

# In Brief

## Economic Capsules

### Equity Carve-outs in Tokyo

by Ted Fikre

The gap between price-earnings ratios of Japanese and U.S. stocks in the late 1980s has puzzled market analysts and other observers. Since 1987, the value assigned to a stream of corporate earnings has been two to four times higher in Tokyo than in New York. Although various accounting and economic factors have been cited as explanations for this difference, little effort has been made to determine which characteristics of "Japanese" equity attract pricing at such a high multiple of earnings.

Some insight into this problem, however, can be gained by examining the records of initial public offerings in Tokyo of shares of U.S. subsidiaries and joint ventures between Japanese and foreign firms. These so-called carve-outs reveal how Japanese investors valued the stock of a company operating in Japan but owned, at least to some degree, by foreigners. The pricing of seven such public offerings suggests that the Tokyo market assigned a high pricing multiple to earnings *generated in Japan*. All seven of these Tokyo carve-outs, which raised an aggregate of \$0.7 billion equivalent over four years, received a price-earnings multiple significantly higher than the contemporaneous price-earnings ratio of their U.S. parents. Although any conclusion based on a very small sample must remain somewhat tentative, the puzzle of Japanese stock prices in the late 1980s gives these cases a particular claim on our attention.

#### Background

Tokyo stocks had higher price-earnings multiples than New York stocks throughout the 1980s, but pricing in

Tokyo yielded a particularly large cost of equity advantage after 1986 (see chart). While price-earnings multiples for U.S. stock indexes ranged between 10 and 20 during the latter half of the decade, comparable Japanese multiples skyrocketed from around 25 at the end of 1985 to over 60 in 1987 and 1988. According to the Morgan Stanley Capital International indexes, the current level of price-earnings multiples in Japan, around 31 at the end of December 1990, remains well above the U.S. level of about 14, although adjustments for cross-shareholdings bring the price-earnings multiples significantly closer. Other broad indexes show similar results.<sup>1</sup>

Given the divergence of U.S. and Japanese price-earnings ratios in recent years, it is no surprise that the number of U.S. firms with listings on the Tokyo Stock Exchange grew from fifteen at the end of 1985 to seventy-two at the end of 1990. But if large, well-known U.S. corporations obtained listings in Tokyo in order to raise their price-earnings ratios, they were disappointed. A random sampling of twenty U.S. companies listed on the Tokyo Stock Exchange yielded an average price-earnings ratio of 12 as of December 31, 1990, roughly equivalent to aggregate U.S. levels. It is true that some of the benefits of listing shares in Tokyo, such as greater investor access and heightened prestige,

<sup>1</sup>On December 31, 1990, the price-earnings ratio for the Standard and Poor's 500 was 15.2, while the corresponding ratio for the Tokyo Stock Price Index was 38.3. Among narrower indexes, the Dow Jones Industrial Average showed a price-earnings ratio of 13.6 and the Nikkei 225, a ratio of 38.5.

may not be fully captured in price-earnings multiples. But merely listing one's stock in Tokyo does not suffice to achieve a higher capitalization for a given stream of earnings.

Japanese subsidiaries of U.S. companies may be in a better position to capitalize on the relative strength of Tokyo equity prices because their earnings, unlike those of U.S. companies listing shares on the Tokyo Stock Exchange, are generated in Japan. Several U.S. companies have in fact attempted to exploit the lower cost of equity in Japan by floating stock in their Japanese subsidiaries on the Tokyo market. In some cases the subsidiaries were wholly owned by the U.S. parent, and in others they were jointly owned by a Japanese and a U.S. company.<sup>2</sup>

### Carve-outs of subsidiaries wholly owned by U.S. companies

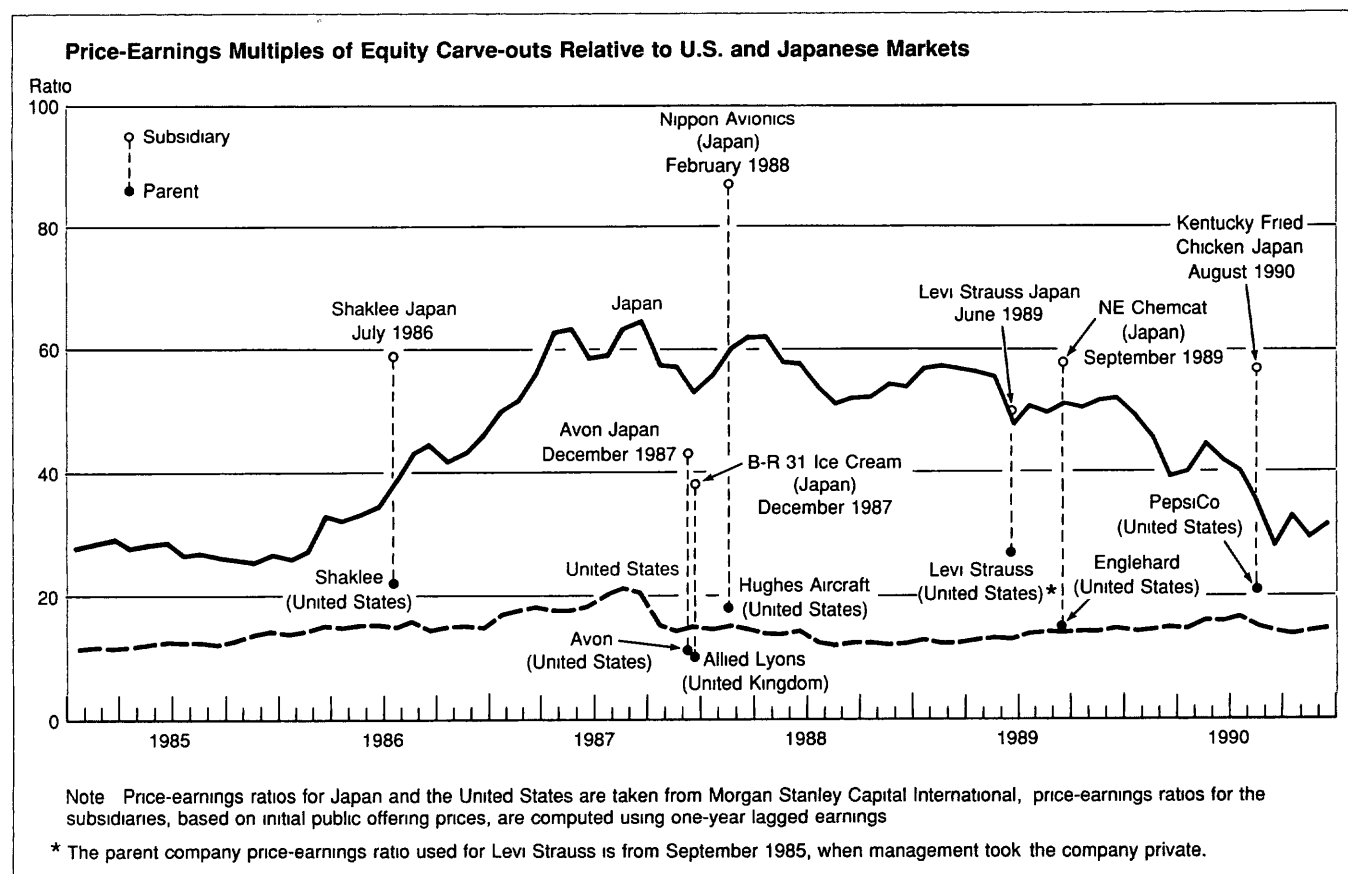
The first U.S. corporation to carve out and publicly offer equity in its Japanese subsidiary was Shaklee Corpora-

tion, a U.S. company involved in the direct marketing of food products. In July 1986 Shaklee Japan K.K. issued over 3 million shares on the Tokyo over-the-counter market at a price of \$25.38 (¥3,900). These shares, representing a 22 percent stake in the Shaklee subsidiary, were valued at a price-earnings multiple of 59, quite a contrast to the multiple of 22 assigned by investors on the New York Stock Exchange to the parent company's stock.<sup>3</sup> The Shaklee deal, underwritten by Goldman Sachs and Nikko Securities, marked the first time that a non-Japanese investment bank took the lead in a Japanese issue.

More than a year passed before another U.S. company, Avon Products, took its Japanese subsidiary public in Tokyo. At the end of 1987, Avon floated a 40 percent stake in its Japanese unit on the over-the-counter market in Tokyo. The total value of the deal, underwritten by Morgan Stanley, was \$218 million, making it the largest new issue in the history of the Jap-

<sup>3</sup>In February 1989 Shaklee sold its remaining 78 percent stake in the Japanese subsidiary to Yamanouchi Pharmaceutical for about \$350 million, roughly 28 times earnings.

<sup>2</sup>One of the Tokyo carve-outs described below involved a U.K.-Japanese joint venture.



anese over-the-counter market. The shares were offered in December 1987 at a price-earnings multiple of 43, far above the multiple of 11 for the parent company's stock at that time.<sup>4</sup>

Another American company that took its wholly owned Japanese subsidiary public in Tokyo was Levi Strauss. In June 1989 the company offered a 15 percent stake (\$80.6 million) in its Levi Strauss Japan subsidiary on the Tokyo over-the-counter market. Of the 4.1 million shares floated in Japan at a price of \$19.66 (¥2,830), 1.1 million were newly issued and the remaining 3 million were existing shares previously held by the parent company. Like the Shaklee issue, the deal was underwritten by Goldman Sachs and Nikko Securities.

In the case of Levi Strauss a direct comparison of price-earnings multiples for the parent company and its subsidiary is impossible because the Levi Strauss parent had been taken private by management in September 1985. Nevertheless, the price-earnings ratio of 50 that Levi Strauss Japan achieved in 1989 was well above the multiple of 27 at which its parent exited the U.S. market in 1985. The behavior of Levi Strauss, going private in the United States and then taking a subsidiary public in Tokyo several years later, has elements of a long-term arbitrage strategy, designed to capitalize on persistent pricing differentials between the two markets.

#### **Joint venture carve-outs**

In addition to the wholly owned subsidiaries of U.S. companies that issued stock in Japan, several joint ventures between Japanese companies and U.S. or U.K. companies have floated shares in Tokyo. In December 1987 Allied Lyons, a U.K.-based food and beverage company, made an initial public offering of 14 percent of B-R 31 Ice Cream on the Tokyo over-the-counter market. B-R 31 Ice Cream is a fifty-fifty joint venture between Baskin-Robbins International (Allied's wholly owned subsidiary) and Fujiya of Japan. The 1.4 million shares were offered at \$29.82 (¥3,610) each, yielding a price-earnings ratio of 38, well above the multiple of 10 at which Allied Lyon's stock traded in London at the time of the issue and below Fujiya's multiple of 83.<sup>5</sup> The \$36 million of net proceeds from the deal, underwritten by Nomura, Daiwa, Nikko, and Goldman Sachs, was split evenly between the two partners.

<sup>4</sup>By the end of December, less than two weeks after the issue, the stock was down 40 percent below the offering price.

<sup>5</sup>The B-R 31 issue demonstrated more strength in the ensuing period than did Avon Japan. Several months after the offering, the stock was trading at ¥3,950, almost 10 percent above the initial price. Inspired by the success of this first issue, Allied-Lyons and Fujiya sold another 16 percent of B-R 31 Ice Cream on the Tokyo market several months later.

All of the carve-outs through 1987 were listed on the over-the-counter market, not surprisingly given the strict listing requirements of the Tokyo Stock Exchange. However, in February 1988 Nippon Avionics, a joint venture between Hughes Aircraft and NEC, floated a \$78 million issue on the second section of the Tokyo Stock Exchange. At the initial offering price of \$13.85 (¥1,760), the stock secured a price-earnings ratio of 87, making it the most expensive initial public offering of all the equity carve-outs in Tokyo. The Nippon Avionics issue, underwritten by Goldman Sachs, was met so enthusiastically that within a week the shares were trading at over 200 times earnings. At the time of the Nippon offering, the stock of General Motors Hughes Electronic (the U.S. parent company of Hughes Aircraft) was trading at 18 times earnings in New York while NEC's stock was trading at a multiple of 102 in Tokyo.

In September 1989, just three months before the Nikkei peaked at 38,915, another U.S.-Japanese joint venture, NE Chemcat, issued shares on the Japanese over-the-counter market. Before the issue, Chemcat was 46 percent owned by Englehard Corporation and 54 percent owned by Sumitomo Metal Mining. The \$90 million flotation, equivalent to a 15.6 percent share of Chemcat, reduced the stake of each partner but did not change the proportionate ownership. The 3.9 million shares, of which 1.35 million were newly issued, sold at a price of \$23.13 (¥3,373) each, yielding a price-earnings ratio of 58, in between Englehard's ratio of 15 and Sumitomo's ratio of 72 at the time.

A more recent equity carve-out is particularly impressive because of the market climate in which it was executed. On August 21, 1990, with the Tokyo Nikkei plummeting below 24,000 as the Middle East crisis unfolded, Kentucky Fried Chicken Japan (KFCJ), a joint venture between PepsiCo and Mitsubishi Corporation, persisted in a previously planned listing on the second section of the Tokyo Stock Exchange. The flotation received an extremely strong reception by Japanese investors, who bought all the shares at the maximum value of ¥8,470 (\$57.71) and then boosted the price up to ¥11,000 (\$74.83) during the first day of trading. The resulting price-earnings ratio of 57 for KFCJ (based upon the initial public offering price) was far above the contemporaneous price-earnings ratio of 21 of PepsiCo and even higher than the multiple of 49 at which Mitsubishi's stock was trading in Tokyo.

#### **The role of selection bias**

It can be argued that the high price-earnings ratios obtained by the carved-out subsidiaries in Tokyo, more than double the parent price-earnings ratios on average, are partly attributable to a selection bias. Accord-

ing to this view, a company would choose to carve out a subsidiary only if it expected the subsidiary's stock to be valued more highly than its own equity. Indeed, a sampling of U S subsidiaries carved out in the U S market appears to offer some support for this interpretation: the purely domestic carve-outs, like their counterparts in Tokyo, on average tend to be priced at higher price-earnings multiples than their parents

Nevertheless, the size and regularity of the carve-out premium is much less striking in the domestic than in the Japanese carve-outs. A sample of eight U.S. carve-outs during 1988 and 1989 yielded carve-out and parent price-earnings ratios of 15.5 and 14.1, respectively (see table). This 10 percent premium is far smaller than the 220 percent premium received by the Tokyo carve-outs. Furthermore, unlike the Tokyo carve-outs, which all had higher price-earnings ratios than their parents, three of the eight U.S. carve-outs actually had lower price-earnings ratios than their parents. These results are consistent with evidence drawn from a broader sample by Schipper and Smith.<sup>6</sup> So, although carve-outs are generally priced at higher multiples than are their parents, the magnitude and consistency of the premium obtained by the Tokyo subsidiaries suggests a fundamental difference between the pricing of the U.S. and Japanese carve-outs. Selection bias, in other words,

<sup>6</sup>For seventy carve-outs undertaken between 1963 and 1983, Schipper and Smith reported a median subsidiary price-earnings ratio of 21.7 and a median parent ratio of 15. Furthermore, twelve of the seventy carve-outs received price-earnings multiples below those of their parents. Katherine Schipper and Abbie Smith, "A Comparison of Equity Carve-Outs and Seasoned Equity Offerings," *Journal of Financial Economics*, vol. 15 (1986), pp. 153-86.

### Average Price-Earnings Ratios for Carve-out Parents and Subsidiaries

Carve-out Type	Market	Average Price-Earnings Ratios	Number of Cases Sampled
<b>U.S. subsidiary of U.S. company</b>			
U.S. parent	New York	14.1	8
U.S. subsidiary	New York	15.5	
<b>Japanese subsidiary of U.S. company</b>			
U.S. parent	New York	20.0	3
Japanese subsidiary	Tokyo	50.7	
<b>Joint venture between Japanese and foreign firms</b>			
U.S. or U.K. partner	New York or London	16.0	4
Japanese partner	Tokyo	76.5	
Japanese subsidiary	Tokyo	60.0	

does not appear to be an important determinant of the differential between U.S. and Japanese carve-outs.<sup>7</sup>

### Conclusion

We have seen that U.S. and U.K. firms that own subsidiaries or participate in joint ventures with Japanese companies were able to float equity in those operations on the Tokyo market at pricing in line with the broader Japanese market. The price-earnings ratio differentials between Japanese subsidiaries and their U.S. parents depicted in the chart roughly match the overall market discrepancies. While a simple comparison of price-earnings ratios between Japan and the United States can be misleading, factors known to explain a portion of the apparent pricing differential between the two markets probably do not explain the huge carve-out premium. The understatement of Japanese earnings associated with extensive cross-holdings of shares and low dividend payouts is known to boost reported Japanese price-earnings ratios somewhat misleadingly relative to those in the United States. However, carved-out firms, particularly the wholly owned subsidiaries of U.S. companies, are likely to hold fewer shares than Japanese firms in general.

Beyond accounting differences, why are the equity carve-outs of Japanese subsidiaries valued so highly? The large pricing advantage achieved by these Tokyo carve-outs over their U.S. parents does not appear to stem from the tendency of corporations to select for carve-outs those subsidiaries likely to be priced at a substantially higher price-earnings multiple than their own.

One interpretation points to general economic factors, such as the potential for higher and more stable growth and less business risk, that might lead to a favorable capitalization for earnings generated in Japan.<sup>8</sup> But one would expect that Japanese investors,

<sup>7</sup>Selection bias may, however, play a somewhat larger role in the case of Japanese joint ventures. Even if the U.S. parent of a jointly owned company wished to realize a carve-out premium, the Japanese parent might be reluctant to take its subsidiary public unless it was confident that it could achieve a price-earnings ratio considered good by the standards of the Tokyo market.

Therefore, it is not surprising that the joint venture carve-outs earned larger premiums than the carve-outs wholly owned by U.S. companies. On average, the price-earnings multiples of the joint venture subsidiaries were 280 percent higher than those of their U.S. parents, whereas the wholly owned subsidiaries commanded price-earnings ratios 180 percent higher than their parent companies. In addition, although only one of the four joint ventures carved out in Tokyo was priced above its Japanese parent, three of the joint venture carve-outs were priced above the overall Tokyo market.

<sup>8</sup>For a fuller discussion of the explanations behind this cost of capital advantage, see Robert N. McCauley and Steven A. Zimmer, "Explaining International Differences in the Cost of Capital," *Federal Reserve Bank of New York Quarterly Review*, Summer 1989, pp. 29-43.

recognizing this potential, would bid up the parent's stock price before the carve-out took place. The parent's stock price would then represent a weighted average of the Japanese and U.S. multiples, with the weights determined by the respective revenue shares of the Japanese and U.S. components of the firm. If this were the case, carve-outs would not raise total firm value: a high price-earnings multiple for the subsidiary in Tokyo would come at the expense of a lower multiple for the parent in the United States.

However, the Tokyo carve-outs provide no evidence of such a trade-off in pricing. Despite the high price-earnings ratios attained by the carve-outs, the parent stocks did not drop in price. Various reasons, such as imperfect or incomplete information, could be offered for this anomaly, but the best explanation would appear to be a preference on the part of Japanese investors for companies with exclusively Japanese operations. In

buying the stock of these carved out subsidiaries and joint ventures, Japanese investors are making a "pure play" for Japanese operations and perhaps for Japanese management as well.<sup>9</sup>

The evidence from the carve-outs suggests that Japanese ownership is not a prerequisite for attaining the high multiples associated with the Tokyo market in recent years, although it does not preclude the possibility that such ownership could be a factor in the pricing of equity in this market. The valuation of these carve-outs demonstrates that an earnings stream generated entirely in Japan is sufficient to attract multiples comparable to those of the broader Tokyo market.

<sup>9</sup>By virtue of the residual parent company ownership, significant control of these subsidiaries and joint ventures remains in the hands of foreigners. However, even if these carved-out operations are not ultimately under Japanese control, they are probably under Japanese management at some level. For example, KFCJ's current president and chief executive is Japanese.