

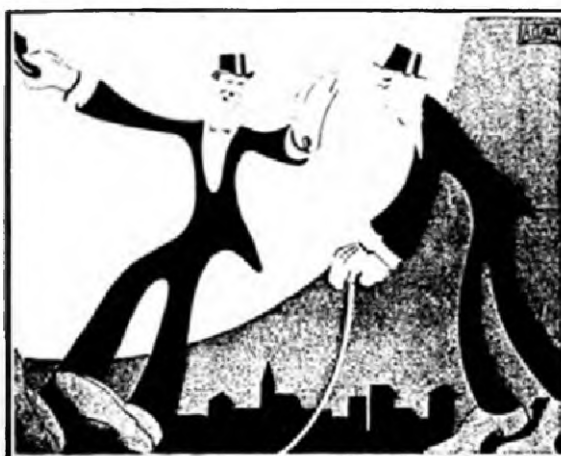
CORPORATE REAL ESTATE JOINT VENTURES AND SECURITY PRICE PERFORMANCE

The announcement of a real estate joint venture does not result in significant stock price reactions, except in some instances.

by John B. Corgel and Ronald C. Rogers

Probably the single most important issue in academic corporate finance over the past 50 years has been the effect of a firm's financial policy on the market value of its common stock. Based in theory on the seminal work of Modigliani and Miller,¹ studies have shown that the debt-equity decisions of firms operating in perfect capital markets have no effect on the total market value of the firm's securities, given public knowledge of the investment decision.² From one perspective, the value of a firm is determined by the set of contracts, financial and nonfinancial, that a firm enters into with other parties.³ The optimal set of contracts for a firm depends on the firm's operations, balance sheet and corporate strategy. Therefore, while a change in the financial policy of a firm may not substantially affect its market value in the long run, short run effects may be evident if the firm's financial contracting arrangements are suboptimal.

Decisions to enter into joint ventures result in an organizational restructuring of the financial resources of the jointly venturing firms. Such decisions alter the set of financial contracting arrangements of these firms. Unlike mergers in which all resources are joined together, corporate joint ventures involve only combinations of subsets of the resources of two or more companies. Nonetheless, corporate joint ventures have been shown to produce abnormal shareholder returns.⁴ These results



support the synergy hypothesis to explain why increases in wealth accrue to shareholders of firms involved in corporate combinations. The synergy hypothesis also has been used by Bradley, Desai and Kim to explain interfirm tender offers.⁵ The effect of management displacement, the main competing hypothesis, is held constant in event studies in which corporate combinations such as joint ventures occur without a restructuring of management.

Joint Ventures To Develop Real Estate

Many corporate joint ventures are undertaken for the purpose of developing real estate.⁶ Exhibit I lists the motives for entering into joint ventures that were most commonly cited in a questionnaire survey of corporate executives conducted by Berg and Friedman in 1978.⁷ Two of these motives are believed to be the primary reasons why corporations enter into joint ventures to develop real estate. Sometimes, a joint venture is formed to help raise debt capital, but most often, real estate development joint ventures are undertaken to acquire skills and technical knowledge.

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Typically, the firm initiating the joint venture desires to develop real estate that it owns and has sufficient capital to finance the development but, like many corporations, is ill-equipped to do so. On the other hand, the development partner has the expertise necessary to complete real estate development but often is too poorly capitalized to undertake a large-scale project. An example is a joint venture between The Lankmarks Group, a development firm in the southeastern United States, and Chicago-based MCC Powers, a division of Mark Controls, to introduce advanced telecommunications systems into Lankmark's Concourse complex in Atlanta.⁸

In some cases, third parties supply financing while the joint venture partners supply the development concept, the land and the expertise. A growing number of joint ventures are between domestic and foreign development firms who seek to acquire the expertise to extend the range of their development opportunities internationally.⁹

EXHIBIT I

Motives For Forming Corporate Joint Ventures: In Rank Order

- * 1. To acquire skills and technical know-how
 2. To acquire distribution facilities
 3. To acquire production facilities
 4. To go into business with a venture partner who is a customer
 5. To go into business with a venture partner who is a supplier
 6. To research and develop a new product or process
 - * 7. To acquire capital
 8. To fulfill a government contract
 9. To purchase government-owned facilities
 10. To exploit a product or a licensed process
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Source: Berg and Friedman (see footnote #7)

*Most likely motives for real estate development joint ventures

Wealth Effects Of Real Estate Joint Ventures

Joint ventures to develop real estate provide an opportunity to combine resources in optimal instead of fixed proportions as dictated by a corporate acquisition or merger. The relationship between the joint venture partners is temporary, unlike whole-unit combinations, and usually lasts only for the duration of one project. Also, joint ventures are non-hostile combinations; since neither partner is an aggressor, strategies for corporate control do not influence decisions. Finally, stockholder voting is not needed. Joint ventures to develop real estate, therefore, are consummated in a relatively unconstrained environment and on a totally voluntary basis.

Decisions to enter into real estate joint ventures are subject to the usual capital budgeting constraints. Shareholder wealth effects of participation in joint ventures depend on whether projects have positive, zero or negative net present values. Presumably, ventures with negative net present values would not be pursued. However, the null hypothesis, which holds that corporate joint ventures to develop real estate have zero net present values, and thus produce no abnormal returns to shareholders, has been rejected by Ravichandran and Sa-Aadu in a recent paper. They find significant positive effects on shareholder wealth resulting from corporate real estate joint ventures.¹⁰

The purpose of this paper is to determine if corporate joint ventures to develop real estate are positive or zero net present value activities. The paper is organized into three sections. The first section describes the data and methodology for the study. The second presents the results of an analysis of shareholder wealth effects from entering into joint ventures to develop real estate. The final section includes conclusions and suggestions for future research.

Sample And Empirical Methods

The sample for this study was selected by identifying firms that announced real estate joint ventures during the period January 1979 through December 1985 in the *Wall Street Journal* or *The New York Times* or in articles from financial and real estate periodicals. Press releases describing each transaction were analyzed to ensure that the transaction was a real estate joint venture, and each of the transactions was examined to ensure that at least one of the joint venture firms was listed on the New York Stock Exchange (NYSE) or the American Stock Exchange (ASE).

This procedure identified a total of 38 joint ventures that were formed for the purpose of real estate development, and each of these joint ventures involved two firms for a total of 76 firms. Eleven of the joint ventures, involving 42 of the firms, were not included in the final study sample because at least one of the venture partners was not listed on the NYSE or ASE. Lack of a sufficient price history (either because of infrequent trading or recent listing) among 14 firms eliminated three other transactions and reduced the final study sample to 24 joint ventures that involved 28 firms.

Twelve of the joint ventures were arranged to develop office real estate; eight were established to develop hotel projects; three were formed for hotel/casino developments; and one was established for commercial/residential development.

The standard event time procedure was used to analyze stock price reactions to announcements of joint ventures for real estate development. The basic idea was to identify a normal return for a security based on general market conditions. By comparing actual stock returns at or near the time of a real estate joint venture announcement to the normal or expected returns, one could detect returns that could not be explained by general

market movements. To the extent that these abnormal returns were associated with the announcements, one could estimate the magnitude of the market revaluation associated with such announcements.

First, an event window that centered around the date of the first public announcement of the joint venture was selected. With day zero (or t) as the day the joint venture proposal was first reported in the financial press, the event window extended from 50 days before the announcement ($t - 50$) to 50 days afterward ($t + 50$).

Using the market model, a normal return was estimated by regressing each stock's rate of return on the CRSP value-weighted index of common stocks over the interval from 200 days prior to the announcement to 51 days prior to the announcement. These parameter estimates allowed for the identification of normal returns conditioned on the market portfolio during the event window. Any deviation of actual daily returns from the estimated conditional returns was considered an abnormal return.

For each stock in the sample, a time series of abnormal returns was centered around the respective announcement date (day zero). Although the announcements varied widely across calendar dates, they were all standardized to day zero in event time. A simple average of day zero abnormal returns gave an estimate of the average abnormal stock price reaction on the day the joint venture announcement appeared in the financial press for each of the 28 firms in the study. In the absence of abnormal performance, this average should have been zero. A significant departure from zero, however, was consistent, on average, with revaluations resulting from information contained in the joint venture announcements.

Results

The daily abnormal returns during the interval $t - 50$ to $t + 50$, which are reported in Table 1, showed that, on average, the 28 firms in the sample had positive abnormal returns throughout the 51-day period prior to the joint venture announcement on day zero, with the highest cumulative average abnormal return of 3.2% seen on day -10 . After day -10 , the cumulative average abnormal return dropped for seven of the following nine days, but after day zero, the cumulative average abnormal return rose slightly.

The average cumulative abnormal return from day -50 to the day of the announcement of the joint venture was 1.6% and was not significantly different from zero (test-statistic, 0.756). Of particular interest was the reaction of stock prices to the joint venture announcement. There was no significant average abnormal return, both on the announcement day (interval 0.0) and in the two-day announcement period (interval $-1, 0$). Abnormal returns at the time of announcement were evenly divided between positive and negative changes (see Table 2).

Thus, announcements of real estate joint ventures were not associated with significant stock price reactions. While there were neutral price reactions associated with

joint venture announcements, on average, there were also substantial differences across firms. Of particular interest was the variation in two-day announcement period (interval $-1, 0$) abnormal returns (see Table 3). The maximum abnormal return of 7.1% was earned by shareholders of U.S. Realty Investments when a joint venture to acquire a development site was announced. The largest negative abnormal return was associated with the announcement of a joint venture to develop an Atlantic City casino by MGM Grand (-15.9%) and Hilton Hotels (-4.5%).

TABLE 1

Daily Abnormal And Cumulative
Average Abnormal Returns,
Days $t - 50$ Through $t + 50$

Day	Abnormal Return	Cumulative Average Abnormal Return	Total Number Of Firms
-50	-0.001	-0.001	28
-40	0.005	0.015	28
-30	-0.001	0.015	28
-20	0.008	0.027	28
-10	0.003	0.032	28
-9	-0.003	0.029	28
-8	-0.002	0.027	28
-7	0.000	0.027	28
-6	-0.001	0.026	28
-5	0.000	0.026	28
-4	0.000	0.026	28
-3	0.001	0.027	28
-2	-0.007	0.020	28
-1	0.000	0.019	28
0	-0.004	0.016	28
+1	0.000	0.016	28
+2	0.002	0.018	28
+3	-0.005	0.013	28
+4	-0.004	0.010	28
+5	0.004	0.014	28
+6	-0.004	0.010	28
+7	0.004	0.015	28
+8	-0.002	0.012	28
+9	-0.001	0.011	28
+10	0.004	0.015	28
+20	0.002	0.024	27
+30	-0.002	0.032	27
+40	-0.006	0.010	27
+50	-0.001	0.022	27

TABLE 2

Cumulative Abnormal Returns
For Various Intervals Around Announcements

Interval	Cumulative Abnormal Return	T-stat.	Total Number of Positive Returns	Total Number of Negative Returns
-50,0	.016	0.756	15	13
- 4,0	-.010	-1.081	12	16
- 1,0	-.004	-0.380	14	14
0,0	-.004	-0.810	15	13
1,10	-.001	-0.367	13	15

Discussion

The discussion results suggest that there is no systematic pattern of share revaluation associated with joint venture announcements but rather that revaluations are likely dependent on the project under development and the terms of the joint venture agreement. In an efficient market, the expected net present value of projects is incorporated into share prices with the allocation of the net present value between the firms. The revaluation associated with one of these transactions consequently is determined by both the economic efficiency of the project and the contracting efficiency of the joint venture. Therefore, it is not surprising to observe that among the six transactions for which returns on both firms are available, there are two cases in which the announcement period returns are both positive, two in which they are both negative and two in which one is positive and the other is negative.

Summary

The purpose of this study was to determine if corporate joint ventures to develop real estate were associated with abnormal returns in terms of increase in share prices to the firms' shareholders. A sample of 24 joint ventures was identified and analyzed using standard event study methods. On average, the announcement of real estate development joint ventures was not associated with significantly positive or negative price reactions. There were, however, substantial differences across firms. These differences were likely due to differences in the economic efficiency of the project under development and the differences in the contracting efficiency of the joint venture partners. Subsequent research should focus on the characteristics of individual transactions to determine the factors that lead to differential share price changes among joint venture firms.

TABLE 3

Distribution Of Two-Day Abnormal Returns
From Announcements Of Real Estate Joint Ventures

Range of Cumulative Abnormal Returns	Total Number Of Firms
Greater than positive 5.0%	2
Positive 2.0% to 5.0%	3
0 to positive 1.99%	9
Negative .1% to negative 2.0%	8
Negative 2.1% to negative 5.00%	5
Less than negative 5.0%	1

Maximum positive return = 7.1%

Minimum negative return = -15.9%

NOTES

1. Modigliani, F. and Miller, M.H. "The Cost of Capital Corporation Finance, and the Theory of Investment," *American Economic Review* (Vol. 40, 1958): 261-297.
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3. Jensen, M.C. and Meckling, W.H. "Theory of the Firm: Managerial Behavior Agency Costs and Ownership Structure," *Journal of Financial Economics* (Vol. 3, 1976): 305-360. Myers, S.C. "Determinants of Corporate Borrowing," *Journal of Financial Economics* (Vol. 5, 1977): 147-175. Smith, C.W. and Warner, J.B. "On Financial Contracting: An Analysis of Bond Covenants," *Journal of Financial Economics* (Vol. 7, 1977): 117-161.
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5. Bradley, M., Desai, A. and Kim, E.H. "The Rationale Behind Interfirm Tender Offers," *Journal of Financial Economics* (Vol. 11, 1983): 183-206.
6. Real estate development was the largest category of joint ventures (18 out of a sample size of 156) studied by McConnell and Nantell (see footnote #4).
7. Berg, S.V. and Friedman, P. "Joint Ventures in American Industry, Part II: Case Studies of Managerial Policy," *Mergers and Acquisitions* (Vol. 13, 1978): 9-17.
8. The production of "smart" buildings is currently a popular idea in office buildings development, but few developers possess the expertise to complete such projects by themselves. See Kelly, B., Jr. "Case Study: One Developer's Journey Toward Smart Building," *National Real Estate Investor* (June, 1985): 76.
9. For an example, see "J.V. A Response to Increased Foreign Interest," *National Real Estate Investor* (May, 1984): 44.
10. Ravichandran, R. and Sa-Aadu, J. "Resource Combination and Security Price Reactions: The Case of Real Estate Joint Ventures," unpublished working paper #662, Louisiana State University (June, 1987).