# BAD LUCK OR BAD TRADING?

*By Daryl Guppy*

Distinguishing between bad luck and bad trading is an important way to survive in trading. There are times when our trade entry or exit benefits from good luck. We intend to get out at $0.12 and it looks as if prices will move to this level tomorrow. Overnight the DOW closes up dramatically, and the price for our stock gaps up. This is good luck, and we get out at $0.14. The trade plan does not change, but good luck helps us to get a better than expected exit.

In some other trades the plan is excellent, but un unexpected event – bad luck – makes our exit much worse than we anticipated. We accept that luck will sometimes pay a role on our trading, but it is unwise to rely on luck to get us out of a hole.

Good luck is a bonus. Bad luck has the capacity to inflict serious financial damage to our account so it is useful to distinguish between a run of bad luck and bad trading. Active traders find there are times when they lose touch with the market. Trading techniques which were successful are no longer quite as successful. Good trades turn out badly. They face a decision. Is it time to fine tune their previously successful trading technique, or is this just a run of bad luck that is not a reflection on the effectiveness of the trading plan?

The right answer sets us on the path to profitability. The wrong answer diverts us. By comparing selected periods of trading we can develop a  method of determining what results, or events, fall within a reasonable expectation of success, and which are random. No trading plan is perfect. We expect failures but the rate and level of losses should be relatively small. They should also be consistent. A wide variation, or volatility, in losses suggests there are more random occurrences – more bad luck.
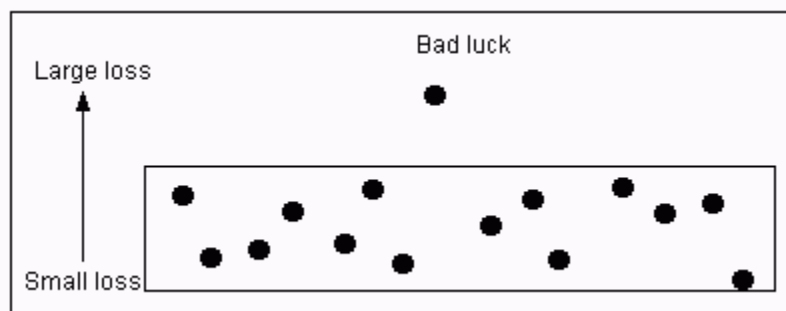


Although a random event is not the same as luck it is a useful way of understanding the role that luck can play in trading. The diagrams illustrate the differences. The box represents the value of 2% of total trading capital. The dots represent the losses incurred in 15 losing trades. In the first diagram 14 of the trade losses fall within reasonable limits, as defined by the box. This is the expected range of losses for this trading system. We look at ways to determine these limits below. Only one trade has a loss that is much greater than the expected acceptable loss. This is a random event that is well outside the range of consistent results.

In our terms, this trade is probably just bad luck. We can afford to ignore this because it is an unusual event that does not suggest that something is wrong with our trading system.
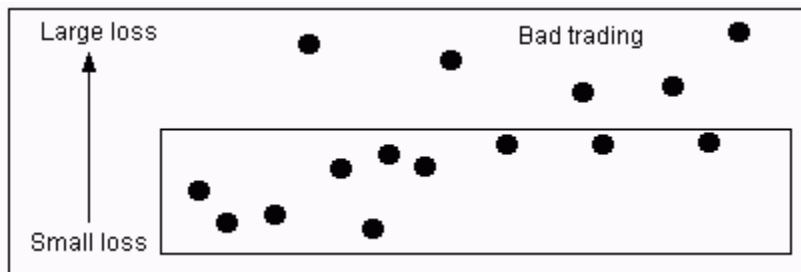


The character of losses shown in the second diagram is quite different. Ten of the losses still fall within the box area. This is the same value as the previous diagram and set at 2% of total trading capital. This is not an ideal representation because 15 trades is too small a number of make an accurate assessment of a trading plan. We want to show the pattern of behavior that separates bad luck from bad trading. The first feature is the way losses tend to cluster near the upper level of the box. This is not a definitive feature of a bad trading system, or a trading system in decline, but an increase in the number of losses that are near the maximum suggests this trading system may have a problem.
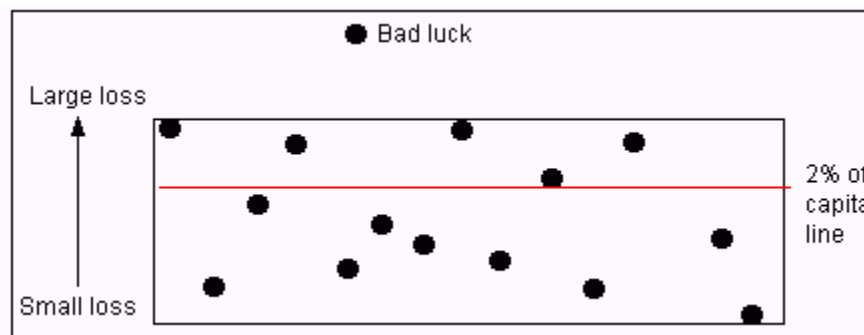


The main indication that these losses are not the result of bad luck is the reduction in randomness of the number of very large losses that lie outside the box. Five large losses is not bad luck. Five large losses suggest this trading approach has problems. The trader is best advised to closely examine his trading system and trading discipline. The system might still be valid, but just inappropriate for the current market conditions. Dismissing this pattern of heavy losers as bad luck is inconsistent with the developing pattern of behavior. The spreadsheet discussed below provides a method of capturing this need for change.

The difference between diagram three and diagram one is the degree of spread in losses. There is just one random loss – bad luck – and the remainder of the 14 trades are evenly spread within the box. This trader is consistent, but the degree of loss is a problem. If these losses are with the 2% rule boundaries then this is acceptable. These losses subject this trader consistently to loses that exceed 2% of total trading capital. This trading system is marginal. Although the results

are consistent, the level of loss makes it very difficult to get ahead. The single random, or bad luck, event is not enough to invalidate the system. However, the system needs adjustment to bring the consistent range of losses back below 2% of total trading capital.

To separate random or bad luck events from a true failure of the trading system we need a record of the **losses** for two separate periods of time. This allows us to compare changes in our trading behavior. An active trader might compare this month with last month. A less active trader might compare this quarters trades with the previous quarter. The time periods selected should be of the same length. It does not matter if the number of trades in each period are the same or different because we use the mean average for each period as a starting point for comparison. It is important that each period should contain at least 5 trades to ensure that the comparison is valid. The more trades in each elected period, the more accurate the conclusions.

Our focus is on losses because they have the potential to do damage to our trading portfolio. The same analysis methods can be applied to profits to help decide just how large a part luck plays in our trading success. This is a useful exercise and it can signal the need to fine tune our profit taking mechanism.

| Period 1 | Period 2 |
|---|---|
| $ 355 | $ 500 |
| $ 267 | $ 467 |
| $ 100 | $ 605 |
| $ 799 | $ 555 |
| $ 99 | $ 465 |
| $ 1,345 | $ 524 |
| $ 67 | $ 444 |
| $ 36 | $ 489 |
| $ 299 | $ 588 |
| $ 169 | $ 857 |
| $ 88 | |
| $ 22 | |
| **3.92** | **1.21** |
| Inconsistent results | Trading system changed to achieve consistent results |

Once the two comparison sets of figures are collected the next step is to calculate 1 standard deviation from the mean. This tells us where two thirds of all random occurrences – bad luck trades – can be expected to fall. The objective is to determine how consistent our losses are and decide which are random occurrences. The closer they are together, the more consistent we are. Consistency in losses is critical because it illustrates control. The more control we have, the lower the level of luck involved in our trading. The key comparison result is the level of standard deviation for the mean. The lower the standard deviation for the mean, the more consistent we are.

| Period 1 | Period 2 |
| --- | --- |
| $ 500 | $ 455 |
| $ 467 | $ 267 |
| $ 605 | $ 100 |
| $ 555 | $ 899 |
| $ 465 | $ 199 |
| $ 524 | $ 1,345 |
| $ 444 | $ 167 |
| $ 489 | $ 436 |
| $ 588 | $ 299 |
| $ 857 | $ 169 |
| $ 100 | $ 588 |
| $ 150 | $ 122 |
| 1.98 | 3.72 |

Inconsistent results show the need for change

The spreadsheet extract shows two comparison periods and the standard deviation for each period. The free spreadsheet with this weeks newsletter allows readers to enter up to six comparison periods. We have limited the number of trades to each period to 12, but this can be changed simply by using the "fill down' function after the protection feature on the spreadsheet has been unlocked. There is no password required for this.

The key result is the standard deviation result. The larger the figure, the larger the role that 'bad luck' plays in our trading performance. In the first period the standard deviation was 3.9%. In the second period the standard deviation dropped to 1.2%. This trader is over three times more consistent in the second period in controlling losses.

We are equating the level of randomness, or lack of consistency in trading results with luck. This is not strictly speaking correct, but it is a useful rule of thumb measure that we can use as a guide to the way our trading is developing.

The second spreadsheet extract shows a trading system that was in touch with market conditions but which has now slipped out of touch. Consistent losses within a narrow range have been replaced by a much higher level of volatility. There are more, larger losses and these cannot be put down to bad luck. The level

of inconsistency has grown substantially. The trading system is now over twice as inconsistent as it was in the first period.

With a little manipulation we can discount the impact of a bad luck trade by removing it from the calculation. The middle column on the spreadsheet shows a bad luck trade. This is a single trade where the loss is outstandingly larger than the other losses. It stands out as abnormal. The trader is likely to remember the exact reasons for the failure of this trade. Include this trade and there appears to be little improvement in the trading system or approach over the two periods.

If we remove this single 'bad luck' trade by replacing the loss with a zero it increases the range of results achieved and expands the standard deviation result. The trade must be removed completely from the spreadsheet by moving the later results upwards as shown. The calculation is now a more accurate reflection of the improvement of the trading system. Consistency, excluding the bad luck trade, has been reduced, or improved, to 1.28%.

| | | Bad luck trade |
| Period 1 | Period 2 | Period 2 |
|---|---|---|
| $ 355 | $ 500 | $ 500 |
| $ 267 | $ 467 | $ 467 |
| $ 100 | $ 605 | $ 605 |
| $ 799 | $ 1,555 | $ 465 |
| $ 99 | $ 465 | $ 524 |
| $ 1,345 | $ 524 | $ 444 |
| $ 67 | $ 444 | $ 489 |
| $ 36 | $ 489 | $ 588 |
| $ 299 | $ 588 | $ 857 |
| $ 169 | $ 857 | |
| $ 88 | | |
| $ 22 | | |
| **3.92** | **3.40** | **1.28** |

Move this group up to eliminate the 'bad luck' trade

Not much improvement

Better trading

Removing a single bad luck trade is one way of verifying if a trading system is effective. If we find ourselves removing two, or three, or four "bad luck" trades then we are refusing to recognize that our trading approach is no longer in touch with the market. We must be honest with ourselves about the level of consistency we are achieving in our trading. This spreadsheet provides a tool to help us with this calculation and assessment.

The volatility of returns – the consistency of our trading – is an important foundation of long term trading success. The rate of return we get from trading must be related to a low volatility. It is no good making an 80% annual return on capital if there is a good chance that next year we might make an 80% loss. If you

have a good rate of return, but your volatility is very large then you should be nervous about your trading future. The risk of high volatility is that you could make a large fortune, or lose one. If however high volatility in returns is matched with a low standard deviation in losing trades it suggests that you have good control of your trading. You can breathe easier. To rest comfortably the next step is to measure your maximum draw down, or largest loss. If this in total, is less than 5% then you can invest in your trading approach with confidence.

A trading approach that has a combination of generating profits while controlling risk is a winner. This is the profile we want to develop, and the second part of the spreadsheet gives us some tools to monitor and assess this.

This is based on the Sterling ratio developed by Deanne Sterling Jones. It is one solution to resolving the risk-reward equation. Ideally you need 3 years of trading performance to get accurate figures. However the same principles can be applied over a shorter period. The result will tell you if you have been adequately rewarded for the risks you have been taking.

The Sterling ratio compares your average percentage return over 3 consecutive years ( or periods) with your largest realized percentage loss in equity in the same period. The formula then adds 10% to this loss to adjust for the fact that short term calculations of draw down are under stated compared with the annual draw down figure.

**The Sterling Ratio**

| System A | System B | System C |
|----------|----------|----------|
| 35 | 30 | 45 |
| 20 | 12 | 40 |
| 1.167 | 1.364 | 0.900 |

The result can also be used to compare the relative performance of two trading systems, or two traders, or of investment managers. The spreadsheet applies it to two trading systems. Trading system 1 has an average return of 35% over the past 3 years with the average draw down at 20%. Trading system 2 has a lower return of 30%, but also a much lower draw down. Trading system 2 lost an average of only 12%. Which of these systems has the best risk/reward relationship?

The Sterling ratio provides a quick answer. The higher the Sterling ratio the better the relationship between risk and reward.

Although trading system 1 has an annual return on capital track record 5% higher than trading system 2, it is the second system that is better adjusted for risk. The excellent annual returns for system 3 are destroyed by the very large draw down. System 3 is not much better than gambling when all your trading capital can be won, or lost with almost equal ease.

The Sterling ratio can also be used to assess improvement in your trading performance. Instead of system A and B, this may become period A and period B.

This allows you to compare how you were trading in 1999 with how you are trading in 2003.

As a private trader it is important to become consistent because it is easier on your nerves. Wild swings in returns can be exhilarating when there are profits, but terribly depressing when there are losses. This doesn't mean that losses should be about as large as profits. It means that losses should be very small in relation to the return. By using stop loss methods we have the ability to limit our losses and let our profits run. Consistency, as measured in the standard deviation section of the spreadsheet, and a low Sterling ratio are a good guide to how consistently you are performing as a trader.

Trading and investment analysis should be objective. One of the strengths of charting and technical analysis is that it uses an objective set of figures – price activity – which are readily available to everybody interested in the market. How individual traders choose to apply and interpret those techniques is a matter of subjectivity.

The fundamental analysis relies on figures created by the company in annual reports and press releases. He works with figures generated by outsiders, such as auditors and accountants. He also works with figures derived by others for particular purposes. For instance,  if the analyst works for a brokerage involved in an IPO launch then the figures are often a little brighter than market reality would suggest. The application of fundamental analysis is a subjective process from the very start because very few of the figures used can be independently verified. Even the balance sheet is a carefully massaged document.

A significant problem for traders and investors who rely on the research and analysis of others is the objectivity of the research, and recommendations.  When a research company is being paid for a company to do the work then it is not uncommon for the report to put the best possible gloss on the situation. When a brokerage is preparing a report on a company, and  it is also handling trading work for the same company, then the same constraints apply.

The result is that few sell recommendations are produced by the analysis industry, even in the April 2000 period when the tech market crashed.

One of the advantages of  this newsletter is that we are not tied to any company. We receive no commissions from the purchase or sale of shares by readers, or the sale of any financial product used by readers, or  from brokerage or industry referrals. We do receive income from books and our other software products but these are quite independent of any material we cover in the newsletter. The analysis methods we use in the newsletter case studies are easily duplicated by readers using objective price and volume information.

NOTE. Much of this article is based on material drawn from **The Market Is Always Right** by Thomas Mc Cafferty. We recommend this book to readers for its excellent discussion of these issues and other aspects of disciplined trading.