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A new tool for gauging trader sentiment

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Back on trend?

Trevor Neil: After Bloomberg

Reversal or continuation?

PEAK OUTS AND PERMISSIONS

by Cynthia A. Kase

Cynthia Kase explains how certain Kase Statware® indicators can anticipate a greater percentage of market turns and can provide speedier confirmation of trading signals.

After becoming a self-taught market technician, in January 1990, I left a major oil company I had been with for 10 years and joined a major bank to manage their commodity derivatives book. Back then, energy derivatives were in their infancy and so, in the face of the looming Gulf crisis and the war that followed, I was faced with trading using only a screen and my wits, having exited the active ebb and flow of information one gets through constant telephone contact with counterparties. In the absence of support from immediate fundamental information and the weaknesses of traditional technical indicators, the areas in which innovation was called for became obvious.

Back in those days I was using the Stochastic, RSI and/or MACD to identify market turns and to exit when such a turn was imminent. What I found was that if one of these indicators generated a divergence the market turned most of the time. However, there were a lot of market turns that took place in the absence of divergence - our recent research shows around 55%. The problem is that all the traditional momentum indicators use very simple underlying measures of trend, like moving averages or rates of change of closes. So, I developed the Kase PeakOscillator and KaseCD, which work as well as the traditional indica-

tors in predicting turns, about 80% of them just like the traditional indicators, but also catch about 80% of the turns.

Around the same time I learned about serial dependency in time series. A random event can set off a series of predictable, or serially dependent, events in turn. For example, in late April 2005 after a protracted relaxation in prices in the energy market there was a reversal back to the upside following forecasts that a series of freak snowstorms would hit the US Midwest. The storms were random, but even in the early stages of the rally, the upside run became predictable and perpetuated for over a week. So, in thinking about improving momentum indicators, the idea of using serial dependency seemed like the way to go.

Thus I came up with the Kase Serial Dependency Index, or KSDI. What the index does, when looking at "up" markets, is divide the natural logarithm of the high n days ago to the low today, by the volatility, which is also logarithmically based. The opposite calculation is made for the "down". Since volatility is a one standard deviation logarithmic rate of change, we can think of it as a standard of measurement for the market. The higher the ratio of the actual market movement to this measure, the more it is exhibiting serial dependency - or "trendiness". Should prices move to about two standard deviations, there is

less than a 3% chance that the "trend" will continue and prices can then be expected to revert.

$$\text{Volatility} = \text{stddev}(\ln(P/P[1])n)$$

$$\begin{aligned} \text{KSDI (up)} &= (\ln(H/Ln))/\text{volatility}n \\ \text{KSDI (down)} &= (\ln(L/Hn))/\text{volatility}n \end{aligned}$$

Kase PeakOscillator

There are two indicators that are derived from the KSDI, the PeakOscillator and the KaseCD. The Kase PeakOscillator in a sense parallels a simple oscillator which takes the difference between two moving averages. But in the case of the PeakOscillator, the indicator takes the difference between the up and down indices. The actual index value is based on an "n" where the number of periods in question, over a range of lookback lengths, gives the highest returned value.

Figure 1 compares the PeakOscillator with the Stochastic and RSI. The PeakOscillator is divergent generating a reversal signal, while the traditional indicators are not. Some fine points on the chart are that the first peak on the Stochastic cannot be used for comparison purposes as there was no matching price peak to go with it. We usually recommend a tolerance of about three bars between the price and momentum peak for a comparison to be valid. Also, instead of discrete peaks, small plateaus

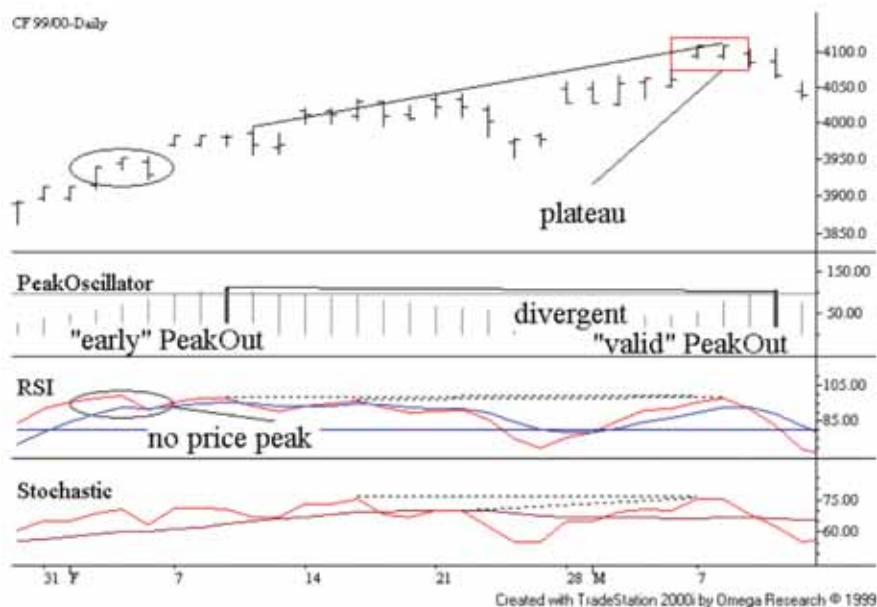


Figure 1. CAC-40 Index with Kase PeakOscillator, Stochastic and RSI

of up to three bars are allowable, as shown by the red box. The fact that the PeakOscillator "worked" and the other indicators did not is illustrative of this indicator's vastly improved performance.

Also notice the "PeakOuts" shown. These are discrete one-bar overbought signals. Traditional indicator overbought and oversold signals often perpetuate for some time in trending mar-

kets. The PeakOscillator's lookback length optimization focuses the signal to usually one-bar, making the use of overbought or oversold indications practical.

KaseCD

The KaseCD is to the PeakOscillator as the MACD histogram is to a moving average oscillator. Each is an oscillator of an oscillator, with the:

**"KASE STATWARE
IS A LIBRARY OF
MATHEMATICALLY
SOUND,
STATISTICALLY
BASED TECHNICAL
INDICATORS."**

- CYNTHIA KASE

$KCD = \text{PeakOscillator} - \text{average (Peak Oscillator, } n)$

As illustrated in Figure 2, the KaseCD has similar advantages to the PeakOscillator, in that it often catches turns that traditional indicators miss, and develops much rounder and less choppy formations than the MACD. Also unlike the MACD it generates discrete overbought and oversold signals like the PeakOscillator, called KCDpeaks.

The Permission Stochastic

It is often said that entering the market is the easy part. All one has to do is choose an indicator or group of indicators and get in on relatively simple signals. While that is true, one of the keys to successful entries is using multiple time frames to trade - any given chart should contain the actual time frame upon which the trade is focused and a higher time frame as a filter. If the longer term "trend" is up, then long trades will be more successful and vice versa.

When I first heard about the idea of using a longer time frame filter, it appealed to me, but I never had the patience to wait for the filter. For →

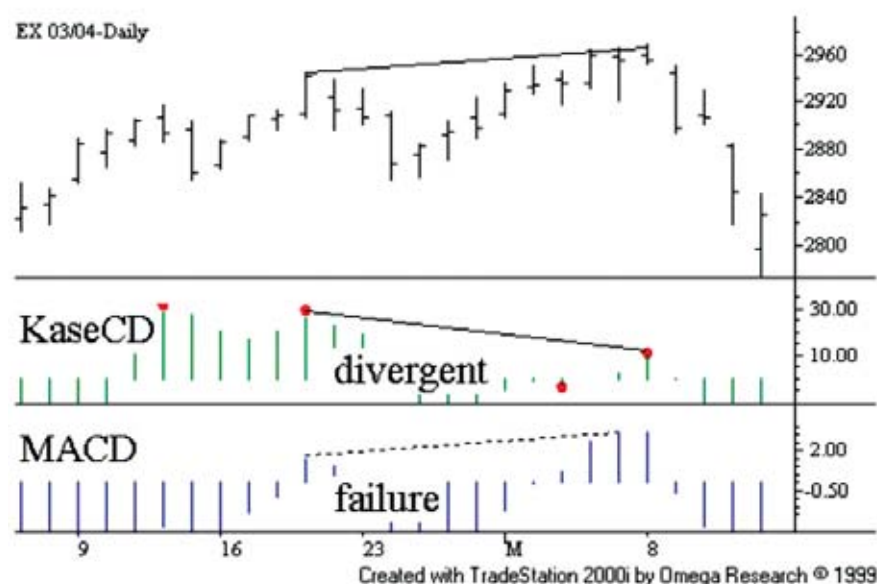


Figure 2. Dow Jones Euro Stoxx, March 2004

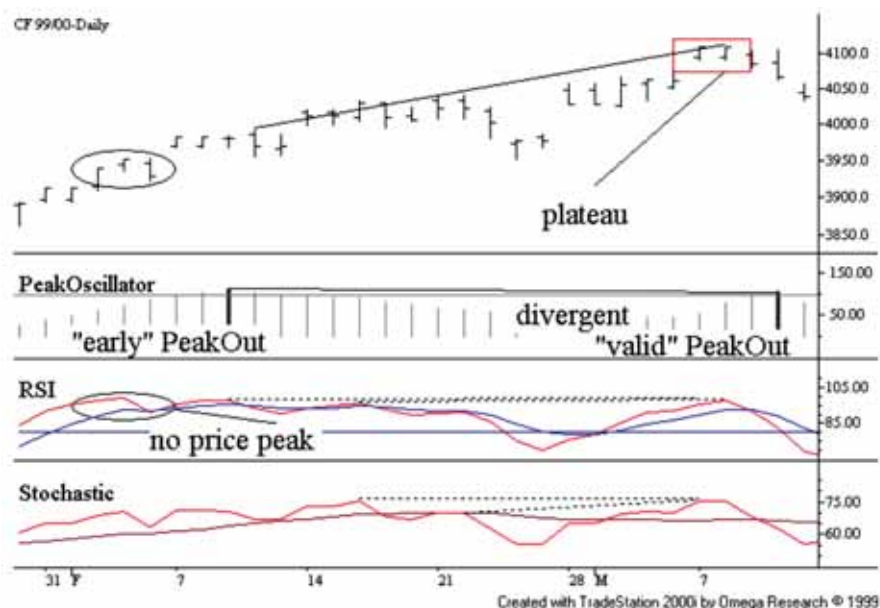


Figure 3. IPE Gasoil, June 2005

example, if on the open there was a signal generated after the first 15 minute bar, I didn't want to wait another 45 minutes for an hourly bar confirmation. So I developed the Kase Permission Stochastic, and in turn the Kase Permission Screen.

The Permission Stochastic updates every bar and has a variable time frame. The way this works is to use the normal Stochastic mathematics, but instead of filtering say a 15 minute bar with a 60 minute bar, it filters a 15 minute bar with an n (four in the case of a 60 minute bar) ending with the current 15 minutes. So a 15-minute bar generating a signal at 0915 would be filtered by an hourly bar from 0815 to 0915 and so forth every 15 minutes. If you prefer using Fibonacci numbers you could change " n " from four to three, and use a 45 minute bar, or five and use a 75 minute bar. Either way, any bar you use to filter would generate a higher time frame bar and thus a signal at the end of the smaller time frame bar. That way any signal gets accelerated as much as possible.

For those who like to interpret the fine points of indicators, the accelerated Kase Permission Stochastic may be sufficient as a higher time-frame filter. However, I have added two additional

layers of automation. First is to place a rule set against the Permission Stochastic and simply display it as blue (permission to go long) and pink (permission to go short). A further refinement is to color-code bars themselves. This is done in the Kase Easy Entry System (KEES). It works like this. Blue shaded dots are buy bars, red or pink are sell bars. If a bar has a number on it, such as 1, 2 or 3, an entry may be taken. A "1" denotes that the short and longer term time frames agree, a "2" means that the longer term time frame is ambiguous, but that there have been two rising or falling bars as confirmation of the entry, and a "3" means that the longer term time frame is opposed, but that there have been three rising or falling bars as confirmation of the entry. The underlying signals themselves that generate the blue or red dots are simple Stochastic, MACD and RSI crossovers.

Final notes

Kase PeakOscillator, KaseCD, Kase Permission Screen & Stochastic, and Kase DevStops (see Jul/Aug05 issue of the Technical Analyst) all form part of the Kase StatWare, a library of mathematically sound, statistically based technical indicators.

More information can be found on www.kasestatware.com, where you can also sign up for a demo of the indicators. The best way to understand the indicators is to use them. They are available on CQG, TradeStation, eSignal, Aspen Graphics, and .DTN ProphetX.



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