CHAPTER 1

TD Sequential Defining the Trend and Identifying Exhaustion Points

WHEN I STARTED LOOKING at the DeMark indicators in the early 1990s, it was TD Sequential that first piqued my interest. I had previously come across other technical studies that identified trading opportunities well when prices were trending, and still other indicators that were particularly suited to ranges, but I had found it frustrating that none of these approaches was sufficiently dynamic to distinguish between these two very different types of price action.

TD Sequential appeals to me because it addresses that problem, having both momentum (TD Setup) and trending (TD Countdown) components. Furthermore, it's completely objective and incorporates disciplined money-management rules, and (because it's based on relative price action) you can apply it to any market or time frame, regardless of the market's underlying volatility, without having to change any of the default indicator settings.

For those of us brought up in the computer age, it may seem hard to believe, but Tom DeMark developed TD Sequential by hand, through a process of trial and error, in the 1970s. It never ceases to amaze me how something originally created to analyze daily price data can be applied so effectively, more than thirty years later, to any time frame—from one minute to one year—and to any market.

Since the majority of people are trend followers, it's hardly surprising that "the trend is your friend" is one of the most widely quoted trading mantras. While it may seem counterintuitive, given that most people do follow trends, TD Sequential attempts to isolate prospective exhaustion points in ranges, to anticipate market tops and bottoms when it believes prices are overbought or oversold and during trends when sentiment is invariably at an extreme. Even if you are not inclined to the technical, TD Sequential can be helpful for market-timing purposes, as an adjunct to your existing arsenal of trading tools. Traders oriented to fundamentals tell me it helps them determine take-profit levels when they would otherwise be reliant on a less-efficient price-reversal pattern to close out a profitable position. TD Sequential also highlights, at the time the signal is generated, points where one should refrain from establishing or adding to an existing position in the direction of the underlying trend. Once you're comfortable with the methodology, however, you can use TD Sequential as I do, to fade trends.

Let's look at the components of TD Sequential in order to understand how and why it manages to be so versatile. The indicator has two components: TD Setup, which relies on momentum to define price ranges, and TD Countdown, which is trend based, and looks for low-risk opportunities to fade established directional moves. As TD Sequential is probably the most-talked-about TD indicator, I'll explain it in detail for both bullish and bearish scenarios, as well as answer some frequently asked questions.

TD Setup

TD Setup is one component of TD Sequential; the other component, TD Countdown, cannot come into play until a TD Setup formation is complete. TD Setup, however, is not only a prerequisite for the broadertrend-reversal TD Countdown signal; it is also an indicator, one that can help determine whether a market is likely to be confined to a trading range or starting a directional trend. TD Setup, of course, has both buy and sell indicators, and I will address them separately.

The prerequisite for a TD Buy Setup is a Bearish TD Price Flip, which indicates a switch from positive to negative momentum (**Figure 1.1**).

Bearish TD Price Flip

A Bearish TD Price Flip occurs when the market records a close *greater than* the close four bars earlier, immediately followed by a close *less than* the close four bars earlier.



FIGURE 1.1 Bearish TD Price Flip to Initiate a TD Buy Setup

The chart of USDCAD illustrates the price action necessary to produce a bearish TD Price Flip for the initiation of a TD Buy Setup, that is, a close *greater than* the close four price bars earlier, immediately followed by a close *less than* the close four bars earlier. In this instance, the close of X' is above the close of X, and X' is followed by Y', which is below Y. The chart also shows the extension of that price action into an uninterrupted series of nine consecutive closes, each one less than the corresponding close four price bars earlier.

Note: The bar on which the bearish TD Price Flip occurs qualifies as bar one of the prospective TD Buy Setup.

TD Buy Setup

After a bearish TD Price Flip, there must be nine consecutive closes, each one less than the corresponding close four bars earlier.

Since the indicator was originally designed to look at daily price data, a comparison of the closing price with the closing price four bars earlier represents a rolling week.

Interruption of a TD Buy Setup

If, at any point, the sequence—of nine consecutive closing prices less than the closing price four bars earlier (up to and including the close of TD Buy Setup bar nine)—is interrupted, the developing TD Buy Setup will be canceled and must begin anew.

Having to start all over again can test one's patience, because it postpones the appearance of a signal. But the delay is meaningful, because it suggests a change in market dynamics, which the indicator acknowledges by changing its behavior.

Completion of the First Phase of TD Sequential

Once a TD Buy Setup successfully reaches nine, the first phase of TD Sequential is complete, and a TD Buy Countdown can begin.

TD Sell Setup

For a prospective sell situation, before a TD Sell Countdown can begin, we need to see a bullish TD Price Flip—a switch from negative to positive momentum (**Figure 1.2**)—in order to initiate a TD Sell Setup.

Bullish TD Price Flip

A Bullish TD Price Flip occurs when the market records a close *less than* the close four bars before, immediately followed by a close *greater than* the close four bars earlier.

Once the bullish TD Price Flip occurs, a TD Sell Setup can begin.

TD Sell Setup

Once the bullish TD Price Flip occurs, a TD Sell Setup, consisting of nine consecutive closes, each one *greater than* the corresponding close four bars earlier, can begin.

Interruption of a TD Sell Setup

lf

At any point, the sequence of nine consecutive closes *greater than* the close four bars earlier is interrupted—up to and including the close of TD Buy Setup bar nine—



FIGURE 1.2 Bullish TD Price Flip to Initiate a TD Sell Setup

The chart of AUDJPY illustrates the price action necessary to produce a bullish TD Price Flip for the initiation of a TD Sell Setup, that is, a close *less than* the close four price bars earlier, immediately followed by a close *greater than* the close four bars earlier. In this instance, the close of X' is below the close of X, and X' is followed by Y', which is above Y. The chart also shows the extension of that price action into an uninterrupted series of nine consecutive closes, each one greater than the corresponding close four price bars earlier.

Note: The bar on which the TD Price Flip occurs qualifies as bar one of the prospective TD Buy Setup.

Then

The developing TD Buy Setup will be canceled and must begin anew.

After a TD Sell Setup successfully reaches nine, the first phase of TD Sequential is complete, and a TD Sell Countdown can begin.

Using TDST Levels to Determine the Underlying Trend Bias

Many people move straight from TD Setup to TD Countdown, overlooking the implications of a completed TD Setup. But, in doing so, they miss the valuable directional insight provided by this aspect of TD Sequential. Since it compares the current close with the corresponding close four bars earlier, TD Setup has a momentum component, but, unlike more conventional momentum indicators, TD Setup is dynamic. This is an important distinction that enables TD Setup to differentiate between trending and nontrending price action. Each time the market completes a TD Setup, the true price extreme of that move—known as the TD Setup Trend (TDST)—redefines the range in terms of price levels. From a TD perspective, the ensuing price response to that TD Setup Trend level helps to determine the underlying directional bias.

TD Sequential vs. More Conventional Momentum Indicators

Conventional momentum indicators, such as the RSI (Relative Strength Index), are typically calibrated between zero and one hundred, and have the constraint of fixed overbought and oversold zones, which makes them less reliable when price action switches between ranges and trends. In a strongly directional up move, the RSI rarely pulls back into extreme oversold territory (which is typically set around twentyfive), but, instead, finds support between an oscillator reading of fifty and forty.

Similarly, in a strongly directional down move, the RSI tends not to retrace into extreme overbought territory (typically set around seventy-five). Instead, the RSI usually finds resistance in the oscillator zone between fifty and sixty.

The TD Setup indicator, on the other hand, adjusts dynamically, in line with the price action, since it recalculates what it considers to be range extremes in the form of TDST Levels every time a new TD Setup completes. See **Figures 1.3** and **1.4**.

TD Setup Scenario I: Consolidation/Reversal

lf

A price fails to record a close beyond the absolute high or low of the most recently completed TD Setup in the opposite direction—that is, the TDST Level—up to and including the completion of bar nine of the current active TD Setup,



FIGURE 1.3 Scenario 1: Consolidation/Reversal

In the chart of the U.S. 30-year bond (USH8), although the RSI never enters oversold territory, there is a clear signal to enter longs upon completion of the TD Buy Setup—that is, the close of TD Buy Setup bar nine—because none of the bars within the TD Buy Setup phase has sufficient momentum to close below TDST support.



FIGURE 1.4 Scenario 2: Trend Extension

In the chart of GBPUSD, when the market closes above TDST resistance, it suggests there is a heightened risk that the developing bull trend will remain intact and price action will most likely continue to extend higher.

Note: At the time of the TDST break, the RSI is already approaching overbought territory, even though the uptrend is only beginning to accelerate.

Then

The market is deemed to have insufficient momentum to break out of the range.

Prices should then experience a short-term reversal of the underlying trend, or at least a consolidation, lasting a minimum of one to four price bars.

It is not significant if the TDST Level is violated on an intrabar basis; what is relevant is only whether or not the market is able to sustain a TDST break on a closing basis (**Figures 1.5** and **1.6**).

TD Setup Scenario II: Confirmed Trend Extension

lf

Price exceeds the extreme absolute high or low of a previous TD Setup in the opposite direction on a closing basis,



FIGURE 1.5 TD Buy Setup Unable to Close Below TDST Support

The chart of the March U.S. 30-year bond (USH8) shows a TD Buy Setup unable to close below TDST support, indicating that buying pressure remains the dominant force, with the market therefore likely to recover near term, since it has insufficient downward momentum to stage a breakout of the range to the downside.



FIGURE 1.6 TD Sell Setup Unable to Close Above TDST Resistance

The chart of Pfizer shows a TD Sell Setup unable to close above TDST resistance, indicating that selling pressure remains the dominant force, with the market therefore vulnerable to a short-term correction, since it has insufficient upward momentum to break out of the range to the upside.

Then

The market is deemed to have sufficient momentum to facilitate a sustained break out of the range.

Prices should then continue in the direction of the underlying trend, and quite possibly move toward a completed TD Countdown before a reversal occurs.

From personal experience, I find that, if a TDST level breaks up to and including bar three of a prospective TD Setup, there is a good chance that the market will continue in the direction of the break, at least until the completion of the developing TD Setup (**Figures** 1.3, 1.4, **1.7**, and **1.8**).

TD Buy Setup "Perfection"

TD Buy Setup "perfection" is the prerequisite for entering a long position based on a completed TD Buy Setup.



FIGURE 1.7 Market Close Below TDST Support Prior to the Completion of a TD Buy Setup

In the chart of the USD Index (DXY), the market closes below TDST support prior to the completion of a TD Buy Setup, indicating that selling pressure has intensified, with the market having sufficient bearish momentum to sustain a break to the downside.



FIGURE 1.8 Market Close Above TDST Resistance After Initial Rebuff

In the chart of GBPUSD, the market, having initially been rebuffed by TDST resistance, subsequently closes above resistance prior to the completion of a TD Sell Setup, indicating that buying pressure has intensified and the market has sufficient bullish momentum to sustain a break to the upside.

TD Buy Setup "Perfection"

The low of bars eight or nine of the TD Buy Setup or a subsequent low must be less than, or equal to, the lows of bars six and seven of the TD Buy Setup.

TD Setup perfection is deferred until that happens, and, as long as that situation remains, the risk exists for a retest of the price low of TD Buy Setup bars six or seven, prior to the minimally expected response of a one- to four-bar consolidation/reversal. Before the trader enters a long position based on a completed TD Buy Setup, TD Buy Setup perfection is needed to increase the probability of his entering the market at or near an interim price low.

Note: Perfected TD Setups (Figure 1.9) can be seen by checking the TD Setup perfection arrows under the TD Sequential Setup "properties" on the Bloomberg terminal toolbar.



FIGURE 1.9 Perfected TD Buy Setup

In the chart of the U.S. 30-year bond (USH8), the market records a perfected TD Buy Setup bar nine, since the lows of TD Setup bars eight or nine are less than the lows of TD Setup bars six and seven.



FIGURE 1.10 Unperfected TD Buy Setup

In the chart of Hutchison Whampoa, the market reaches TD Buy Setup bar nine, but the TD Buy Setup is not perfected because the lows of TD Buy Setup bars eight or nine are not less than the lows of TD Buy Setup bars six and seven. This pattern shows an increased risk that the market could come back to retest the lesser of bars six and seven before the expected consolidation/reversal materializes. The consolidation/ reversal does come, five days later, and the up arrow below the bar indicates where the TD Buy Setup is eventually perfected.

The absence of TD Buy Setup perfection (**Figure 1.10**) doesn't *retard* the onset of a TD Buy Countdown, but it is an important consideration for those who want to trade TD Buy Setups.

Trading a TD Buy Setup

Other than saying that one can *initiate* a position if a TD Buy Setup holds TDST support on a closing basis, DeMark doesn't go into detail about how a trader can actually define the parameters for such a signal. Here is how *I* think TD Buy Setups (**Figure 1.11**) can be traded objectively, using a very clear set of rules:



FIGURE 1.11 Trading a Perfected TD Buy Setup

In the chart of the U.S. 30-year bond (USH8), the market records a perfected TD Buy Setup ahead of TDST support.

Perl's Rules for Trading TD Buy Setups Objectively

Many people believe, mistakenly, that one should initiate a long position following every completed TD Buy Setup. I advise against doing that except under the following conditions:

- 1. When the TD Buy Setup has been perfected, that is, the low of TD Buy Setup bar eight or nine is less than the lows of TD Buy Setup bars six and seven,
- 2. When none of the bars within the TD Buy Setup has closed below TDST support, and
- 3. When the close of TD Buy Setup bar nine is in close proximity to TDST support.

I also prefer the close of TD Buy Setup bar nine to be less than the close of TD Buy Setup bar eight, but this is optional.

Risk Management: Calculating the TD Risk Level for Trading a TD Buy Setup

- 1. Identify the TD Buy Setup bar with the lowest true low, and
- Subtract the true range of that bar from its true low. (For example, if TD Buy Setup bar eight has the lowest true low, subtract the true range of that bar from its true low.)

The expectation would be for a return toward the upper-range extreme, as defined by TDST Resistance, in other words, the true high of the most recently completed TD Buy Setup. Typically, I would take the trade only if the difference between the entry price (close of TD Buy Setup bar nine), and TDST Resistance is more than 1.5 times the difference between the close of TD Buy Setup bar nine and the TD risk level.

TD Sell Setup "Perfection"

The high of TD Sell Setup bars eight or nine or a subsequent high must be greater than, or equal to, the highs of TD Sell Setup bars six and seven.

TD Sell Setup perfection is deferred until that happens, and, as long as that situation exists, the risk is for a retest of the price high of bars six or seven, prior to the expected minimal response of a one- to four-bar consolidation/reversal.

The absence of TD Sell Setup perfection doesn't *retard* the onset of a TD Sell Countdown, but it is an important consideration for those who want to trade TD Sell Setups. To increase the probability of entering the market at or near an interim price high, traders should wait for a TD Sell Setup to be perfected before entering a short position based on a completed TD Sell Setup (**Figures 1.12** and **1.13**).

Trading a TD Sell Setup

As with the TD Buy Setups, DeMark doesn't describe how traders could actually define the parameters for such a signal other than saying that one can initiate a position if a TD Sell Setup holds TDST resistance on a closing basis. As earlier with the TD Buy Setups, however, I have my own set of very clear rules for trading TD Sell Setups objectively.



FIGURE 1.12 Perfected TD Sell Setup

In the chart of USDCHF, the market records a perfected TD Sell Setup bar nine, because the highs of TD Sell Setup bars eight or nine are above the highs of TD Sell Setup bars six and seven.



FIGURE 1.13 Unperfected TD Sell Setup

In the chart of the Nikkei 225, the market reaches TD Sell Setup bar nine, but the TD Sell Setup is not perfected, because the highs of TD Sell Setup bars eight or nine are not greater than the highs of TD Sell Setup bars six and seven. This pattern shows that there is an increased risk that the market could come back to retest the greater of bars six and seven before the expected consolidation/reversal materializes. The reversal materializes the following day, and the down arrow above the subsequent bar indicates where the TD Sell Setup is eventually perfected.

First, although many people mistakenly believe that one should initiate a short position following every completed TD Sell Setup, I advise against that except under the following conditions.

Perl's Rules on When to Initiate a Short Position Following a Completed TD Sell Setup

- 1. When the TD Sell Setup has been perfected, that is, when the high of TD Sell Setup bar eight or nine is greater than the highs of TD Sell Setup bars six and seven,
- 2. When none of the bars within the TD Sell Setup has closed above TDST resistance, and
- 3. When the close of TD Buy Setup bar nine is in close proximity to TDST resistance.

As with the TD Buy Setup, I have my own preference, that is, for the close of TD Sell Setup bar nine to be higher than the close of TD Sell Setup bar eight, but this is optional (**Figure 1.14**).

Next, assuming the above conditions are met, and the signal is triggered on TD Sell Setup bar nine, the TD risk level for such a trade must be calculated.



FIGURE 1.14 Trading a Perfected TD Sell Setup

In the chart of USDCHF, the market records a perfected TD Sell Setup ahead of TDST resistance.

Risk Management: Calculating the TD Risk Level for a TD Sell Setup

1. Identify the TD Sell Setup bar with the highest true high, and

2. Add the true range of that bar to its true high.

(If, for example, TD Sell Setup bar eight has the highest true high, add the true range of that bar to its true high, to derive the TD Sell risk level.)

The expectation would be for a return toward the lower-range extreme, as defined by TDST support—in other words, the true low of the most recently completed TD Sell Setup.

Typically, I would take the trade only if the difference between the entry price—the close of TD Sell Setup bar nine—and TDST support is more than 1.5 times the difference between the TD risk level and the close of TD Sell Setup bar nine.

TD Setup vs. TD Sequential Countdown

Once TD Setup is complete, TD Countdown can begin, from the close of bar nine of TD Setup (inclusive), onward. The distinction between the two strategies is this:

• **TD Setup** compares the current close with the corresponding close four bars earlier,

Whereas

• **TD Countdown** compares the current close with the low two bars earlier for a potential buy, and compares the current close with the high two bars earlier for a prospective sell. This price relationship is an important distinction from TD Setup, because the market must be trending for TD Countdown to objectively identify the likely exhaustion point for a trend reversal.

One can start looking for the first bar of a TD Buy Countdown when a TD Buy Setup is in place.

To Initiate TD Buy Countdown

After

TD Buy Setup is in place, look for the initiation of a TD Buy Countdown.

lf

Bar nine of a TD Buy Setup also has a close less than, or equal to, the low two bars earlier,

Then,

Bar nine of a TD Buy Setup becomes bar one of a TD Buy Countdown.

lf

That condition is not met,

Then

TD Buy Countdown bar one is postponed until it does, and the TD Buy Countdown continues until there are a total of thirteen closes, each one less than, or equal to, the low two bars earlier.

Unlike TD Buy Setup, TD Buy Countdown doesn't have to be an uninterrupted sequence of qualifying price bars; the TD Buy Countdown process simply stops when markets are trading sideways, and resumes when prices start trending lower again.

For a TD Buy Countdown to be completed (**Figures 1.15** and **1.16**) and to help identify a low-risk buying opportunity, bar thirteen must meet certain requirements.



FIGURE 1.15 Completed TD Sequential Buy Countdown

In the chart of Microsoft, subsequent to the completed TD Buy Setup, the market records a series of thirteen closes, each one less than, or equal to, the low two price bars earlier, thereby completing a TD Sequential Buy Countdown.

18



FIGURE 1.16 Completed TD Sequential Buy Countdown

In the chart of IBM, the market completes a TD Buy Setup, but price doesn't satisfy the conditions to begin a TD Buy Countdown until seven days later. Consequently, the TD Buy Countdown phase is deferred until that condition (that is, a close less than, or equal to, the low two price bars earlier) is fulfilled.

Note: When there is an interruption in the sequence of closes that are less than, or equal to, the lows two price bars earlier, the TD Buy Countdown phase stops until the conditions are met again, at which point counting can resume—as is the case in this instance, between TD Buy Countdown bars 9 and 10.

To Complete a TD Buy Countdown

- 1. The low of TD Buy Countdown bar thirteen must be less than, or equal to, the close of TD Buy Countdown bar eight, and
- The close of TD Buy Countdown bar thirteen must be less than, or equal to, the low two bars earlier.

When the market fails to meet these conditions, the thirteen is deferred, and a plus sign (+) appears where the number thirteen would otherwise have been.

It can be extremely frustrating to see the market recover following a "deferred thirteen," while the trader is still waiting for a buy signal.



FIGURE 1.17 Deferred TD Sequential Buy Countdown

In the chart of Microsoft, subsequent to the completed TD Buy Setup, the market begins a series of closes, each one less than, or equal to, the low two price bars earlier. After bar twelve, however, a plus sign appears, indicating that TD Buy Countdown bar thirteen has been deferred. When a plus sign appears beneath a TD Buy Countdown bar, it means that although the close is less than, or equal to, the low two price bars earlier, the market fails to satisfy the other condition that is required to produce a thirteen (that the low of TD Buy Countdown bar thirteen be less than, or equal to, the close of TD Buy Countdown bar eight). Only when the same price bar satisfies both conditions does the TD Buy Countdown bar thirteen appear.

However, as long as a plus sign is present in lieu of a bar labeled thirteen, there is a heightened risk that the market will revisit the close of a TD Buy Countdown bar eight before a reversal materializes (**Figure 1.17**).

A more conservative approach would also require the low of TD Buy Countdown bar eight to be less than, or equal to, the close of TD Buy Countdown bar five, but DeMark considers this an elective option rather than a prerequisite.

Patience and discipline should always rule the day. Never preempt a signal. As my former colleague David Toth used to say, "Better to be out of a trade, wishing you were in it, than to be in a trade, wishing you were out of it."

TD Buy Countdown Cancellation

Although a developing TD Buy Countdown doesn't reset itself if there is an interruption in the sequence of closes each one of which is less than, or equal to, the low two bars earlier, there are a number of built-in conditions, or filters, to help the trader recognize when the dynamics of the market are changing. These filters erase the as-yet-incomplete TD Buy Countdown.

Filters That Cancel a Developing TD Buy Countdown

Either of the following conditions erases an incomplete TD Buy Countdown:

- 1. If the price action rallies and generates a TD Sell Setup, or
- 2. If the market trades higher and posts a true low above the true high of the prior TD Buy Setup—that is, TDST resistance.

DeMark is currently investigating a subtle change here, whereby the four price bars prior to the start of the TD Buy Setup would also be included, to determine the reference level for the TD Setup extreme; that is, the market would need a true low above the true high of the prior TD Buy Setup, including the four price bars prior to bar one of the TD Buy Setup.

TD Buy Countdown Cancellation and Recycle Qualifiers

Compare the true range of the previous TD Buy Setup, that is, the difference between the highest true high and the lowest true low, with the true range of the most recently completed TD Buy Setup, and then apply the TD Buy Countdown Cancellation qualifiers I and II.

TD Buy Countdown Cancellation Qualifier I

lf

The size of the true range of the most recently completed TD Buy Setup is equal to, or greater than, the size of the previous TD Buy Setup, but less than 1.618 times its size,

Then

A TD Setup Recycle will occur; that is, whichever TD Buy Setup has the larger true range will become the active TD Buy Setup.

When comparing the respective ranges, keep in mind that a TD Buy Setup can extend beyond TD Setup bar nine, if there is no subsequent TD Price Flip to extinguish it.

TD Buy Countdown Cancellation Qualifier II (a TD Buy Setup Within a TD Buy Setup)

lf

The market has completed a TD Buy Setup that has a closing range within the true range of the prior TD Buy Setup, without recording a TD Sell Setup between the two,

And if

The current TD Buy Setup has a price extreme within the true range of the prior TD Buy Setup,

Then

The prior TD Buy Setup is the active TD Setup, and the TD Buy Countdown relating to it remains intact.

When comparing ranges, keep in mind that, as with TD Cancellation Qualifier I, a TD Buy Setup can extend beyond TD Setup bar nine if there is no TD Price Flip to extinguish it.

TD Buy Countdown Recycle Qualifier

The letter R (for recycle) will appear on a chart (Figure 1.18) where TD Buy Countdown bar thirteen would otherwise have been if the following condition is met.

An R Will Appear

When a TD Buy Setup that began *before, on,* or *after* the completion of a developing TD Buy Countdown, but *prior* to a bullish TD Price Flip, extends to eighteen bars—that is, eighteen closes, with each one less than the close four price bars earlier.



where the TD Sequential Buy Countdown bar thirteen would otherwise have been.

Such an occurrence is meaningful, because it is an acknowledgment that momentum is very strong, and the underlying bear trend has intensified.

There is a misconception that the TD Setup process stops once the count reaches nine. In actual fact, the TD Buy Setup process can continue indefinitely, as long as the uninterrupted series of closes, each one of which is less than the close four price bars earlier, persists.

While charting systems default to display TD Buy Setups only up to bar nine, the Setup continues until a downside TD Price Flip occurs.

Note: The extent of a TD Setup beyond nine can be seen by checking the TD Setup shading box in the TD Sequential properties section and highlighting the area covered by consecutive closes each one less than the close four price bars earlier.



FIGURE 1.19 Aggressive Approach to Entering a Long Position After a Completed TD Buy Countdown

In the chart of EURUSD, the market completes a TD Buy Countdown, and a long position is established on the close of TD Buy Countdown bar thirteen (aggressive approach). The more conservative approach is to wait for a confirmed bullish TD Price Flip subsequent to the thirteen (that is, a close greater than the close four price bars earlier), to eliminate the risk of prices recycling.

Entering a Long Position

Following a completed TD Sequential Buy Countdown thirteen, traders can initiate a long position (**Figure 1.19**) using one of the following options (my personal preference being "aggressive").

Two Ways to Enter a Long Position

Aggressive Approach: Buy on the close of a TD Buy Countdown bar thirteen, or Conservative Approach: Subsequent to a TD Sequential Buy Countdown thirteen, wait for the first instance when the close is greater than the close four price bars earlier i.e., a bullish TD Price Flip.

Although the latter approach may provide a less-efficient entry point, it eliminates the risk that the market will recycle.

Alternative Strategy for Entering a Long Position

As alternatives, DeMark suggests you can enter a long position using TD Camouflage, TD Clop, TD Clopwin, TD Open, or TD Trap, all of which are described below. You can use all these indicators in isolation, but they are more powerful when used in conjunction with TD Sequential or TD Combo signal.

Requirements for a TD Camouflage Buy

- 1. The close of the current price bar must be below the close of the previous price bar,
- 2. The close of the current price bar must be above the open of the current price bar, and
- 3. The low of the current price bar must be lower than true low two price bars earlier.

When this pattern is confirmed, you would initiate long positions on the close.

A TD Clop buy signal works on the assumption that upside momentum will continue when the market exceeds the open and close price of the prior price bar.

Requirements for a TD Clop Buy Signal

- 1. The open of the current price bar must be below the close and open of the previous price bar, and
- 2. The market must subsequently trade above both the open and close of the previous bar.

If these conditions are met, there is a greater chance that upside momentum will continue into the close.

A TD Clopwin buy signal examines the relationship between the open and close of the current price bar and the open and close of the previous price bar.

Requirements for a TD Clopwin Buy Signal

- 1. The open and close of the current price bar must be contained within the open and close range of the previous price bar, and
- 2. The close of the current price bar must be above the close of the prior price bar.

Meeting these conditions increases the probability that upside momentum will be sustained into the next price bar, thereby reinforcing the TD Sequential buy signal.

Requirements for a TD Open Buy Signal

- 1. The current price bar's open must be less than the low of the prior price bar, and
- 2. It must then trade above that low.

Requirements for a TD Trap Buy Signal

The open of the current price bar

- 1. Must be within the range of the previous price bar, and
- 2. Must then break above the high of that range.

TD Buy Termination Count

I prefer to compare the close of TD Buy Countdown bar thirteen with the low two price bars earlier, but a more aggressive version of Termination Count, which DeMark recommends, is to compare the open on TD Buy Countdown bar thirteen with the low two days earlier.

Risk Management: For a TD Buy Countdown

Following a completed TD Sequential Buy Countdown:

- Identify the lowest true low throughout the TD Sequential Buy Countdown process, which includes bars one through thirteen, whether or not it is a numbered price bar;
- 2. Calculate the difference between the true high and true low for that bar; and
- 3. Subtract that true range from its true low.

Many traders take the value of the true range of the bar with the lowest true low and subtract it from the low of TD Buy Countdown bar thirteen, but this would be correct only if TD Buy Countdown bar thirteen happened to have the lowest true low. Accordingly, if TD Buy Countdown bar twelve had the lowest true low, then the correct action would be to take the true range of Countdown bar twelve and subtract it from the low of TD Buy Countdown bar twelve (**Figure 1.20**).

By implication, if markets are experiencing high volatility in the lead-up to the signal, then a wide stop-loss is likely, but, if volatility is low leading up to the signal, then a fairly tight stop-loss is likely. What is significant is that you're letting price action, rather than an arbitrary fixed amount, determine the risk level.

Note: Traders can, for example, still opt to risk 1 percent of capital on a trade, but they should reduce position size to accommodate the required TD Sequential risk level. For example, where the risk on a single position might ordinarily be 1 percent of equity, and the required TD Sequential risk level is 2 percent, traders should halve the amount they would otherwise have traded.



FIGURE 1.20 Calculating the Risk Level Following a TD Sequential Buy Signal

In the chart of EURNOK, of all the TD Countdown bars (one to thirteen inclusive as well as those bars that aren't numbered), TD Countdown bar twelve has the lowest true low. To calculate the TD risk level, we therefore take the value of the true range of that bar and subtract it from its true low.

Frequently Asked Questions

What constitutes a valid downside break of a TD Sequential Buy Countdown risk level?

DeMark recommends following these rules to determine a valid downside break (the price bar that violates the TD risk level is bar X):

- 1. The close of price bar X needs to be below the downside TD risk level,
- The close of price bar X − 1 must be higher than the close of price bar X − 2,
- 3. The open of price bar X + 1 must be a down open, and
- 4. The low of price bar X + 1 must be at least one tick below the open of price bar X + 1.

My own preference is to stop out of a long position as soon as the downside risk level is violated on an intrabar basis. From personal experience, I have found that either the TD Buy Countdown risk level holds, or the market accelerates through it. Since there are fewer instances in which the market violates the TD Buy risk level and then reverses, I'd rather know my up-front risk than incur an unknown, potentially substantial loss while I wait for the four-step process above to be satisfied.

How much time should be allowed for the market to respond to a TD Sequential buy signal?

Ideally, the market should have a meaningful response within twelve price bars. A close above the close four price bars earlier eliminates the risk of a TD Recycle, and so that is an important reinforcing factor, but it is preferable for the market to trade above the TD Reference Close (that is, the highest close four price bars before the trend low) up until the point when the buy signal was generated—within twelve price bars of the TD Countdown thirteen buy.

What are the requirements for a TD Sequential 9-13-9 Buy Count?

Following the TD Buy Countdown bar thirteen, the market temporarily trades higher—producing a bullish TD Price Flip—but subsequently trades lower again and goes on to record a TD Buy Setup. A TD Sequential 9-13-9 Buy Count provides a fresh opportunity to fade the underlying downtrend and initiate a long position, but to validate the signal, the following conditions must occur.

Requirements for Validation of a TD Sequential 9-13-9 Buy Count

- 1. The TD Buy Setup must not begin before or on the same price bar as the completed TD Buy Countdown,
- 2. The ensuing bullish TD Buy Setup must be preceded by a TD Price Flip, and
- 3. No completed TD Sell Setup should occur prior to the appearance of the TD Buy Setup.

Once these conditions are satisfied, a fresh long position can be established on the close of the completed TD Sequential 9-13-9 (**Figures 1.21**, **1.22**, and **1.23**). Although DeMark doesn't outline how to



FIGURE 1.21 Qualified TD Sequential 9-13-9 Buy Signal

In the chart of BMW, the market records a TD Sequential Buy Countdown. Although the market rallies initially after generating a bullish TD Price Flip, (that is, a close higher than the close four price bars earlier), the market fails to sustain those gains and, without first having produced a TD Sell Setup, it sells off again to complete a fresh TD Buy Setup, which generates a TD Sequential 9-13-9 buy signal. The signal is particularly compelling because the risk level on the prior TD Sequential Buy Countdown is still intact.



FIGURE 1.22 Disqualified TD Sequential 9-13-9 Buy Signal

In the chart of EURUSD, the market completes a TD Buy Setup subsequent to a TD Buy Countdown. Note, however, that because the TD Buy Setup begins prior to the completion of the TD Buy Countdown, this does not qualify as a TD Sequential 9-13-9 buy signal. There is, consequently, no Bullish TD Price Flip separating the TD Buy Setup from the TD Buy Countdown.



FIGURE 1.23 Disqualified TD Sequential 9-13-9 Buy Signal

In the chart of Telefonica, the market completes a TD Buy Countdown. There's a TD Sell Setup, however, between that and the subsequent TD Buy Setup, which means that this does not qualify as a valid TD Sequential 9-13-9 buy signal.

determine a risk level for this sort of trade, I have developed my own method.

Risk Management: For TD Sequential 9-13-9

Subtract the true range of the price bar with the lowest true low in the TD Buy Countdown and ensuing TD Buy Setup from the true low of that bar.

TD Sell Countdown

As soon as a TD Sell Setup is in place, we can start looking for the first bar of a TD Sell Countdown; bar nine of a TD Sell Setup can also be bar one of a TD Sell Countdown if it satisfies the following conditions.

Requirement for a TD Sell Countdown

With bar nine of the TD Sell Setup in place, there must be a close greater than, or equal to, the high two bars earlier.

Bar one of the TD Sell Countdown is postponed until the requirement is satisfied. Unlike TD Sell Setup, the TD Sell Countdown doesn't have to be an uninterrupted sequence of qualifying price bars.

The TD Sell Countdown process pauses when markets are trading sideways, resumes when prices start trending higher again, and continues until there is a total of thirteen closes, each one greater than, or equal to, the high two bars earlier (Figures 1.24 and 1.25).

To Complete a TD Sell Countdown

- 1. The high of TD Sell Countdown bar thirteen must be greater than, or equal to, the close of TD Sell Countdown bar eight, and
- 2. The close of TD Sell Countdown bar thirteen must be greater than, or equal to, the high two bars earlier.

When the market fails to meet these conditions, TD Sell Countdown bar thirteen is deferred, and a plus sign appears where



FIGURE 1.24 Completed TD Sequential Sell Countdown

In the chart of the German DAX Index, subsequent to the completed TD Sell Setup, the market goes on to record a series of thirteen closes, each one greater than, or equal to, the high two price bars earlier, thereby completing a TD Sequential Sell Countdown.



FIGURE 1.25 Completed TD Sequential Sell Countdown

In the chart of J Sainsbury PLC, the market completes a TD Sell Setup, but the price doesn't satisfy the conditions to begin a TD Sell Countdown until five bars later. Consequently, the TD Sell Countdown phase is deferred until that condition—a close greater than or equal to the high two price bars earlier—is fulfilled. Note that when there is an interruption in the TD Sell Countdown sequence of closes greater than, or equal to, the high two price bars earlier, the TD Sell Countdown phase stops until the conditions are met again. At that point counting can resume; in this case the interruption occurs between TD Sell Countdown bars eleven and twelve.



FIGURE 1.26 Deferred TD Sequential Sell Countdown

In the chart of EURJPY, subsequent to the completed TD Sell Setup, the market begins a series of closes, each one greater than, or equal to, the high two price bars earlier. However, after TD Sell Countdown bar twelve, a plus sign appears, indicating TD Sell Countdown bar thirteen has been deferred. In the instances of a bar marked with a plus sign, the close is greater than, or equal to, the high two price bars earlier, but the market has failed to satisfy the additional condition necessary to produce a bar thirteen: The high of TD Sell Countdown bar thirteen must also be greater than, or equal to, the close of TD Buy Countdown bar eight. Only when one price bar satisfies both conditions does the TD Sell Countdown bar thirteen appear.

TD Sell Countdown bar thirteen would have otherwise been (Figure 1.26).

It can be extremely frustrating to see the market decline after a "deferred thirteen," when a sell signal has still not appeared. However, as long as a plus sign is present in lieu of a bar labeled thirteen, there is a heightened risk the market will revisit the close of a TD Sell Countdown bar eight before a reversal materializes.

A more conservative approach would also require the high of TD Sell Countdown bar eight to be greater than, or equal to, the close of TD Sell Countdown bar five, but DeMark considers this an elective option rather than a prerequisite.

TD Sell Countdown Cancellation

Although a developing TD Sell Countdown doesn't reset itself if there is an interruption in the sequence of closes greater than, or equal to, the high two bars earlier, built-in filters recognize when the dynamics of the market are changing. These filters cancel the as-yet-incomplete TD Sell Countdown.

Filters That Will Cancel a Developing TD Sell Countdown

Either of the following conditions erases an incomplete TD Sell Countdown: *If*

Price action leads to a selloff, and a TD Buy Setup is generated,

Or

The market trades lower, and posts a true high, below the true low of the prior TD Sell Setup (that is, TDST support).

DeMark is currently investigating a subtle change to this indicator, whereby the four price bars prior to the start of the TD Sell Setup are also included, to determine the reference level for the TD Sell Setup extreme; that is, the market would need a true high below the true low of the prior TD Sell Setup, including the four price bars prior to bar one of the TD Sell Setup.

TD Sell Countdown Cancellation and Recycle Qualifiers

Compare the true range of the previous TD Sell Setup, that is, the difference between the highest true high and the lowest true low, with the true range of the most recently completed TD Sell Setup, and then apply the TD Sell Countdown Cancellation qualifiers I and II.

TD Sell Countdown Cancellation Condition I

lf

The size of the true range of the most recently completed TD Sell Setup is equal to, or greater than, the size of the previous TD Sell Setup, but less than 1.618 times as big,

Then

A TD Countdown Cancellation will occur. Whichever TD Sell Setup has the larger true range will become the active TD Sell Setup.

TD Sell Countdown Cancellation Condition II (a TD Sell Setup Within a TD Sell Setup)

lf

The market completes a TD Sell Setup with a closing range within the true range of the prior TD Sell Setup, without recording a TD Buy Setup between the two, and the current TD Sell Setup has an extreme close, to close range within the true range of the prior TD Sell Setup,

Then

The prior TD Sell Setup is the active TD Setup, and the TD Sell Countdown related to it remains intact.

When comparing the respective ranges, as with TD Cancellation qualifier condition I, take into consideration that TD Sell Setup can extend beyond nine if there is no TD Price Flip to extinguish it.

TD Sell Countdown Recycle Qualifier

Following a complete TD Sequential Sell Countdown thirteen, traders can initiate a short position using either the aggressive or conservative approach, my personal preference being the aggressive.

lf

A TD Sell Setup extends to eighteen bars (that is, eighteen closes each one greater than the close four price bars earlier prior to the occurrence of a TD Price Flip),

Then

The prior TD Sell Countdown is negated and the letter R will appear on the chart where TD Sell Countdown bar thirteen would have otherwise been.

Note: The appearance of the R is meaningful because it is an acknowledgement that momentum is very strong and the underlying bull trend has intensified (Figure 1.27).

Entering a Short Position Following a Completed Thirteen TD Sequential Sell Countdown

Aggressive Approach: Sell on the close of TD Sell Countdown bar thirteen or

Conservative Approach: Subsequent to a TD Countdown thirteen, wait for the first instance in which the close is less than the close four price bars earlier—i.e., a bearish TD Price Flip.



FIGURE 1.27 Extension of TD Sell Setup from Nine to Eighteen Recycles a Developing TD Sell Countdown

In the chart of EURJPY, rather than stopping at nine consecutive closes, each greater than the close four price bars earlier, the TD Sell Setup extends to eighteen closes, each greater than the close four price bars earlier. This suggests buying pressure is gaining momentum, and therefore the TD Sell Countdown is recycled. The letter *R* now appears where the TD Sequential Sell Countdown thirteen would have been.

While the conservative approach eliminates the risk of the market's recycling, it provides a less efficient entry point, and hence my preference for the more aggressive approach (**Figure 1.28**).

Alternative Strategy for Entering a Short Position

DeMark suggests you can enter a short position using TD Camouflage, TD Clop, TD Clopwin, TD Open, or TD Trap, each of which can be used alone but is more powerful used in conjunction with TD Sequential or TD Combo Signals.



FIGURE 1.28 Aggressive Approach for Entering a Short Position After a Completed TD Sell Countdown

In the chart of Daimler, the market completes a TD Sell Countdown, and a short position is established on the close of TD Sell Countdown bar thirteen.

Conservative approach for entering a short position after a completed TD Sell Countdown. Rather than establishing a short position on the close of TD Sell Countdown bar thirteen, the more conservative approach is to wait for a confirmed bearish TD Price Flip—subsequent to the thirteen—that is, a close less than the close four price bars earlier, to eliminate the risk that prices will recycle.

TD Camouflage Sell Signal Requirements

- 1. The close of the current price bar must be above the close of the previous price bar,
- 2. The close of the current price bar must be below the open of the current price bar open, and
- 3. The high of the current price bar high must be above the true high two price bars earlier.

Short positions would be initiated on the close when this pattern has been confirmed.

TD Clop Sell Signal Requirements

- 1. Downside momentum must continue when the market exceeds the open and close price of the prior price bar,
- 2. The open of the current price bar must be above the close of the previous price bar and open, and
- 3. The market must subsequently trade below both the open and close of the previous price bar.

Meeting these conditions increases the probability that downward momentum will continue into the close.

TD Clopwin Sell Signal Requirements

- 1. The open and close of the current price bar must be contained within the open and close range of the previous price bar, and
- 2. The close of the current price bar must be below the close of the prior price bar.

Meeting these conditions increases the probability that downward momentum will be sustained into the next price bar, thereby reinforcing the TD Sequential sell signal.

TD Open Sell Signal Requirements

- 1. The open of the current price bar must be above the high of the prior price bar, and
- 2. It must then trade below that high.

TD Trap Sell Signal Requirements

- 1. The current price bar's open must be within the previous price bar's range, and
- 2. It must then break below the low of that range.

TD Sell Termination Count

I prefer to compare the close of TD Sell Countdown bar thirteen with the high two price bars earlier. DeMark recommends the more aggressive open setting, which compares the open of TD Countdown bar thirteen with the high two price bars earlier.

Risk Management: For a TD Sell Countdown

Following a completed TD Sequential Sell Countdown,

- Identify the highest true high throughout the TD Sequential Sell Countdown process, which includes bars one through thirteen, whether or not it is a numbered price bar,
- 2. Calculate the difference between the true high and true low (the range) for that bar, and
- 3. Add that true range to its true high.

Do not take the value of the true range of the bar with the highest true high and add it to the high of TD Sell Countdown bar thirteen unless TD Sell Countdown bar thirteen happens to have the highest true high, such as, for example, if TD Sell Countdown bar twelve has the highest true high. If this occurs, you would take the true range of TD Sell Countdown bar twelve and add it to the high of TD Sell Countdown bar twelve.

By implication, if markets are experiencing high volatility in the lead-up to the signal, then a wide stop-loss is likely, but, if volatility is low leading up to the signal, then a fairly tight stop-loss is likely. The key factor is that you're letting price action—rather than an arbitrary fixed amount—determine the risk level (**Figure 1.29**). You can still opt to risk the same percentage of capital, but you should reduce position size relative to the required TD Sequential risk level. For example, if you would ordinarily risk 1 percent of equity on a single position, and the TD Sequential risk level is 2 percent, then halve the amount you would otherwise have traded.

Frequently Asked Questions

What constitutes a valid break of a TD Sequential Sell Countdown risk level?

To determine a valid upside break, DeMark recommends the following (the price bar that violates the TD Sell risk level to the upside is bar X):

- 1. That the close of price bar X be above the TD Sell risk level,
- That the close of price bar X − 1 be lower than the close of price bar X − 2,



- **3.** That the open of price bar X + 1 be an up open, and
- 4. That the high of price bar X + 1 be at least one tick above its open.

My preference is to stop out of a short position as soon as the upside risk level is violated on an intrabar basis, since, usually, either the TD Sell risk level holds or the market accelerates through it. Only rarely does the market violate the TD Sell risk level and then reverse. I'd prefer knowing my up-front risk than incurring an unknown and potentially substantial loss waiting for the four-step process above to be satisfied.

How much time should be allowed for the market to respond to a TD Sequential sell signal?

Ideally the market should have a meaningful response within twelve price bars. Although a close less than the close four price bars earlier eliminates the risk of a TD Recycle, and is therefore an important reinforcing factor, it is preferable that the market trade below the TD Reference Close, that is, the lowest close four price bars before the trend high, up until the point when the sell signal was generated and within twelve price bars of the TD Countdown thirteen sell.

What are the requirements for TD Sequential 9-13-9 Sell Count?

If, following a TD Sell Countdown thirteen, the market temporarily trades lower and produces a TD Price Flip and subsequently goes on to record a TD Sell Setup, then what is known as a TD Sequential 9-13-9 Sell Count occurs, which provides a fresh opportunity to fade the underlying uptrend and initiate a short position.

- Requirements for Validating a TD Sequential 9-13-9 Sell Count
 - 1. The TD Sell Setup must not begin before or on the same price bar as the completed TD Sell Countdown,
 - 2. The ensuing TD Sell Setup must be preceded by a bearish TD Price Flip, and
 - 3. There must be no completed TD Buy Setup prior to the appearance of the TD Sell Setup.

To allow the establishment of a fresh short position on the close of the completed TD Sequential 9-13-9, the TD Sequential 9-13-9 Sell Count must be validated (**Figures 1.30, 1.31**, and **1.32**).

Risk Management: For a TD Sequential 9-13-9 Sell Count

Although DeMark doesn't outline how to determine a risk level for this sort of trade, my preference is to:

Add the true range of the price bar with the highest true high in the TD Sell Countdown and subsequent TD Sell Setup to the true high of that bar, and to use that as my risk level.



FIGURE 1.30 Qualified TD Sequential 9-13-9 Sell Signal

In the chart of the Nikkei 225, the market records a TD Sequential Sell Countdown. Although exhibiting an initial decline after generating a Bearish TD Price Flip—that is, a close less than the close four price bars earlier—the market fails to sustain those losses and, without having first produced a TD Buy Setup, rallies again, to complete a fresh TD Sell Setup, and thereby generate a TD Sequential 9-13-9 Sell Signal.



FIGURE 1.31 Disqualified TD Sequential 9-13-9 Sell Signal

In the chart of CADJPY, although the market completes a TD Sell Setup subsequent to the TD Sell Countdown, note that the TD Sell Setup begins prior to the completion of the TD Sell Countdown. Because of this and because the market consequently exhibits no Bearish TD Price Flip separating the TD Sell Setup from the TD Sell Countdown, the signal is not, therefore, a TD Sequential 9-13-9.



Combining Time Frames for Additional Confidence

Applying the approach outlined above to multiple time frames can increase the signal's probability of success (Figures 1.33, 1.34, 1.35). On March 5, 2007, for example, at a Bloomberg "Thursday Night Technicals" session (type <TNTS> <GO> on your Bloomberg terminal for further details), I highlighted my reasons for being bearish on the USD Index. The USD Index (DXY) already had an active monthly TD Sell Setup at 91.57 from November 2005 (Figure 1.33).

At about the same time, in November 2005, the market also completed a weekly TD Sell Setup, at 91.91 (Figure 1.34). The bear trend was reinforced when DXY violated weekly TDST support at



The confluence of negative DXY signals is reinforced in February 2007, when a TD Sequential Sell signal occurs at 85.12 on the daily chart. Interestingly, having violated TDST support in late November 2006, the ensuing sell signal materializes ahead of daily TDST resistance, indicating the market has insufficient upward momentum for a successful break out of the range to the upside. (See also Figures 1.34 and 1.35.)

87.75 in April 2006. Finally, on February 12, 2007, having failed to overcome daily TDST resistance at 85.48, the DXY generated a daily TD Sequential Sell signal at 85.12 (Figure 1.35). Adding credence to the bearish view, the market subsequently experienced a daily close below daily TDST support at 82.38, and posted a monthly close beneath monthly TDST support at 81.28.





Figures 1.33 and 1.34.)

Frequently Asked Questions about TD Sequential

If more people start using TD Sequential, will its usefulness diminish over time?

Consider for a moment that the indicator is countertrend by definition; therefore, it is also counterintuitive for most people who are typically trend followers. Although it's true that a lot of people are now familiar with TD Sequential and look at it on a regular basis, relatively few traders are actually willing to commit capital to it or initiate trades based on it.

If you go long into an uptrend and get stopped out, it's easy to rationalize the position. It looked as if it were going up, and so you bought it, because "the trend is your friend," and other people probably got stopped out too. On the other hand, if you go short into an uptrend and get stopped out, it's harder to justify your actions, particularly since it becomes blatantly apparent retrospectively that the market was entrenched in a directional up move.

There will be times when the indicator doesn't work for prolonged periods, but it is important, nevertheless, not to give up on it, and to remain both disciplined and objective. In the third quarter of 2004, I had had a good run with TD Sequential for a while, but then, in the fourth quarter, I had a series of losing trades. It was a time when many people became despondent and questioned whether the indicator still worked. Well, on January 14, 2005, the indicator gave a buy signal in USDJPY on the New York close.

I should tell you that not only had I been experiencing a particularly bad run of losing recommendations, but it also happened to be a Friday—and not just any Friday, but a Friday before a three-day holiday weekend in the United States. If all that were not enough, the market closed roughly twenty-five pips off a five-year low. From a customer perspective, none of these factors was an ingredient for a high-confidence trade. I think only one of our clients traded the signal that day, and even that client was only closing out a short position, not committing fresh capital to the long side.

I often highlight this example when discussing the indicators—not to say, with hindsight, how wonderful they were—but to illustrate how tough it is to stick with them after a bad run. When you've had a prolonged losing streak, when everyone around you is calling the market lower and questioning the validity of the approach, and when more conventional technical analysis suggests the established trend is firmly intact, you cannot underestimate how difficult it is to take a leap of faith and trade. Think back to my dieting example in the introduction to this book: Even if you know the rules you're supposed to follow, when emotions are involved, it's still not easy to stick with the plan.

How did DeMark come up with nine and thirteen for TD Setup and TD Countdown? Are they necessarily the optimal numbers to use?

Tom DeMark has never really given me a straight answer to the first question—other than to say that his wife, Nancy, was incredibly patient during the time he was developing the indicators. Since the study was done thirty years ago, it's reasonable to ask whether there have been any subsequent optimization tests.

I'm not inclined to optimize the default settings of nine for TD Setup and thirteen for TD Countdown. The fact that you can apply TD Sequential to any market or time frame, irrespective of the market's underlying volatility, without your having to change any of the default parameters, is testimony to how robust it is. Personally, I prefer indicators that work well across the board, rather than studies that are optimized for a specific market or set of conditions; the latter tend to fail when the behavioral characteristics of the market change.

Since DeMark was fascinated by Fibonacci numbers, he had really wanted to use eight for the TD Setup phase, and was disappointed that although nine works better, it's not a Fibonacci number. As mathematicians, designers, and architects know, the Fibonacci numbers are Nature's numbering system, and they are represented in the leaf arrangement of plants, the bracts of a pinecone, and the scales of a pineapple. DeMark was relieved—and able to sleep a lot better—when someone pointed out to him a few years back that, since TD Setups have a fourbar look-back, the TD Setup phase covers thirteen bars in total!

Should I trade every TD Setup nine and TD Countdown thirteen indiscriminately?

It's certainly tempting, but, since TD Sequential is not an infallible indicator, there are times when the signals are less likely to work. My personal preference is to trade a completed TD Setup only if it has been perfected and fails on a close to exceed the prior TD Setup in the opposite direction.

As for TD Countdowns, I try to avoid countertrend signals that coincide with TD Wave 3 (see Chapter 3, "TD D-Wave," for details), unless the projected price target has already been reached and there is reinforcing evidence of price exhaustion from higher-degree TD Sequential time-frame charts.

Is TD Sequential better suited to some markets than others?

I don't believe so; it seems more of a behavioral distinction; that is, some markets have a greater tendency to range trade, and therefore to generate more TD Setups, while others have a greater propensity to trend. The more directional markets produce more TD Countdowns.

Is TD Sequential better suited to some time frames than others?

No. While the indicator was originally developed with daily price data in mind, you can apply it to any time frame from minutes to years, regardless of underlying volatility of the market, and without your having to change any of the default settings. The breadth of its applicability is testimony to the robustness of TD Sequential. I do believe, however, that one's expectations need to be adjusted relative to time frame. Although high-frequency price data will generate a lot of signals and fairly tight risk levels, the expected return per trade is fairly limited; whereas, if you're looking at a longer-term-data series, you'll get fewer signals and greater potential profit per trade—but commensurately wider risk levels.

Have you backtested the performance of TD Sequential signals?

I have not felt the need to backtest the signals, because I've been using the indicators in real time for the past fourteen years. I would encourage those new to the indicators to do so, to get a better sense of when the signals do and do not work. In backtesting, however, bear in mind that you must objectively filter the signals to get confirmation from other TD indicators and, ideally, time frames, and it's up to you to manage the risk and the take-profit level (since DeMark doesn't explain how to manage the trade once it starts to move in your favor). Remember, TD Sequential is an indicator, not a system.

Risk Management for TD Sequential

There are a number of ways in which you can improve the efficiency of the signal without compromising the signal itself:

- The "Maximum Favorable and Adverse Excursions Subsequent to a Signal" Method (that is, the point at which the market goes most in your favor and the point at which it typically goes most against you without being stopped out). This is the most objective way to manage the risk. If you plot the distribution of these variables over time, you can at least determine optimum take-profit levels, which is a useful exercise because there isn't always a signal in the opposite direction to tell you where to close out a profitable trade.
- 2. The "Drawdown Support" Method. (This is the method of risk management popularized by David Stendahl of Rina Systems, and is another concept worth testing.) Rather than tampering with the signal to try to optimize it (which would compromise the integrity of the system), you can try to plot the distribution of signals historically generated. This idea can be applied to any approach. If you notice, for example, that the market often goes half a percent against you before becoming profitable, you could trade half your normal unit size, and then add the remainder (to take you up to what would have been your full initial allocation) when the market reaches the drawdown support level. This way, you remain true to the entry signal, without trying to optimize it, and you remain true to the risk parameters, but you average your entry price. The net effect, over time, should improve your overall performance.

I've noticed, to my cost, that, when markets are trending, most TD Countdown thirteens get stopped out. Is there anything I can do to reduce this risk and improve the success rate of the signals by not trying to fade trends when momentum behind the move is very strong?

Here, instead of using TD Sequential in isolation, I'd suggest using the indicator on a multiple-time-frame basis, to see if higher-degree time frames are in sync with other indicators, such as TD Combo and TD D-Wave. TD D-Wave, in particular, is helpful, because it puts the broader trend into context, and I've observed, over the years, that countertrend TD Sequential signals occurring in TD D-Wave three are more likely to violate their risk levels than those that, for example, coincide with TD D-Wave five.

How important is context?

Just as it's sound from an ecological perspective to consider the environment you live in, it's sound from a trend perspective to consider the market environment you operate in. For me, although weekly, monthly, quarterly, and annual signals are important (particularly when they line up with daily charts), the signals stemming from the dailies are the most important, particularly if you trade intraday. You will improve your chances of success if, for example, you take only buy signals intraday (completed thirteens or nines that hold TDST support), rather than sell signals, if the daily chart has an active qualified buy signal in place.

Should I trade TD Countdown thirteens using short-dated options rather than the underlying cash or futures instrument I get the signal in?

It depends on the circumstances. Often people think an option is a better way to express a countertrend view, because they believe there's a lower probability that the risk level will be violated before the expected reversal materializes. That may be so, but it's also important to consider the time-decay element and the implied volatility of the option in question. I'm inclined to express a countertrend view only following a completed TD Sequential via an option if implied volatility is very low. Otherwise, when you're wrong, you get hit from a price, time, and volatility-decay perspective, if the trend continues more gradually or if the market merely consolidates.

If we're already on bar twelve of a prospective thirteen, why shouldn't I preempt the signal if I think a reversal is imminent?

Let's say the market is on bar twelve of a prospective TD Buy Countdown thirteen. The only thing that would prevent the appearance of a thirteen would be if there were a market rally—the event you were ultimately waiting for. Since, however, the market would need to close less than, or equal to, the low two price bars earlier to complete the signal, it would not be advisable to preempt the signal because:

- There's a risk of new lows, and
- The true range of the lowest low is used to calculate the risk level (which means that, if you act ahead of time, you could quite easily have the wrong stop-loss).

Sometimes a random TD Countdown number seems to appear from nowhere—is this a bug in the software?

No. What's going on here is that, since charting systems are programmed not to display more than one developing TD Countdown at any given



Countdown completes.

moment, the default is always to show the TD Countdown closest to completion (Figure 1.36). If, for example, there are two TD Countdowns in progress, the second, hidden, TD Countdown will continue counting in the background, but be displayed only when the first TD Countdown finishes (hence making it appear that TD Countdown numbers sometimes appear "from nowhere," midcount).

Sometimes TD Setups and TD Countdowns disappear—is this a bug in the software?

No. When market-data systems update in real time, they treat the current price as the close, which is why a signal that happens to satisfy the requisite criteria on an intrabar basis may appear on a real-time basis prior to the completion of a price bar. The numbers are not fixed until the end of the chosen period, however, and so they will disappear if the necessary conditions are not satisfied at the close of the period selected. Be aware that TD Setups are continually forming, regardless of where we are in the TD Countdown phase.

Can I apply TD Sequential to any price-data series?

Yes, you can, with the proviso that the data needs to be clean, that is, free of any unintentional price gaps or missing data points. In fact, we've had success applying the indicator not only to price, but also to tick charts (which aggregate the number of price updates to allow each bar to represent an equal number of price updates), to constant-volume bars (which aggregate volume data to allow each bar to represent an equal volume), to spreads, to bond yields, to implied volatility, to economic-data series, and even to proprietary data like the UBS FX Risk Index (Figures 1.37, 1.38, 1.39, and 1.40).

Can I apply TD Sequential to other technical indicators?

Yes, it's worth experimenting with this idea, but you need to be aware that, by doing so, you're looking at a derivative of price. My preference







S&P 500 VIX (Volatility Index)



FIGURE 1.40 Applying TD Sequential to the UBS FX Risk Index

This daily index chart shows how TD Sequential is successfully applied to the UBS FX Risk Index. The index shows investor appetite for risk. The chart shows that when the index is rising, the market is increasingly risk averse; when the index is falling, the chart reflects a growing appetite for risk. If you apply TD Sequential to the index, as has been done in the past, it's an extremely useful tool to help you identify prospective turns in risk appetite or aversion.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com. Data from UBS AG.

is always to evaluate price action first. Nevertheless, it is possible to overlay TD Sequential on momentum indicators like the RSI, and it also works quite well on point & figure charts. Interestingly, you can overlay TD Sequential even on open interest, and I'd also recommend experimenting with applying Fibonacci retracements to TD Setups (Figures 1.41, 1.42, 1.43, 1.44, and 1.45). Remember, while TD Setups are only displayed up until the close of bar nine, it is worth looking at both the retracements of the one- to nine-range extremes and the completed TD Setup beyond nine (the last only until a TD Price Flip occurs). This range can be highlighted if you check the TD Setup shading box in TD Setup parameters.



FIGURE 1.41 Using TD Sequential with Overbought or Oversold Oscillators

The daily chart of the S&P 500 (basis cash) shows how you can overlay TD Sequential on overbought or oversold oscillators such as the RSI, to identify prospective turns in momentum. Note how, in this example, if you rely on price alone, you will have no price signal at the low. If you apply TD Sequential to the corresponding RSI, however, you will have evidence that momentum (and therefore price) is susceptible to a reversal higher in August 2004.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com.



FIGURE 1.42 Using TD Sequential with Point & Figure Charts

The daily chart of USDCHF shows how you can overlay TD Sequential on a point & figure chart to identify prospective turns in price.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com.



FIGURE 1.43 Using TD Sequential with Tick Charts

The daily chart of the S&P 500 (basis cash) shows how you can overlay TD Sequential on tick charts to identify prospective turns in price. Tick charts aggregate the number of price updates such that each bar represents an equal number of price updates.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com.



FIGURE 1.44 Using TD Sequential with Constant Volume Bars

The daily chart of the S&P 500 (basis cash) shows how you can overlay TD Sequential on Constant-Volume bars to identify prospective turns in price. Constant volume bars aggregate volume data so that each bar represents the same amount of volume.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com.



FIGURE 1.45 Using TD Sequential to Identify Turns in Open Interest

The daily chart of COMEX gold shows how you can use TD Sequential even to identify prospective turns in open interest.

Source: CQG, Inc. © 2008. All rights reserved worldwide. www.cqg.com.

TD Sequential: Recommended Settings



Setup Countdown Recycle TDST			
Reverse Setup Cancel	Recycle Count	18	
⊠ Recycle Confirm	Recycle Setup Rule	Recycle All	7
Enable Setup Within Setups	Recycle Multiplier	1.000 - 1.618	
Setup Within Setups Option 1	Use Maximum Setup		7
Setup Within Setups Option 2	Extreme Setup Closes	Within True Range	7

Setup Countdown Recycle TDST

☑ TDST On
☑ Extend the 2nd Most Recent TDST Level
☑ Open Restriction

TD Aggressive Sequential

There will inevitably be times when TD Sequential is silent. For those who want to trade more frequently, TD Aggressive Sequential can be a useful adjunct to its more conservative partner. It is very similar to TD Sequential, in the sense that the conditions required to complete the TD Setup phase are the same; it's just the TD Countdown phase that differs.

TD Aggressive Sequential

For a prospective sell following a completed TD Sell Setup:

TD Aggressive Sequential compares the high with the high two price bars earlier, during the TD Sell Countdown process.

For a prospective buy following a completed TD Buy Setup:

TD Aggressive Sequential compares the low with the low two price bars earlier during the TD Buy Countdown phase.

By definition, TD Aggressive Sequential always produces buy and sell signals before TD Sequential does. I have found that often TD Aggressive Sequential identifies the trend extreme, while TD Sequential captures the retest of that price extreme. It is generally safer to act when both indicators produce signals at the same time. That said, TD Aggressive Sequential is useful when markets reach price projections, and the relative positioning of the TD studies suggests a reversal is likely, even though TD Sequential is silent.