality. In the Gardner's trend-seasonality framework, we can generate twelve different behaviour of the price series by combining the basic trend and seasonal patterns as shown in Figure 3-2. Scientist uses this framework to categorize many real world price series data set for prediction purpose. Then, what is the practical use of the Price Pattern Table in Figure 3-2 for traders? As a trader, we can develop trading strategies to capture these price patterns within the price series. For example, most of technical indicators are created to capture trend pattern in the price series. Price patterns in price series are regularities, which help us to predict the price series into the future. Financial trading is based on our prediction for the future market. We buy EURUSD because we predict that EURUSD have the high chance to go up. We sell EURUSD because we predict that EURUSD have the high chance to go down. If we understand the existing regularities of the financial market better, then we will likely make better trading and investment decision too.













	Nonseasonal	Additive Seasonality	Multiplicative Seasonality
Constant Trend			
Linear Trend			
Exponential Trend			
Damped Trend			

Figure 3-2: The original Gardner's table to visualize the characteristics of different time series data (Gardner, 1987, p175). Gardner assumed the three components including randomness, trend and seasonality in this table.

In spite of the fact that trend and seasonality are the important price patterns in the financial market, practically the entire financial market will not fit to this trend-seasonality framework alone. If the market was so predictable with these two components only, then traders and investors were able to make money much easier. Maybe you can also take advantage on buying shares of Ice Cream Company during April and selling them late August. If the pattern is there, then

you should do that. However, in the highly competitive and liquid financial market, this is not the case. In many cases, the trend and seasonality might be the less significant components in the financial price series in the Stock Market and Forex in comparison to the data obtained from the business and social studies. The Gardner's trend and seasonal framework can work well for business and some social data set but it might be oversimplified for the case of the financial markets.

Instead of the two components framework with trend and seasonality, in this book, we propose the three components framework. The three components include Equilibrium process, Wave process and Fractal-Wave process. These three components can serve to conceptualize the basic price patterns existing in the financial price series. Just like the trend and seasonal components in the Gardner's framework, these three components are the building blocks to explain more complex price patterns in the financial price series and to predict the future movement of the price series. Just to convey our idea, we will explain these three components in brief, before we expand each in more details from the next chapter.

The Equilibrium process is equivalent to the trend in the Gardener's framework. However, it is also the same term "equilibrium" used in the supply- demand economic theory. Literarily it is the market force moving the price to release the unbalance between supply and demand. Wave process is any cyclic patterns repeating in the fixed time interval. Wave process includes the concepts of additive and multiplicative seasonality in the Gardner's model. Furthermore, Wave process includes other complex cyclic behaviour, which can be described with the multiple of combined sine and cosine waves. Finally, the Fractal-Wave process is the representation of the Fractal geometry in the time dimension.



Therefore, it is the self-similar process repeating in different scales. In plain language, Fractal-Wave process refers to the repeating patterns with varying scales. For example, trader might remember that the price patterns in the S&P 500 before 2008 financial crisis. He can come across the similar price patterns in lower timeframe or in other instruments. Because he has already seen that the price pattern led to the huge bearish movement for S&P500 before 2008 financial crisis, he would take the sell action again whenever he recognize the similar patterns from lower timeframe or from other instruments.

Just as Gardner visualized the possible combinations of trend and seasonality in three columns in Figure 3-2, we can visualize the possible combinations of these three components in five columns. In Figure 3-3, first three columns including Equilibrium Process (=trend), Additive Seasonality and Multiplicative Seasonality are identical to the Gardner's three columns. Fourth column includes any simple and complex cyclic patterns, which can be described with the combined sine and cosine waves. Fifth column describes the Fractal-Wave process with Equilibrium process. Each column represents a distinctive regularity with its own behaviour. We can describe the five columns as the five regularities in the financial market (Figure 3-3 and Figure 3-4).

One most obvious distinction among the five regularities is that each regularity has the distinctive range of number of cycle periods as shown in Figure 3-5. In general, Second and Third Regularity have very few cycle periods. Fourth Regularity tends to have more cycles but the number of cycles is still finite. The Fifth Regularity can be characterized by the infinite number of cycles because the repeating patterns can have the infinitely varying scales within the price series. Therefore, it becomes very clear that we need to use different tactics when we deal with each regularities.

Especially, the fifth regularity is the underlying process behind many horizontal and diagonal price pattern used by traders. The horizontal and diagonal price pattern can include the popular price patterns like support, resistance, harmonic patterns, Elliott Wave patterns, Triangle, Wedge and Channels, etc. This book mainly focuses for the fifth regularity because the fifth regularity is the main price dynamics behind many price action and pattern trading strategies. In the book, we want to help you to understand the clear difference between this fifth regularity and the rest. We will focus to cover the practical trading knowledge for this fifth regularity. Finally, we will help you to learn the price action and pattern trading strategy in the practical level throughout this book.

There are many different data in the Stock Market and Forex. Remember that different players are participating in the different markets. Each financial price series will be played by different players with different attributes and different psychologies. Therefore, each price series can have their own dynamics because they possess different price patterns in different magnitude. For example, some stock market price series can possess much stronger Equilibrium process than currency price series in the Forex. Practically speaking, the most of the price series in the Stock market and Forex will have either the mixed effects of Equilibrium process and Wave process or the mixed effects of Equilibrium process and Fractal-Wave process. This means that they are a highly complicated system representing the crowd behaviour of millions of people.

Once again, the main purpose of this taxonomy is to identify regularities existing in the financial price series. Therefore, traders can make prediction for their trading. The five regularities framework can be used to build any trading strategy for different financial market. For example, there is no need to apply hammer when the entire house was built with bolts and nuts. In addition, the medical

doctor will prescribe you the medicine for cold when your symptoms are very close to other patients having cold. Likewise, if the financial price series exhibit strong trend and multiple cycles, then you should just apply the right tools to capture the strong trend and multiple cycles for your trading. If you are applying the tool to capture trend only or if you are applying the tool to capture cycles only, then you will be underestimating the market. Therefore, you will be suffering more than enjoying the profits. Practically speaking, trader should know what regularities they are dealing with and what tools they need to apply to capture those regularities.

From next chapter, we will describe the sub price patterns under these five regularities in details (Figure 3-6). Especially, we will focus to explain the combined price patterns like Equilibrium Wave process and Equilibrium Fractal-Wave process. It is because the price patterns in the real world financial markets are likely to be one of these complex patterns. We will try our best to visualize each price patterns with example. However, for Forex and Stock market, it is not easy to find them showing simple trend pattern or seasonal pattern alone. As we have mentioned before, highly competitive and liquid market are likely showing more complex patterns like Equilibrium Wave process or Equilibrium Fractal-Wave process. Therefore, when we explain an obviously simple price patterns, then we might use some data set not from the Forex or stock markets because it is difficult to find Stock or Forex market data showing trend pattern alone. For example, in explaining the Equilibrium price patterns, we use UK housing price to show you how the typical Equilibrium dominated price series look like. Sometimes we might use some synthetic price series to visualize some price patterns in Figure 3-6.

After we have covered all the sub price patterns in next few chapters, we will move to the practical part focusing on the fifth regularity for your trading. The fifth regularity is the least understood but most confused price patterns among trader comparing to the rest of the regularities. Especially, the characteristic of the infinite cycle period tells us that many technical indicator, we were using without any doubt, can reduce your profitability or at least they can act as an inefficient element in your trading. Simply many technical indicators are not designed to deal with the infinity but they were designed rather to reduce the noise from the price series by smoothing or averaging. When you do not understand nature of wave in the price series, these technical indicators can take away many good trading opportunities from you.

In addition, traders observe many horizontal and diagonal price patterns every day because of the Equilibrium Fractal Wave propagation. We want to bring the unified view or just one simple concept encapsulating these price patterns for both educational and practical trading purpose. The commonly used term “raw price action” among the price action trading community does not provide much explanation for beginners or any relation to the already established trading practice and concepts.

In doing so, first, we will help you on how to identify those price patterns using the Peak Trough Analysis technique from your charts. We present several different Peak Trough Analysis technique for your trading. Please note that we provide free Peak Trough Analysis tool in our website. Second, we will presents the actual trading strategy especially designed to deal with the infinity of the fifth regularity. We will look at the increasingly popular trading strategies for this purpose. We will start with the support and resistance to introduce some fundamental trading knowledge on the price patterns. Then we will further

expand it with the popular trading strategies like Harmonic Pattern, Elliott Wave, Triangle and Wedge patterns. These trading strategies are over 80 years old and used by many reputable traders in the world. Several traders thought that these strategies are connected but it is difficult to find the literature level of claim yet. We show that these advanced trading strategies can be explained in one notion, the fifth regularity (Figure 3-7). At the same time, we will reveal the powerful trading recipes you can use for your practical trading in this book.

## Price Pattern Table for Trading and Investment

Developed by Young Ho Seo

		Number of Cycle Period				
		Zero ←				→ Infinite
		First Regularity	Second Regularity	Third Regularity	Fourth Regularity	Fifth Regularity
Price Pattern Trend Type	Equilibrium Process (or Trend)	Wave Process			Fractal-Wave Process	
		Additive Seasonality	Multiplicative Seasonality	Multiple Cyclic Combination		
Constant Level						
Linear Trend						
Exponential Trend						
Damped Trend						

Figure 3-3: Five Regularities and their sub price patterns with inclining trends. Each pattern can be referenced using their row and column number. For example, exponential trend pattern in the third row and first column can be referenced as Pattern (3, 1) in this table.

## Price Pattern Table for Trading and Investment

Developed by Young Ho Seo



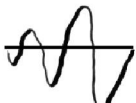
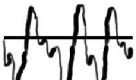















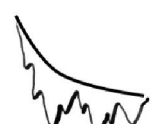
		Number of Cycle Period				
		Zero ←————→ Infinite				
		First Regularity	Second Regularity	Third Regularity	Fourth Regularity	Fifth Regularity
Price Pattern Trend Type	Equilibrium Process	Wave Process			Fractal-Wave Process	
		Additive Seasonality	Multiplicative Seasonality	Multiple Cyclic Combination		
Constant Level	 (1, 1)	 (1, 2)	 (1, 3)	 (1, 4)	 (1, 5)	
Linear Trend	 (2, 1)	 (2, 2)	 (2, 3)	 (2, 4)	 (2, 5)	
Exponential Trend	 (3, 1)	 (3, 2)	 (3, 3)	 (3, 4)	 (3, 5)	
Damped Trend	 (4, 1)	 (4, 2)	 (4, 3)	 (4, 4)	 (4, 5)	

Figure 3-4: Five Regularities and their sub price patterns with declining trend. Each price pattern can be referenced using their row and column number. For example, exponential trend pattern in the third row and first column can be referenced as Pattern (3, 1) in this table.

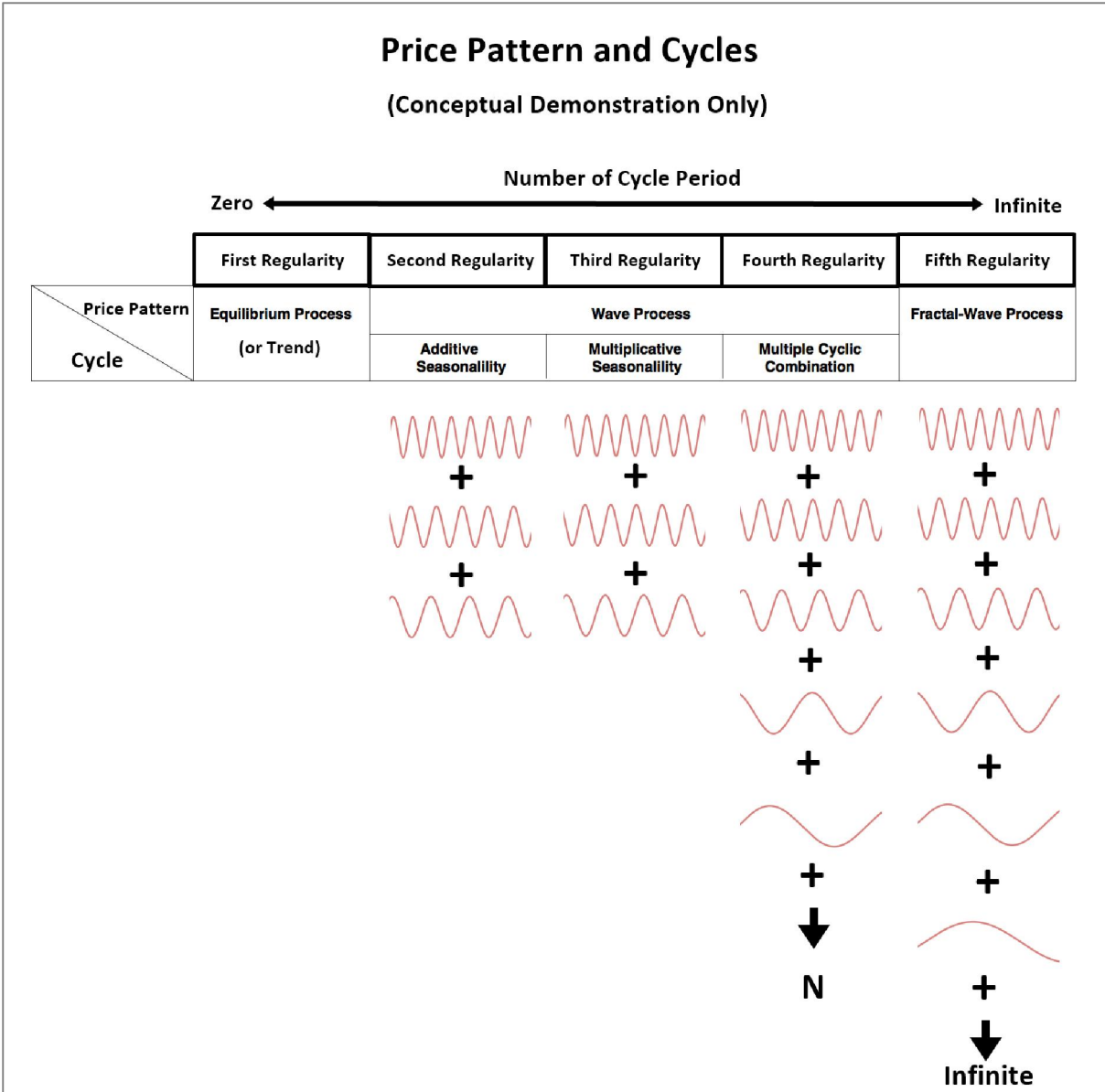


Figure 3-5: Visualizing number of cycle periods for the five regularities. Please note that this is only the conceptual demonstration and the number of cycles for second, third and fourth regularity can vary for different price series.



## Price Pattern Table for Trading and Investment

Developed by Young Ho Seo

		Number of Cycle Period				
		Zero ←				→ Infinite
		First Regularity	Second Regularity	Third Regularity	Fourth Regularity	Fifth Regularity
Price Pattern Trend Type	Equilibrium Process (or Trend)	Wave Process			Fractal-Wave Process	
		Additive Seasonality	Multiplicative Seasonality	Multiple Cyclic Combination		
Constant Level	Stationary Process or Random Process  (1, 1)	Wave Process  (1, 2)	Wave Process  (1, 3)	Wave Process  (1, 4)	Fractal Wave Process  (1, 5)	
Linear Trend	Equilibrium Process  (2, 1)	Equilibrium Wave Process  (2, 2)	Equilibrium Wave Process  (2, 3)	Equilibrium Wave Process  (2, 4)	Equilibrium Fractal Wave Process  (2, 5)	
Exponential Trend	Equilibrium Process  (3, 1)	Equilibrium Wave Process  (3, 2)	Equilibrium Wave Process  (3, 3)	Equilibrium Wave Process  (3, 4)	Equilibrium Fractal Wave Process  (3, 5)	
Damped Trend	Equilibrium Process  (4, 1)	Equilibrium Wave Process  (4, 2)	Equilibrium Wave Process  (4, 3)	Equilibrium Wave Process  (4, 4)	Equilibrium Fractal Wave Process  (4, 5)	

Figure 3-6: Five Regularities and their sub price patterns.

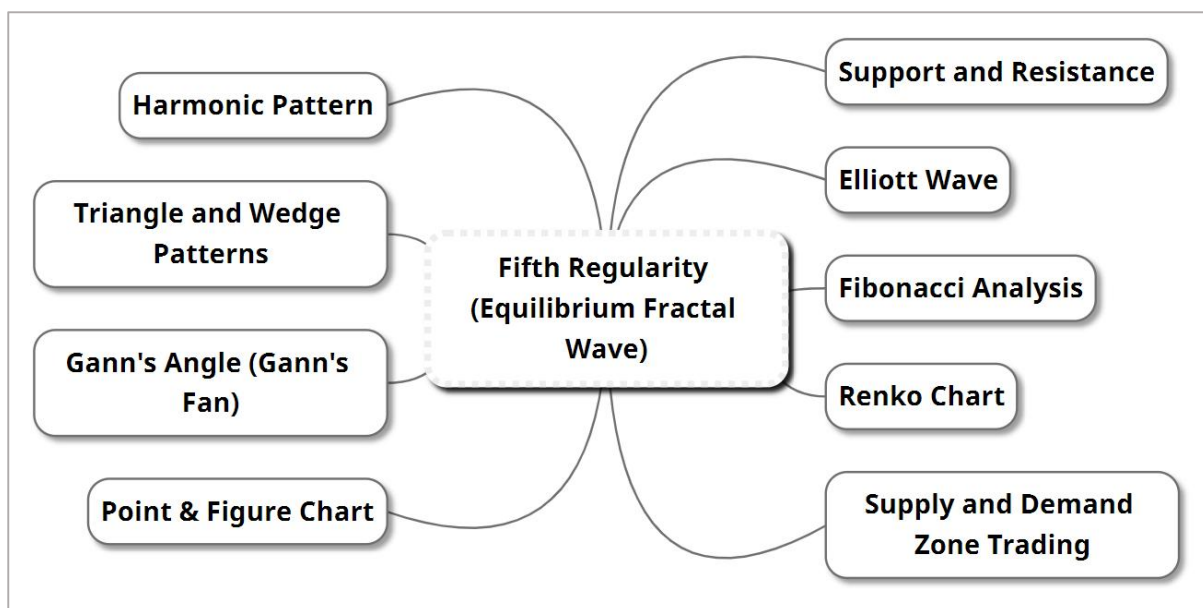


Figure 3-7: Trading strategies and charting techniques to deal with the fifth regularity.