

Days Of Our Lives

The capacity to recall unimportant statistics is nothing short of the bedrock of American civilization: The boys who grew up quizzing each other on baseball trivia went on to win wars and build commercial empires at the expense of the unfortunate multitudes elsewhere stuck with a bunch of 1-0 soccer scores. No scoring means no statistics, and no statistics means no superpower status. It's just that simple.

Data must be comparable in order to spark a good debate. Technical analysis is based upon the analysis of recurring patterns (see "Death Of A Chartsman," *Futures*, September 1998). The technological changes sweeping the industry, principally the advent of electronic trading, have weakened the meaning of a trading day. Consider the history of Treasury bond futures trading on the Chicago Board of Trade. The contract has traded under ten different regimes of hours and combinations of open outcry and electronic trading, not including mutual offset arrangements with non-U.S. exchanges, as the CBOT has tried to accommodate the needs of U.S. and non-U.S. traders, its own members, the brokerage community, and its competitors/partners amongst other exchanges.

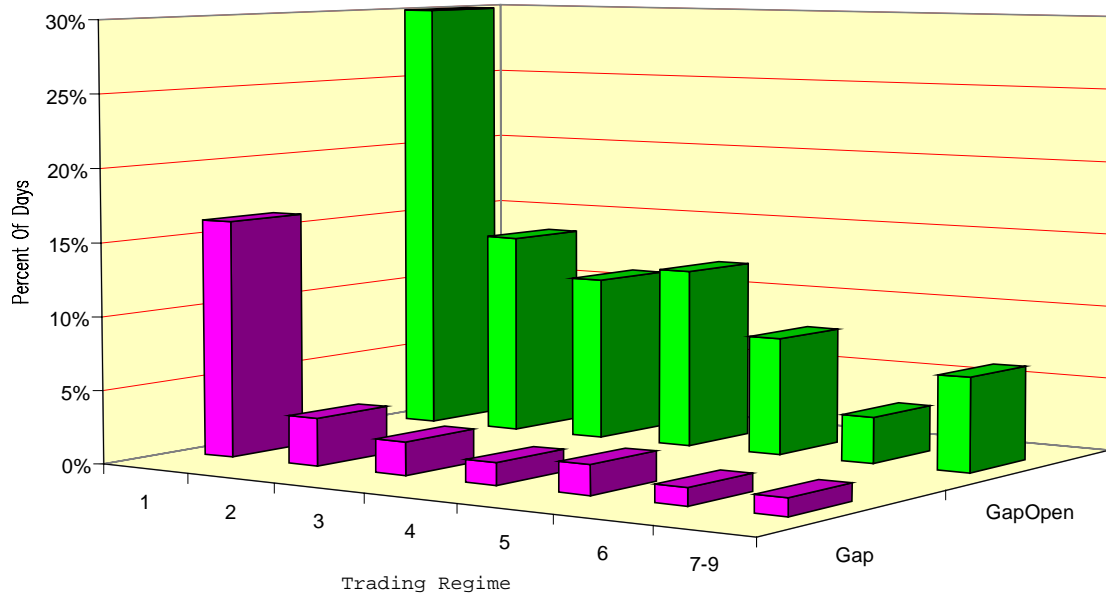
Regime	Starting Date	Ending Date	Open Outcry Hours (Central)	Electronic Hours (Central)
1	02-Sep-77 to	30-Apr-87	0800:1400	None
2	01-May-87 to	04-Nov-88	0800:1400 + Eve.	None
3	07-Nov-88 to	24-Jun-92	0720:1400 + Eve.	None
4	25-Jun-92 to	20-May-94	0720:1400 + Eve.	Globex 2230:0600
5	23-May-94 to	19-Oct-94	0720:1400 + Eve.	None
6	20-Oct-94 to	01-Nov-95	0720:1400 + Eve.	Project A 1430:1630
7	02-Nov-95 to	15-Jan-97	0720:1400 + Eve.	Project A 1430:1630 + 2230:0600
8	16-Jan-97 to	28-Jan-98	0720:1400 + Eve.	Project A 1430:1630 + 2230:0645
9	29-Jan-98 to	27-Sep-98	0720:1400	Project A 1430:1630 + 2230:0645
10	28-Sep-98 to	Present	0720:1400	Project A side-by-side

Some of these changes were more important than others. The addition of the evening session in 1987 never produced the Asian-hour trading volumes that were hoped for, but the Sunday evening session became technically notable for the number of times it produced a weekly high or low; the same phenomenon is now seen in the overnight trade in stock index futures (see "The People's Stock Index Futures," *Futures*, March 1998). The shift to 0720 pit session opening in November 1988 came as a welcome relief to all who had positions in place at the time of major 0730 government report releases. The expansion of Project A hours beginning in November 1995 moved Treasury bond futures trading closer to a true global market than it had even been before. At the time of this writing, the effects of Regime 10, side-by-side Project A trading, introduced at the end of September 1998, are inconclusive. The data from Regimes 7-9 are similar enough to be pooled together, and will be treated as a single group for the remainder of this analysis.

The changes in regimes altered the frequency of common signposts for technical analysis. The "gap," the situation in which today's low is greater than yesterday's high, or today's high is less than yesterday's low, has been a notable casualty. A data base of the active three-month window for each front-month Treasury bond futures contract, over 5,200 data points, was analyzed for two types of gaps. The first is when the contract gaps higher or lower and stays there for the entire trading day. The second is a gap opening that failed, e.g., the contract opened above yesterday's high, but traded down into the previous day's range. Gaps are significant in that their discontinuous prices demonstrate a significant change in underlying value (see "Making A

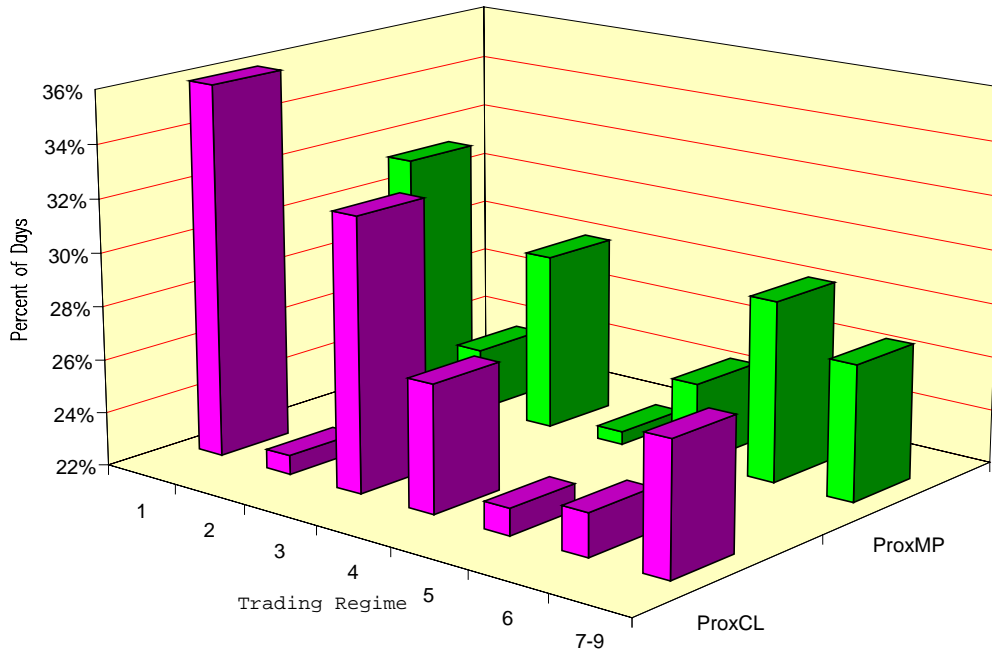
Commitment," *Futures*, June 1998). The simple addition of the evening session, Asian trading hours alone, greatly reduced the presence of both types of gaps, and succeeding expansions of trading hours generally reduced the number of gaps even further.

Disappearing Gaps



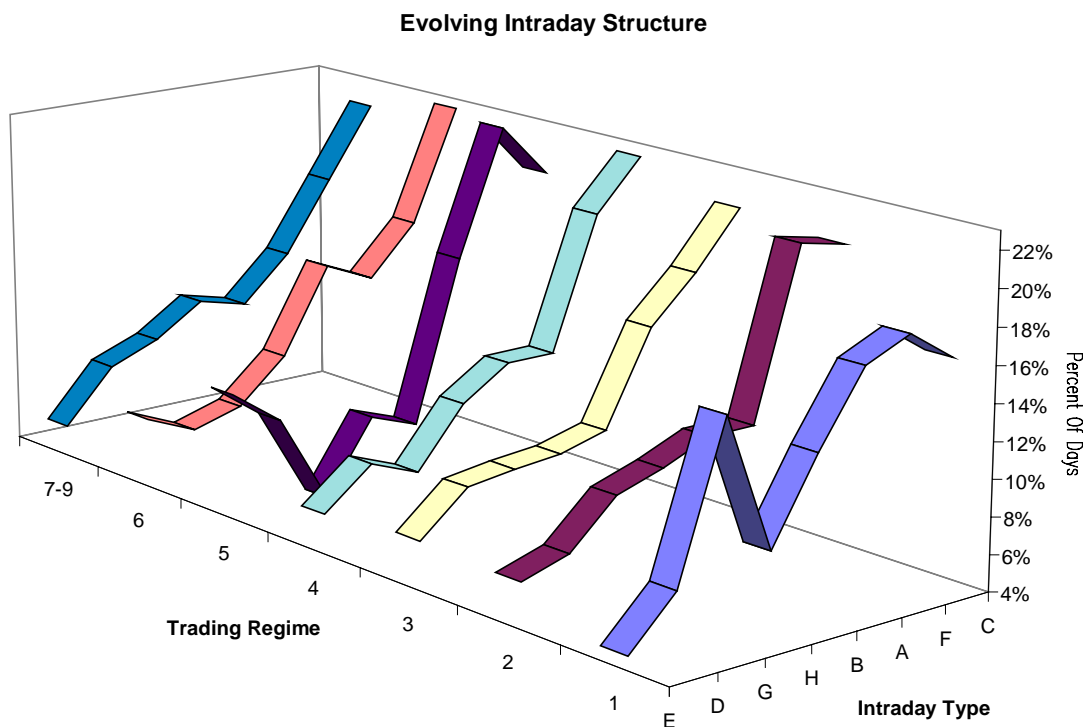
Regime 1 was characterized by relatively anxious closes, which are defined here as settlement within two ticks of the high or low for the day. These closes occurred on nearly 36% of the observations. The addition of the evening session in the second regime reduced this percentage drastically, and despite a rebound in this number in Regime 3, the trend has been generally toward less anxiety to close positions during the pit session. In contrast, the relative number of settlements within three ticks of the day's midpoint has increased since the advent of Project A trading in Regime 6.

Less Rush For The Exits



More subtle changes in intraday market structure have occurred as well, and these can be detected using the day structure classification system first described in "Death Of A Chartsman" and repeated here. Key identifiers of a day's structure – its open, high, low, close, and midpoint – are classified by their location on a stochastic distribution of the day's range. These are comparisons of range size, not comparisons of absolute price. Since there is no specific notation for this concept, a standard relational notation will be used. For example, if the range between a day's open and close – corresponding to the body on a candlestick – exceeds the mode of the day's stochastic distribution, it will be designated as "O>=C." In the table below, the first classification would be for a day where the open/close range, the open/midpoint range, and the midpoint/close range all exceeded the stochastic criterion.

<u>O >= C</u>		<u>O < C</u>	
<u>O >= M</u>	<u>O < M</u>	<u>O > M</u>	<u>O <= M</u>
(A) M >= C	(C) M < C	(E) M > C	(G) M <= C
(B) M < C	(D) M >=C	(F) M <=C	(H) M > C



Regime 1 was characterized by a high frequency of Types F and G, structures characterized by large extensions into the close. The first expansion of trading hours in Regime 2 permanently reduced the frequency of Type G and permanently increased the frequency of Type C, a structure characterized by a successful test of support or resistance in one direction followed by an extension back through the opening range to the other side. The removal of Globex overnight hours led to a large increase in Types D and E, structures characterized by relatively large ranges between the day's midpoint and close, in Regime 5. These increases disappeared and have remained infrequent with the reintroduction of electronic trading via Project A in Regime 6.

If price patterns are influenced by trading regime, and apparently they are, what are the implications for market analysis? First, the importance of the settlement price is reduced as daily ranges expand and as settlements no longer gravitate toward the day's high or low. Second, the role of the day trader will expand as positions can be exited prior to an official pit session settlement and re-established soon thereafter in an electronic session with no overnight margin exposure. Third, commonly-used chart points such as spike highs and lows, will become less useful in defining actual support and resistance if established during electronic hours.

All three of these factors have been seen at work in this year's exceptionally volatile stock index trading, which has witnessed stunning last-hour reversals, huge daily ranges, and pit session openings that negate overnight Globex trading quickly. None of this favors longer-term position trading, the target of most technical analysis over the years, but it does favor day traders, limited-risk option traders, and low margin-to-equity fundamental traders, an odd combination to say the least. Military planners long have known that structure – terrain, climate, weaponry – determines strategy. Traders will have to learn this same lesson.