

The taking any risk because if it

[Business](#), [Management](#)



The Midas formula has been well known for solving risk and return issues in the stock market.

It is acknowledged by the profession as a perfect formula that can do something that has never been dreamed. They are now aware that the two risky positions taken together can effectively eliminate the risks themselves in a moment of great clarity after a long time the world is full of uncertainties and risks, uncontrollable and can not be analyzed. There comes one of the most impossible projects, to find a formula that will enable anyone to be perfectly rich without taking any risk because if it works, it will bring orders to the world financial exchanges and challenge the role of a group of people; traders. Products traded on the financial exchanges, are strange and complex, such as interest rate swaps and currency derivatives. Price is always fluctuating due to sentiment market changes. The task of the dealer is to try to guess these prices next year, next week or in 10 seconds and do it thousands of times a day.

The risk is huge. The formula should defeat the ordinary trader in order to make it work. It should also compete with the wisdom of collecting legendary traders. In the office high above the trading floor is a recognized expert. For example, the Chicago Mercantile Exchange, his clerk who is operating his account and he then executes the order he gives, verifying his execution. He gets other information they do not get such as to know which direction from which one in a dozen markets he will enter. In addition, he needs to think about reading the newspaper to know whether this information will make them raise prices, or will make them afraid, and most importantly is if he can beat the market.

While merchants like Melamed are confident that success in the market is related to human judgment and intuition, the quality that can not be reduced to a formula. However, this view has a strong opposition where an important academic group, who studies the marketplace mathematically, believes that luck is a great part of success. In the 1930s academicians decided to find out whether merchants could really predict how the prices moved.

They struggled to find some scientific basis for this business, but they could not find it, so eventually they decided to run some experiments. They only choose stocks and stocks randomly. So, by the end of the year, this random choice is done by the top traders.

This is a revelation. This means the price must move at random and therefore not impossible, to predict anything about them. This shows that academics conclude that everyone who succeeds in making a successful prediction in the stock market must do it with no skills but by chance. Using a series of equations Louis Bachelier created the first complete mathematical model of the market. He also realizes the stock prices are moving at random and it is possible to make accurate predictions about them, but Bachelier says he has found a great way to get rid of risks, miraculous financial contracts called options. He believes that if one finds a formula that would allow contracts that are rarely used for widespread use, they will be able to tame the market completely, but he dies before it can be found.

After that, suddenly came to the minds of all the eager workers about what the Holy Grail was. There is a next step required. It is to get the perfect

formula to evaluate and price options. They find the options, in theory, is a form of magical financial insurance and they work in remarkable ways.

The risk in the stock market is that if you buy a stock today the price may fall in the future and you may lose money but if you pay this option contract gives you the right to wait and buy the stock if it reaches some price agreement in the future, but there is no obligation. If the stock fails to reach the price, you can option and you will only lose the cost of the option. In theory option is the perfect way to get rid of risks, but there is a problem. No one can agree in a standard way for price pricing because how much will one pay for absolute peace of mind. Around the 1960s academicians developed their mathematical model where they were convinced that they could illustrate mathematically emotional optimism from the investors they would solve the problem of how the choice of price. They continue to add more symbols to do so. They add a symbol for satisfaction, for the ability and aggressiveness.

When it does not seem to make a mistake they add more. Symbols to guess other traders and security defense. Unfortunately, by the end of the 60s the academics are no closer to the price options than they have ever been, or closer to Bachelier's dream about the perfect mathematical model on the market. All this will change. In 1968 Myron Scholes and his colleague, Fisher Black tried to address the problem of option. When the first option is discovered about the possibility of a contract that can only return profits rather than a loss that can raise the price is only worth. They know that every stock price is always up and down.

Therefore, the value of the options in a particular stock also changes, but there is no predictable relationship. What they want to find is the formula that will get the exact price at the option at any time simply by knowing the current stock price, so they decide to try something different. One after another they drop any symbols that represent something that can not be measured. All academic years have been busy adding their equations. It is a brilliant insight.

Losing these elements does not affect computation at all. All symbols are not required. So they start with the old idea of hedge where gamblers hide their bets with bet from the opposite direction. The way they work is to be one of the most important inventions in the economy of this century. They create theoretical portfolio, mix the stock and option. Then each time it fluctuates or goes down, they try to cancel the movement by making another step at risk in the opposite direction. Their goal is to keep the overall value of the portfolio in perfect balance. Because everything moves at random, it is very difficult and at first they can only cancel the movement, but ultimately use complex algebra and many calculations that eventually they can compensate for the movement accurately and then the other.

They soon find that dynamic hedges can offset any movement at all. They can create the perfect balance in which the risk of self-defeating. They have found theoretical way not just to reduce the risk, but to eliminate it altogether. With dynamically hedging Black and Scholes can remove unmeasurable element – risk itself has fallen from their equations. And without risk they eventually have mathematical formulas that can give them

a price of any option. Black and Scholes have solved the problems that have confused the academic generation.

It was a great achievement in the price of Black-Scholes. However, it takes time to calculate the dynamic hedge. At present, a fast moving market will move and its calculations will be too long. What is needed is a way to recalculate naturally to continually eliminate the risk. By the early 1970s Bob Merton developed a reputation for using exotic and abstract maths to study financial contracts such as option. He is the perfect person for Black and Scholes to be contacted. Merton has explored theories that are not in the finances that have ever heard them. One is to be unlikely final piece of the jigsaw.

Merton turned to rocket science. Bob Merton uses this idea and adapts it to the Black-Scholes formula. Using the perception of continuous time, the value of the option can be recalculated and the risk is eliminated continuously. To plan the rocket trajectory you need to know exactly where the missile is, not just the second with the second, but literally all the time. It has developed a way to divide the time into small packages, smoothing it up to become continuum so that the trajectory can be updated continuously.

By following their procedures, their dynamic trading strategy in stocks and cash at least in the context of my model, they can eliminate all risks. Then another trader looks at the Black-Scholes formula and realizes it can make money as well. By allowing them to hedge their perpetual risk, traders can feel safe enough to do business on a scale they have never dreamed possible. Risk in stocks can be hedged against futures, which are in futures

on currency transactions and all covered by new complex financial derivatives, which are widely proposed to exploit the Black-Scholes formula. The basic dynamics of the Black-Scholes model is the idea that through our dynamic hedging can eliminate the risk, so we have a mathematical argument to trade a lot. The more we trade, the better the society is because of the less risk there is. Myron Scholes and Robert Merton created a giant company, hedge funds called Long Term Capital Management.

LTCM promises to use mathematical modeling to make investors do not miss the amount of money. His reputation Merton and Scholes as the largest academic mind in finance makes it easy to earn money. The most prestigious investors, the biggest names in capitalism, banks, pension funds and institutions all compete for investing.

The vast LTCM strategy is to find ways to hedge your position so you can do more than you can if you do not hedge the risk and it works. LTCM is a tremendous success, not implementing any other investment company. Merton and Scholes prove, as if academic can cut it in the real world and they succeed in success. In the summer of 1997 across Thailand property prices collapsed. This sparked a panic which swept through Asia.

Banks went bust from Japan to Indonesia and then people took to the streets. These things were so improbable they had never been included in any mathematical models. The market broke, then rallied and continuously. As prices leapt and plunged as never before, the models traders used began to give them strange results, so they relied instead on their instincts. In a time of crisis cash is king.

Traders stopped borrowing and dropped investments in risky places. But at LTCM their models told them everything would return to normal soon. There was no reason to panic but as panic spread options cost ever more.

Now LTCM did the opposite of the normal trader – they began to borrow and do it heavily. LTCM was about to be able to afford the cost of this extra borrowing. They would be able to continue to hedge just as long as one more totally improbable thing did not happen. In August 1998 something that's happening is considered impossible: the world's largest country suddenly and without explanation refused to pay all international debt and now all the calculations in the LTCM model are finally, hopeless.

The models they use are not just Bachelier models but all types of models, based on normal behavior in the market and when behavior gets wild, no model can be adapted to it. Although their model tells them that they should not have lost more than 50 million or so on a given day they lost 100 million and more days after day after day until finally one day 4 days after Russia defaulted when they fell half a billion dollars, 500 million in a day. But then suddenly they look at this nightmare where a firm associated with every major firm on Wall Street will be hijacked and the market may stop working. That is a great fear. To avoid global economic collapse, the Central Bank of America, the Federal Reserve, has no choice but to advocate LTCM guarantees. This term is embarrassing.

Merton and Scholes lost millions. So do their investors. The Black-Scholes Formula continues to be used millions of times a day by traders who know when to use it and when their heart is moved to use it.