

TECHNICAL AND PRACTICAL IMPLICATIONS OF SHORT SELLING

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Abstract:

This paper aims at providing insight into some of the implication of short selling for markets, investors as well as regulators. Findings show that capital flows are adversely affected by strict regulation and bans of short sales, while market liquidity, and bid-ask spread can be improved by allowing short selling. Additionally portfolios that incorporate short selling strategies can have lower volatility in returns. The informational content of short sales can provide important feedback for informed investors and lead to better price discovery.

Key words: *short selling, market makers, portfolio management, stock market regulation*

JEL classification: *D47, D53*

INTRODUCTION

Over the last three decades of capital markets experienced a dramatic resurgence and expansion without precedent. Both the number of stock exchanges and their capitalization rose substantially, punctuated by financial crises in certain places. If in the past the markets were dominated by transactions concentrated in a few financial centers, now more and more flows occurring in local markets, with specific rules and practices, highlighting the emerging markets. This article aims to analyze the situation of global capital markets regulations and practices with reference to short-selling and some implications of these transactions in local economies, especially for attracting foreign capital.

A study conducted in 2004 by professors from Yale and Davis (1) show that about 93% of total market capitalization in the world has the potential to be sold short, but in many areas is very difficult or unused operation in practice. Numerous other studies have shown that markets without short selling are characterized by a weaker diffusion of information and therefore errors in pricing. (2) For this reason markets are more exposed to extreme price declines and investors who rely on the fundamental efficiency of markets will prefer those where the trading environment is fluid and transparent, and information flows freely. Thus, empirical evidence has shown that international capital flows are directed towards markets where rules and laws allowing the highest efficiency.

REALTIONSHIP BETWEEN CAPITAL FLOWS AND SHORT SELLING REGULATION

From the data collected about short selling practices of investment banks, regulators institutions, specialized publications and financial data form a picture of the situation short selling in 59 countries. Parameters to be taken into account are: existența of regulations, changes in these regulations, major restrictions and expert opinion on the impact of such changes. The data shows interesting findings such as Singapore where short-selling is practiced although it is not allowed formally numerous countries where short selling is allowed, the argument increase liquidity, but is less used like Turkey because of the manner in which a loan is charged as as a short-term gain, or countries such as Estonia, capitalization lower than where authorities consider the risk of creating bubbles too high to allow accompanied by such financial transactions.

The compilation of indices to simulate portfolios of securities to were sold short, compared to others without such positions, during the period between 1989 and 2002 shows that there are significant differences of performance, especially in terms of volatility. Annual standard deviation for non-short index is 24%, while short index is 19% and the inclusion of US actions volatility decreases to 16% over the same period. In addition to the stability of markets and volatilities recorded, institutions that regulate financial systems are very interested in how it affects international capital flows in and a domestic market. Investors may be attracted by the opportunity to hedge short selling in markets with higher pressure allowed but sale is a reason to prefer markets with restrictions. Empirical evidence suggests that, taking into account the informational efficiency of markets, easing regulations reduce capital outflows from the domestic market, while imposing tougher reduce capital inflows in a market. There are numerous factors that influence international financial flows, and therefore should be considered three types of risk: political risk, economic risk and financial risk. The study by Bris, Goetzmann and Zhu are based on observations of FDI, realizing regression models for different outputs and inputs, taking into account the three types of risk mentioned above. It selected a set of countries that have changed their regulations on short selling period, thus testing the efecele these decisions. The conclusion, even after are considered risk factors is that deregulated markets attract capital in this respect compared to the other, outflows are more pronounced in conditions of low political risk and economic and financial high. Although net flows increased slightly in terms of deregulation, the complexity of factors that influence foreign investment, statistical significance is limited.

Another strong argument in favor of allowing short selling's is the added liquidity that is supposed to confer markets. With the collapse of international credit many markets in 2008, many institutions have banned short selling operations in order to protect the industries most affected in terms of uncertainty especially in the financial sectors of banking and insurance. So many stock exchanges for a number of titles have been banned shorts, meaning that from a certain date (19 September in London) could no longer open short positions. The decision was taken despite the fact that the evidence was inconclusive on the liquidity and volatility. (3) The London Stock Exchange has commissioned an independent study to examine the effects of the decision on market liquidity. The report examines the liquidity of the stock around the FSA's decision to ban shorts, one month before and one after. The first important discovery is increasing the spread to restricted shares 140%, from 15 basis points from 36 bps. For debt control, where the regulation has not been implemented in practice, increasing the spread was only 56%. Depth market deteriorated in both cases, but more pronounced (59% versus 43%) for shares with restrictions. The number of transactions fell by 10% after the ban while for the control actions increased by 50%. Also recorded a volume decrease of 21% after the ban while the control units increased by 42%. Results from two separate regressions show that liquidity decreases seen major changes occur independent of the market and increased volatility. The models are statistically significant and clearly concludes that the shares have low liquidity after the ban short-selling, but may be explained by the volatility higher specific period.

This information is verified by the academic study done by Professor Ian Marsh, Cass Business School which examines the impact of restrictions on short selling in different countries. The study identifies significant evidence indicating a change in yields due to restrictions and price behavior analysis on the different markets where nature was also different restrictions, did not show any effect in downward likelihood of massive price declines. Also, regression analysis suggests that changes in yields actions were caused by factors other than short selling operations with no evidence of systematic impact of restrictions.

Both of the above work are cited by a memorandum of the International Association of loan securities (International Securities Lending Association) addressed the British Parliament which holds that price changes are caused by changes in fundametele listed companies and not by the actions of groups restricted investors that short selling does not have caused the collapse of

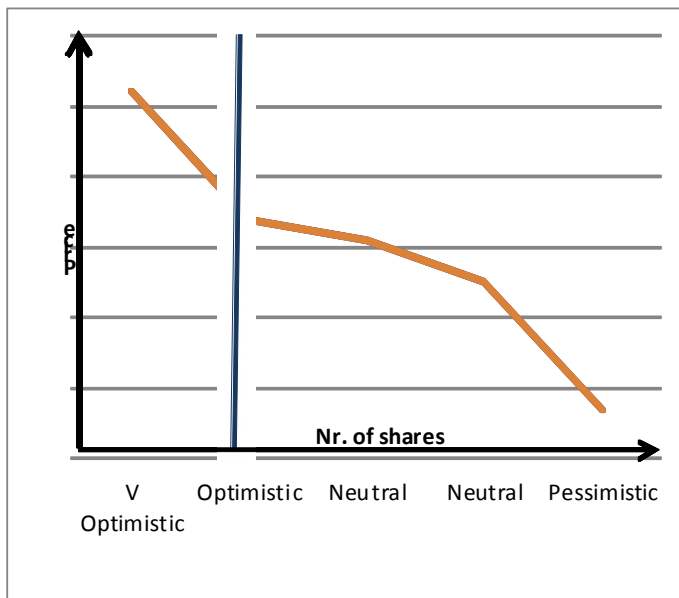
quotations of banks since 2007, which have continued to decline even accentuated, and after the ban short-selling, the lack of possibility to hedge brought additional costs to market participants. Thus the memorandum proposes that future legislation on financial markets to pursue clear objectives and follow strict consultation and analysis. To reject allegations that banks quotations collapsed due to short sales, the Association provides data showing the shares borrowed in parallel to the share price, proving that at the time of the percentage borrowed significant fall was small. Also, the memorandum claims that shorts helps regulate a price equilibrium faster response new information or fundamental changes, decreases the possibility and probability of bubbles decreases the intensity and even the likelihood of crash sites and equilibrium price can be adjusted to a higher amid investor confidence in the mechanisms regulating, requiring lower yields relative risks.

The relationship between volume and yield, a study by Henry and McKenzie examines the impact of short-selling market in Hong Kong. (4) Unlike other academic papers, it considers potential sources of non-linearity and asymmetry in the modeling process. Because with the drop in the price of shares, the share of debt in relation to the capital increase in a company, the risk associated increases and a drop in market volatility also tends to increase. Analyzing the activity of short sellers, in particular in regard to volume, it has been concluded that markets overreact to good news or bad. This does not indicate, however, as more theoretical work suggests that the volume push prices in one direction or another, but there is a two-way relationship between volatility and volume, noting the existence of an asymmetry in the sense that the volatility associated with a decrease higher than that associated an increase of similar magnitude. Also innovations both positive and negative ones seem to be exacerbated by short selling.

A study by researchers at the University of Sydney on the impact of uncovered short selling ("naked shots") on returns, volatility and liquidity, with evidence from the stock exchange in Australia shows that allowing them does not correspond with better efficiency of markets but with an increase in volatility. Also, this work shows that liquidity deteriorates by increasing the spread between bid and ask and falling market depth, justifying the measures in the authors' opinion makers who have limited shorturile uncovered.

An answer 100% in one direction or another remains difficult to offer because the distance between correlation and causality is sufficient to conclude generally valid and still divergence of opinion even among experts makes a decision to be hard to get.

RESTRICTIONS ON SHORT SALES AND EFFECTS ON INVESTORS



Standard financial theory is conceived in an abstract world in which it is assumed that investors are able to open short positions as easily as those long, which are unrealistic assumption. For most institutional investors short selling is not allowed and individual traders are often afraid to bet against the market. Also there are many institutional obstacles such as the need for borrowing or rules "uptick" and in a market with such restrictions, even long investor strategy should be different. Essentially we can show that in a market in which shorts are restricted are not efficient and therefore the analysis and selection of shares can be profitable, inefficiencies are often forms of overvaluation of shares identifiable as publicly available

information analysis of a small number of titles is a more effective strategy and therefore preferred, often avoiding waste and finding good sales momentum is what stands out from the rest of a successful investor. Also in contradiction with standard financial theory, we believe that not all investors are equally informed and that there is difference of opinion among them. In addition, the standard assumption is that when the price does not reflect reality, the transactions of informed investors tend to balance price. This theory is correct in the undervalued securities, but not for the overvalued ones for the simple reason that most holders often do not have sufficient securities to sell them and without access to short selling other participants cannot correct price. The implication is that we can identify overvalued shares to public information.

If we look at the mechanism of supply and demand we notice that the intersection curve of investor demand, which depends on the degree of optimism or pessimism are willing to pay more or less for a title, with the offer, a vertical line because the number of shares issued the company is fixed, it takes place at a price that is situated in the upper area, where the number of investors are more optimistic than the number of shareholders. This condition is easily met. When some investors are not aware of certain information and become overoptimistic, they will exert even greater control over the price. If the pessimists could easily sell short, then it could meet the demand and price of optimists would balance. Artificial creation of shares through short selling does not substantially alter the supply curve, failing totaling on average only 1% of total shares and 2.8% for the first 5% of companies with high short interest. (5) Thus we can explain why there are companies that are and continue to be overpriced.

Of course we can meet and converse situation when pessimistic investors do not realize the potential of a title. As is extreme understatement, the profit potential increases in same rules as the percentage of the portfolio allocated capital increase resulting in the need for a much smaller number of investors to correct price. For this reason, the probability of identifying an undervalued strong action is reduced and investment Raises candidates have focused on eliminating the most overvalued.

Also if we look at the time evolution of prices in the presence of uninformed investors we discover a curve of expected prices above the forecasts of informed investors. Under a theoretical limit that short-selling could place, the price continues to rise, and therefore, although we agree that the title is overvalued, is not a good candidate to be sold short, unless the premium is excessive. Besides the definition of such action is that the yield is below the average of others with similar profile of risk. Thus we can explain why short positions opened on actions hi-tech in 2000, although over-valued, caused huge losses to investors who estimated fair value. A number of academic papers began to observe these phenomena and discuss the limits of arbitration. As long as there are enough optimistic investors, the price will be high. If we assume that a company has 100 million shares and an investor has on average in 1000, it requires 100,000 optimistic investors to sustain the price at a high level. If the number of investors in the economy is 10 million, then it is necessary that only 1% to be overoptimistic. Also, a large number of them are using naive formulas of growth extrapolation to estimate the price of a share. Numerous studies have shown there are no correlations between yields of past years and growth rates of income per share in the future. (6) In addition studies have shown that investments in companies with high projected growth had poor yields. Between 1987 and 2002 one fifth of the companies with the most generous projections reported negative returns (-0.6% compared to the S & P 500 9%). A company with strong growth expected to have revenues of \$ 1 per share next year, and a rate P / E of 40 would be valued at \$ 40. If receives only \$ 0.5 then the status can be lowered at a P / E of 20, lowering felt the price was double, \$10. Such disasters makes the performance of a portfolio to decline significantly. Not taking into account a possible low probability negative event, such as a mistake in marketing or fraud, can have the same effect.

A strong argument that supported claims that shorting is restricted in practice is that the investor can not use the amount from the sale of short. For large institutional actors, some of that cash can be used in low-risk investments, the yield being below market. Theoretically buying cheap and selling dear principle can be violated if the yield reinvested cash generation is greater than the

possible loss sustained by short position. For an action expected yield of 0%, short selling to unblock an amount of money that can be invested or used to give a leveraged portfolio without the need of a margin. Meanwhile, the marginal cost of necessary expertise to identify a good candidate for short selling is small since it is a waste of effort identifying candidates for long positions. But most often the justification of short positions is to reduce risk (beta having negative) and to hedge against a decline rather moderate risk bond purchases. Therefore, if the institutional investor receiving cash, and the action is not labeled as "special", with borrowing costs high (average 8% of the total shares offered for loan) (7), short positions in the portfolio can be profitable Whereas management their cost will not add too much.

Another restriction at the expense of these operations is the risk of claims, usually in declining markets, when institutional holders will liquidate its portfolio and price action is highly sought after rebate decreases or becomes more negative. The investor loses not only declining, but costs of trading commissions deducted from the return operation. Also rules "uptick" proved that the implementation of short orders is much weaker, which further reduce the yield strategy. Legislation toll is still an impediment to that, at least in the United States, regardless of how much is kept short position, capital gains taxes are for the short term.

Since shorting is considered speculative, most insitutions are prohibited these operations, about 70% of US equity managers having access to such strategies, and less than 10% of those eligible even using them actively (8). Also no derivates products are not used by 80% of mutual funds. Therefore, arbitrage portfolios found in academic works which present long positions to short positions funded with an initial investment of capital than can be eliminated. Federal Reserve margin rule reinforces this fact resulting in the decision to keep a cash amount equivalent short position, greatly limiting the freedom to devise a strategy for arbitration. In terms of collateral, very low return on cash generation from the sale of short makes the strategy is no longer as attractive in the absence of option hedging and portfolio risk reduction.

The conclusions of these multiple considerations. First, short selling can not remove the overstatement, which makes the number of suitable candidates short-selling is not as high as anticipated. Immediate implication in portfolio construction by a manager is that, in contrast to a simple index, the profit potential in following a selection can be very high if one takes into account the right time to sell when prices are substantially overstated. A diversified portfolio can easily avail the elections lucky, but no selling at the right time can mean a return to price originally anticipated by analysis, not justify such an active portfolio management in opposition to indexing. Immediate implication is that over-valued securities should be excluded from the portfolio, and will constitute the most often not good candidates for short. Based on these considerations and asymmetries and errors in the way it sets share price can develop investment opportunities capable of providing competitive returns.

THE CONTENT INFORMATION OF SHORT SALES

Companies and their management would prefer that the share price to be high for many reasons such as "stock options", the risk of aggressive acquisition or ease of obtaining financing. For this reason we believe that there are powerful incentives to generate an asymmetry in how information appears legitimate organization, meaning that positive information appear much easier, because the management will draw attention to each incident positive that has been neglected market (new products in development, a solution to operational problems, etc.). Basically we can never expect a company to disclose negative information, such as the lack of sustainability products, comparative disadvantages to competition or simply because they made mistakes of management.

If brokers discovers that a company is undervalued expect to publish information confirming this, because in the end to receive purchase orders for that share of investors who informs. The downside is that the presence of restrictions on short selling means that information about a overvalued company not influence many, whereas few investors are holders of action. Also

brokerage companies that employ analysts and investment banks and publishing news with negative connotations does not attract business, yet a cause for discouragement. And investors are encouraged that once accumulated in a position to communicate this action, because entry of other investors will push the price higher, thus increasing its yield. Short Seller also have reason to disclose negative information, but considering the small percentage among investors, the impact is much smaller. The media, as a key player in how information travels, is also inclined to assist in removing underestimates because a large percentage of news is based on press releases and not on independent investigations, hence their nature tend to be optimistic. This asymmetry of information is still a strong argument in support of the hypothesis that it is very difficult to find undervalued companies using public information.

Considering that one of the indicators to watch is investor EPS or earnings per share, companies will be inclined to artificially increase earnings. As part of the cost of capital is calculated using share price, if it is too high results in the cost of capital and the company risks of over investing. Capital is easily caught when the market is up.

Technical analysts on Wall Street looked to the high interest short (eng "short interest") as a sign "bullish", whereas most academic studies predict yields in decline or even negative, thus signaling a feeling "bearish". One argument is that given the high cost of these operations, those who initiate its operations supposedly superior ordering information. On the other hand, a short position means a latent demand in the future, you will be covered, the technician actually identifying a "short squeeze". But if short interest indicator contains really useful information was and is a controversial issue, especially because information on short transactions do not provide substantial evidence.

US exchanges, NYSE, AMEX and NASDAQ for example compiles information on short interest for each company for the 15th of each month, or as if 15 is not working day. While the operation is not an exotic usually associated with short interest is not high, the vast majority of shares average is 0.5%, only the most sold share approaching to 5%.

View, generally accepted technical analysts that interest which registered a growth or already has a high value translates into a buy signal assumed that: 1. The positions reflect the latent demand that will generate pressure to buy in the future, 2. the high value of short interest reflects an excess speculative long been associated with decreases in the price to recover, 3. It is necessary that traders are relatively poorly informed. From this point of view, it is indeed risky because it can attract buyers to force the coatings with substantial losses, investotarii analogous to those less informed buying in times when the market is pregărește to touch highs. Interest accumulates in time, and it is therefore essential when investor open position, sooner or later.

The first studies that wanted to test these assumptions shows that interest short contains no information about yields future action, but the action in high yield (small) an increase (decrease) in interest short in the next month, helping to stabilize price by adding pressure on the price after they grew. (9) Moreover, a short position in the shares with the highest short interest offering better yield than one long in shares with the lowest short interest, provided that the seller have the cash from the sale. But much of the possible relevant information which may be identified in this indicator is obscure operations hedging and arbitrary acquisitions and mergers (eg. long position in target acquisition and short who make the purchase), and the existence of options distorts and more information. The above results are confirmed by Brent Morse and Stice in 1990 confirming that the changes in interest short may provide future returns, but after substantial increases in prices and interest is increasing, which is in direct opposition to the view of analysts techniques that increase in short interest in declining markets. They also noted that shares the highest rate tend to have higher beta coefficients, options and convertible securities tradable listed. The conclusion is that short selling site reflects hedging and arbitrage and not the actions of speculators, especially as a hedging techniques to sell short shares that you own already to defer capital gains next year ("shorting against the box") distorts and more information.

The existence of stock options is an alternative to short selling, sometimes cheaper by selling CALL and buying PUT, which means that often negative information about a company are

found quickly in volumes of trading options and quotation first. Therefore, such actions are traded options do not show significant reactions to the announcement of large increases in percentage interest short, while the behavior of those who have no option is marked by a movement negative small, but significant statistically. The introduction of marketable options have the effect of significantly increasing the percentage of short interest and the impact on prices comes as a result of traders who sell options when buying PUT and CALL, do hedging by short selling. Again, in contradiction to the technical analysts view is that the non observation on options tend to offer negative returns in the months after the notice high levels of short interest, and most academic papers indicating this phenomenon. Although two managers capital (10) tested this assumption in 1994 through a survey, giving a yield of 1% above the S&P 500 with a short position in shares which have recorded the largest percentage increase interest short, which would indicate that interest must accumulate indefinitely until there is a correction, and therefore anticipate short-term yields using this indicator has no chance of success.

Changing the perspective in one longer term, interviews conducted by Asquith and Meulbrook with managers of investment funds reveals that establishing positions large hedge using put options for action hard to borrow is, surprisingly, more costly and offer liquidity weaker than short-selling directly. Also more aggressive actions to selling pressure not listed PUT options and a maturity that there is a major drawback for investors who speculate a decrease in the action. From this new perspective, anticipating long-term yield is not affected by the presence of options, and the empirical results are in favor of the assumption that a large percentage of interest is a sell signal reflecting an overvaluation of prices. Apparently traders running short operations targeting highly liquid shares for which prices have risen too much in comparison with the performances of the company's core. For an index of shares with average short interest of 2.5% yields were 6.6% for the first year, -8.8% for the second, third -7.3%, and 11.2% after , hence the obvious conclusion that a high signal is pessimistic long-term. Price drops are much higher as beta greater and greater divergence of opinion, but it remains difficult to operate because of the costs and trading risks that short selling imposed. However, the fact that yields are negative indicates that corrects accumulated short sales prices in the company's core qualities direction, but the dilemma arises when the best time to open a position. Acting early is certainly less costly, because no action yet to register a big demand loan, but can become very expensive if it takes until it becomes negative yields, with the risk that they may not materialize at all.

The most important factor in the accumulation of short interest is a low ratio between the fundamental value of the company and the share price or as alternatives book value to price and cash flow to price. These companies consistently experience poor yields in the future becoming targets short selling. The criteria they avoid action refers to the small size of capitalization and weak institutional ownership, high dividends, book value ratio at low market justifiably high potential for growth. Other factors that influence interest are turnover of the company, and its overall size, the volume of put options traded and fundamental trading strategies and predicting future operational performances. The indicator is sensitive to innovations both favorable and less favorable hedging is associated suggesting that, while seen in the past is associated with the overvaluation of securities.

In connection with the assumption that short selling helps companies identify over-valued, Karpoff and Xiaoxia make three key observations.(11) For shares that have been identified and sanctioned by the SEC (Securities and Exchange Commission) as misconstruing the financial statements, overestimating results, interest short rise steadily 19 months before the estimation error to be made public, and quantitative growth is positively correlated with the severity of the error. Meanwhile, the speed at which the error is publicized is positively related to the level of interest short, and the most important aspect is that short selling does not generate a downward spiral in the price once bad news becomes public, but operate and indeed the level decreases with level error of interpretation. These observations suggest that short-selling can anticipate an eventual discovery of inappropriate financial behavior of the listed companies providing incorrect information to investors.

Conclusions regarding the information content of academic opinions favoring short sales and disproves the classical techniques that analysts still have found no evidence. Accumulation of short interest level is an indicator of poor performances in the future, although hedging activities detract from the quality of this statement. The risk of short squeeze is still present, and the only reason to open a long position amid a large short interest is whether the investor anticipates this phenomenon.

CONCLUSIONS

The difficulty of short selling operations is greater in practice than in financial theory, especially because of the many restrictions and market imperfections but it is proven that for a portfolio manager performance can be improved by these practices. Successful strategy involves eliminating companies often overvalued or expected poor performance and the opening of short positions may reduce the risk of a portfolio. Methods to identify actions appropriate to be sold short and founding an investment decision include the detection of clues accounting problem verdict, analysis of core especially related to creating economic benefit in conjunction with dynamic revenue estimating the degree of implementation of the information in market price and the general evolution of the industry sector and the wider economy. Technical analysis is not a proven solution, but it can help guide strategy while or confirmation of market movements.

At the same time the economic implications of short selling for the investor and for the economy claim attention of authorities to regulate these matters. Decisions to block or limit short selling do not have the desired effect, in some cases exacerbating the already precarious situation of financial markets. Research has indicated that allowing these operations have a beneficial effect on market efficiency, liquidity and price adjustment, larger price volatility in certain circumstances. Also a scholar transparent and accessible framework encourages foreign investment and enhanced business opportunities. Analyzing the situation short selling by the investor does not offer considerable opportunities for the production of clear predictions, but their investment behavior should be adjusted and the mechanism of decision should take into account factors other than the absence of short selling.

The bottom line is that reducing obstacles to short selling is imperative in any market, including emerging markets or small as the one in Romania. Arbitrage and market making institutions can function better while smart investor can take advantage of the fact that there is a discrepancy between prices and actual market denominated assets and business actions that they represent.

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