Short selling of Spanish bank shares

Ángel Berges and Daniel Suárez
A.F.I.[1]

Short selling, especially of bank shares, serves an important function in the stock market. However, the activity can also have significant destabilizing consequences, which explains the reason behind its temporary prohibition.

Bank share prices have been particularly hit in recent months, especially in those countries, like Spain, where the fate of banks and that of public finances is more closely related, such that speculating against bank shares is seen as a proxy for speculation against sovereign debt. These types of transactions are especially amplified by "short sales", which have a great potential to destabilize normal price setting in stock markets, especially in those sectors, such as the financial sector, facing strict capital requirements. This explains why several countries, among them Spain, imposed temporary bans on short selling of bank shares. In the case of Spain, the effect of that ban has been a decrease in volatility and asymmetry in price formation, while at the same time reducing considerably market liquidity.

Short sales of bank shares: Theoretical arguments and decisions by regulatory authorities

Short selling of bank shares has been a continuous worry for policy makers all over the world since the crisis began. In response, numerous countries have taken measures to restrict, or even prohibit, such activity.

An intense debate has developed around short selling, especially on whether it should be banned, at least on a temporary basis, or subject to some type of operational restrictions.

At one extreme of the debate are advocates –both academics and practitioners– of the efficient market hypothesis. They argue that short positions form an important part of the market, and should be allowed to operate without any restrictions at all. According to these proponents (Niemer 2011), short sales perform three important functions in markets that should be preserved:

- First, short sales help increase the depth and liquidity of the market, as long as they incorporate a new flow of orders that otherwise would not be present.
- Second, short sales –help to promote a more efficient price formation, as downward expectations have the same opportunities to express themselves as upward expectations.
- Third, short sales– reduce the risk premium, from the perspective of less informed

[1] A.F.I –Analistas Financieros Internacionales, S.A.

investors, a result of improved market quality and symmetry of price formation.

Against this extreme position, it is not difficult to express some counterarguments with respect to market quality, or even market excesses, which run counter to the efficient market hypothesis.

It is true that short positions provide liquidity, but a type of liquidity that is not "good" for the market, as it is not structural. It is only valid for very short time intervals, and unable to fulfill the basic economic function of liquidity in a market: absorb large volumes of orders, from both sides of the market, without causing excessive movement in prices.

Also, short sales are of little help for the "quality" of price formation, and thus the perceived risk and volatility, if the information is asymmetric and comes from investors with better information than the market as a whole (Marsh- Payne, 2010). From here it follows that temporary restrictions on short sales should not be harmful for market quality.

The arguments for such restrictions are much more intense in the case of shares of financial institutions.

The destabilizing potential of short positions on financial institutions is enhanced by the existing capital requirements on banks. Very aggressive short selling may drive down the market value of a financial institution, making it more difficult to meet capital requirements.

Brunnermeier et al (2008) offers the clearest position in favor of limiting the short positions on financial institutions in times of stress. The destabilizing potential of these short positions on financial institutions is enhanced by the existing capital requirements on banks. Given such requirements, very aggressive short selling *("predatory short sales")* may drive down the market value of a financial institution, making it more difficult to meet capital requirements. While it is true that the solvency requirements relate to regulatory capital, and not to the market value of equity, a sharp fall in share prices may affect the future ability to increase regulatory capital.

From here, Brunnermeier defends the imposition of temporary restrictions on *"naked short sales"* as a preferred alternative to allow operations with full disclosure of positions. In fact, the dissemination of information on short positions could exacerbate the "predatory" character of short sales.

A complementary argument is provided by (Liu 2011), based on asymmetric information models. According to this author, the problem of short positions is that they can amplify market illiquidity, resulting in increased uncertainty and information asymmetries on the fundamental value of the bank whose shares are the subject of such a sales. But because bank creditors are concerned only with the so-called *"downside risk",* this uncertainty may reduce the market value of debt, and possibly even cause bank runs. Again, these arguments favour the imposition of temporary restrictions on *"naked short sales"* on bank stocks.

Examples of temporary prohibitions

Recently, there have been many cases of temporary prohibition:

Probably the most well-known is the one imposed by the US markets regulator, the Securities and Exchange Commission (SEC), in 2008. On two occasions, July and September, and in both cases for three weeks duration, the SEC imposed a prohibition of *short sales* on all types of financial institutions. It is interesting to remember the arguments that the SEC presented when it made those decisions: "*Short selling in the securities of a wide range of Financial Institutions may cause sudden and excessive fluctuations of the prices*

of securities in a manner so as to threaten fair and orderly markets. (http://www.sec.gov/rules/other/2008/34-58592.pdf).

Soon after the SEC bans on short sales, the UK financial markets regulator, the FSA, also put in place a temporary prohibition of *"short sales"* on financial institutions for a period of 4 months between 2008 and 2009.

Eurozone countries did not react to these measures in late 2008 and early 2009, as the effects of crisis were felt more heavily in US and UK markets. But developments in euro area markets, especially related to the sovereign debt crisis, since the spring of 2001, forced euro area countries to take restrictive decisions on short sales. Germany was the first one, and in May 2011 announced the prohibition of short selling on bank stocks and euro area countries´ sovereign debt.

Finally, a group of countries, among them Spain, took the decision on August 11th, 2011, to prohibit short selling of bank stocks; the prohibition was lifted six months later.

It should be noted that the European Securities and Markets Authority (ESMA) recognized at the time the absence of a common European legal framework on *"short sales",* leaving the responsibility in the hands of each national supervisor. In any case, it endorsed the decision taken by several countries, and it is worth mentioning ESMA´s statement on the day of prohibition: "*While short selling can be a valid trading strategy, when used in combination with spreading false rumor this is clearly abusive* (www.esma.europe.eu August 12th, 2011).

Short sales on Spanish bank shares: Effects of the temporary ban

The ban imposed on short positions from August 2011 to February 2012, and the subsequent lifting of the ban, represent and excellent example for analyzing the effects of short sales on several aspects of bank shares. Accordingly, three observation windows are compared to perform the analysis. A first window covers the period between January and August 2011, when short sales were allowed, without restriction. A second window covers the period of a temporary ban, that is from August 11th, 2011, to February 11th, 2012; and a final one from that date to the end of May.

For those three windows, we compare bank share behavior relative to overall market behavior, considering that the ban affected only bank shares and not the rest of the sectors. We are particularly interested in two aspects of market "quality" that are usually assumed to be affected by short sales.

Effects on market liquidity

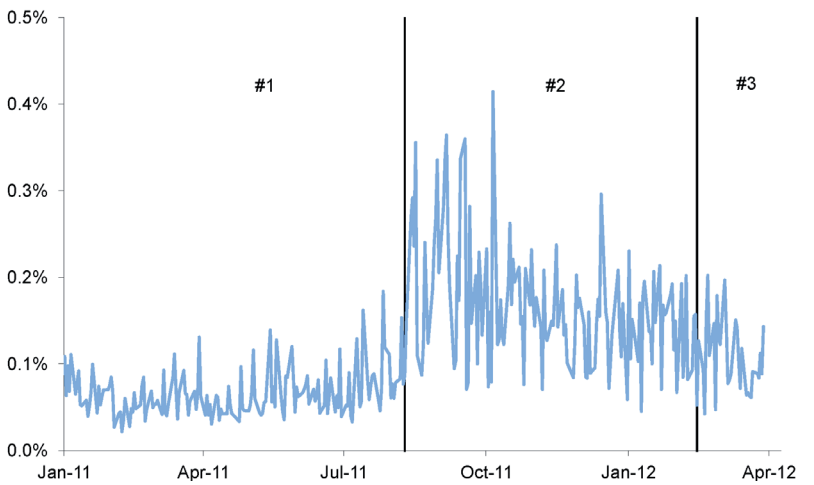
Opponents of short selling bans argue that such operations provide an important source of liquidity to markets, and therefore its banning could have adverse implications on market liquidity.

The simplest measure of liquidity is average daily trading volume. During the period of the ban, volume fell by 46% for bank stocks, compared to the average volume prior to the ban. In fact, lifting the ban translated into a new volume increase of 39% in bank share trading. Bans on short selling of non-bank shares had a much more limited impact on trading volume. It fell by 11% during the period of the ban, and fell an additional 20% after the ban was lifted. From this information, we arrive at a conclusion regarding the adverse effects of a short sale ban on market volume, a result that is consistent with findings for other markets.

Another way of looking at liquidity is through the analysis of the bid-ask spread. Exhibit 1 shows the average of such a measure, for bank shares, and comparing the three time windows. The average spread increased significantly (in fact it more than doubled) during the period of the ban, compared to windows before or after such a period.

Exhibit 1

Bid-Ask spread in Spanish bank shares



Source: AFI

Bid-ask spreads in the rest of the market were virtually unchanged during the three observation windows, from which it can be concluded that short sale banning had a clear adverse effect on market liquidity for those assets (bank shares) subject to the ban.

Both results, in terms of trading volume as well as bid-ask spread, are quite universal in all markets that have imposed bans, and support the general view that those bans, when imposed, should be of a temporary nature, in order not to interfere with a regular source of liquidity for markets.

Effects on prices and volatility

While it is clear that short sales add liquidity to markets, evidence in other countries also demonstrates that they significantly increase volatility, and therefore reduce the capacity of quoted prices to reflect the fundamental value of shares. Deviations from fundamental values are an undesirable outcome, from the viewpoint of potential investors, as they may fear that prices are moved by better informed investors.

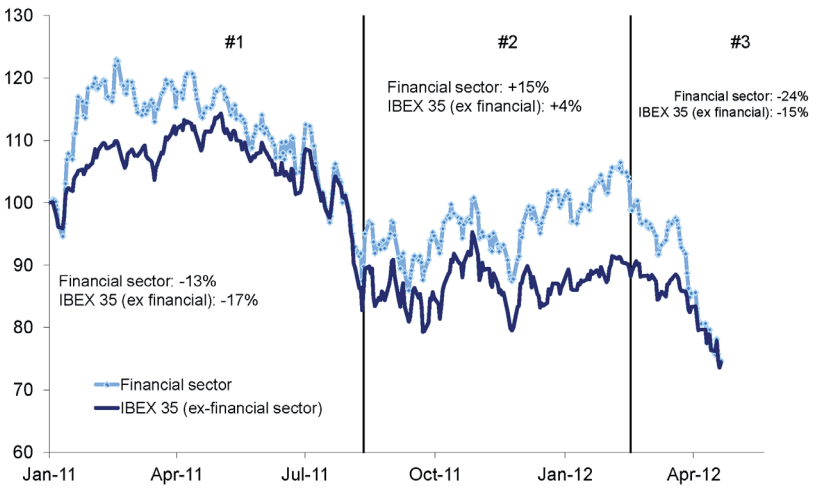
While it is clear that short sales add liquidity to markets, evidence in other countries also demonstrates that they significantly increase volatility, and therefore reduce the capacity of quoted prices to reflect the fundamental value of shares.

Exhibit 2 shows the relative stock price behavior in banks versus the rest of the market, again comparing the three observation windows. A breakpoint in the observed trend is clearly visible from the graph: bank shares lost, on average, 13% during the first window of fully operational short sales. During the period of the ban, they registered a 15% increase. Following the lifting of the ban, bank shares experienced a renewed loss in price, well over 20%.

It could be too simple, however, to attribute those price reversals to the simple presence or ban of short sales. Additionally, the rest of the market displays a similar pattern, although more moderate

Exhibit 2

Relative share prices: Banks versus rest of market

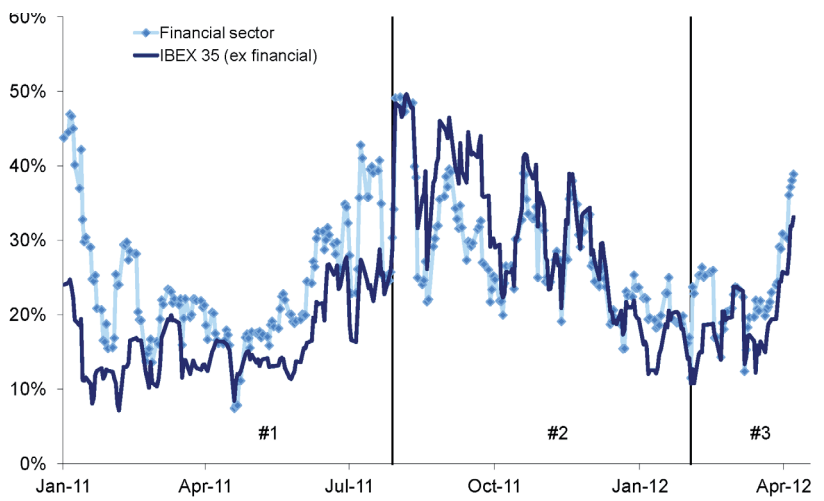


Source: AFI

in magnitude. Given that only bank shares were subject to the ban, a similar behavior in bank and non-bank shares supports the conclusion that short sale bans are not the main factor behind a price reversal. In fact, nobody, and to an even lesser degree market regulators, would pretend

Exhibit 3

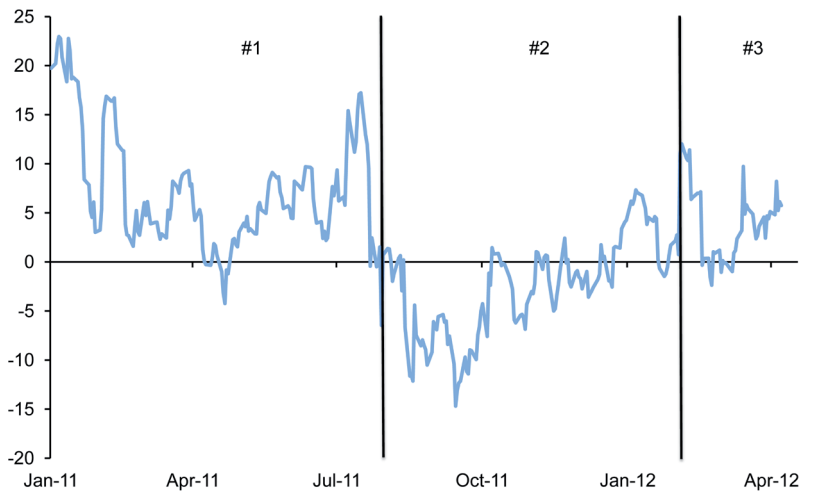
Volatility: Banks versus rest of market



Source: AFI

Exhibit 4

Relative volatility: Banks – rest of market (basis points)



Source: AFI

to set up artificial barriers to prevent prices from moving in the direction marked by the free interplay between supply and demand.

Much more important than the price trend is, however, the way prices move around trend, or volatility. Here the evidence is clearly conclusive, as can be inferred from Exhibit 3. The exhibit shows the evolution of volatility, as standard deviations from trend, measured by a 10 day moving average in three windows. Volatility went up sharply during the months prior to the ban in 2011, virtually doubling, from levels around 20% to 40%. It came down, during the ban period, to a new 20% average. Finally, lifting of the ban translated again into a new volatility increase.

Moreover, Exhibit 4 shows that volatility swings before and after short sale bans have been much more intense in bank shares than in the rest of the market; from here it can be concluded that short sale bans have been effective in reducing volatility in the shares where they were applied, that is bank shares. Additionally, the reduction in volatility was also associated with a clear reduction in asymmetry, measured by the ratio between average downward and upward movements. That ratio was virtually 1 (almost perfect symmetry), during the period of the ban, but it was well over 1.5 when short sales were fully operational. Again, the issue is not to oppose any downward trend in prices, but rather try to smooth, as much as possible, price fluctuations.

Summary and implications

The Spanish market regulator, in a coordinated action with other European regulators, temporarily banned short sales on bank shares during a six month period between August 2011 and February 2012. Empirical analysis comparing bank price behavior before and after the ban, and controlling for the rest of the market not affected by the ban, has allowed us to reach a conclusion on the effect of the ban on several aspects of market quality.

Short sale bans adversely affected market liquidity, both in terms of trading volume and of average spread between the best quoted prices for demand and supply orders. This is a result

quite similar to the ones obtained in other markets where bans have been imposed; and certainly is a valid argument for any type of temporary prohibition or restriction.

Regarding price behavior, however, short sales ban have proven to be an effective measure for reducing volatility and asymmetries without going against the price trend based on underlying fundamental valuation. It is this result, also quite universally observed in other markets where bans have been imposed, that allows us to conclude that short sale bans may be an appropriate course of actions in moments of exceptional volatility and/or information asymmetries around fundamental value of shares.

We believe that current conditions surrounding the Spanish banking sector are well supportive of a temporary ban on short sales for a period of around three months - the time period during which the system will be submitted to extremely ambitious stress testing to determine capital needs. In such a context, short sale positions may increase the potential for destabilizing the transparency process, or even generate self-fulfilling prophecies. That potential is magnified by the negative feedback loop that has developed between banks and the Treasury, regarding mutual risk contamination.

Bibliography

Beber, Alessandro; Marco Pagano. "Short selling bans around the World: evidence from the 2007-09 Crisis". *Journal of Finance,* agosto 2011.

Boehmer Ekkehart; Charles M. Jones,; Xiaoyan Zhang. "*Shackling short sellers: the 2008 shorting ban*". Diciembre 2011.

Brunnermeier, Markus; Oehkme, Martin: "Predatory Short Selling". *Working paper,* Princeton University, Noviembre 2008.

Liu, Xuewen., "Predatory Short-Selling and Self-fulfilling Crises: When Morris-Shin Meets Diamond-Dybvig". Hong Kong University, Agosto 2011.

Marsh, Ian; Norman Niemer. "*The impact of short sales restrictions*". Noviembre 2008.

Marsh, Ian; Richard Payne. "*Banning short sales and market quality: the UK´s experience*". Julio 2010.