

SPECULATION

Speculation Speculation entails running the risk of a loss in the expectation of a high reward. A pure investment is devoid of risk and, therefore, of any speculative element. Financial speculation involves the buying, holding, selling, and short-selling of stocks, bonds, commodities, currencies, real estate, derivatives, or of any other financial instrument, in order to profit from fluctuations in its price.

Leverage Leverage (or gearing) consists of disposing borrowed funds in some manner in the hope of deriving speculative returns that are greater than the cost of the borrowing.

One way of speculating, which should not entail a great risk, would be to buy an asset at time $t = 0$ at the spot price of S_0 in the expectation that an increased price S_τ at time τ will enable one to realise a profit. A more risky way of speculating would be to use the same funds for buying options.

The purchase at time $t = 0$ of a call option on an asset gives the buyer the right to purchase the asset at a given strike price $K_{\tau|0}$ at the future date of $t = \tau$. If the price of the asset rises above $K_{\tau|0}$, then the value of the call option will rise at a rate far greater than will the value the asset itself.

However, if the spot price falls below $K_{\tau|0}$, then the call option may become worthless, implying a much greater loss than if the money had been invested in the asset. A put option will allow the holder to make a similar speculation that envisages a fall in the price of the asset below the level $K_{\tau|0}$ of the strike price.

To clarify these matters, we may examine the circumstances at time $t = \tau$, which is when the options mature. Suppose that, at time $t = 0$, when the investment was made, the treasurer had a sum of V_0 at his disposal. Then, he would be able to purchase $N = V_0/S_0$ units of the asset. At time τ , when the price is S_τ , his profit or loss from the speculation will be

$$\pi_\tau = N(S_\tau - S_0) = \frac{V_0}{S_0}(S_\tau - S_0).$$

As a proportion of the funds at his disposal, this is $(S_\tau/S_0) - 1$, which is liable to be small, if S_τ does not diverge greatly from S_0 .

The treasurer might have invested, instead, in call options. At time $t = 0$, the price of an option in respect of one unit of the asset is $c_{\tau|0} < S_0$. In fact, it is probable that $c_{\tau|0}/S_0$ will be a small fraction. If all of the available funds were used to purchase options, and if these were held to maturity, then, at that time, returns from the speculation could be represented as follow:

$$\pi_\tau = \begin{cases} \frac{V_0}{c_{\tau|0}}(S_\tau - K_{\tau|0}), & \text{if } S_\tau > K_{\tau|0}; \\ 0, & \text{if } S_\tau \leq K_{\tau|0}. \end{cases}$$

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The factor $V_0/c_{\tau|0}$, which would amplify the difference $S_\tau - K_{\tau|0}$ if $S_\tau > K_{\tau|0}$, is liable to be far greater than the factor V_0/S_0 , which would amplify the difference $S_\tau - S_0$. Therefore, if it were profitable, we would expect the speculation involving options to yield a far greater profit than the simple investment. (For a complete comparison, we should need to know the extent of the divergence of $K_{\tau|0}$ and S_0). On the other hand, if $S_\tau \leq K_{\tau|0}$, then all of the money invested in options would be lost whereas, in such circumstances, the losses from the simple investment would be limited.

Short Selling Short selling an asset at its market price S_t means borrowing the asset at time t from some other party who owns it, selling the borrowed asset at the spot price of S_t and, finally, returning the asset to the lender at an agreed date τ . If the spot price at time τ is $S_\tau < S_t$, then the short seller will have made a return which might exceed whatever must be paid to the owner of the asset for lending it.

The short seller usually borrows from his broker, who in turn has borrowed the securities from some other investor who owns them. The broker itself seldom purchases the securities to lend to the short seller. The owner of the securities retains the right to sell them at any time.

Short selling has often been criticised; and it has been subject to various prohibitions since at least the eighteenth century, when it was banned in England. It is liable to magnify the downturns in financial markets. In one famous incident, George Soros broke the Bank of England on Black Wednesday of 1992, when he sold short more than \$10 billion worth of pounds.

Short sellers were blamed for the Wall Street Crash of 1929. This led Congress to pass a law banning short sellers from selling shares during a downtick. The resulting uptick rule, was in effect until 2007.

Cornering the Market Cornering the market means purchasing enough of a particular asset or commodity to be able to manipulate its price by hoarding it. Thus, a futures trader might attempt to corner the market by buying a large number of futures contracts on a commodity. They would attempt to sell them at a profit after inflating the price.

An attempt to corner a market can be a risky undertaking, particularly if it becomes widely known. The rest of the market may resist an attempt to drive the prices higher by taking opposing positions. When the price starts to move against the cornerer, they will have difficulty in relinquishing their position without causing prices to move against them. In such a situation, others may be able to profit greatly at the expense of the party who have made the attempt.

Porsche, Volkswagen and the Hedge Funds A recent incident involving the shares of the motor manufacturer Volkswagen has involved the activities both of short selling and of cornering the market.

The sport car manufacturer Porsche, which had been making large profits, had been increasing its ownership of Volkswagen shares rapidly. As the reces-

sion deepened towards the end of 2008, the shares of most motor manufacturers fell sharply in value. Those of Volkswagen were an exception, but it seemed inevitable that they would soon follow suit.

It was on this supposition that several hedge funds began to short sell the Volkswagen shares. The expected fall in value did not materialise before the short-sold shares were due to be returned to their owners. In fact, the cost of the Volkswagen shares rose dramatically as the hedge funds tried desperately to acquire them in order to return them to their owners.

The shares that the hedge funds had short sold had been acquired by Porsche, who must have used call options to pre-empt a large proportion of them. Porsche had effectively cornered the market in Volkswagen shares.

Porsche was able to realise a substantial profit by releasing some of the shares at their peak price. They have also retained enough of them to have acquired a 50% stake in the Volkswagen company, which has taken them a long way towards their goal of acquiring a controlling interest in the company.

The Florida Land Boom The Florida land boom preceded the great crash of 1929. During this boom, the trading was in so-called binders. These were options that gave the holder a right to purchase the land. The cost of a binder was a tenth of the purchase price of the land. This right to buy could be sold.

After the value of the land has risen, the speculator could resell the binder for what they had paid plus the full amount of the increase in price, thus giving them the full benefit of the increase in the land value.

In the absence of the binder, the speculator on land would have had to pay its full purchase price. With the use of a binder, they needed only to provide a tenth of the purchase price. Therefore, in effect, binders multiplied by ten the land from which the speculator could harvest the increase in values. (J.K. Galbraith, *The Great Crash 1929*).

Buying on Margin The stock market boom that preceded the great crash of 1929 was sustained by the practice of buying stock on margin. This was an arrangement whereby the broker lent to the speculator the funds to purchase financial assets in return for a small marginal payment. The buyer of securities on margin acquired the full title to the assets in question, but they were required to leave these securities with the broker as collateral for the loan that had been used to purchase them.

If the price of the securities increased, then the speculator got the full benefit of the increased value, since the value of the loan was fixed. If the price of the securities fell, as it did dramatically in the stock market crash, then the speculator, who was obliged to repay the full value of the loan to the broker, was liable to be ruined. When the speculators defaulted on their debts, the brokers were left with the worthless stock, which had been the collateral of their loans. (J.K. Galbraith, *The Great Crash 1929*).