

THE FINANCIAL CHARACTERISTICS OF U.S. COMPANIES ACQUIRED BY FOREIGN COMPANIES

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ABSTRACT

The number of cross-border mergers and acquisitions has increased considerably after the 2007-2008 financial crisis. However, the post-crisis M&A market has not been studied sufficiently. In this paper, we compare the financial characteristics of the U.S. companies acquired by foreign companies with a matched sample of non-acquired U.S. companies during the post-crisis period. Supporting the findings of the prior literature, we provide evidence that acquiring companies tend to target mismanaged firms with low profitability. We also find that liquidity is not a significant factor in the acquisition decisions of foreign buyers. This paper is one of the first attempts to empirically examine the post-crisis M&A market, which may encourage more future research on the subject.

JEL: G11, G15

KEYWORDS: 2007-2008 Financial Crisis, Acquisition Target, Foreign Predator, Financial Characteristics, Liquidity, Asset Management, Profitability, MANOVA, Liquidity

INTRODUCTION

Foreign acquisition of U.S. companies has been increasing in recent years. For instance, it is stated in the Wall Street Journal (November 22, 2006) that more than 40% of the \$1.28 trillion of announced U.S. mergers in 2006 came from foreign buyers. Low company valuations and the weak U.S. dollar have made U.S. companies particularly attractive acquisition targets for foreign buyers after the 2007-2008 financial crisis.

In this paper, we study the financial characteristics of the U.S. companies that were acquired by foreign corporations after the 2007-2008 financial crisis. We examine the liquidity, assets management, financial leverage, profitability, growth, and market value characteristics of the firms and we compare the merger targets with a matched sample of non-acquired U.S. companies. We explain how our findings correspond to merger theory.

We make a contribution to the extant M&A literature in several ways. First, we focus on the M&A activities after the 2007-2008 financial crisis. Our paper is one of very few empirical studies that deal with the post-crisis period. Secondly, we distinguish domestic M&A's from the cross-border M&A's, which received more interest after the financial crisis. Lastly, we examine the U.S. targets acquired by foreign buyers and compare their financial characteristics with the financial characteristics of non-acquired U.S. firms to determine what characteristics make U.S. companies attractive acquisition targets for foreign predators.

The remainder of the paper is organized as follows: The next section reviews the previous literature. In the section that follows, we explain our data and methodology. We present our empirical findings in the section titled "Empirical Findings." In the last section of the paper, we summarize our conclusions and offer suggestions for future research.

LITERATURE REVIEW AND BACKGROUND

The M&A literature focus has traditionally been more on the buyers, rather than the targets. The poor post-merger performance and bad market reaction to mergers are explained by reasons such as hubris (Roll, 1986), managerial entrenchment (Jensen 1986; Morck et al., 1988; Shleifer and Vishny, 1989), empire building (Rhoades, 1983; Black, 1989) and bad judgment (Morck et al., 1990). In addition, the value destruction of mergers has been evaluated extensively in the context of diversification (Lang and Stulz, 1994; Berger and Ofek, 1995; Servaes, 1996).

The focus on targets in M&A activities is typically limited either to specific industries or to certain countries (see, e.g., Meric et al., 1991; Rose, 1987; Trifts and Scanlon, 1987). For instance, Meric et al. (1991) studies the banking industry, in the context of interstate acquisitions, while evaluating the characteristics of target firms. These studies cover time periods prior to the 2007-2008 financial crisis.

There are very few published studies dealing with the M&A activities after the 2007-2008 financial crisis. The recent literature on the subject mainly focuses on the regulation and theory. Therefore, more empirical studies are needed on the subject. For example, Martin et al. (2008, 2011) evaluates the impact of financial crisis on the way M&A deals should be executed. They suggest some new strategies and explain how companies have overcome the lack of cash and credit by getting into more creative M&A deals. The post-crisis cross-border merger literature is also growing. For instance, Sherman and Badillo (2010) state that weak dollar and low valuation make U.S. companies cheaper and encourage foreign buyers. They suggest that this will help the U.S. M&A markets get back on their feet. Tokic and Beyea (2010) point out the latest trend of converging M&A regulation globally, especially after the financial crisis. They argue that such regulatory alignment reduced the differences between country regulations, creating new opportunities for harmonization in corporate governance.

Comparing the financial characteristics of different groups of firms with financial ratios has long been a popular research methodology in the finance literature. Altman (1968), Edmister (1972), and Dambolena and Khoury (1980) predict bankruptcy by comparing the financial ratios of bankrupt and healthy firms. Stevens (1973), Belkaoui (1978), Rege (1984), and Meric et al. (1991) use financial ratios to identify the financial characteristics of companies, which become the target of corporate takeover. Hutchinson et al. (1988) use financial ratios to identify the financial characteristics of companies, which achieve stock market quotation in the U.K. Meric et al. (2000) compare the financial characteristics of Japanese kieretsu-affiliated and independent firms with financial ratios. Meric and Meric (1994) and Meric et al. (2002) use financial ratios to compare the financial characteristics of firms in different countries.

DATA AND METHODOLOGY

Our data collection process consists of three steps. First, we identify the U.S. companies acquired by foreign companies during the 2007–2011 period. Secondly, we collect the data from the financial statements of the target U.S. companies. Lastly, we construct a matched-sample of non-acquired U.S. firms and collect the data from their financial statements.

The mergers and acquisitions data are collected from the Capital IQ database. We first identified the U.S. public firms acquired by foreign companies during the period of 2007–2011. We then collected the annual data from the year-end financial statements of our sample firms from the Compustat database for the fiscal year one year prior to the year of merger. In order to mitigate the excessive influence of the outliers, we winsorized our sample at the 1% and 99% levels.

As the final step of our data collection, we created a matched-sample for the target firms. We matched every target company with a same-size non-acquired public company from the same industry. After we settled the matched sample, we collected their annual financial data again from the Compustat database. Overall, our sample consists of 110 U.S. targets and 110 matched U.S. non-acquired public firms. The summary statistics of the target sample and the matched sample are presented in Table 1.

Table 1: Summary Statistics of the Target Sample and the Matched Sample

Variables	Target U.S. Public Firms			Matched Non-Acquired U.S. Public Firms		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Total Assets	4,406.32	567.80	16,474.00	4,097.92	561.44	16,621.37
Current Assets	1,288.25	315.51	3,848.85	1,152.18	237.30	4,382.36
Net Fixed Assets	1,960.82	91.56	9,540.50	1,955.20	117.14	9,071.85
Sales	4,015.18	568.03	16,293.18	2,905.42	269.79	11,797.76
Net Income	231.61	16.38	1,089.49	183.12	17.13	702.50
Stock Price per Share	19.76	16.26	18.89	20.93	12.81	24.23

This table displays the summary statistics of the sample. The values are in thousands of U.S. dollars.

Multiple Discriminant Analysis (MDA) and Multivariate Analysis of Variance (MANOVA) are the two statistical methods most commonly used in previous studies to compare the financial characteristics of different groups of firms. In this study, we use the MANOVA method to compare the financial characteristics of U.S. companies that were acquired by foreign corporations during the 2007-2011 period with an equal number of U.S. control group companies. The financial ratios used in the comparison are presented in Table 2.

Table 2: Financial Ratios Used in the Study as Measures of Firm Financial Characteristics

Financial Ratio Name	Financial Ratio Definition
<i>Liquidity</i>	
Current Ratio (CUR)	Current Assets / Current Liabilities
Quick Ratio (QUR)	(Current Assets - Inventories) / Current Liabilities
Liquid Assets Ratio (LAR)	(Cash + Marketable Securities) / Total Assets
<i>Asset Management (Turnover) Ratios</i>	
Accounts Receivable Turnover (ART)	Sales / Accounts Receivable
Inventory Turnover (INT)	Sales / Inventory
Fixed Assets Turnover (FAT)	Sales / Net Fixed Assets
Total Assets Turnover (TAT)	Sales / Total Assets
<i>Financial Leverage</i>	
Total Debt Ratio (TDR)	Total Debt / Total Assets
<i>Profitability</i>	
Net Profit Margin (NPM)	Net Income / Sales
Operating Profit Margin (OPM)	Operating Income / Sales
Return on Assets (ROA)	Net Income / Total Assets
Earning Power Ratio (EPR)	Operating Income / Total Assets
Return on Equity (ROE)	Net Income / Common Equity
<i>Growth</i>	
Capital Expenditures Ratios (CER)	Capital Expenditures / Total Assets
<i>Market Value</i>	
Market-to-Book Ratio (MBK)	Market Value Per Share / Book Value Per Share

This table explains the calculation methodology of the ratios used in the study. The ratios are calculated with data for the fiscal year prior to the year of the acquisition.

MANOVA TESTS

The MANOVA test statistics are presented in Table 3. The multivariate F statistic is used to test the null hypothesis that the mean ratio/variable vector for the acquired firms is not significantly different from the

mean ratio/variable vector for the control group firms. The multivariate F statistic in the table indicates that the alternative hypothesis should be accepted at the ten-percent level of significance (i.e., the overall financial characteristics of the acquired and control group firms are significantly different at the ten-percent level).

The univariate F statistics indicate that the liquidity levels of the two groups of firms, as measured by the current ratio (CUR), quick ratio (QR), and liquid assets ratio (LAR), are not significantly different. None of the three liquidity ratios of the two groups of firms is significantly different. The quick ratios of the two groups of firms are almost identical. These results imply that liquidity level of the target company is not a significant consideration in the acquisition decision.

Table 3: Multivariate Analysis of Variance (MANOVA)

Financial Ratios	Means and Standard Deviations†		Univariate Statistics	
	Merger Targets	Control Firms	F value	P Value
<i>Liquidity</i>				
Current Ratio	2.55 (1.63)	2.64 (1.76)	0.080	0.777
Quick Ratio	2.00 (1.50)	2.00 (1.53)	0.000	1.000
Liquid Assets Ratio	0.17 (0.16)	0.20 (1.09)	1.186	0.278
<i>Asset Management (Turnover) Ratios</i>				
Acc. Rec. Turnover	6.87 (4.04)	12.03 (14.96)	6.779***	0.010
Inventory Turnover	30.38 (58.35)	15.22 (14.96)	3.862**	0.052
Fixed Assets Turnover	5.77 (6.40)	8.48 (14.70)	1.744	0.189
Total Assets Turnover	0.80 (0.42)	0.92 (0.42)	2.763*	0.099
<i>Financial Leverage</i>				
Total Debt Ratio	49.1% (19.9%)	51.6% (30.0%)	0.280	0.598
<i>Profitability</i>				
Net Profit Margin	-10.4% (57.1%)	2.5% (15.4%)	2.906*	0.091
Oper. Profit Margin	-3.5% (53.7%)	8.2% (12.9%)	2.744*	0.100
Return on Assets	-0.8% (14.8%)	2.8% (9.9%)	2.455	0.120
Earning Power Ratio	4.1% (12.1%)	7.8% (9.3%)	3.456*	0.065
Return on Equity	-3.6% (39.5%)	1.2% (28.8%)	0.597	0.441
<i>Growth</i>				
Cap. Expend. Ratio	4.9% (0.2%)	5.0% (4.0%)	0.011	0.917
<i>Market Value</i>				
Market-to-Book Ratio	2.44% (1.91%)	1.66% (2.61%)	3.636*	0.059
Multivariate Statistics:			1.630*	0.078

This table compares the financial characteristics of the merger target companies with the control group companies using the MANOVA technique.† The figures in parentheses are the standard deviations. ***, **, * indicate that the difference is significant at the 1-percent, 5-percent, and 10-percent levels, respectively.

The univariate F statistics for the asset management (turnover) ratios imply that the asset management of the target company is an important consideration in the acquisition decision. The accounts receivable turnover ratios of the two groups of firms are significantly different at the 1-percent level. The mean value statistic indicates that the acquired companies have significantly higher accounts receivable levels compared with control group companies. This may imply mismanagement of accounts receivable in the

target companies and, perhaps, presence of a large amount of uncollectable accounts. However, inventory management does not appear to be an asset management problem in the acquired firms. The mean inventory turnover ratio of the acquired firms is significantly higher than that of the control group firms at the 5-percent level.

The fixed asset turnover ratios of the two groups of firms are not significantly different. However, the total assets turnover of the control group firms is significantly higher compared with the acquired firms at the 10-percent level. This implies the presence of a significant total asset management problem in the acquired companies compared with the control group companies. Since the acquired companies do not appear to have any problems related to fixed asset and inventory management, the problem appears to be related to accounts receivable management.

The merger theory argues that acquiring companies generally target mismanaged companies with an unused debt capacity and low profitability or loss. The idea is that the acquiring company can improve the management of the mismanaged target for synergistic benefits. The unused debt capacity can be utilized to improve the target's capital structure and to boost equity returns. The losses of the target company can be deducted from the profits of the acquiring company for tax benefits. The low profitability of the target company may be the result of mismanagement. By improving the target's management, the acquiring company can improve its profitability for significant synergistic benefits.

As the theory argues, the mean debt ratio of the acquired companies in the sample is lower than that of the control group companies. However, the difference is not statistically significant. We also find that, as the merger theory argues, the acquired companies are considerably less profitable compared with control group companies.

The mean net and operating profit margins of the acquired companies are significantly lower than those of the control group companies. This may imply cost management problems and/or product pricing problems in the acquired companies, which the acquiring companies would hope to be able to improve for synergistic benefits.

Asset profitability is also significantly better in the control group firms than in the acquired firms. This may be the result of poor asset utilization and cost or marketing management problems, which the acquiring companies would hope to be able to improve for synergistic benefits. The return-on-equity ratio is considerably better in the control group firms compared with the acquired firms. However, the difference is not statistically significant because the standard deviation figures for both samples are quite large.

The capital expenditure ratios of the two groups of firms are not significantly different. However, the market-to-book ratio of the acquired companies is significantly higher than that of the control group firms. This may be because the market may be viewing the acquired firms as good long-term growth prospects and bidding up their prices. Furthermore, we use data for the year prior to the acquisition year in the study. It is possible that investors may have anticipated that the acquired firms could be acquisition targets and they may have bidden up their share prices in the year prior to the acquisition year.

SUMMARY AND CONCLUSIONS

Little is known about the effect of financial crises on cross-border mergers. There is a new growing strand of literature on post-crisis M&A markets. In this study, we make a contribution to this literature by studying the foreign acquisitions of U.S. target companies after the 2007-2008 financial crisis.

We use financial ratios and the MANOVA (Multivariate Analysis of Variance) methodology to compare the target U.S. firms that were acquired by foreign corporations during the 2007-2011 period with a matched sample of non-acquired U.S. firms to study the effect of liquidity, assets management, financial leverage, profitability, growth, and market value on the cross-border merger decision.

The merger literature suggests that acquiring companies tend to target mismanaged companies with low profitability or loss and with unused debt capacity. The objective for the acquiring company is to improve the performance of the target and utilize the unused debt capacity for synergistic benefits. Our findings in this study support the predictions of the merger theory. We find that the U.S. companies that were targeted by foreign predators during the post 2007-2008 financial crisis period had low profitability, mismanaged assets, and low debt ratios.

The target U.S. companies appear to have no asset management problems related to inventories and fixed assets. However, they appear to have significant problems related to accounts receivable management. The mean accounts receivable turnover ratio of the acquired U.S. companies is significantly lower than that of the non-acquired U.S. companies.

We also find that the total assets turnover ratio of the acquired U.S. companies is significantly lower than that of the non-acquired U.S. companies. Along with significantly lower net and operating profit margin ratios, this results in significantly lower asset profitability ratios for the acquired companies compared with the non-acquired companies. Although it is not statistically significant, in conformity with the merger theory's prediction, we also find that the acquired companies have a lower mean debt ratio compared with the non-acquired companies.

Our findings indicate that liquidity was not a significant consideration in the acquisition decision of the foreign predators. The liquidity ratios of the acquired U.S. companies are not significantly different compared with the liquidity ratios of the non-target U.S. companies. In fact, the quick ratios of the two groups of firms are almost identical in terms of the mean values and the standard deviations.

The capital expenditure ratio gives an idea about the current growth rate of a company. Whereas the market-to-book ratio gives an idea about the market's perception of a company's long term growth prospects. We find that the mean capital expenditure ratios of the acquired and non-acquired U.S. companies are not significantly different. However, the mean market-to-book ratio of the acquired companies is significantly higher than that of the non-acquired companies. This may be because the market may be viewing the acquired firms as good long-term growth prospects or potential acquisition targets.

There is considerable interest in the recent literature in the post-crisis M&A activities. In this paper, we make a contribution to this growing body of literature by studying the foreign acquisitions of U.S. companies after the 2007-2008 financial crisis. Our preliminary finding in this study may encourage further studies on this subject.

A limitation of our study is that it only focuses on the post-2007-2008-crisis M&A activities. A more comprehensive future study can compare the findings for several post-crisis periods to determine if the results are period-specific or if there are certain characteristics common to all post-crisis merger activities. In this paper, we study the post-crisis acquisition of U.S. target firms by foreign companies. Future research can also examine the post-crisis acquisition of U.S. target companies by other U.S. companies and compare the results.

REFERENCES

- Altman, E. I. (1968) "Financial Ratios, Discriminant Analysis, and the Prediction of Corporate Bankruptcy," *Journal of Finance*, vol. 23(4), p. 589-609.
- Belkaoui, A. (1978) "Financial Ratios as Predictors of Canadian Takeovers," *Journal of Business Finance and Accounting*, vol. 5(1), p. 93-108.
- Berger, P. G. & Ofek, E. (1995) "Diversification's Effect on Firm Value," *Journal of Financial Economics*, vol. 37, 39-65.
- Black, B. (1989) "Bidder Overpayment in Takeovers," *Stanford Law Review*, vol. 41(3), p. 597-660.
- Dambolena, I. G. & Khoury, S. J. (1980) "Ratio Stability and Corporate Failure," *Journal of Finance*, vol. 35(4), p. 1017-1026.
- Edmister, R. O. (1972) "An Empirical Test of Financial Ratio Analysis for Small Business Failure Prediction," *Journal of Financial and Quantitative Analysis*, vol. 7(2), p. 1477-1493.
- Hutchinson, P., Meric, I., & Meric, G. (1988) "The Financial Characteristics of Small Firms which Achieve Quotation on the UK Unlisted Securities Market," *Journal of Business Finance and Accounting*, vol. 15(1), p. 9-20.
- Jensen, M. C. (1986) "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *American Economic Review*, vol. 76(2), p. 323-329.
- Lang, L. H. P. & Stulz, R.M. (1994) "Tobin's Q, Corporate Diversification, and Firm Performance," *Journal of Political Economy*, vol. 102, p. 1248-1280.
- Martin, D. R., Wathen, M. M., & Cotter, J. F. (2011) "Creative M&A Deals for a Tough Economy," *Journal of Corporate Accounting & Finance*, vol. 22(2), p. 15-19.
- Martin, D. R., Wathen, M. M., & Klee, J. J. (2008) "Doing the Right Deals," *Journal of Corporate Accounting & Finance*, vol. 19(2), p. 11-17.
- Meric, G., Kyj, L., Welsh, C., & Meric, I. (2000) "A Comparison of the Financial Characteristics of Japanese Kieretsu-Affiliated and Independent firms," *Multinational Business Review*, vol. 8(2), p. 26-30.
- Meric, G., Leveen, S. S., & Meric, I. (1991) "The Financial Characteristics of Commercial Banks Involved in Interstate Acquisitions," *Financial Review*, vol. 26(1), p. 75-90.
- Meric, I. & Meric, G. (1994) "A Comparison of the Financial Characteristics of U.S. and Japanese Manufacturing Firms," *Global Finance Journal*, vol. 5(2), p. 205-218.
- Meric, I., Weidman, S. M., Welsh, C. N., & Meric, G. (2002) "A Comparison of the Financial Characteristics of U.S., E.U., and Japanese Manufacturing Firms," *American Business Review*, vol. 20(2), p. 119-125.
- Morck, R., Shleifer, A., & Vishny, R. W. (1988) "Management Ownership and Market Valuation: An Empirical Analysis," *Journal of Financial Economics*, vol. 20(3), p. 293-315.

Morck, R., Shleifer, A., & Vishny, R. W. (1990) "Do Managerial Objectives Drive Bad Acquisitions?" *Journal of Finance*, vol. 45(1), p. 31-48.

Rege, U. P. (1984) "Accounting Ratios to Locate Take-Over Targets," *Journal of Business Finance and Accounting*, vol. 11(3), p. 301-311.

Rhoades, S.A. (1983) *Power, Empire Building, and Mergers*, Lexington MA.: D.C. Heath & Co.

Roll, R. (1986) "The Hubris Hypothesis of Corporate Takeovers," *Journal of Business*, vol. 59(2), p. 197-216.

Rose, P.S. (1987) "The Impact of Mergers in Banking: Evidence from a Nationwide Sample of Federally Chartered Banks," *Journal of Economics and Business*, vol. 39(4), p. 289-313.

Servaes, H. (1996) "The Value of Diversification during the Conglomerate Merger Wave," *Journal of Finance*, vol. 51(4), p. 1201-1225.

Sherman, A. J. & Badillo, A. (2010) "Is the M&A Market Back?" *Journal of Corporate Accounting & Finance*, vol. 21(2), p. 55-60.

Shleifer, A. & Vishny, R.W. (1989) "Management Entrenchment: The Case of Manager-Specific Investments," *Journal of Financial Economics*, vol. 25(1), p. 123-139.

Stevens, D. L. (1973) "Financial Characteristics of Merged Firms: A Multivariate Analysis," *Journal of Financial and Quantitative Analysis*, vol. 8(2), p. 149-158.

The Wall Street Journal (2006) "Place Your Bets, Please: Takeover Wheel Spins," November 22.

Tokic, S. & Beyea, G. (2010) "Changing Regulations for Cross-Border M&As," *Journal of Corporate Accounting & Finance*, vol. 21 (2), p. 33-43.

Trifts, J. W. & Scanlon, K. P. (1987) "Interstate Bank Mergers: The Early Evidence," *Journal of Financial Research*, vol. 10(4), p. 305-312.

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