1 The Basics: Candlestick Construction

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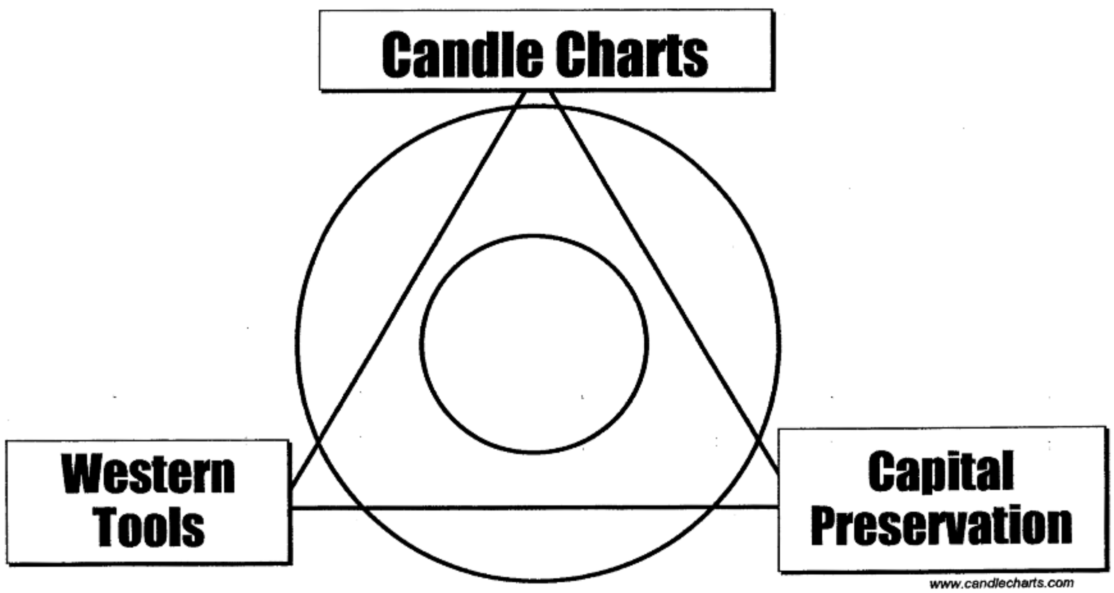
My firm has an exclusive strategy called the *trading triad*. I like to make the analogy that trading is like a three-legged stool. What happens if you take away one leg of the stool? It's going to fall over. So it is with the trading triad, as illustrated in Figure 1.1.

The first leg is the basics of candlesticks. Construction of the chart with individual price lines, development of recognizable patterns and trends, and how these reveal market momentum. The second leg is a study of Western technicals. I do not believe that candlestick charts replace technicals or even traditional Western-style bar charts. You still need four price factors: open, high, low, and close, which become even more valuable when studied as part of trend lines and moving averages. The third leg is the study of how this information works to reduce risk and to promote preservation of your investment capital.

You might have heard the expression, "Water can both sink and raise a ship" This wisdom applies in so many places, including how you use candlestick charts. These are timing tools, of course, but they can provide so much more. You can also use candlesticks to manage and reduce risk, and to make more informed decisions involving your portfolio. That is where the real value to candlestick charting is going to be found.

Figure 1.1: The Trading Triad



Candlestick patterns give you very specific turning points, or reversals. These appear in several ways: as single candlesticks, two-part patterns, or three-part patterns. On a bar chart, you look for reversals by tracking a long-term trend line or picking up on popular technical signals like the well-known head and shoulders. Candlestick patterns will certainly provide a clearer signal in the moment of a pending reversal. However, you also need to remember that the overall technical pattern and trend is more significant than any single candlestick.

For example, you might notice a clearly defined candlestick pattern, but by the time it forms, it may be too late to act. What is important to keep in mind is that whatever market you are looking at, you can use candlestick charts to improve the timing of your trades. This works in any time frame and in any market condition.

Figure 1.2 is a typical bar chart. Review this keeping an important point in mind: the candlestick chart is constructed using exactly the same data as that

Figure 1.2: Bar Chart

used for the bar chart. So I have taken the same data displayed in this bar chart and converted it into a candlestick chart in Figure 1.3.

A **bar chart** is also called an OHLC chart, a simple price chart showing the day's trading range in a vertical line or stick; the opening price, a smaller extension out to the left; and the closing price, a small extension to the right.

THE CANDLE LINE

The candlestick takes the information found on the bar chart and adds a third dimension to it. The bar chart's vertical stick is replaced by a rectangle topped and bottomed by the borders of the trading range, plus an extension above

Figure 1.3: Candlestick Chart

and below the rectangle; so it is the same up-and-down size as the bar chart's stick. The new dimension is that some candlestick rectangles are white and others are black. The white rectangles appear on days that the price moves upward (closing price is higher than opening price). Black rectangles show up on downward-moving days (when closing price is lower than the opening price).

A **candlestick chart** is a formation reporting the day's trading range in a rectangular white formation for upward-moving days, or in a rectangular black formation for downward-moving days. The upper and lower borders of the rectangle are the opening and closing prices.

The name "candlestick" comes from the fact that "wicks" are seen either above or below the rectangles (or both above and below). Each segment of the candlestick chart has a descriptive name. The rectangular body (white or black) is called the "real body" because its upper and lower borders represent opening and closing price.

A **real body** is the candlestick's rectangle, bordered by opening and closing prices and excluding any price points above or below those levels.

Any extension above the rectangle is called the upper shadow; and any extension below the rectangle is called the lower shadow. For example, if the opening price is $32.10 and the closing price is $34.00, there was a real body change of $1.90. However, during the day, the price range might have moved up as far as $35 per share and down as low as $32 per share. In this case, you would see both an upper shadow and a lower shadow.

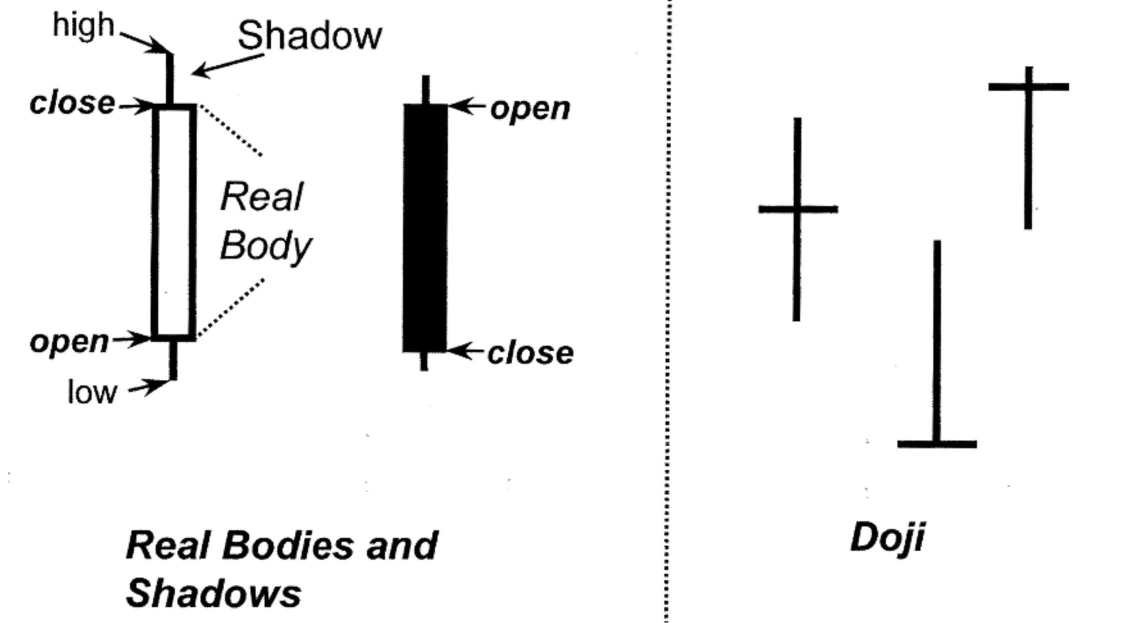
The **upper shadow** represents a session's price range above the range between opening and closing price, extending to the day's highest price.

The **lower shadow** represents a session's price range below the range between opening and closing price, extending to the day's lowest price.

John Murphy, former CNBC talk show host, once told me that a viewer called in and asked the question, "What are those charts that look like hot dogs?" I briefly considered calling them "hot dog charts" to make them appealing to Americans, but thought better. But it makes the point that these charts are still relatively new in the West.

No matter whether you think of these as candlesticks or hot dogs, they involve a lot of new terminology. It is going to be important to master this terminology before you can effectively use candlesticks. For example, what is it called when the opening and closing price are the same level or very close? This is a *doji* formation. The word "doji" is Japanese for "mistake."

Figure 1.4: Constructing the Candle Line



Doji, meaning "mistake" in Japanese, is a candlestick with opening and closing prices at the same price level or very close; rather than a rectangle, the real body is a horizontal line.

For full comprehension of the doji candle, watch Steve explain on the DVDs included with this book.

When a doji also has both upper and lower shadows, it resembles a cross. The real body is the horizontal line and the shadows are the vertical lines. Of all of the single candlestick formations, the doji is one of the most important. I will explain why a bit later; for now I am only trying to introduce some of the important basic concepts and definitions. The formation of the candlestick (including the doji) is summarized in Figure 1.4.

The "candle line" refers to all of the features you find in candlesticks: the real body, upper and lower shadows, open and close, and the direction of price movement. This is summarized on the left portion of the illustration. On the right side, I have summarized the appearance of the doji. Notice that there are three possible doji formations: the cross (with upper and lower shadows), as well as those with a shadow only on one side.

The candlestick is so valuable because it gives you such a wealth of information in a relatively simple design. This includes everything at a glance:

- the day's complete trading range
- opening and closing prices
- direction of price movement

Even more to the point, when you look at a chart with many sessions included, you can see the overall trend immediately. Even with a bar chart, you can easily tell whether price trends are moving upward or downward; but candlestick charts make it easier to judge relative strength or weakness of upward and downward sessions, the *size* of daily trading ranges, and—when combined with daily volume—the volatility in trading action.

At this point, you already have enough information to build your own candlestick chart. Figure 1.5 gives you a grid as a starting point, along with five trading sessions and each one's open, high, low, and close.

This information is easily moved onto a candlestick chart by transferring the price information, as demonstrated in Figure 1.6. The decision about whether the real body should be white or black relies on whether price for the

Figure 1.5: Drawing Candle Lines

session	open	high	low	close
1	23	26	21	25
2	26	28	23	27
3	23	27	22	22
4	25	28	22	25
5	27	27	25	25

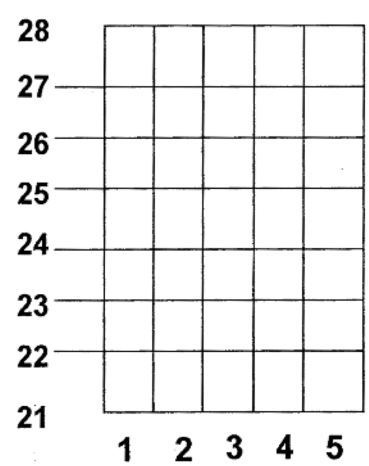


Figure 1.6: Drawing Candle Lines

session	open	high	low	close
1	23	26	21	25
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4	25	28	22	25
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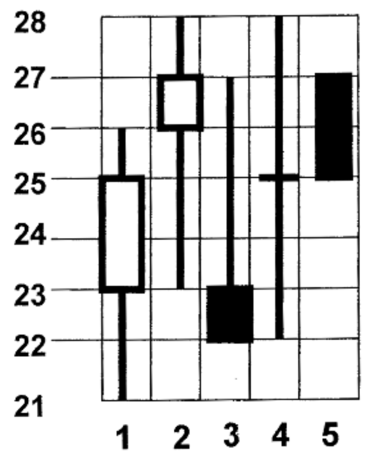

day moved upward between open and close (requiring a white real body) or downward (requiring a black body). The range of trading defines the extent of upper and lower shadows. These rules apply whether your charts cover daily sessions or five-minute sessions. Incidentally, the technical patterns you find using candlesticks apply to all durations of charts. Day traders like to use very short-term charts, and swing traders—those trading in two- to five-day time frames, usually prefer daily charts.

When I first began using candlesticks back in the 1980s, I had to draw the charts by hand. At that time, there was no Internet and even if there had been, no one really knew anything about candlesticks. Today, you are more fortunate. Many sites provide free and instant candlestick charting with a lot of flexibility, including the duration of the chart and additional technical features like moving averages, for example. Even though you do not need to draw charts by hand, it is a good idea to go through the exercise just to make sure you have grasped the basics. As for me, I am still waiting for an even more advanced system, one in which I can press a button and get tomorrow's prices!

GAPS

One point that often confuses people about candlesticks: the formation is strictly limited to the current trading price action. The opening price is not the previous session's closing price. If you start with this premise, then the candlesticks will *not* make much sense. So when you see a space between one session's close and the next session's open, it can be significant, especially if the gap is quite large.

A gap is easy to spot when the space is visible. For example, if one day's range is between $30 and $32 and the next day opens up at $35, there is an obvious three-point gap between those two days. Not all gaps are as visible, though. For example, if a day's trading opens at $44 and closes at $41, it has a three-point drop. If the next day's trading opens at $43, the range looks like it is within the previous day's range; but in fact, there was a day-to-day gap of two points between the close of $41 and the next day's open of $43. It is not as visible. Intraday gaps can be very important, but you need to search for them carefully.

A **gap** is a space between one day's closing price and the next day's opening, when the space exceeds the range and the new opening price is not within the previous range.

At this point, you have the basics in hand and you should be able to begin a methodical journey into the world of candlesticks. In coming sections, I introduce many of the special formations you need to expand your analysis of price movement and reversals.

SELF-TEST QUESTIONS

1. A bar chart is also called OHLC, which is defined as:

- **a.** Over Heavy, Lacking Content.
- **b.** Open, High, Low, Close.
- **c.** On the High, Long Candlestick.
- **d.** Open Held Long Call.

2. Candlestick formations reveal:

- **a.** The day's trading range.
- **b.** Opening and closing price.
- **c.** Direction of price movement.
- **d.** All of the above.

3. The real body is:

- **a.** Substantial price movement beyond overreaction to recent news.
- **b.** The span between opening and closing price.
- **c.** The span of the full trading range.
- **d.** Collectively, all active traders during a session.

4. A candlestick's shadow is:

- **a.** Price movement above and below the real body.
- **b.** Secondary price movement in the next session.
- **c.** The tendency for volume to track, or "shadow" price movement.
- **d.** A reference to black candlesticks seen in downward-trending days.

5. The "doji" is:

a. A Japanese word meaning "mistake."

b. A candlestick for a session when opening and closing prices are identical or very close.

c. A candlestick with a horizontal line instead of a rectangular real body.

d. All of the above.

For answers, go to www.traderslibrary.com/TLEcorner.