

Bankruptcy as a planned business strategy? Evidence from the stock market

Management
Research Review

Luís Miguel Serra Coelho

*School of Economics, University of Algarve, Faro, Portugal and
CEFAGE-UALG, Faro, Portugal*

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Abstract

Purpose – This paper aims to investigate how the US stock market deals with the announcement of a strategic Chapter 11, a special type of corporate bankruptcy in which companies seek the protection of the law not as a last resort but as a planned business decision.

Design/methodology/approach – An event study is conducted by using data concerning a group of US publicly traded companies that entered Chapter 11 for both strategic and nonstrategic reasons. Regression analysis is also used for robustness purposes.

Findings – This study reveals that initiating both strategic and nonstrategic Chapter 11 proceedings results in negative and statistically significant abnormal stock returns before and at the bankruptcy announcement date. However, in the period following the filing, the market gradually views strategic bankruptcy cases as positive news, whereas nonstrategic Chapter 11 filings continue to be perceived as distinctly negative.

Originality/value – To the best of the author's knowledge, this is the first paper that documents an asymmetric market reaction to the announcement of Chapter 11, suggesting that, in certain circumstances, managers can add value by filing a strategic bankruptcy.

Keywords Strategic bankruptcy, Chapter 11, Event study, Corporate strategy, Strategic management

Paper type Research paper

1. Introduction

Historically, bankruptcy has been associated with organizational failure and the destruction of shareholder value (e.g. Johnson *et al.*, 1986; James, 2016). This view of corporate bankruptcy is, however, not consensual at least in the USA (Sheppard, 1992; Delaney, 1998, p. 3; James, 2016; Kang *et al.*, 2020). In effect, this country made substantial progress toward improving the efficiency and effectiveness of its bankruptcy process with the introduction of Chapter 11 (Moulton and Thomas, 1993). Inspired by the notion that a firm is more valuable to society than a bundle of assets distributed in liquidation (Altman and Hotchkiss, 2005, pp. 7–8), this chapter permits the rehabilitation of the debtor's assets and the reconfiguration of its operations while easing, at the same time, the financial pressure from creditors.

Chapter 11 does *not* require companies to be insolvent (e.g. Johnson *et al.*, 1986; Altman and Hotchkiss, 2005, p. 28), which allows managers to use it to fight undesirable financial obligations (Sheppard, 1992; Altman, 1993, pp. 89–90; Moulton and Thomas, 1993; Delaney, 1998, p. 3), and

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grants management considerable flexibility to determine the circumstances and timing for entering bankruptcy proceedings (Johnson *et al.*, 1986; Sheppard, 1992; Moulton and Thomas, 1993). Viewed in this light, bankruptcy in the USA can serve as a tool for managers to implement changes that positively impact their firm's value creation process (Sheppard, 1992; Moulton and Thomas, 1993).

Many companies have, in fact, used Chapter 11 in nontraditional ways (Johnson *et al.*, 1986; Delaney, 1998), with the term "strategic bankruptcy" being used in the literature to describe these situations (e.g. Delaney, 1998; Rose-Green and Dawkins, 2002). Despite their very distinct nature, we do not know much about how these bankruptcies affect firm value (James, 2016; Kang *et al.*, 2020). This paper adds to this debate by investigating how the US stock market deals with the announcement of both strategic *and* nonstrategic Chapter 11 bankruptcies. Under the assumption that the market is efficient (Fama, 1998), differences *are* to be expected. Firms on the brink of financial or economic collapse that seek legal relief are likely to incur significant direct and indirect bankruptcy costs, substantially reducing their market value. Strategic cases may also experience *short-term* negative effects. However, as highlighted by James (2016) and Kang *et al.* (2020), if managers can reduce operational ambiguity, mitigate stakeholder conflicts and increase the firm's flexibility, filing a strategic Chapter 11 can create value in the long run.

Previous research, albeit indirectly, hints at this possibility. Aivazian and Zhou (2012) argue that Chapter 11 is efficient for economically viable companies, whereas Chatterjee *et al.* (1996) report that distressed firms are more likely to file for Chapter 11, with viable firms opting for workouts. Moulton and Thomas (1993) highlight the challenges of reorganization under bankruptcy law, especially for smaller firms and those with limited managerial flexibility. In fact, successful Chapter 11 reorganizations seem to depend on factors such as asset pledges and profitability (Casey *et al.*, 1986), managerial flexibility and environmental constraints (Dawley *et al.*, 2002) and qualitative factors such as the formation of a creditors committee and judicial experience (Jaggia and Thosar, 2019).

Using an event study, this paper makes a novel contribution to the literature by showing that the stock market is unable to distinguish between strategic and nonstrategic bankruptcies before and around the formal filing date. However, over time, strategic Chapter 11 filings are perceived positively, resulting in significant abnormal stock returns for at least six months post-filing. In contrast, traditional bankruptcy filings lead to negative stock returns over the same period, indicating the market views these filings as bad news. This is the first study to document such an asymmetric market reaction to Chapter 11 announcements, highlighting that, in particular cases, management can add value through strategic bankruptcy filings.

The remainder of the paper is as follows. Section 2 provides background information and introduces the research hypotheses. Section 3 summarizes the data and methods, whereas Section 4 presents the results. This paper concludes with a discussion of the findings and their implications for research and practice, which are presented in Section 5.

2. Background

2.1 Chapter 11 under the US bankruptcy law

Prior research suggests that filing for bankruptcy is a last resort to be considered only after all other out-of-court options have been exhausted (Moulton and Thomas, 1993).

The US bankruptcy law offers a compelling alternative, especially following the enactment of the Bankruptcy Reform Act of 1978. This reform introduced Chapter 11, designed to help businesses restructure and is typically used by large American corporations. It allows companies to continue operating as a going concern while creditors and shareholders negotiate a management-led reorganization plan. In this sense, Chapter 11 provides a formal forum for managing stakeholder relationships, which is crucial for achieving sustainable improvement in a firm's performance after bankruptcy (James, 2016).

Chapter 11 also grants debtors a stay of the pre-petition liabilities, giving management time to devise changes that help improve the long-term prospects of the company. Simultaneously, it allows accessing debtor-in-possession financing, which is critical for preserving employees and a working relationship with key suppliers. As such, Chapter 11 facilitates the reduction of operational uncertainty *and* a way to deal with excess debt. At the same time, it allows companies to work toward a fresh start after bankruptcy (Kang *et al.*, 2020).

2.2 *The US stock market's reaction to the announcement of Chapter 11 bankruptcy*

Several studies investigate how the US stock market deals with the announcement of bankruptcy. Morse and Shaw (1988) conclude that buying and holding stocks of failed firms does not lead to statistically significant abnormal returns in the long run. Rose-Green and Dawkins (2000) find that firms that end up being liquidated exhibit significantly larger negative abnormal returns prior to and at the event date than companies that eventually reorganize. Dawkins *et al.* (2007) report that the market overreacts to the announcement of bankruptcy in the short term. In contrast, Serra Coelho (2015) finds a significant post-bankruptcy announcement drift that lasts for at least six months after the beginning of the proceedings.

Rose-Green and Dawkins (2002) is the only paper that partially investigates how the stock market deals with the announcement of both strategic and nonstrategic bankruptcies. The authors identify 19 strategic cases with the help of the New Generation Research Inc.'s Bankruptcy Yearbook and Almanac and, using an event study, conclude that, in the period around the bankruptcy date, firms that file a strategic Chapter 11 exhibit significantly less negative abnormal stock returns than their nonstrategic counterparts [1].

2.3 *Hypotheses development*

There is little evidence on the market pricing implications of filing strategic and nonstrategic bankruptcies. Drawing on the assumption that markets are efficient (Fama, 1998), this paper investigates this issue over three different event periods. The first is the pre-announcement period. Previous research shows that relevant information is usually leaked to the market in advance of the bankruptcy filing date (e.g. Dawkins and Rose-Green, 1998). Yet, during this period, market participants cannot know with certainty what management is planning to do and, as a result, separating between strategic and nonstrategic Chapter 11s is likely to be challenging. This paper tests this prediction with the help of the following hypothesis:

- H1.* The difference in risk-adjusted abnormal stock returns of strategic and nonstrategic Chapter 11s is not statistically significant before the bankruptcy announcement date.

The second period of interest is the actual bankruptcy announcement date. There is evidence that entering Chapter 11 leads to negative and statistically significant stock abnormal returns (e.g. Rose-Green and Dawkins, 2002; Dawkins *et al.*, 2007; Serra Coelho, 2015). As such, the bankruptcy filing date is especially relevant for this research since, moving forward, the management team's private information about the case becomes (at least partially) publicly available. This should allow market participants to realize which bankruptcies are strategically motivated, something that they should price accordingly. This paper explores this prediction with the help of its second research hypothesis:

- H2.* The difference in risk-adjusted abnormal stock returns of strategic and nonstrategic Chapter 11s is not statistically significant around the bankruptcy announcement date.

The post-filing period is the last window of interest, which is interesting given the previous evidence that the stock market responds differently to good and bad news. For instance, [Chan \(2003\)](#) shows that stocks associated with bad public news stories exhibit a significant negative drift for up to 12 months, but no drift seems to exist following the disclosure of comparable good news. This could also apply to the in-bankruptcy stock price performance of strategic and nonstrategic Chapter 11 filings. If the managers of companies filing for strategic reasons can use Chapter 11 to reduce operational uncertainty, resolve stakeholder conflicts and enhance the chances of emerging from court protection, the market may perceive this as positive news in the long run. Companies filing nonstrategic Chapter 11s are, however, less likely to be viewed favorably by the market. This paper uses its final research hypothesis to test this prediction:

- H3.* The difference in risk-adjusted abnormal stock returns of strategic and nonstrategic Chapter 11s is not statistically significant following the bankruptcy announcement date.

3. Research methodology

3.1 Data and sample

The sample includes US firms that filed for Chapter 11 between October 1, 1979 and October 16, 2005, and remain listed on the NYSE, AMEX or the NASDAQ after their bankruptcy date and have sufficient accounting and market data available to conduct the analysis. Cases are initially identified from the UCLA-LoPucki Bankruptcy Research Database. Additional firm-level data from CRSP and COMPUSTAT are also collected. This procedure yields a set of 93 bankrupt companies.

Sample cases are then identified as either strategic or nonstrategic Chapter 11 using a modified version of Sheppard's [\(1995\)](#) framework. Strategic bankruptcies must cumulatively comply with two features:

- (1) the filing helps the company achieve a specific goal; and
- (2) the case cannot be motivated by a clear financial and/or economic problem.

This framework is manually implemented in three consecutive steps. First, using Factiva, the story of each Chapter 11 is recreated using the news items published in the press, while controlling for signs of distress with the help of keywords drawn from the previous literature (see [Beneish and Press, 1995](#); [Chen and Church, 1996](#) and [Holder-Webb and Wilkins, 2000](#) for details). Next, the main reason driving each case is identified on Bankruptcydata.com and, at this stage, the sample firms are preliminary labeled as either a strategic or a nonstrategic Chapter 11. In the final step, this paper resorts to Hoover's database and data provided by the US Securities and Exchange Commission's website to check for inconsistencies and resolve a few omissions. This framework ensures that market participants have enough information available at the time of the filing to understand the main motivation of each of the bankruptcies this study considers. In the end, this paper identifies 18 strategic Chapter 11s, i.e. 19.4% of the total cases.

3.2 Event study methodology

This paper uses buy-and-hold abnormal returns (BHARs) to investigate its research hypotheses ([Barber and Lyon, 1997](#); [Kothari and Warner, 1997](#)). Daily stock returns collected from CRSP are used in the calculation of the abnormal returns and individual BHARs are averaged cross-sectionally using equal weights to allow for maximum

diversification of each company's idiosyncratic risk (Gilson, 1995). Event day $t = +1$ is included in the bankruptcy announcement window together with days $t = -1$, and $t = 0$, the bankruptcy announcement date, as firms are able to file their bankruptcy petition after the market closes (Dawkins *et al.*, 2007). Different event windows are used to explore this paper's research hypotheses. A one-year (i.e. $-252; -2$) and a six-month (i.e. $-126; -2$) window help shed light on *H1*, as it explores whether the market anticipates the filing for bankruptcy. Shorter time intervals are used to investigate the second research question. These include the event windows of $(-6; -2)$, focusing on anticipation, $(-1; +1)$, examining the immediate reaction to the bankruptcy filing and $(+2; +6)$, shedding light on the market's immediate response. Following Serra Coelho (2015), this study includes event windows $(+2; +84)$ and $(+2; +126)$ to investigate *H3*. The initial period is especially interesting because the law grants debtors an exclusivity period of four months to develop a reorganization plan. As a result, within this post-event period, top managers are likely to know considerably more about the prospects of their companies than all other stakeholders. This paper also considers a 6-month post-event window, which is not more extended because of 10 sample cases are resolved between 8 and 12 months after their Chapter 11 filing date.

CRSP equally weighted returns are used as a proxy for expected returns. However, for robustness, this paper also uses a single control firm approach based on size and earnings surprise to alternatively determine expected returns (e.g. Serra Coelho, 2015). The matching is as follows: First, all nonbankrupt, nonfinance, nonutility firms with a market capitalization between 70% and 130% of the sample firms' market capitalization are identified. The earnings surprise values for the sample and the potential matching companies are calculated as per Foster *et al.* (1984). The company with the closest earnings surprise value to that of each bankrupt firm is chosen as its matching firm.

Following Barber and Lyon (1997), this paper uses a *t*-test to infer the statistical significance of the different mean BHARs that are computed, and the cross-section of the BHARs is used to form an estimator of their variance (see McEnally and Todd, 1993). Reported mean BHARs are winsorized at 1% and 99% levels to reduce the impact of extreme outliers in the analysis. Median abnormal returns are also reported for robustness, along with the corresponding Wilcoxon signed rank-test results (Dawkins *et al.*, 2007). Finally, abnormal returns for strategic and nonstrategic bankruptcies are computed separately and a *t*-test (Wilcoxon–Mann–Whitney test) is used to investigate if there is a difference in the mean (median) performance of these two sub-samples.

3.3 Regression analysis

This paper uses linear regression analysis to study how different determinants affect how the US stock market deals with the announcement of Chapter 11 bankruptcy (e.g. Rose-Green and Dawkins, 2002; Dawkins *et al.*, 2007; Serra Coelho, 2021). The following model is used:

$$BHAR_{j,\tau} = \alpha_0 + \beta_1 STRA_j + \sum_{l=1}^6 \lambda_l Z_{l,j} + \varepsilon_j \quad (1)$$

where $BHAR_{j,\tau}$ is the buy-and-hold abnormal stock return of firm j computed over a given event window τ , $STRA_j$ is a strategic Chapter 11-related dummy variable, $Z_{l,j}$ represents six control variables and ε_j is the error term. $STRA_j$ is the explanatory variable of interest in equation (1). This dummy variable is set to one when the Chapter 11 case is initiated for strategic reasons and to zero otherwise. Thus, if the underlying motivation of the strategic cases is priced by the market, β_1 should be statistically significant, which would constitute

evidence that, *ceteris paribus*, the shareholders of these companies experience a different risk-adjusted stock abnormal performance than that of their nonstrategic counterparts.

The regression model includes six control variables. The first is the pre-bankruptcy distress level. In most cases, formal corporate failure is usually preceded by various important, but less dramatic, events (Beneish and Press, 1995), which could affect how the market reacts to the announcement of bankruptcy (Rose-Green and Dawkins, 2000). Drawing on the previous research (e.g. Rose-Green and Dawkins, 2002; Serra Coelho, 2021), this paper accounts for this effect by incorporating the score of the Altman's (2013) function (*ZSCORE*) as a covariate in the estimation of equation (1). As pointed out by Altman *et al.* (2017), this is a broadly accepted and consistent measure of financial distress and, as such, is relevant in the context of the present study. This variable is computed for sample firm *j* using data collected from the fiscal year-end of the year preceding its bankruptcy announcement date.

The regression model also includes firm size (*ASSETS*) as an additional control variable because abnormal returns can vary between small and large firms (e.g. Fama and French, 1992). This control also accounts for the possibility that information about small bankrupt firms may spread more slowly among investors (Serra Coelho, 2015). Firm size is calculated as the natural log of the total assets reported in the fiscal year preceding the formal announcement of Chapter 11.

Market price (*PRICE*) is the third control variable, computed as the natural log of the firm's price per share before the start of a given compounding period of interest. This variable helps explore the extent to which potential limits to arbitrage affect the regression results, an issue that is particularly relevant for firms with low share prices (D'Avolio, 2002).

The fourth control variable is the weight of intangible assets in the firm's total assets one year before the bankruptcy announcement (*INTAN*). According to Harrigan and Porter (1983), companies facing distress should implement strategic changes, particularly in declining industries. However, this can be challenging when existing assets are hard to sell because of legal issues or difficulties in assessing their value (James, 2016). Consequently, the sale of these assets may not generate enough funds to repay debt obligations, a concern for distressed firms that can influence the market's reaction to both strategic and nonstrategic Chapter 11 announcements.

The fifth control variable is the volume of assets in the balance sheet that can be sold under Section 363 of the Bankruptcy Code (*POTEN_j*), measured as the sum of intangible assets and net property divided by total assets, as reported in the financial accounts in the year that precedes the bankruptcy announcement year (James, 2016). Kang *et al.* (2020) emphasize that, under Chapter 11, debtors can restructure financial contracts and operational commitments, thus impacting post-bankruptcy performance. Section 363 of the US Bankruptcy Code facilitates this by allowing firms to sell difficult-to-trade assets unencumbered by contingent liabilities, which potential buyers might avoid in an out-of-court sale (James, 2016; Kang *et al.*, 2020). This provision enhances the debtor's post-bankruptcy prospects, as buyers are likely to pay higher prices for unencumbered assets compared to outside bankruptcy proceedings (James, 2016), which explains why using Section 363 may influence the market's reaction to Chapter 11 announcements.

The likelihood of a successful reorganization increases when firms pre-negotiate a restructuring plan with their main stakeholders (Kang *et al.*, 2020). This reduces the length of time spent in court and permits securing customers, employees, suppliers and creditors, all of which are needed for a positive implementation of the reorganization strategy. As a result, to capture this important aspect, the dummy variable *PREPACK* is included in equation (1), which is set to one when the sample firm files a prepacked Chapter 11.

4. Results

4.1 Descriptive statistics

Table 1 presents summary statistics for the strategic and the nonstrategic bankruptcies considered in the sample. As shown, firms filing for strategic Chapter 11 are typically larger than those filing for nonstrategic Chapter 11, a conclusion supported by the results of the Wilcoxon–Mann–Whitney test, as reported in Panel C of **Table 1** (Gibbons and Chakraborti, 2010).

Table 1 also shows that the mean and median z-score value for the companies filing a nonstrategic Chapter 11 is below the 1.81 cutoff point established by Altman (2013). Results for the strategic cases are less clear. Yet, the Wilcoxon–Mann–Whitney test is not statistically significant (see Panel C of **Table 1**), suggesting that both sets of companies face a similar degree of financial distress in the year leading up to their bankruptcy.

The sample firms trade at a very low price per share before seeking legal protection from their creditors. However, using the Wilcoxon–Mann–Whitney test, this paper concludes that firms in the strategic set tend to trade at a higher price per share right before the Chapter 11 date (see Panel C of **Table 1**).

There is also evidence that both groups of firms share a similar proportion of assets that can be sold under Section 363 of the Bankruptcy Code and intangible assets as a percentage of total assets. In particular, the Wilcoxon–Mann–Whitney tests for these variables are not statistically significant at 10%. Finally, **Table 1** shows that almost 20% of the firms filing a

Table 1. Summary statistics – strategic vs nonstrategic bankruptcies

	Mean	SD	Std. error	S-W test	Median
<i>Panel A: Non-strategic set n = 75</i>					
ASSETS (m\$)	1,155	3,029	349.8	0.28***	461
ZSCORE	1.16	0.81	0.09	0.97	0.99
PRICE (\$)	2.44	3.84	0.44	0.49***	1.44
INTAN	6.9%	13.49%	1.56%	0.58***	0.01%
POTEN	48.3%	22.04%	2.55%	0.97*	50.3%
PREPACK	18.7%	–	–	–	–
<i>Panel B: Strategic n = 18</i>					
ASSETS (m\$)	3,791	8,194	1,931	0.47***	1,004
ZSCORE	1.86	2.0	0.47	0.63***	1.16
PRICE (\$)	6.15	7.74	1.83	0.72***	3.28
INTAN	2.2%	4.14%	0.98%	0.60***	0.00%
POTEN	49.6%	17.97%	4.24%	0.95	44.3%
PREPACK	0.0%	–	–	–	–
<i>Panel C: Differences between nonstrategic and strategic Chapter 11 s</i>					
	Mean	Median	WMW		
ASSETS (m\$)	–2,637	–543	1,036*		
ZSCORE	–0.70	–0.17	924		
PRICE (\$)	–3.71	–1.84	1,082**		
INTAN	4.64%	0.01%	715		
POTEN	–1.29%	6.05%	836		

Notes: S-W is the result of a Shapiro–Wilk test for normality. WMW is the result of a Wilcoxon–Mann–Whitney test for differences in medians. *, ** and *** indicate statistical significance at the 10, 5 and 1% levels, respectively

Source: Created by the author

nonstrategic Chapter 11 pre-negotiate the terms of their bankruptcy case. In contrast, none of our strategic bankruptcies follow the same strategy.

Table 2 presents the Pearson correlation coefficients between the continuous control variables used in equation (1).

The only significant coefficients are that for *PRICE* and *ASSETS* (0.438, $p < 0.01$) and *PRICE* and *ZSCORE* (0.185, $p < 0.1$). Although statistically significant, these coefficients are not particularly high. In fact, Hair *et al.* (2018) suggest that only correlations above 0.7 or 0.8 in absolute value may indicate potential issues with multicollinearity.

4.2 Event study's results

Table 3 summarizes the results of the event study using the CRSP equally weighted returns as a proxy for the expected returns. Panel A is for the pre-Chapter 11 abnormal stock returns and sheds light on *H1*. The mean and the median BHAR are always negative and statistically significant at better than 1%, a conclusion that holds for the strategic and the nonstrategic cases in the sample. In addition, there is evidence that, within this period, the risk-adjusted stock performance of these two groups is *not* statistically different. In fact, the p -value of the t -test (Wilcoxon–Mann–Whitney test) for the difference in the mean (median) BHAR in the $(-252; -2)$ and the $(-126; -2)$ windows is higher than 10%. Hence, these results suggest that the stock market does *not* differentiate between strategic and nonstrategic bankruptcies in the pre-event period, which leads us not to reject our *H1*.

Panel B of Table 3 is for the short-term market anticipation and reaction to Chapter 11 bankruptcy and explores research question number two. As mentioned in Subsection 3.2, three distinct subperiods are covered. The first is that right before the actual filing date, portrayed in Table 3 by the $(-6; -2)$ window. As can be seen, the mean and median BHAR for this period is negative and statistically significant for the strategic and the nonstrategic bankruptcies. In addition, t -test and the Wilcoxon–Mann–Whitney test are not significant even at 10%, suggesting that, right before the actual bankruptcy filing date, the stock market is *still* unable to set apart strategic and nonstrategic Chapter 11s. This conclusion does not change when one considers what happens at the filing date. Panel B of Table 3 shows that both sets of firms sustain similar losses in market value in risk-adjusted terms over the $(-1; +1)$ window. Recall that is the first period where market participants know with certainty that companies are filing for protection against their creditors, and this paper finds that announcing a strategically or a non-strategically motivated Chapter 11 is *equally* perceived by the market as an extremely bad news event. The last subperiod covered by Panel B of Table 3 is that immediately follows the filing for Chapter 11, which is portrayed by the $(+2; +6)$ event window. Irrespective of the type of bankruptcy, the mean and the median BHAR is now *positive*, and the differences between groups are not statistically significant. Given the

Table 2. Pearson correlation coefficients

	ASSETS	ZSCORE	PRICE	INTAN
ZSCORE	-0.095			
PRICE	0.438***	0.185*		
INTAN	-0.067	-0.146	-0.076	
POTEN	0.119	-0.168	-0.001	0.125

Notes: *, ** and *** indicate statistical significance at the 10, 5 and 1% levels, respectively. $n = 93$ (75 non-strategic Chapter 11s and 18 strategic Chapter 11s)

Source: Created by the author

Table 3. Market reaction to chapter 11 – strategic vs nonstrategic bankruptcies

Compounding period	Nonstrategic (A) <i>n</i> = 75		Strategic (B) <i>n</i> = 18		Diff. (A-B)	
	Mean	Median	Mean	Median	Mean	Median
<i>Panel A: Pre-Chapter 11 abnormal stock returns</i>						
(-252; -2)	-0.898	-0.925	-0.690	-0.745	-0.208	-0.180
<i>P</i> -value	< 0.01	< 0.01	< 0.01	< 0.01	0.312	0.224
(-126; -2)	-0.650	-0.719	-0.566	-0.582	-0.084	-0.137
<i>P</i> -value	< 0.01	< 0.01	< 0.01	< 0.01	0.308	0.801
<i>Panel B: Short-term market anticipation and reaction to Chapter 11 bankruptcy</i>						
(-6; -2)	-0.101	-0.084	-0.097	-0.095	-0.004	0.011
<i>P</i> -value	< 0.01	< 0.01	0.037	< 0.01	0.941	0.682
(-1; +1)	-0.283	-0.329	-0.264	-0.275	-0.019	-0.054
<i>P</i> -value	< 0.01	< 0.01	< 0.01	< 0.01	0.763	0.594
(+2; +6)	0.151	0.090	0.075	0.017	0.076	0.073
<i>P</i> -value	< 0.01	< 0.01	0.062	0.087	0.213	0.663
<i>Panel C: Post-Chapter 11 abnormal stock returns</i>						
(+2; +84)	-0.094	-0.107	0.227	0.247	-0.321	-0.354
<i>P</i> -value	0.061	0.023	0.042	0.041	< 0.01	< 0.01
(+2; +126)	-0.123	-0.220	0.186	0.226	-0.309	-0.445
<i>P</i> -value	0.032	< 0.01	0.073	0.082	< 0.01	< 0.01

Notes: This table presents the abnormal stock returns of both nonstrategic and strategic Chapter 11 cases included in the sample, computed using CRSP equally weighted returns as an approximation for expected returns. Time is measured in event days, with $t = 0$ representing the day of the bankruptcy announcement. Three distinct compounding periods are considered to match this paper’s research hypotheses. Panel A covers windows preceding the formal filing of Chapter 11. Panel B explores the event period, whereas Panel C examines the longer-term market reaction to the Chapter 11 announcement. In columns A and B, *p*-values from *t*-statistics based on cross-sectional variances (from a Wilcoxon signed rank-test) are reported below the mean (median). The final column displays the *p*-value of a *t*-test (Wilcoxon–Mann–Whitney test) for differences in means (medians) between the abnormal performance of nonstrategic and strategic Chapter 11 cases

Source: Created by the author

evidence above, this paper concludes that the market *fails* to separate between strategic and nonstrategic Chapter 11s shortly before, at and soon after the beginning of the formal bankruptcy case, which leads us to reject our *H2*.

Panel C of Table 3 helps investigate *H3*. As outlined in Subsection 3.2, the (+2; +84) window is of particular interest because of the possibly elevated levels of information asymmetry between managers and other stakeholders. The mean and the median BHAR of the nonstrategic Chapter 11s for this period are negative and statistically significant. In contrast, the strategic cases exhibit *positive* and *significant* stock abnormal returns over the same window. The *t*-test and the Wilcoxon–Mann–Whitney test are now significant at 1%. Considering the more extended (+2; +126) event window does *not* change the nature of our conclusions for the post-announcement period. Clearly, the empirical evidence suggests that an asymmetric market response to the announcement of bankruptcy exists. In the *longer* run, strategic Chapter 11s seems to constitute good news while its nonstrategic counterparts represent bad news. This finding leads us to reject our *H3*.

4.3 Regression analysis

This section presents the results of our regression analysis, and this paper focuses on the post-bankruptcy announcement period since this is the only one for which we can find

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statistically significant results in the event study above. As such, market-adjusted abnormal returns computed over the (+2; +84) and (+2; +126) event windows are used as the dependent variable in Models I and II, respectively. The White test and the RESET test are used to evaluate the overall adequacy of the models. The first helps investigate the presence heteroscedasticity, with the null hypothesis assuming equal variances for the errors (White, 1980). The RESET test detects potential issues with omitted variables or incorrect functional forms. The null hypothesis asserts that the model is correctly specified (Ramsey, 1969). Additionally, an F-test is used to determine whether any of the predictor variables in the regression model have non-zero coefficients [2].

As can be seen, none of the Reset tests is statistically significant, whereas the F- and the White tests are at (better than) the 5% (1%) level. These results lead us to use ordinary least squares (OLS) and standard errors corrected as suggested by White (1980) when estimating both Models I and II.

Table 4 shows that the estimated coefficient for STRA in Model I is 0.24 (significant at the 10% level) and is 0.26 (significant at the 5% level) in Model II. As such, the regression results suggest that, *ceteris paribus*, the shareholders of firms filing a strategic Chapter 11 can expect to lose substantially less in risk-adjusted terms in the post-bankruptcy announcement period than their counterparts that invest in the nonstrategic Chapter 11s. This finding corroborates the results of the event study, which hold after controlling for important confounding effects that the previous univariate analysis does not account for.

As Table 4 shows, in Model I, the estimated coefficient for ZSCORE is 0.06 (statistically significant at the 10% level); the corresponding figure for Model II is 0.02 (also statistically significant at the 10% level). This suggests that, all else being equal, companies that are in a better financial position as profiled by the Altman (2013) model one year before filing for creditor protection experience less negative stock abnormal returns in the post-Chapter 11

Table 4. Post-bankruptcy announcement period – regression analysis

Independent variable	Estimate	Model I		Estimate	Model II	
		Std. error	T-value		Std. error	T-value
INTERCEPT	-0.49	0.30	-1.67*	-0.31	0.30	-1.04
STRA	0.24	0.13	1.87*	0.26	0.13	2.05**
ZSCORE	0.06	0.03	1.80*	0.02	0.01	1.96*
ASSETS	0.04	0.04	0.95	0.03	0.05	0.52
PRICE	0.01	0.01	0.26	-0.01	0.01	-0.52
INTAN	-0.02	0.31	-0.05	-0.31	0.32	-0.96
POTEN	0.20	0.21	0.98	0.08	0.26	0.33
PREPACK	-0.04	0.10	-0.46	-0.07	0.11	-0.66
Reset test	0.67			0.91		
White test	<0.01			<0.01		
F-test for overall significance	0.01			0.04		
N	93			93		
R ²	0.116			0.080		

Notes: Model I [II] uses marked-adjusted stock abnormal returns computed over the (+2; +84) [(+2; +126)] event window as the dependent variable. Reset (F-test Sig.) is the Reset test's *p*-value. White (F-test Sig.) is the White test's *p*-value. R² is the regression's coefficient of determination, used to assess the proportion of the variance in the dependent variable that is explained by the independent variables in the model. N is the number of firms used to estimate the models, using OLS. P-values are computed using heteroskedasticity-robust errors. *, ** and *** indicate statistical significance at the 10, 5 and 1% levels, respectively

Source: Created by the author

period. None of the estimated coefficients for the remaining control variables is statistically significant even at the 10% level, a conclusion that holds for both Models I and II. This finding suggests that once the other factors are accounted for, such variables have no incremental power to explain the variability in the long-term post-event abnormal stock returns of this paper's sample firms.

4.4 Robustness tests

4.4.1 *Event study.* Kothari and Warner (1997; 2007) stress that measuring long-term stock abnormal returns is challenging. As such, to test the robustness of our results, this paper uses a single control firm approach to recalculate the expected returns in the event study. As discussed in Subsection 3.2, in this test sample firms are benchmarked on size and earnings surprise [3].

Untabulated results indicate that the conclusions of the main event study remain unaffected. In the pre-event period, all BHARs are negative and statistically significant. Furthermore, there is no statistically significant difference between the risk-adjusted stock price performance of strategic and nonstrategic Chapter 11 filings during this period. Furthermore, regardless of the motivation for the filing, companies experience a significant loss in market value in risk-adjusted terms both before and on their formal Chapter 11 date and the sample firms show a statistically similar rebound in their risk-adjusted market price shortly after filing for creditor protection. Finally, this paper finds that, in the medium run, nonstrategic (strategic) Chapter 11 filings lead to negative (positive) and *not* statistically significant (statistically significant) abnormal stock returns.

4.4.2 *Regression analysis.* This paper also estimates equation (1) using size and earnings surprise BHARs as dependent variables for robustness purposes [4].

The results presented in Section 4.3 remain consistent under this different setup. The estimated coefficient for the dummy variable associated with strategic cases is once again positive and statistically significant in both models. Additionally, the results suggest that, all else being equal, having a better financial position one year before the actual event, as captured by the Altman (2013) model, tends to result in less negative abnormal returns in the post-Chapter 11 period. Finally, none of the estimated coefficients for the other control variables is statistically significant at the 10% level, supporting the conclusion that these variables do not significantly explain the variability of the dependent variables considered in the analysis.

5. Discussion and conclusions

There has been little debate about the effects of filing a strategic bankruptcy (James, 2016; Kang *et al.*, 2020). Drawing on the assumption that the US stock market is efficient, this paper contributes to this discussion by looking at how it deals with such a peculiar corporate event.

Results show that, pre-event, the risk-adjusted stock performance of firms filing a strategic and a nonstrategic Chapter 11 is not statistically different. This finding is at odds with the results reported by Rose-Green and Dawkins (2002), which is the only paper exploring a somewhat related question. The authors, however, use cumulative abnormal returns to carry out their empirical work, a method that is no longer standard when conducting longer-term event studies (Kothari and Warner, 2007). Furthermore, they rely on a list produced by New Generation Research Inc. to identify their strategic bankruptcies. In contrast, this paper uses a much more rigorous process, which requires manually inspecting and combining several different sources of information, thus ensuring that market participants could know the motives behind each analyzed case right from their start.

This paper also concludes that the market fails to distinguish between strategic and nonstrategic cases around the Chapter 11 announcement date as both experience substantial losses in market value in risk-adjusted terms during this period. [Rose-Green and Dawkins \(2000\)](#) and [Serra Coelho \(2015\)](#) report similar findings but fail to recognize the managerial motivation driving the bankruptcies they study. Furthermore, there is evidence that strategic and nonstrategic Chapter 11s exhibit similar positive and significant abnormal stock returns immediately *after* initiating their bankruptcy proceedings. [Dawkins et al. \(2007\)](#), who do not account for the underlying rationale of the Chapter 11 cases they consider, uncover a similar return pattern.

Importantly, this is the first paper to find that, on average, the strategic cases exhibit positive abnormal stock returns over at least a six-month post-bankruptcy period while, in sharp contrast, firms that file for more traditional reasons experience a persistent decline in their stock price during the same period. This asymmetrical reaction to Chapter 11 filings has not been documented before, suggesting that, in the longer run, the stock market views strategic bankruptcies positively while perceiving nonstrategic ones negatively. Regression analysis provides further evidence to this claim and suggests that *ceteris paribus*, companies that have a stronger financial position prior to entering Chapter 11 proceedings are likely to experience relatively lower losses in risk-adjusted terms during the post-event period.

This paper's findings contribute to the understanding of organizational decline in different ways. In effect, our empirical results align well with James's (2016) assertion that companies can enhance value by using Chapter 11, and the work of Aivazian and Zhou's (2012), who show the Chapter 11's effectiveness in rehabilitating economically viable firms. This paper's findings are also consistent with the results of [Dawley et al. \(2002\)](#), who emphasize the importance of managerial flexibility in bankruptcy-related context and expands the early work of [Moulton and Thomas \(1993\)](#), who consider the costs and benefits of different bankruptcy strategies. Moreover, our results also support Kang et al.'s (2020) claim that a strategic bankruptcy is an interesting call option, especially for effecting change and reducing business-related ambiguities.

This paper also has important implications for managers. There is clear evidence that the US stock market does not efficiently process the motivation for filing for bankruptcy. Specifically, *both* strategic and nonstrategic Chapter 11 filings incur substantial filing and pre-filing costs, leading to a reduction in the market value in risk-adjusted terms. This indicates that managers must recognize the considerable uncertainty associated with pursuing a strategic (and nonstrategic) Chapter 11, as the outcome of the legal proceedings is always unpredictable. However, the results of this study also suggest that, over the long term, using bankruptcy as a deliberate business strategy could be a viable option for managers and their firms' stakeholders. In effect, filing a strategic Chapter 11 leads, on average, to positive and statistically significant abnormal stock returns lasting for at least a six-month post-event period. This contradicts the conventional notion that bankruptcy is inherently detrimental to shareholder interests, with strategic Chapter 11s emerging as a relevant tool for managerial decision-making, at least in certain cases.

Notes

1. Research into bankruptcy-related topics extends beyond the borders of the USA. For instance, [Salehi et al. \(2016\)](#) investigate the prediction of financial distress in Iran, whereas [Correa \(2023\)](#) looks at small- and medium-sized Colombian enterprises.
2. This paper also controls for multicollinearity with the help of the variance inflation factor. Results are always below 5.0, suggesting that none of the models suffers from problems of severe multicollinearity (e.g. [Montgomery et al., 2021](#)).

3. Additional robustness tests are conducted to control for other risk factors such as momentum, distress risk and industry effects. The main conclusions do not change after conducting these additional tests. Results are not reported here to save space but are available upon request.
4. Running regressions that control for momentum, distress risk and industry effects does not change the conclusions reported here. These additional results are available upon request.

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Corresponding author

Luís Miguel Serra Coelho can be contacted at: lcoelho@ualg.pt