The New High – New Low Index

Stock Market's Best Leading Indicator

Dr. Alexander Elder & Kerry Lovvorn

SpikeTrade.com

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Introduction: a Leading Indicator

Imagine driving on a mountain road, tall trees on both sides. Suddenly you see a wall of green ahead – the road is about to turn. Will it swing right or left? You grip the wheel and peer straight ahead, but all you see is trees.

Glance at the treetops above the road. You'll see a notch in the wall of green where the road runs, and the direction of that notch, either right or left, will show which way the road is about to turn.

You just found yourself a leading indicator.

We have leading indicators in many areas of life. The New High – New Low Index is a leading indicator of the stock market. It'll help you find out whether the market is likely to rise or fall in the days and weeks ahead. It'll help you make better decisions to buy stocks, sell them, or stand aside.

Beginners tend to buy stocks after a lengthy rally, only to be caught in a downside reversal. As the market drops, they hold onto losses and buy even more until finally dumping in disgust – right before the market turns up. Amateurs mindlessly follow trends instead of anticipating market turns.

The New High – New Low Index can show you when a trend is strong and likely to continue or weak and likely to reverse. In this book we will show you why we believe it is the best leading indicator of the stock market.

How to Work with This Book

We'll begin by reviewing basic definitions and work through many examples. We'll review the New High – New Low Index in different timeframes and even for different countries.

Keeping good records is the keystone of successful trading. Please stop for a moment before you start working with the first of several chart series in this book. Open your word processor and create a file called "Working with NH-NL." Write down the number and the name of each chart series and document your answers to questions at the right edges of several charts. By the time you get to the end of this e-book you will have a nice learning file.

An important reminder: successful trading is based on three M's: Mind, Method, and Money (psychology, tactics, and risk management.) All three are essential for your success. This book focuses on only one M – Method. You may use this book as a guide to market analysis and tactics, but remember to implement the other two M's, discussed in the books which are listed in the Databank at the end of this e-book.

Free Updates & the Honor Code

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And now, let's embark on our journey.

Dr. Alexander Elder & Kerry Lovvorn

New York & Alabama

April 2012

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Basic Definitions

The New High – New Low Index (NH-NL for short) works as a leading indicator by tracking the behavior of market leaders. It tracks the leaders in strength – the stocks that are making new highs and pulling the market up. It also tracks the leaders in weakness – the stocks that are hitting new lows and dragging the market down. Crowds follow leaders, in and out of the markets.

The New Highs are the stocks that rise to a new high for the year on any given day. These are the strongest stocks on the exchange, the bullish leaders.

The New Lows are the stocks that fall to a new low for the year on any given day. These are the weakest stocks on the exchange, the bearish leaders.

The numbers of New Highs and New Lows are reported daily in the financial media, such as *The Wall Street Journal*. They are also reported by a growing number of online data services, some of which are listed in the Databank section at the end of this book.

The New High – New Low Index takes the number of New Highs on any given day and subtracts from it the number of New Lows. The result can be a positive or a negative number:

Daily NH-NL = NH – NL

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Test yourself – calculate the daily NH-NL Index

Answers at the bottom of this chapter

a. On February 1, data services report 250 New Highs and 48 New Lows. NH-NL = ?
b. On September 30, data services report 100 New Highs and 370 New Lows. NH-NL = ?

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You can visualize stocks in any given market as soldiers in a regiment, attacking a hill. Will the regiment press its attack or turn back and run?

The New Highs are the officers in front of the regiment, leading the charge up the hill. If the number of New Highs keeps increasing, it shows that the attack is being well lead and is likely to succeed.

The New Lows are the officers who are deserting, running downhill. There are deserters in every army, but watch their numbers. When officers start running away, soldiers are certain to follow. If more officers run downhill than uphill, you know that the poorly led attack will fail. This market is likely to fall, and it should be sold and sold short.

The basic principle of using NH-NL is to measure the behavior of leaders in strength and the leaders in weakness – and trade accordingly. We wrote this e-book to teach you to identify leaders' behavior and anticipate market turns.

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Answers to the test above

Calculating the 52-week daily NH-NL Index

a. 250 New Highs and 48 New Lows. NH-NL = 202
b. 100 New Highs and 370 New Lows. NH-NL = minus 270

These numbers will become more meaningful when you compare them with the readings for recent days, weeks, and even months. This is what we'll be doing in the following chapters.

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Using Multiple Timeframes

Successful traders always use multiple tools. No single technique will make you a winner because the markets are too complex to be handled with just one tool. For example, markets tend to move in different directions at the same time in different timeframes.

The market may be trending up on the monthly chart, flat on the weekly, down on the daily – all at the very same time. Most traders watch a single timeframe and ignore others until a powerful trend, erupting from a neighboring timeframe, flips their accounts. We solve this problem by using **Triple Screen trading system**, first described in one of the co-authors' book *Trading for a Living*.

The key principle of Triple Screen is to make a strategic decision – to be a bull or a bear – on a long-term chart and then move to a shorter timeframe for tactical decisions on entries and exits. If your favorite timeframe is daily, you're not allowed to look at it until you examine the chart one order of magnitude longer – a weekly chart – and make your strategic decision there. Combining two timeframes will greatly increase your likelihood of success. In working with the New High – New Low Index, we analyze it in more than one timeframe.

Figure 01: The basic New High – New Low Screen

This is how a computer screen may look when we plot the New High – New Low Index. The weekly chart is on the left and the daily on the right. We must analyze the weekly chart before looking at the daily. That's where we make a strategic decision – to be a bull or a bear.

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The Weekly New High – New Low Index

The weekly NH-NL, which we plot below the weekly charts of the S&P500 index, helps confirm major and intermediate trends. Major trends may last years, intermediate several months, and minor trends several weeks or days.

Weekly trend signals are quite straightforward – the trend is bullish when the weekly NH-NL is above its zero line and bearish when below. An important additional signal is a 'bull market confirmation' which we'll review in a moment. There are also two reversal signals: divergences and spikes.

To help you grasp these concepts, let's walk through several Chart Series. We suggest you approach them as puzzles: study each chart and write down your answers to any questions before moving on to the next chart.

How to Construct Weekly NH-NL

The formula for daily NH-NL was given in a previous chapter. The weekly NH-NL simply sums up the daily NH-NL for the last five days, as you can see in the example below. We use Excel to convert daily data into weekly and then load it into a charting package. Perhaps your charting software will plot the weekly NH-NL by automatically converting the daily data.

Date	Daily	Weekly
2/1/2012	247	
2/2/2012	272	
2/3/2012	453	
2/6/2012	182	
2/7/2012	184	1338
2/8/2012	225	1313
2/9/2012	226	1270

Figure 02: Calculating weekly NH-NL

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Weekly NH-NL Bull Market Confirmations

The most basic interpretation of weekly NH-NL is that it is bullish when its latest value is greater than zero and bearish below zero. A much stronger message is given when the weekly NH-NL rises above +2,500 where it confirms a real bull market. Whenever the weekly NH-NL rises to that level, it is as if a friend has tapped you on the shoulder, saying: “You’re on solid ground, this is a bull market; hold on to what you’ve got and buy pullbacks.”

The confirmation level for a bull market is the weekly NH-NL above +2,500.

The weekly NH-NL reaches this level only during bull markets. It tops out at lower levels during bear market rallies. A rise above 2,500 sends a loud and clear message that the major trend is up.

Bull market confirmations – chart series 1

Figure 03: weekly S&P500 and NH-NL (Series 1, chart 1)

Green horizontal line = NH-NL+2,500.

On the left side of the chart we see 2002-2004 bear market in full swing. A rally erupts in area A, but the bear market isn't over. Since the weekly NH-NL cannot rise above +2,500, it is merely a bear market rally. That rally was actually a shorting opportunity, as the bear market resumed, slamming down into its 2002 bottom in area B.

In area C the weekly NH-NL confirms the bull market by rising above +2,500. Its message is to get long and stay long. After seeing this message we need to turn to our daily charts in search of entry points into long trades.

Figure 04: weekly S&P500 and NH-NL (Series 1, chart 2)

Green horizontal line = NH-NL+2,500.

A bull market tends to run for several years, and during that time the weekly NH-NL repeatedly surges above the +2,500 level. We see such confirmations, marked here by vertical green arrows, in areas A through F but several months later there is a hugely important warning.

The stock market kept marching to new peaks in 2007, but the weekly NH-NL could never rise to the +2,500 level. This meant that the rally was becoming narrow, the bullish leadership weakening, and one should expect trouble ahead. This absence of a bull market confirmation was deafening in its silence.

Figure 05: weekly S&P500 and NH-NL (Series 1, chart 3)

Green horizontal line = NH-NL+2,500.

Following the 2007 – 2009 bear market, a new bull market began in March 2009. It has been receiving weekly NH-NL confirmations every few months like clockwork. Only at the right edge of the screen there is a sign of potential trouble: the bull market has risen to a new bull peak, while the NH-NL could not rise above 2,500. This warning preceded a severe correction that began in the summer of 2011 and lasted for the rest of that year.

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Weekly NH-NL Divergences

Divergences between prices and indicators are among the strongest signals in technical analysis. They expose hidden strengths or weaknesses below the surface of the market. SpikeTrade often refers to divergences, and one of the co-authors has written an e-book about them Two Roads Diverged: Trading Divergences.

A **bullish divergence** occurs when:

1. both price and an indicator fall to new lows

2. both rally off their lows, with the indicator crossing above its zero line
3. both fall again, with the price falling to a lower low, while the indicator bottoms out at a higher level than its previous bottom.

A **bearish divergence** occurs when:

1. both price and an indicator rise to a new high
2. both decline from their highs, with the indicator crossing below its zero line
3. both rally, with the price rising to a new high, while the indicator tops out at a lower level.

Let’s review several charts, showing examples of divergences between the weekly NH-NL and the S&P500.

Weekly divergences – chart series 2

Figure 06: weekly S&P500 (Series 2, chart 1). Bullish or bearish?

[There is no dateline here, so that you can analyze this chart as is, without reference to dates].

Figure 07: weekly S&P500 and NH-NL (Series 2, chart 2)

Let's add NH-NL to the chart. Bullish or bearish?

Figure 08: weekly S&P500 and NH-NL (Series 2, chart 3)

Let's mark up the chart.

- At bottom A, the S&P500 stabbed down to a new bear market low and NH-NL dropped to a new low as well, confirming the power of bears.
- NH-NL dropped sharply again at bottom B, confirming that bears were in charge..

- After a brief rally the market dropped to the same low level at point C. NH-NL also fell near its previous low, showing that bears were almost as strong as before.
- The market staged another brief rally and in area D declined into the area of its previous two bottoms. The behavior of NH-NL was strikingly different. It rallied above zero after the decline C and then made a very shallow dip D. This divergence showed that the bearish leadership was exhausted and gave a buy signal.

Figure 09: weekly S&P500 and NH-NL (Series 2, chart 4)

Looking at the dateline, we see that this bullish divergence occurred at the end of the 2000-2002 bear market. It flashed an extremely valuable long-term buy signal, and the ensuing rally lasted a full year. The weekly NH-NL stayed positive for that entire year, confirming the bullish trend.

Weekly NH-NL Divergences – chart series 3

Let's examine a more recent chart set, illustrating messages of weekly NH-NL.

Figure 10: weekly S&P500 (Series 3, chart 1). At the right edge - bullish or bearish?

[There is no dateline here, so that you can analyze this chart as is, without reference to dates]

Figure 11: weekly S&P500 and NH-NL (Series 3, chart 2)

Let's add NH-NL to the chart. Bullish or bearish?

Figure 12: weekly S&P500 and NH-NL (Series 3, chart 3)
Let's mark up the chart.

The S&P 500 is trending higher, in an orderly pattern of higher high and higher lows. The peaks A, B, and C are confirmed by broad peaks of NH-NL of approximately the same height, as the bulls maintain a steady level of power. There are no bearish divergences, just a normal inhale/exhale cycle of rallies and declines. Remember that for a bearish divergence to be valid an indicator must cross and re-cross its zero line. At the right edge we may expect the rally to continue after the current pullback.

Figure 13: weekly S&P500 and NH-NL (Series 3, chart 4)

That bullish call was correct: the S&P500 has recovered and rallied to a new peak D. Now – is it bullish or bearish?

Figure 14: weekly S&P500 and NH-NL (Series 3, chart 5)

This bearish divergence C-D occurred at the very end of the 2003-2007 bull market. As the stock market broke out to its historic peak D, a severe bearish divergence C-D of the NH-NL flashed a priceless sell signal: the stock market bubble was ready to pop.

In order for a bearish divergence to be valid, an indicator has to drop below its zero line between the two peaks. The break between C and D was the deepest in years, showing that the bears were becoming stronger. When the stock market rallied to a new high D, the rally of NH-NL was quite feeble. That bearish divergence warned of trouble ahead and augured in a lengthy bear market.

Weekly NH-NL Divergences – chart series 4

Let's work through another series of charts.

Figure 15: weekly S&P500 (Series 4, chart 1). At the right edge: bullish or bearish?

[There is no dateline here, so that you can analyze this chart as is, without reference to dates]

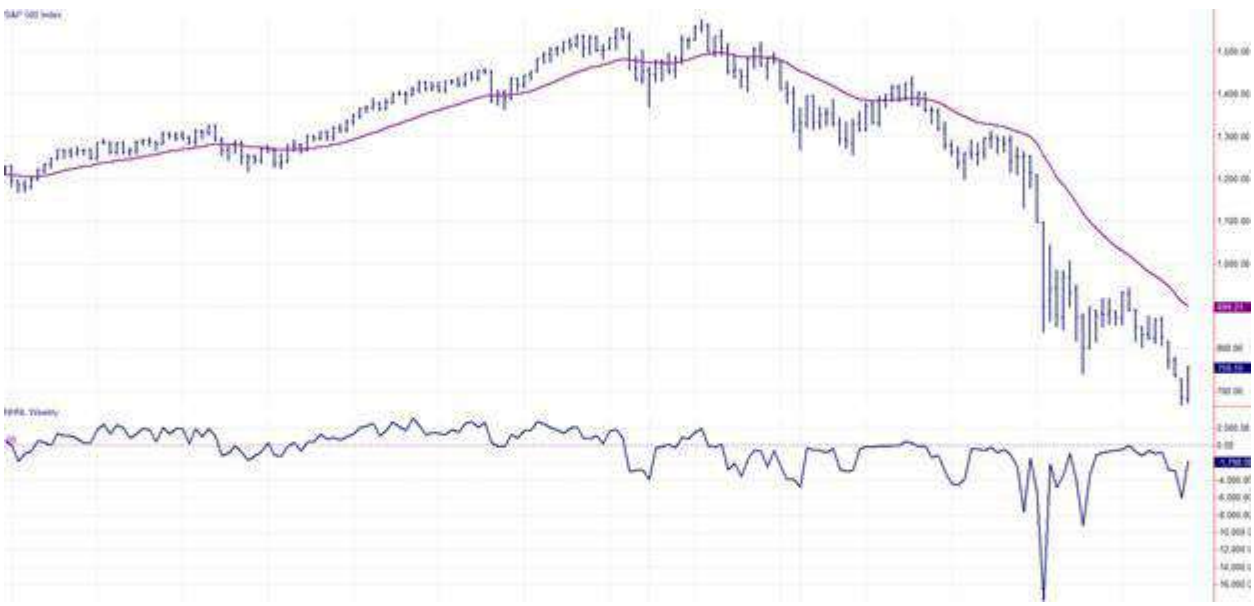

Figure 16: S&P500 and NH-NL weekly (Series 4, chart 2)

Let's add NH-NL to the chart. Bullish or bearish?

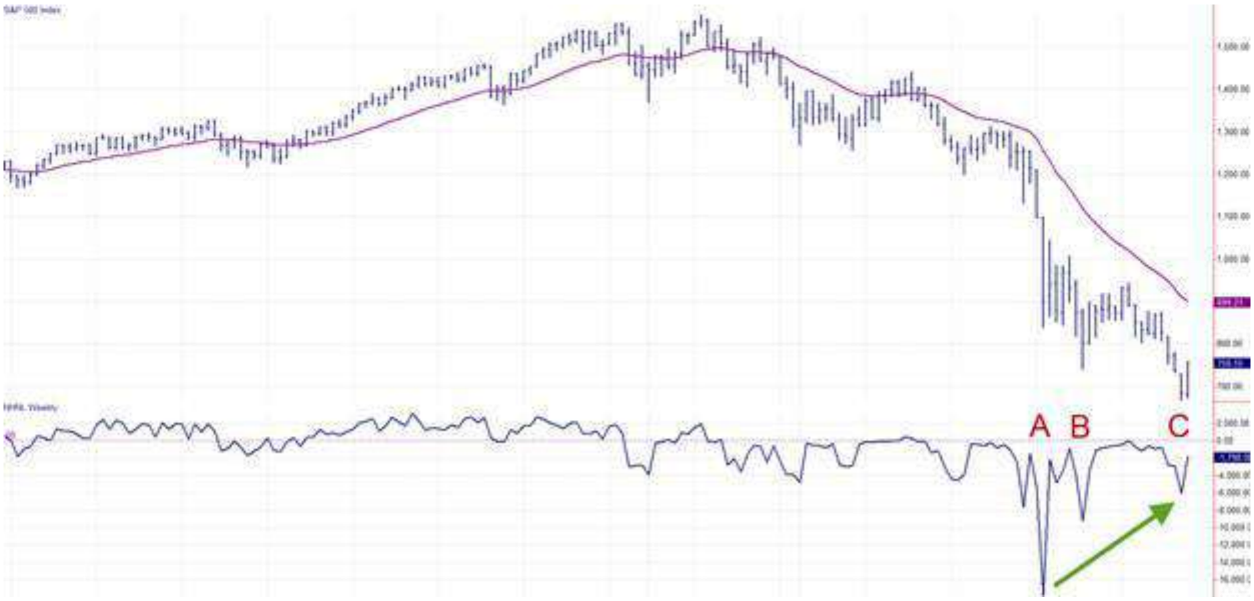

Figure 17: weekly S&P500 and NH-NL (Series 4, chart 3)

Let's mark up the chart. Notice a striking bullish divergence A-B-C. The scale of this chart makes it hard to see that the weekly NH-NL had crossed above its zero line between the bottoms B and C.

Figure 18: weekly S&P500 and NH-NL (Series 4, chart 4)

The bull market that erupted from its 2008-2009 base continues at the time of this writing, three years later. Its first upleg lasted 13 months before any meaningful correction. That bullish divergence marked a great buying opportunity.

Key points on weekly NH-NL divergences:

- For a divergence to be valid, the NH-NL Index must cross and re-cross its zero line between the two peaks or the two bottoms.
- Bullish and bearish divergences of weekly NH-NL often mark the ends of bull and bear markets. Not every major trend ends with a divergence, but nearly every divergence calls for an end of a major trend.
- A new stock market trend after a divergence of weekly NH-NL can persist for about a year.

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Weekly NH-NL Spikes

A spike is an extreme data point, far outside the normal range of numbers. A severe downspike of a weekly NH-NL identifies an extreme level of fear and panic. Such spikes occur at major market bottoms, marking mass capitulation. They show that weak holders have been kicked out, and that stocks have passed from weak into strong hands. This is why spikes are followed by uptrends. One of the co-authors had identified this pattern more than a decade ago and became so fond of it that we used its name for our SpikeTrade.com.

Whenever the weekly NH-NL falls below minus 4,000 and then rises above that level, a great buying opportunity is at hand.

This rule works in bull and bear markets. Keep in mind that there are no absolute rules in the stock market (other than the need for capital preservation). There had been one exception to this spike rule, which we will review later in this chapter.

The duration of an uptrend following a weekly NH-NL spike is different in bull and bear markets. In a bull market a rally after a spike may last a year, while in a bear market it may be over in a few weeks.

A reading of minus 4,000 reflects a huge paroxysm of fear, a massive dumping of shares. In order for the weekly NH-NL to drop this low, the daily NH-NL must fall to at least minus 800 for five days in a row, reflecting an extreme panic. Once the ‘weak hands’ get flushed out, the market is ready to turn up.

Weekly NH-NL Spike – chart series 5

Figure 19: weekly S&P500 and NH-NL (Series 5, chart 1)
Spikes are marked by green arrows, mini-spikes by purple arrows.

The bursting of a 'tech bubble' in 1999-2000 led to a vicious bear market. As it hurtled towards its low in July 2002, the weekly NH-NL fell below -4,000. The rally began the following week, lasted for four weeks and saw the S&P rise 20% from its low.

After that rally the S&P slid again, falling in October to a level seven points below its July low. The weekly NH-NL spiked below -4,000 again, giving a new buy signal. This rally lasted twice as long, for eight weeks, and lifted the index 24% off its low. At the final 2000-2003 bear market bottom there was no spike but a bullish divergence which we reviewed in a previous chart series.

Notice another worthwhile buy signal, a **mini-spike**, which works only during bull markets. When the weekly NH-NL declines to minus 1,500 during bull markets, it identifies a minor panic and a high-quality buying opportunity. You can see three such signals, marked by purple vertical arrows. They do not occur at every bottom, but whenever the weekly NH-NL falls below -1,500 during a bull market, it gives a very tradable buy signal.

Figure 20: weekly S&P500 and NH-NL (Series 5, chart 2)

The left half of this chart tracks the continuation of the 2003 – 2007 bull market, whose beginnings we saw on the previous chart. About once a year, like clockwork, a mini-panic interrupts the joy of the market crowd, with the weekly NH-NL dipping below minus 1,500. Each of those dips, marked here with purple arrows, pointed to a buying opportunity, good for several months.

A severe bearish divergence of weekly NH-NL in 2007 (which we reviewed in a previous chart series) signaled the end of the bull market. Even then, as the bear market got under way, the drops of NH-NL below its minus 4,000 level continued to mark buying opportunities, marked by vertical green arrows. The rally in 2007 lasted eight weeks and lifted the S&P 15% off its low. The next rally, in early 2008, covered 10% in three weeks – bear market rallies tend to be explosive but short-lived, as shorts panic and run for cover. Once they are gone, the rally dies. The third such rally gained 9% in four weeks.

The key point here is that NH-NL spikes of minus 4,000 on the weekly charts work in bull and bear markets. Still, there is no perfect signal in the markets. Had it existed, the first person to discover it would have owned the exchange. This is why, regardless of your level of confidence, you must use protective stops.

Figure 21: weekly S&P500 and NH-NL (Series 5, chart 3)

In October 2008 the bear market accelerated, sliced through the minus 4,000 level, and kept on falling. To quote from [The New Sell and Sell Short]:

> "Occasionally, a decline would carry the weekly NH-NL below minus 4,000, but in the entire history of the US stock market this indicator has never fallen below minus 6,000. Then, in October 2008, the unprecedented happened – the weekly NH-NL crashed to minus 18,000.
>
> This downspike reflected an absolutely wild level of panic. Bear Stearns ceased to exist, sold to the highest bidder for the price below the value of its downtown headquarters. Lehman Brothers was forced into liquidation, and the key question on Wall Street became 'counterparty risk.' Institutions were afraid to trade with each other for fear that the other party will not be able to deliver on its obligations.
>
> In this atmosphere, the federal government stepped in. It saved the day by reliquefying the system, pouring a major amount of money into the markets and issuing guarantees. To this day, critics are pointing to government's missteps and to the vast sums of misdirected and misused money. Still, many of us believe that had the government not

> stepped in, the market could have seized up and stopped functioning.
>
> The unprecedented spike of the NH-NL showed that the marked had reached its 'do-or-die' point. The indicator recoiled from that severely oversold level back towards zero, as it chose 'do' over 'die.' The fate of the market became clear, and the key question became: when will it bottom?
>
> In November 2008, the market fell to a new low but the weekly NH-NL bottomed at a more shallow level of 'only' minus 10,000. It rallied back up to zero in January 2009, but then the stock market weakened again.
>
> In March 2009, stocks slid below their October and November lows on low volume. And what about the weekly NH-NL? This index declined to minus 5,854 – a zone that had been reached before at bear market bottoms. The message of this chart was unmistakable. It told traders not to panic. It told us to cover shorts and get busy drawing our shopping lists."

Did the 2008 occurrence mean that we should throw out the 'buy the minus 4,000 Spike' rule? Not at all! That was the kind of an exception that confirms the rule. It should serve as a reminder to use stops. Note that the uptrend which emerged from that bottom has been so strong that in two years there hasn't been a single "minus 1,500" signal.

Figure 22: weekly S&P500 and NH-NL (Series 5, chart 4)

While this e-book was being written, another Spike occurred. It was followed by an unusually powerful combination: a bullish divergence of NH-NL and a false downside breakout of prices. The rally that erupted has been going on for several months and continues at the time of this writing.

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The Daily New High – New Low Index

A stock appears on the list of **New Highs** on the day it reaches its highest level for the past 365 calendar days. It may stay on that list for several days in a row if it keeps making new highs on subsequent days. It may reappear on that list for weeks or even months if it keeps rallying.

A stock appears on the list of **New Lows** on the day it falls to its lowest level for the past 365 calendar days. A weak stock may appear on that list for several days, weeks, or months if it keeps sinking.

The number of New Highs on any given day is the number of leaders in strength. The number of New Lows on that day is the number of leaders in weakness. Taking New Highs and subtracting New Lows from them gives us that day's New High – New Low Index. We plot it as a line whose shape provides several trading signals:

- Confirmations

The most basic signal comes from the position of the daily NH-NL in relation to its zero line. The readings between plus 100 and minus 100 are considered neutral. Daily NH-NL readings above that band are generally bullish and below it bearish.

- Divergences

As a rally continues, pay attention to expansions and contractions of the daily NH-NL. As long as it keeps matching or exceeding its previous peaks, the rally is in good health. On the other hand, a divergence will provide a bearish warning. The reverse is true in downtrends. The new lows of the daily NH-NL confirm the power of bears, while bullish divergences tell us that the downtrend is about to reverse.

Let's walk through several series of charts. Handle them as puzzles to be solved. Study each chart and write down your trading decision before proceeding to the next chart in the series.

Confirmations – Daily NH-NL chart series 6

Figure 23: daily S&P500 (Series 6, chart 1). When is this daily S&P bullish and when is it bearish?

[There is no dateline here, so that you can analyze this chart as is, without reference to dates]

Figure 24: daily S&P500 (Series 6, chart 2)

Pane one: Daily S&P500

Pane two: daily NH–NL with a zero line and +/-100 band

Pane three: New Highs (green line) and New Lows (red line)

Does adding NH-NL help you recognize when the daily S&P is bullish or bearish?

Figure 25: daily S&P500 (Series 6, chart 3)

Straddling the zero line with the +100/-100 band reduces the number of whipsaws which can occur when NH-NL wiggles above or below zero. We use this band as a filter and accept NH-NL “who’s on top” signals as bullish only when the indicator is strong enough to rise above +100 or bearish when it is weak enough to sink below -100. In the bottom pane of the chart you can see many brief crossovers of the green and red lines, representing New Highs and New Lows, but the filter in the middle pane gets rid of most whipsaws.

After this filtering, crossovers of the New Highs and New Lows provide highly useful confirmations of bullish and bearish trends: buy signals at A, B (after a single whipsaw), C, and D and sell signals at B (a whipsaw) and then at E. Notice their timing: the bullish readings of the daily NH-NL had us carry long positions into the 2007 bull market peak. The readings switched to bearish a week after that historic peak. The great majority of traders expected the uptrend to resume, but the message of NH-NL was loud and clear: sell and sell short.

Figure 26: daily S&P500 (Series 6, chart 4)

Using multiple tools helps serious analysts make better decisions. See what happens when we add an exponential moving average and an envelope to the daily chart of the S&P500. When the daily NH-NL is above +100, pullbacks of the S&P500 to its EMA mark excellent buying opportunities. Those are marked here with green circles. When the daily NH-NL is below -100, pullbacks of the S&P500 to its EMA mark shorting opportunities, marked with red circles. An envelope parallel to a moving average provides an excellent short-term profit target for swing traders. We monitor NH-NL daily in SpikeTrade and point out such signals when they emerge.

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Daily NH-NL Divergences – chart series 7

Figure 27: daily S&P500 (Series 7, chart 1). When is this daily S&P bullish and when is it bearish?

[There is no dateline here, so that you can analyze this chart as is, without reference to dates]

Figure 28: daily S&P500 (Series 7, chart 2)

Pane one: Daily S&P500 with a 22-day EMA (exponential moving average)

Pane two: Daily NH–NL with a zero line and a +/-100 band

Pane three: New Highs (green) and New Lows (red)

Let's add NH-NL to the chart. Does it help you recognize when the daily S&P is likely to turn?

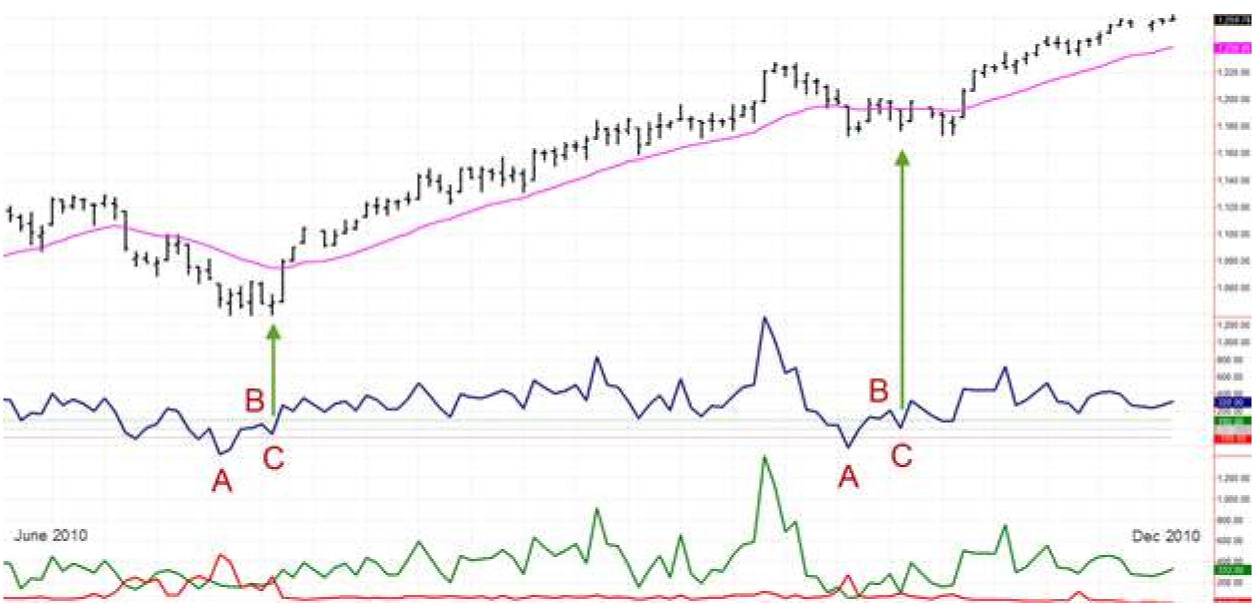

Figure 29: daily S&P500 (Series 7, chart 3)

A bullish divergence occurs when both the index and the indicator drop to a low point A, then rally at point B, with the indicator crossing above its zero line. At point C the index makes a lower low than at A, while the indicator bottoms out at a much more shallow level, giving a buy signal. Here you can see two excellent buy signals, while at the right edge of the chart the yellow line is blinking: the S&P keeps rising, while the NH-NL is tracing lower peaks. If it drops below zero during the next decline and then rallies again but to a lower level, it'll produce a bearish divergence, signaling to sell short.

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Taking a Short-Term View: The 20–day and 65-day NH–NL

A baby has to crawl before it can walk and walk before it can run. Before a stock reaches a new high for the year it must first make a new high for the month and for the quarter. If a stock has been in a downtrend, it may take months to recover and reach a new yearly high, but along the way it'll make many monthly highs.

The 20-day New High – New Low Index

With approximately 20 trading days in a month, a rising stock will keep staging breakouts to new 20-day highs. The combination of the 52-week NH-NL and the 20-day NH-NL can help determine the direction and strength of a trend.

For a bullish market trend to be sustainable, it must have a steady number of stocks reaching new monthly highs. When an uptrend weakens, fewer stocks will break out to new monthly highs; on the contrary, we will see an increase in new monthly lows.

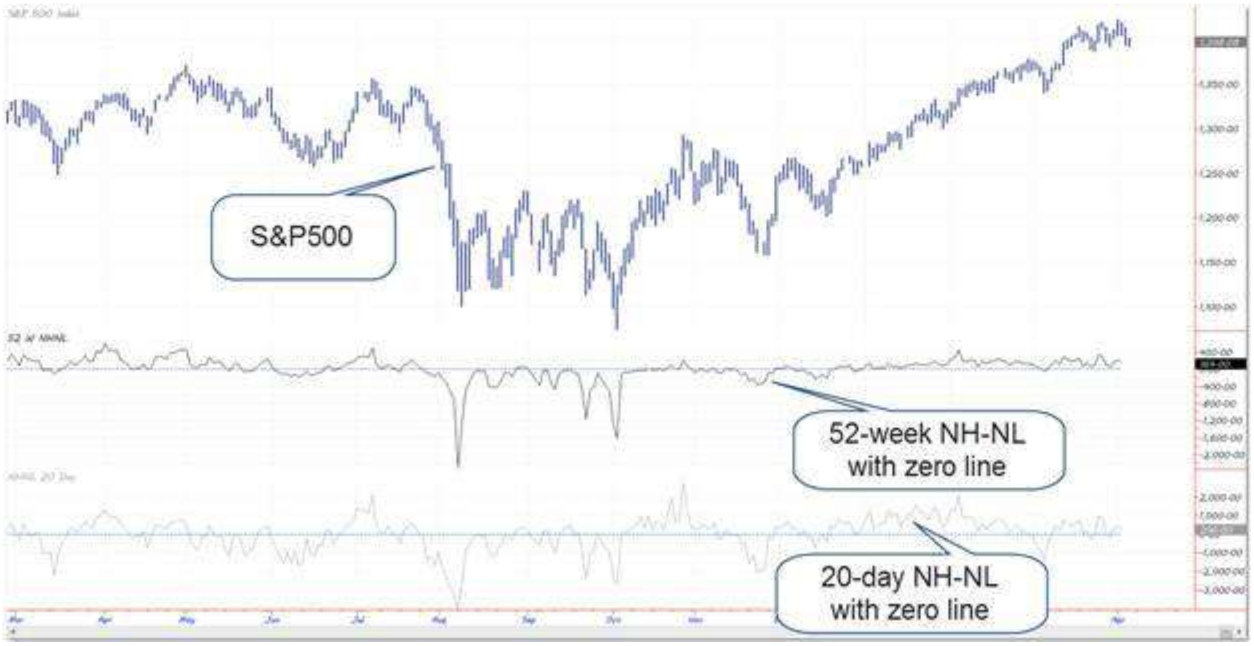

Figure 30: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

This example from the 2009/2010 bull market shows that a sustainable uptrend keeps having fresh upside breakouts of a 20-day NH-NL. A diminishing number of such confirmations will indicate that the bullish trend is approaching a correction or a reversal.

Figure 31: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 Daily chart, price bars turn green when 52 Week NH-NL is above zero

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

The 52-week NH-NL Index confirms a bullish trend by staying above its zero line; it can stay above it for months and sometimes more than a year. The price bars on this chart are colored green when the 52-week NH-NL Index is above its zero level. Here the 52-week NH-NL Index confirmed the bullish trend, helping traders stay long for months at a time. Let's add the 20-day NH-NL Index to the chart and see how it can warn us that a short-term pullback is about to occur and when it is about to end.

Figure 32: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 Daily chart, price bars turn green when 52-week and 20-day NH-NL are both above zero

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

The 20-day NH-NL Index identifies short-term bullish conditions when it stays above zero, in line with the longer-term 52-week NH-NL. When it moves below zero, it signals that a pullback is likely to occur.

Such conditions are marked by blue bars on this chart. The primary trend is up, as the 52 week NH-NL remains above zero, but when the 20 day NH-NL drops below zero, it warns of an approaching pullback within the longer uptrend. When the 20-day NH-NL rises above zero and the bars turn green again, it signals that the bullish trend is about to re-assert itself.

Figure 33: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily chart, price bars are green when 52-week NH-NL is above zero and 20-day NH-NL above 500.

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

The relative positions of a 52-week and 20-day NH-NL can help shorter-term traders decide when to go long. They can also show when it is unsafe to consider shorting.

Typically, during a major uptrend the 52-week NH-NL will stay above zero, while on many days the 20-day NH-NL index will be above its 500 level. This combination identifies a very strong bullish environment. During such periods a trader should be extremely leery of attempting to short. The odds of a successful short are minimal. A much better approach is to buy intraday pullbacks, anticipating a rally to the new highs.

On the other hand, there are times even during bullish periods when aggressive buying is not a good idea. The 20-day NH-NL can show when it is better to lock in profits and stand aside, waiting for a renewed buy signal. A vastly overbought 20-day NH-NL shows that the uptrend is approaching a temporary exhaustion point and a short-term reversal is near. Let's take a look at a recent example.

Figure 34: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily chart, price bars turn red when 20 day NH-NL is above 2,000.

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

Here the price bars here are colored red whenever the 20-day NH-NL moves above the 2,000 level. It rarely stays there for more than two days at a time. Such exhaustion moves are followed by pullbacks or a sideways movement.

A summary for uptrends:

1. Bullish conditions are confirmed when both the 52-week and 20-day NH-NL rise above zero.
2. Bullish conditions are especially strong when the 20-day NH-NL index rises above the +500 level.
3. Bullish conditions are temporarily exhausted when the 20-day NH-NL index rises above +2,000.

The 20-day NH-NL in downtrends

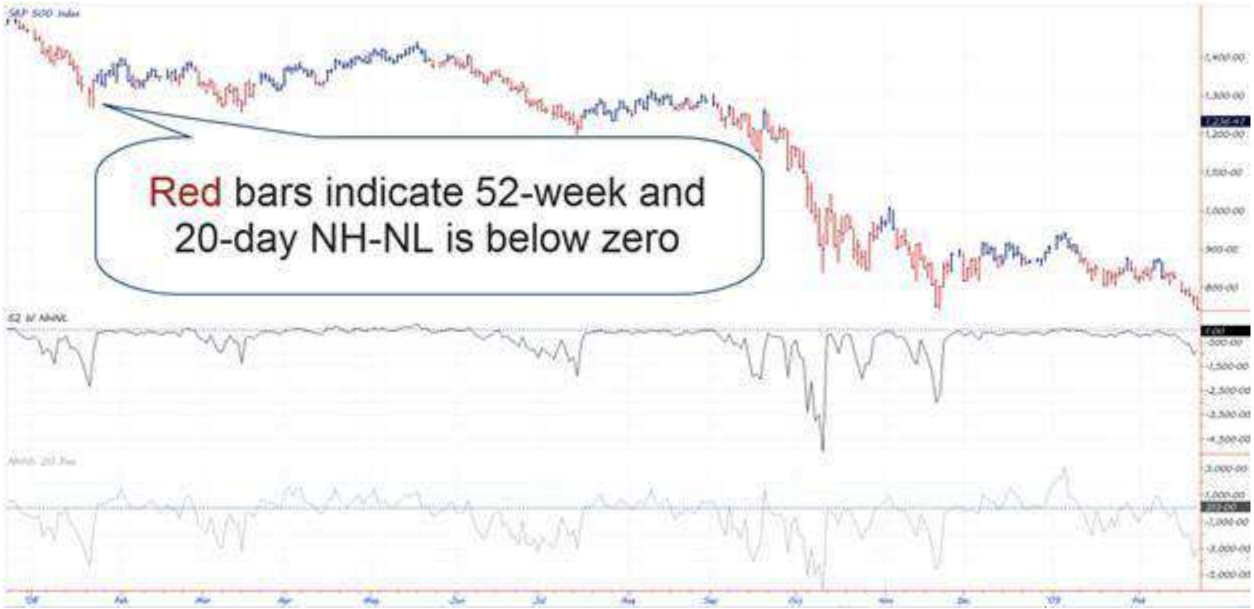

Figure 35: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily chart, price bars turn red when 52-week and 20-day NH-NL are below zero

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

Now let's explore using the 20-day NH-NL in downtrends. This chart of the 2007-2009 bear market shows that both the 52-week and 20-day NH-NL remained below zero for most of that period. The lack of breakouts to new highs and the increased number of breakouts to new lows is typical of bearish trends. Whenever the NH-NL indexes turn steadily negative, be careful not to stay long for any length of time. Still, there are sets of signals that show when you can stay long for more than a day-trade.

Figure 36: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily, price bars turn green when 20-day NH-NL rises above 250 and stays above zero

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

The bars on this chart are programmed to turn green whenever the 20-day NH-NL rises above 250; they stay green for as long as this indicator holds above zero. Once the 20-day NH-NL index drops below zero, the bars turn red, indicating the odds have turned against longs.

Some of the most powerful short-term rallies occur during bear market corrections. The 20-day NH-NL Index gives us a heads-up that a bear market rally could be near. Whenever the 20-day NH-NL Index falls below -1,500 it marks a severely oversold zone from which a rally could erupt. When this index crosses above the -1,500 level, it confirms that the rally is about to begin.

Figure 37: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily, price bars turn magenta when 20-day NH-NL drops below -1,500 and green when it moves back above -1,500

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

In this chart, bars are colored magenta whenever the 20-day NH-NL Index drops below -1,500. The color of the bars changes to green whenever the index moves back above -1,500. Not all signals will produce powerful rallies but rarely do we see a powerful reaction rally without this signal.

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The 20/-500 Bounce Signal

This condition, whose name was selected by SpikeTrade members, provides a very powerful short-term buy signal. It tends to occur during transitions from bearish to bullish phases of the market, although rarely seen when a bullish move is in full swing.

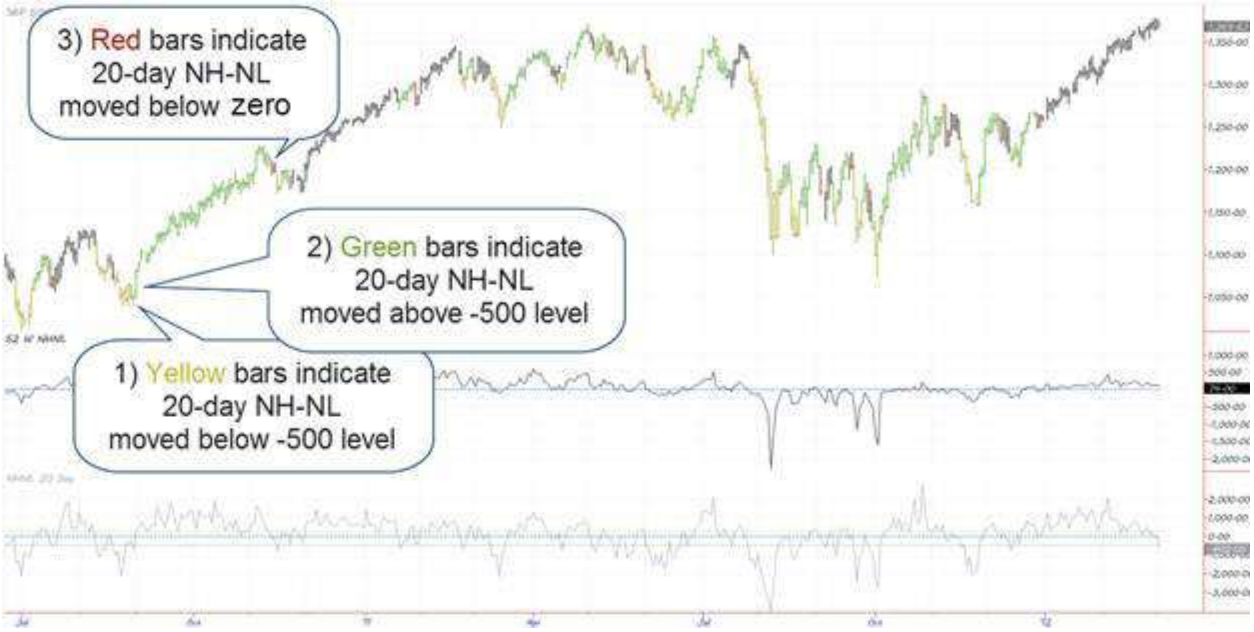

Figure 38: NH-NL on a 52-week and 20-day basis

Pane 1: S&P500 daily, price bars turn yellow when 20-day NH-NL drops below -500 and then green when it moves back up above -500. Prices turn red when 20-day NH-NL drops back below zero

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

The “20/-500 Bounce” signal catches the ends of short-term bearish exhaustion points that lead to tradable rallies. When the 20-day NH-NL Index drops below -500, it activates the setup, marked in the chart with yellow bars. The buy trigger occurs when the 20-day NH-NL moves back above the -500 level, marked by green bars. The signal remains in force until the 20-day NH-NL drops below zero, marked by red price bars. We will return to the 20/-500 Bounce Signal in the next chapter, where we’ll see how it interacts with the 65-day NH-NL.

Some of these rallies will turn into important upside reversals; this is why it makes sense to use a trailing stop underneath a long position. Stop placement is outside the scope of this e-book, but generally a trailing stop of 1.5 Average True Range is useful.

Of course all indicators have occasional whipsaws. This is an inevitable part of trading, and they should be controlled through proper money management. Trying to tune up any system to eliminate all whipsaws will also eliminate good signals – throwing out the baby with the bath water.

A summary for downtrends:

1. Bearish conditions are confirmed when both the 52-week and 20-day NH-NL fall below zero.
2. Bearish conditions are near exhaustion when the 20-day NH-NL Index drops below -1,500
3. A bear market rally is due when the 20-day NH-NL rises above -500

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The 65-Day NH-NL Index

Let's add one more dimension to our analysis of NH-NL and track the New High – New Low Index on a 65-day basis. This setting represents one calendar quarter – between the short-term 20-day and longer-term 52-week NH-NL. The 65-day NH-NL Index can help identify intermediate trends.

We've already seen that a stock must keep reaching new monthly highs before it can make a new yearly high. Along the way, this stock must also reach new quarterly highs. The 65-day NH-NL helps confirm trends that last for several weeks and even months. Its signals are useful for swing traders, helping to trade in the direction of the intermediate trend.

Figure 39: 65-day NH-NL

Pane 1: S&P500 daily chart, prices bars are black when 65-day NH-NL Index is above +300 and red when below -300
Pane 2: 65-day NH-NL Index

In this chart the bars are colored black whenever the 65-day NH-NL index rises above +300 and then stays above the minus 300 level. It may decline below +300 but not below -300 in order to maintain the black color, which identifies intermediate-term bullish market conditions. When the 65-day NH-NL crosses below -300, price bars turn red and stay red until the index rises above +300. Red bars mark intermediate-term bearish conditions.

All indicators occasionally give false signals, and 65-day NH-NL is no exception. That's why it pays to use multiple indicators and compare their messages. Plotting the New High – New Low index using three different timeframes is like sailing a three-masted schooner. This combination helps navigate during crosswind conditions, reducing false signals.

In the previous chapter on the 20-day NH-NL index we studied its 20/-500 Bounce Signal. That signal becomes greatly reinforced if the 65-day NH-NL crosses above the +300 level within a week of its occurrence. As a matter of fact, this combo: a 20/-500 Bounce plus a 65-day NH-NL +300 crossover is one of the strongest signals of the New High – New Low Index. It is second in importance only to the weekly spike.

The NH-NL signals are especially strong when all three timeframes are in gear. That's when a powerful market move becomes highly probable. Let's review several examples.

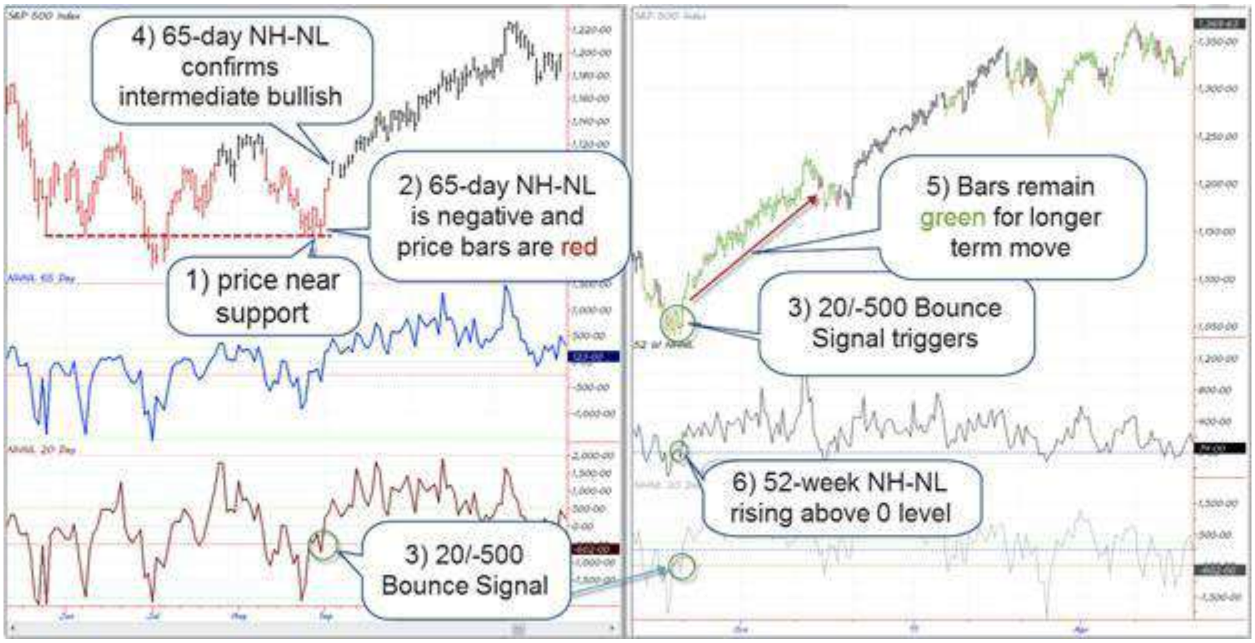

Figure 40: 65-day NH-NL

On the left: S&P500 daily, price bars are black when 65-day NH-NL Index is above +300 and red when below -300

Pane 2: 65-day NH-NL Index

Pane 3: 20-day NH-NL Index

On the right: S&P500 daily, with the 20/-500 Bounce signals (see previous chapter)

Pane 2: 52-week NH-NL Index

Pane 3: 20-day NH-NL Index

In late August 2010 the 65-day NH-NL Index was bearish, as prices began to test support levels of the July lows (point1). The 20/-500 bounce signal triggered on August 30 and again on September 1, indicating the approach of a tradable bounce. The 52-week NH-NL Index was crossing above the zero level on September 1st, indicating the correction was probably ending. Two days later the 65-day NH-NL Index confirmed the 20/-500 Bounce signal by moving above the +300 level. With all three NH-NL indexes in gear, the message of the market was clear: get long and stay long, avoid shorting. The subsequent rally was very strong and continued until mid-November.

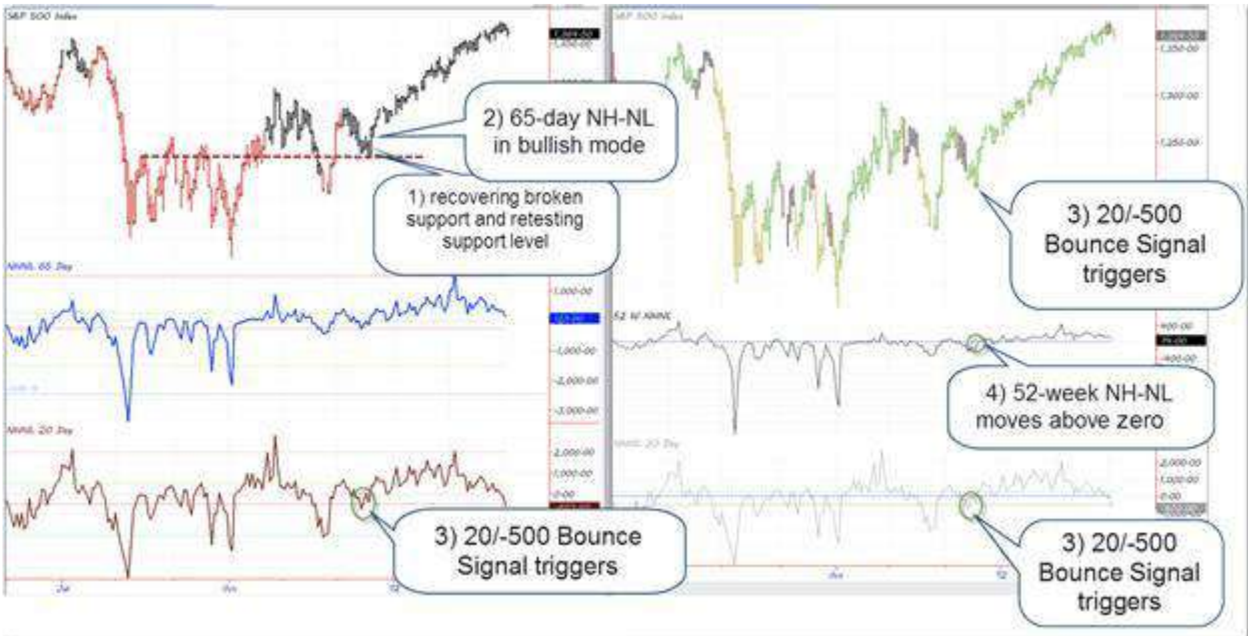

Figure 41: 65-day NH-NL

On the left: S&P500 daily, price bars are black when 65-day NH-NL Index is above +300 and red when below -300

Pane 2: 65-day NH-NL Index

Pane 3: 20-day NH-NL Index

On the right Chart: S&P500 daily with 20/-500 Bounce signal bars.

Pane 2: 52 Week NH-NL Index

Pane 3: 20-day NH-NL Index

The stock market fell in mid-December 2011 and appeared to be heading for a retest of its October lows, but the 65-day NH-NL rallied above +300 and remained in a bullish mode. On December 15th the 20/-500 Bounce signal triggered, igniting a powerful rally that continues at the time of this writing. At the same time the 52 Week NH-NL was rallying above its zero level, further confirming a bullish trend.

A summary for 65-day NH-NL:

1. Bullish conditions are confirmed when the 65-day NH-NL Index rises above +300.
2. Bullish conditions are especially strong when the 20/-500 Bounce signal triggers within a week of the 65-day NH-NL confirming a bullish move.
3. All bullish signals are confirmed when the 52-week NH-NL rises above zero.

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An Alternative Method: the New High – New Low Ratio

The NH-NL Ratio handles the raw NH-NL data in a different manner. It does not subtract New Lows from New Highs, but divides the New Highs by the sum of New Highs and New Lows. This indicator was introduced in Gerald Appel's book *Power Tools*.

NH-NL Ratio = NH / (NH+NL)

For example, on a day that has 300 New Highs and 100 New Lows, the NH-NL ratio is 0.75 [300 / (300+100)]. We can express that as a percentage or 75%. This ratio oscillates between zero and 100%. The overbought level is 80%, which we mark with a green horizontal line. The oversold level is 20%, which we mark with a red horizontal line.

When a high percentage of stocks reach new highs, the NH-NL Ratio rises. It is a bullish sign of market strength. On the other hand, a large percentage of new lows indicates weakness and is bearish for the market.

Figure 42: Raw NH-NL Ratio

Pane 1: S&P500 daily

Pane 2: NH-NL Ratio

The daily NH-NL Ratio is quite volatile. Adding a moving average helps filter out market noise. We smooth the NH-NL Ratio using a 10-day simple moving average (SMA):

New Highs	New Lows	NH-NL Ratio	10 MA
410	33	92.55%	
483	38	92.71%	
487	32	93.83%	
527	68	88.57%	
173	60	74.25%	
136	78	63.55%	
120	67	64.17%	
172	51	77.13%	
149	48	75.63%	
334	51	86.75%	80.92%
205	57	78.24%	79.48%
248	71	77.74%	77.99%
227	56	80.21%	76.63%
109	81	57.37%	73.51%
71	117	37.77%	69.86%
127	62	67.20%	70.22%
209	56	78.87%	71.69%
115	79	59.28%	69.91%
51	116	30.54%	65.40%
75	108	40.98%	60.82%
67	112	37.43%	56.74%
125	86	59.24%	54.89%
190	56	77.24%	54.59%
310	57	84.47%	57.30%
155	96	61.75%	59.70%

Figure 43: Excel Spreadsheet for NH-NL Ratio

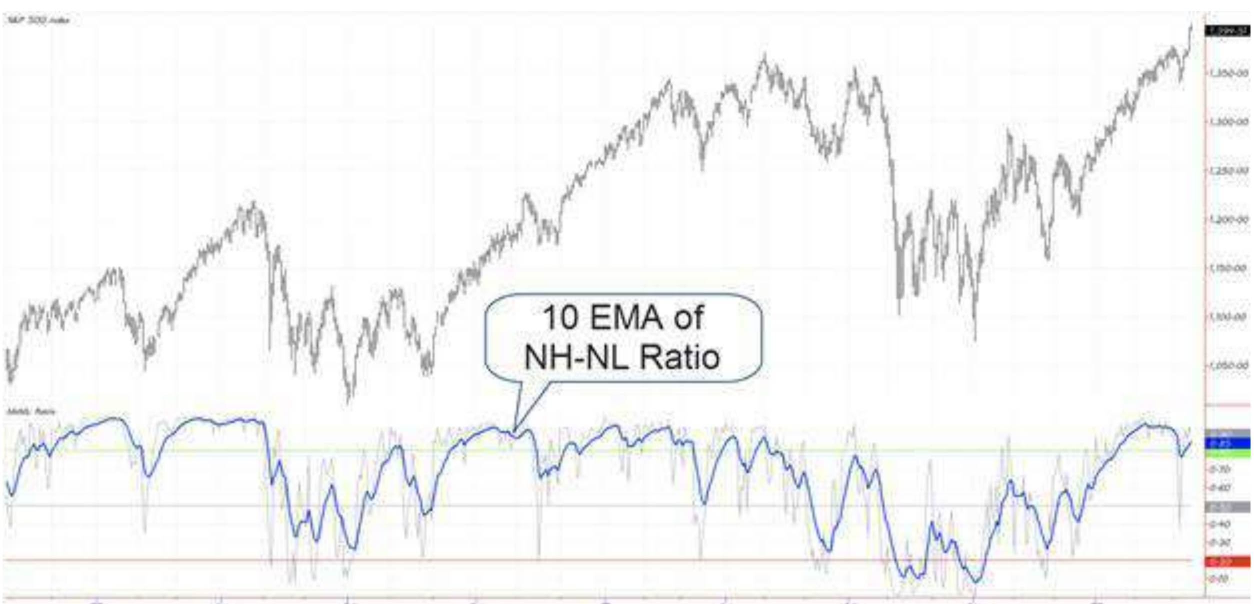

Figure 44: 10-day SMA (simple moving average) of the NH-NL Ratio

Pane 1: S&P500 daily

Pane 2: 10-day SMA of the NH-NL Ratio (blue) and the raw NH-NL ratio (grey)

When the 10-day MA rises above the 80% level (marked by a green line) it reflects strength and confirms intermediate-term uptrends. As long as this line stays above 80%, expect higher prices ahead. When the 10-day MA sinks below the 80% level, it confirms a pullback and calls for lower prices in the short run.

When the 10-day MA sinks below the 20% level (marked by a red line) it confirms weakness, meaning that lower prices are likely, as long as it stays below that level. When the 10-day MA rises above the 20% level, it confirms a bounce and calls for higher prices in the short run.

Prices move faster than the relatively slow 10-day MA of the NH-NL Ratio. This is why it is a lagging indicator, making it an excellent trend confirmation tool.
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NH-NL Ratio and Major Trends

A major trend flows like a river, where you can swim comfortably with the current or exhaust yourself trying to swim against it. Investors would love to buy early in a bull market, stay long for the duration of major trends lasting months or even years, and then move into cash at the beginning of a bear market.

Major trends are punctuated by the intermediate corrective moves. Let's review the behavior of NH-NL Ratio during major trends and then the intermediate ones.

A Major Bullish Condition is signaled when the 10-day MA of the NH-NL Ratio rises above the 80% level. It **persists** until the 10-day MA of the NH-NL Ratio drops below the 20% level.

When the 10-day SMA of the NH-NL Ratio rises above 80%, it shows that the New Highs outpace New Lows by a wide margin, confirming a bull market. When this Ratio drops below 80%, it confirms a pullback, but it needs to fall all the way down to 20% to signal a change of the major trend from bullish to bearish.

A Major Bearish Condition is signaled when the 10-day MA of the NH-NL Ratio sinks below the 20% level. It **persists** until the 10-day MA of the NH-NL Ratio rallies above the 80% level.

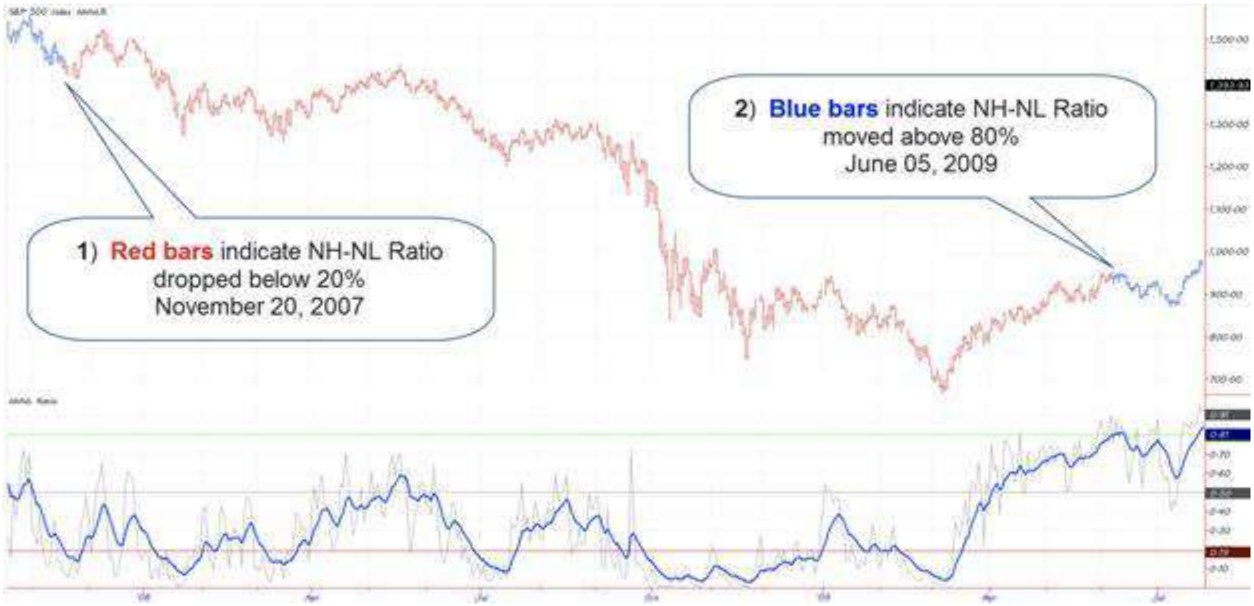

Figure 45: 10-day MA of the NH-NL Ratio 2007-2009

Pane 1: S&P500. Bars turn from blue to red after 10-day MA of NH-NL Ratio crosses below 20%; they turn from red to blue after the 10-day MA of the NH-NL Ratio crosses above 80%.

Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

Price bars on this chart have been programmed to change color from blue to red when the 10-day MA of the NH-NL Ratio falls below 20%, confirming a bear market. This 'flip' occurred on November 20, 2007. The bear market signal given at that time remained in effect for 17 months. The 10-day MA of the NH-NL Ratio did not move back above the 80% level until June 05, 2009, when it indicated a change from a bear to a bull market.

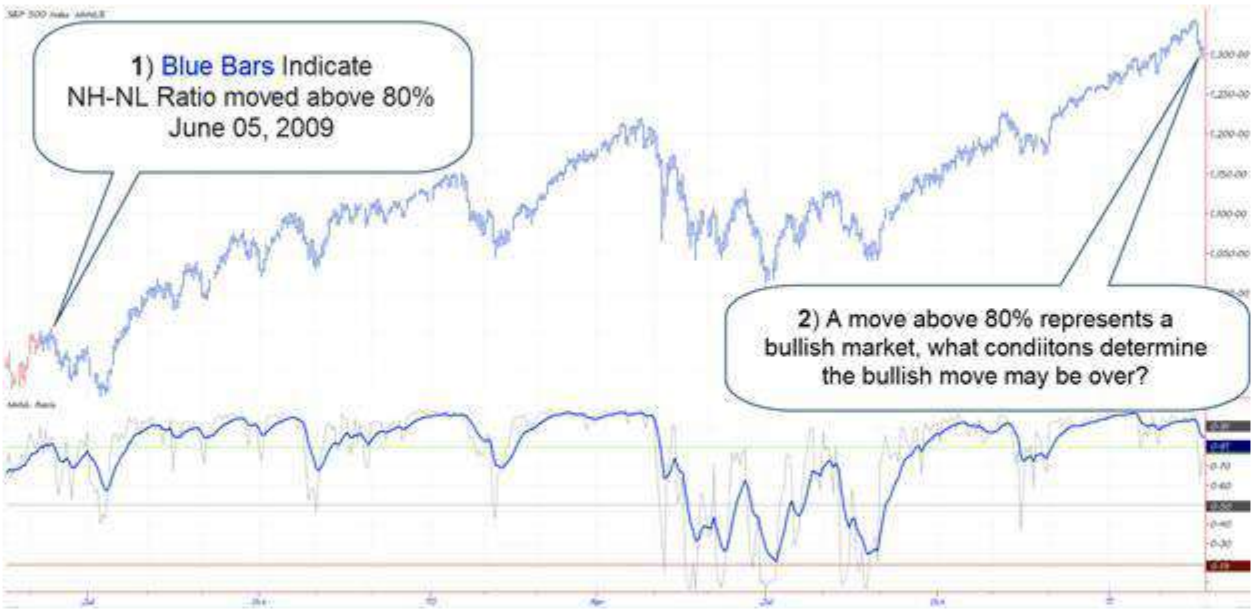

Figure 46: 10-day MA of the NH-NL Ratio 2009-2011

Pane 1: S&P500. Bars turn from red to blue after 10-day MA of NH-NL Ratio crosses above 80%

Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

Here price bars have been programmed to change color from red to blue when the 10-day MA of the NH-NL Ratio rises above 80%, confirming a bull market. These crossovers confirm bull markets but do not forecast how long they will last. This chart shows the bullish trend confirmed on June 05, 2009 and continuing for two years. This indicator is not designed to catch tops and bottoms, but to determine major bullish or bearish stages.

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NH-NL Ratio and Intermediate Trends

All major trends are punctuated by intermediate countertrend moves. Those can last many weeks or even months and retrace a good chunk of the major move that preceded them. While identifying the major trend is vitally important, we need to be alert to counter-trend moves. In a bull market it is not uncommon to see 5 – 15% declines, and during bear markets to have 5 – 15% rallies. The NH-NL Ratio can help us identify and trade those intermediate moves.

To zero in on the intermediate moves, we need to program our computers with two more colors. Let us color price bars depending on the position of the 10-day EMA of the NH-NL Ratio – here we will call it 'the line' for brevity.

Blue bar: the line above 80%

Cyan bar: the line drops from above 80% to below 70%

Red bar: the line below 20%

Magenta bar: the line rises from below 20% to above 30%

Figure 47: Time to prepare a shopping list

Pane 1: S&P500 daily. Bars are blue when the 10-MA of NH-NL Ratio exceeds 80%; cyan below 70%

Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

A blue bar reflects a healthy uptrend in which the 10-day MA of NH-NL Ratio is above 80%. The cyan bar shows that the intermediate-term bullishness is dissipating and a decline is likely. It tells us to wait for the end of the correction and draft a shopping list in anticipation of the next rally.

Figure 48: 10-day MA of the NH-NL Ratio

Pane 1: S&P500 daily. Bars are red when the 10-MA of NH-NL Ratio is below 20%; magenta above 30%

Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

The bars are red in a downtrend, but change to magenta after the intermediate-term conditions improve, making a bounce more likely. This occurs when the 10-MA of NH-NL Ratio moves back above the 30% level from below 20%. Now is the time to plan new short positions, anticipating the resumption of a major downtrend.

Occasionally a signal may fail. Every major trend eventually ends. When a new bull market begins, the magenta color of price bars will change to blue, confirming a new major uptrend.

A Change of Tide

In a major bull or bear market we want to keep an eye on the 50% level of the 10-day MA of the NH-NL Ratio. Crossing that level warns us that the major trend could be changing. The chart that follows shows that on April 9, 2009 the 10-day MA moved above the 50% level, flashing a bullish signal.

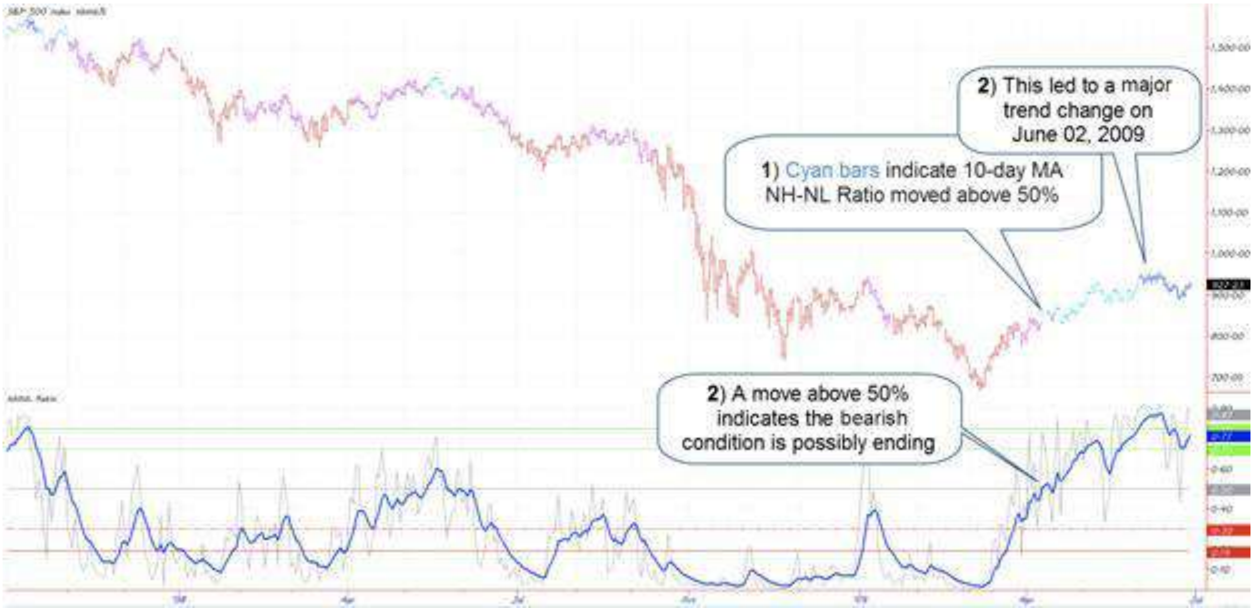

Figure 49: 10-day MA of the NH-NL Ratio

Pane 1: S&P500 with red, magenta, and cyan paint bars, as explained above.

Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

The 10-day MA of NH-NL Ratio crossed above the 50% level almost two months prior to the confirmed major trend change on June 02, 2009. That crossover warned us to begin shifting our attention to bullish stocks.

Whipsaws

No Indicator is perfect; all indicators occasionally deliver false signals, leading to whipsaws. Let's examine several such occurrences during the 2007 – 2009 bear market. We can help guard against whipsaws by using the daily NH-NL (on a 52-week basis), profiled above, to help filter out bad signals.

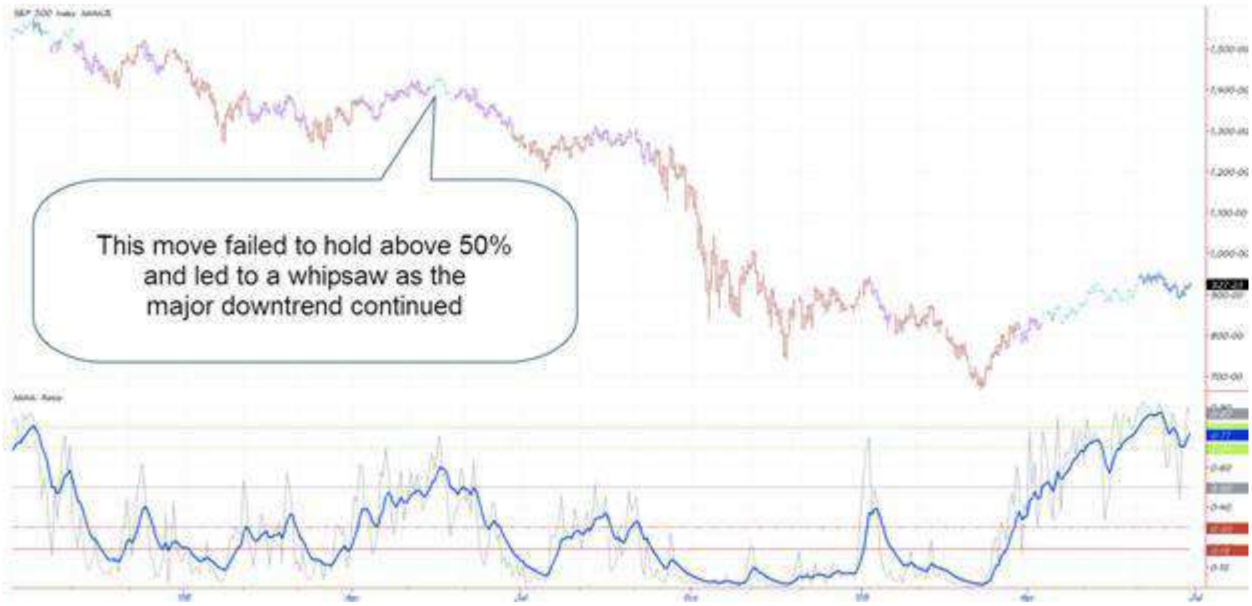

Figure 50: 10-day MA of the NH-NL Ratio

Pane 1: S&P500 with red, magenta, and cyan paint bars, as explained above.
Pane 2: 10-day MA of the NH-NL Ratio (blue line) and the raw NH-NL ratio (grey line)

It is good practice to use more than one indicator to confirm bullish or bearish signals. We can examine New Highs and New Lows from two different angles to decide whether a signal is likely to be true or false.

On May 14, 2008 the 10-day MA of NH-NL Ratio rallied above the 50% level, signaling a potential end of the major downtrend. Had we taken this signal, it would have led to a whipsaw, as the major downtrend continued.

Figure 51: Daily NH-NL Index

Pane 1: S&P500 whose bars are black above and red below the -100 level.

Pane 2: Daily NH-NL Index (on a 52-week basis, as described above)

On June 9, 2008 the Daily NH-NL Index broke below the bearish minus 100 level. This bearish sign confirmed the downtrend.

Figure 52: Daily NH-NL Index

Pane 1: S&P500 with blue paint bars when 52 Week NH-NL is above -100 level.

Pane 2: 52-week NH-NL Index.

During the April – May 2009 bullish transition, the daily NH-NL Index (on a 52-week basis) held above the -100 bearish level, confirming the bullish change.

In summary, the NH-NL Ratio helps confirm major and intermediate trends. Combining it with the daily NH-NL (on a 52-week basis) helps sharpen its messages for following trends and their transitions.

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The New High – New Low Index in Worldwide Markets

One of the co-authors used to say to his students abroad that it was a pity the NH-NL did not exist in countries outside the US. He used to challenge his audiences: modern software should make it possible to create this indicator for your country. Download the daily data for all listed stocks and write a formula that will tag and count any stocks that reach a new high or a new low for the year on any given day. Traders in several countries kept saying this would be easy to program, but nobody ever delivered.

Then in 2009 we received an email from a private trader in Brazil named Vladimir Dietrichkeit. After taking a class in Brazil he began sending us the New High – New Low charts for his country. We made a few minor formatting suggestions, Vladimir implemented them, and afterwards his charts looked perfect. He joined SpikeTrade and began posting NH-NL charts for several markets in which our members were interested: Australia, Brazil, Canada, China, and others. We created a special link on the main page of SpikeTrade for Vladimir's weekly updates. This is now a free feature, open to all guests of SpikeTrade as well as our members. All charts in this chapter were produced by Vladimir and marked up by us.

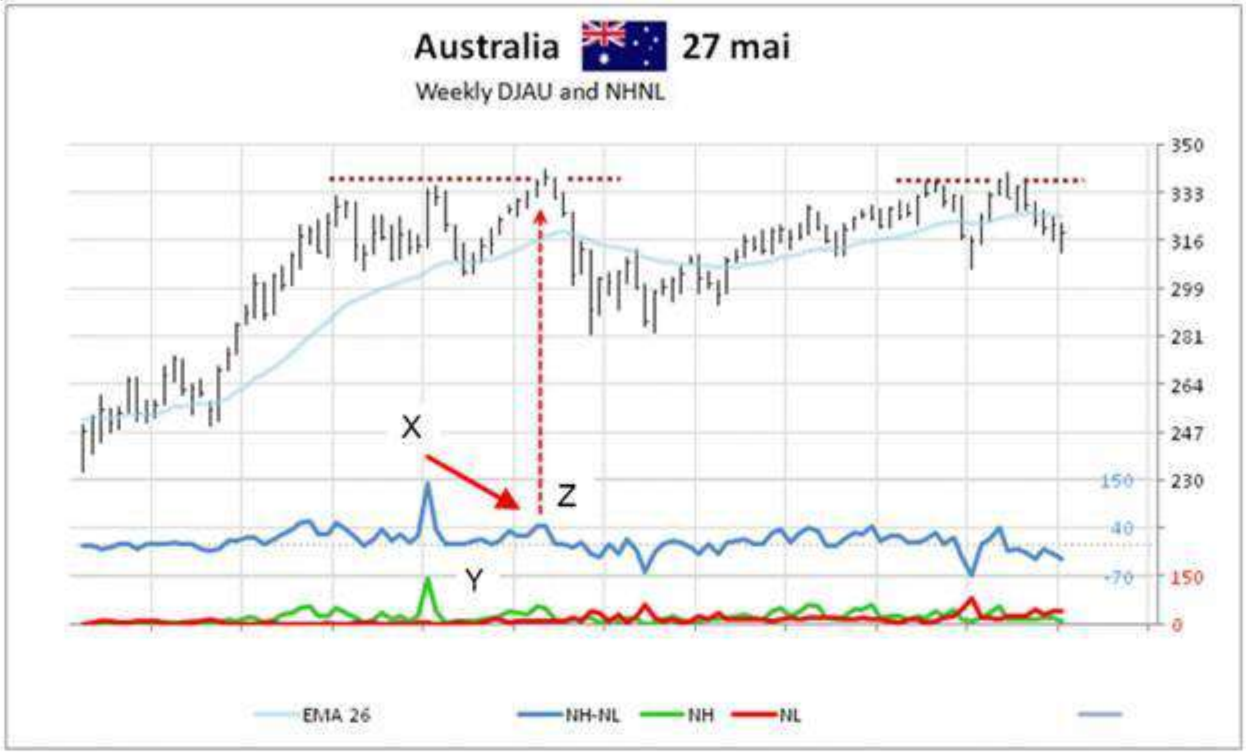

Figure 53: Australia weekly NH-NL

You can see how a bearish divergence X-Z had nailed the top that preceded a sharp 15% break in the Australian market. At the right edge of the chart, while no clear-cut divergence is present, we see a false breakout to a new high, accompanied by a sinking weekly NH-NL. The red line (new lows) is above the green (new highs), telling us to expect trouble ahead.

PS: Within a few months after this was written the Australian index got mauled by the bears, breaking down to a multiyear low. The weekly NH-NL warning turned out to be spot-on.

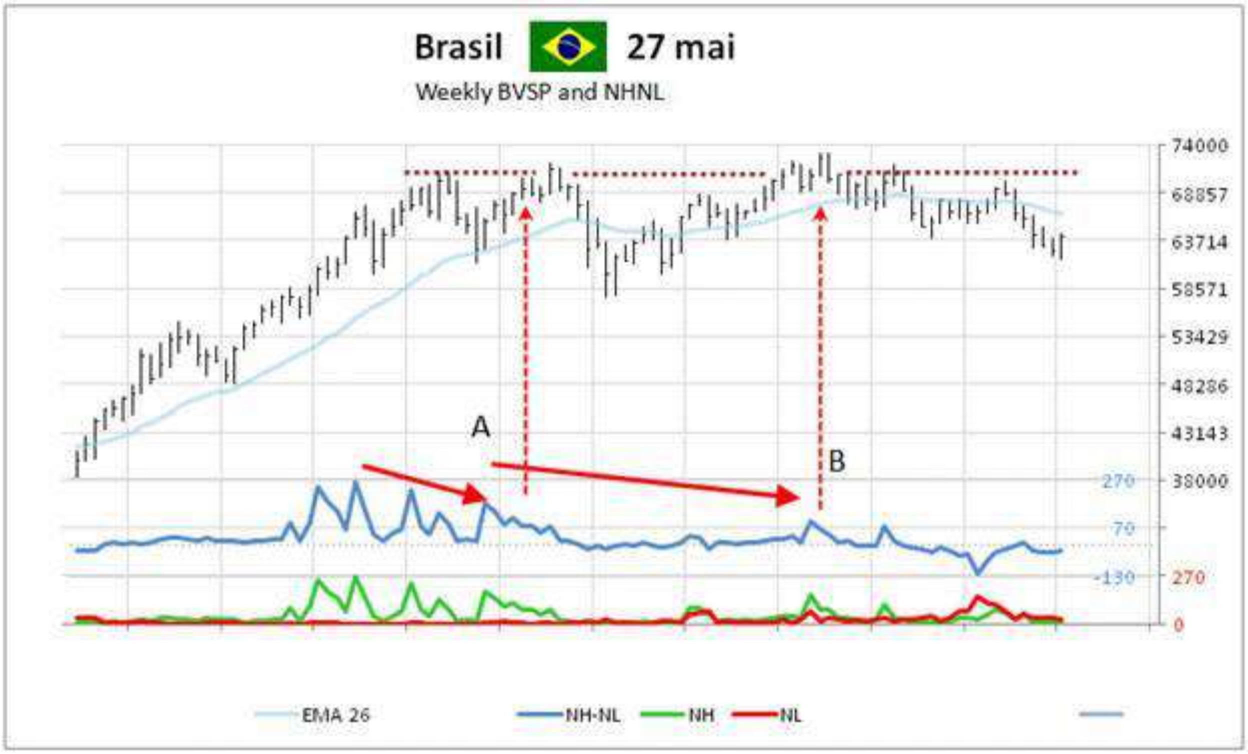

Figure 54: Brazil weekly NH-NL

Brazil is a leading member of the BRIC block and its stock market a darling of the 'emerging markets' crowd. Still, this weekly chart of the Bovespa index and weekly NH-NL is flashing warning signs. A divergence marked A caught an earlier sharp break. Then Bovespa rallied to a new high but in area B NH-NL has diverged and the index has been slowly sinking ever since. Beware: at the right edge of the chart the number of New Lows exceeds that of New Highs, bears are in control.

PS: As we review this chart prior to publication, Bovespa has sank to a multiyear low. The warning of its NH-NL was extremely timely and useful.

Looking at the international NH-NL charts posted by Vladimir at Spiketrade.com, we can find every single pattern we saw on the charts of the US NH-NL, both weekly and daily. You are welcome to visit SpikeTrade and review a multitude of international charts, posted in the free area of the site. The New High – New Low Index is a universal indicator that works well around the globe.

There is only one caveat – beware of thinly traded national markets where just a few stocks dominate the trading volume. The NH-NL tracks the behavior of officers to anticipate the direction of the mass of soldiers. This works great in the countries with broad developed markets but not in narrow markets.

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Databank

Let's take a look at the tools and techniques which help us to produce and interpret the New High – New Low Index.

Getting the NH and NL data

The numbers of New Highs and New Lows are reported daily in the financial media, including such newspapers as *The Wall Street Journal*. They are also reported by a growing number of online data services. In comparing their NH and NL numbers, you'll immediately notice discrepancies between various sources. This has to do with how they calculate new highs and new lows. Some outfits measure only those stocks that trade on the New York Stock Exchange (NYSE), while others cast their nets much wider.

We get our data from Barchart.com which provides separate New High and New Low figures for NYSE, AMEX, NASDAQ, as well as for their total, which is what we use. It offers the following definition: "Overall lists include only NYSE, AMEX and NASDAQ stocks, excluding ETF's. NYSE, AMEX and NASDAQ stocks exclude unit investment trusts, closed end funds, warrant stocks, preferred securities and any non-SIC classified stock." We like their logic.

A unique feature of Barchart.com is that it offers 20-day and 65-day New Highs and New Lows in addition to the yearly ones. We thank the owners of Barchart.com for supporting our research with their data.

Some data services provide the New High and New Low data in real-time. For example, TradeStation, which we used to create the charts in this book, has the following symbols for 52-week NH-NL:

New Highs: $52WHUSL
New Lows: $52WLUSL
New High – New Low Index: $52WHLUSLD

We keep these symbols on our screens and glance at them occasionally, but feel skeptical about the use of NH-NL as an intraday indicator. This might be something to explore in the future.

Our software and indicators

All charts in this book have been drawn using TradeStation software and their S&P500 data. We imported the New High and New Low data from Barchart.com into TradeStation via Excel.

We drew bar charts rather than candlestick charts out of personal preference. We have nothing against candlesticks, but as experienced long-term traders can see just as much using bar charts and selected indicators.

While the focus of this e-book is on the New High – New Low Index, you will notice several other indicators on our charts:

- Moving averages: almost always exponential. Parameters indicated in chart comments
- Autoenvelope: a proprietary tool for drawing well-fitting channels, available from elder.com

A Note on Conditional Formatting

Throughout this e-book you see many examples of conditional formatting – plotting price bars in different colors, depending on various indicator conditions. This programming technique is useful for identifying desired market conditions and zooming in on them. Members of Spiketrade.com receive conditionally formatted charts several times each week.

Teaching conditional programming is outside the scope of this e-book. If you would like some help with conditional formatting for your research, one of the co-authors is available for private consulting, using TradeStation software.

Books

The following books are referenced in our e-book:

Appel, Gerald. Technical Analysis: Power Tools for Active Investors. FT Press, 2005

Elder, Dr. Alexander. The New Sell and Sell Short: How to Take Profits, Cut Losses, and Benefit from Price Declines. John Wiley & Sons, 2011

Elder, Dr. Alexander. Trading for a Living: Psychology, Tactics, Money Management. John Wiley & Sons, 1993

Elder, Dr. Alexander. Two Roads Diverged: Trading Divergences. elder.com 2012

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Thanks and an Invitation

We thank the members of SpikeTrade, whose energy, enthusiasm and tough questions keep us focused on our research and trading. We have developed most of the tools in this e-book during the years we've been running SpikeTrade.

Dr. Elder thanks Inna Feldman and Patricia Liu for their support of his work. Mr. Lovvorn says thanks to Karen who encouraged him not to give up when he would have rather taken a beating with a bat. Both co-authors thank Luke Lewis in Alabama for his help with cover design and Carol Keegan Kayne in New York for her final review of the manuscript.

We invite you to join us at Spiketrade.com, where we share our findings on a daily basis and whose members share trading ideas and challenge us with their questions.

Dr. Alexander Elder & Kerry Lovvorn

SpikeTrade.com

New York & Alabama

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Dr. Alexander Elder is a private trader and a teacher of traders, based in New York City. He is the author of several international best-sellers, including *Trading for a Living* (1993). **Kerry Lovvorn** is a trader and a trading coach, based in Alabama. His work has been featured in several books. Together, they run **SpikeTrade** – a unique club for traders. They can be reached at info@spiketrade.com

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