Growth by Acquisition and the Performance of Large Food Retailers

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ABSTRACT

The latter 1990s witnessed rapid growth among the largest retail food chain companies, much of it through acquisitions. An explanatory motive is that grocery chains could achieve greater scale economies and operating efficiencies, and increase their bargaining power with packaged food manufacturer-suppliers. This article begins to examine whether the largest retailers are realizing the promised financial rewards associated with this growth trend. We examine the performance of the three largest U.S. food retailers, Albertson’s, Inc., The Kroger Company, and Safeway Inc., over 7 fiscal years beginning in calendar year 1993 and ending in fiscal year 1999, a period that covers the recent increase in acquisition activity. Overall, we find only modest evidence that the financial returns to the rapid growth strategies of the three largest food retailers have begun to be realized through fiscal year 1999. [EconLit citations: G390, G340, Q130] © 2002 Wiley Periodicals, Inc.
U.S. food retailers, Albertson’s, Kroger, and Safeway. These firms have grown substantially, largely by acquiring other firms, and are forming into what many believe will be models for a substantial share of the food retailing market. Their combined string of acquisitions is also at the center of concerns about growing concentration in the industry and its potential effect on consumers.

We describe two types of financial performance analyses and evaluate corresponding measures of performance for each of the three firms. We first describe return on investment (ROI) and component financial accounting performance measurements and how these relate to economic efficiency and market power. While the performance measures cannot separate efficiency and market power effects, we can discuss how efficiency and market power affect the measures and examine these firms’ overall performance. The three firms invested a combined $33 billion for acquisitions over their last 3 fiscal years, so we also evaluate how acquisition activity affects performance.

A body of research on firm performance has related ROI to hypothesized causes such as industry concentration and other industry variables. A large body of research has shown accounting returns have only been weakly related to concentration across industries (Schmalensee, 1989, pp. 973–976). A problem is that it is difficult to analyze market power in specific markets with whole-firm accounting measures, since firms usually compete in multiple markets. There has also been research on explaining persistence of firm ROI, which has also been difficult (Jacobson, 1988; Jacobson & Hansen, 1997). There is evidence of differences in return persistence across industries (Waring, 1996). Complementing broad cross-industry studies (e.g., see review in Schmalensee, 1989), Neibergs (1998) studied agribusiness profitability and its relation to macroeconomic conditions. He found significant macroeconomic impacts on the cyclical farm equipment industry but not on consumer nondurable food manufacturing.

A general problem of studies of firm performance causes is that many factors that cause firm success are tacit and cannot be measured or controlled for in statistical models (Nelson, 1995; Jacobson, 1992). Our approach here is to examine changes in ROI and revealing component measures of performance rather than to explicitly model causes of performance. The dramatic change in industry structure over the past decade has raised concerns about how increased concentration may position large retailers for greater pricing power with manufactured food supplier or consumers. If large retailer pricing power has increased, we would expect to see commensurate economic results in measures of firm performance. Therefore, we are not trying to overcome missing variable and other econometric problems in modeling performance. Rather, we seek to detect whether and to what extent accurately measured performance has changed, and where it is in the firm’s operations that changes are realized.

ROI is a comprehensive measure of real firm performance that relates income to capital employed. It accounts for all costs including strategic and managerial resources, re-

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1 These comprise the three largest of the four firms classified in the retail food industry in the Standard and Poor’s 500™, a widely observed benchmark used as a performance standard by 97% of U.S. money managers and pension plan sponsors (Standard and Poor’s, 2000). The fourth firm is Winn Dixie Stores, Inc., a struggling firm with modest returns and no significant acquisition activity or growth in the 1990s.

2 Royal Ahold N.V., a Dutch firm, and Wal-Mart are also considered to be models for the future, but do not have comparable performance measures. Public financial accounting yields whole-firm measures, so Wal-Mart combines results for its food sales and its much larger general merchandise sales. Ahold has a large share of their sales in foreign countries and does not issue financial accounting data based on comparable U.S. standards. Ahold USA, its U.S. subsidiary, does not report its financials independently.
search and development, marketing, and overhead not allocated to firm business segment markets. Firm ROI focuses on the firm as the unit of analysis by which capital is invested, assets organized and managed, and corresponding capital claimants profit. While a firm’s individual enterprises may earn abnormal profits, the firm is the unit by which changes in ROI are measured for overall capacity to appropriate profits as they accrue to its economic claimants. Firm ROI signals economic rate of return and is the most useful measure of business performance (Jacobson, 1987; Fama & French, 2000).

One flaw of accounting performance measurement is that it is purely historical and may not reflect future earning potential. In the second type of performance analysis, we calculate a market internal rate of ROI over the 7-year interval for each firm. This analysis integrates the historical operational and investment funds flows generated from the business to investors with forward-looking market valuations that incorporate expected future performance. We assume efficient capital markets and use the firms’ market valuations along with the firms’ operating profit and investing funds flows to calculate internal rates of return to the firms. This provides a market-based consensus measure of how well management has performed and invested for the benefit of the firm’s financial claimants, the debt and equity investors.

We examine 7 years’ performance from fiscal years beginning in calendar year 1993 and through the fiscal year 1999, a period that covers the recent increase in acquisition activity. We find that overall ROI for Kroger and Safeway has improved slightly over the 7-year period, while it has deteriorated for Albertson’s due to acquisition problems. Gross profit margins, representing sales less the associated product costs, have increased for all three firms. However, increased nonproduct operating expenses or acquisition premiums and merger expenses have so far precluded significant increases in overall ROI. Market valuations and internal rates of investment return appear to reflect confidence in the investments and prospects of Kroger and Safeway, and lower expectations for Albertson’s.

HISTORICAL FINANCIAL PERFORMANCE MEASURES AND DATA

First we analyze the annual historical operational performance of each firm, including ROI and its component factors, invested capital turnover efficiency, and profit margins on sales (e.g., Brealey & Meyers, 2000, p. 834). The original data are from the firms’ annual audited financial statements and footnotes. These data are derived from the firms’ accounting information system, the source of financial and firm-level managerial performance information. Our analysis (i) makes adjustments for noncash items included in operating income (e.g., reversal of noncash goodwill amortization expense, and noncash deferred taxes; see Copeland, Koller, & Murrin, 2000, pp. 164–165, 169), (ii) separates operating income and assets from miscellaneous nonoperating income and investments in marketable securities, other firms’ equities, or any noncore activity, and (iii) adjusts the cost of acquisition investments so as to include common stock issued and debt assumed in exchange (these are fund flows in conjunction with investment cash flows disclosed in the statement of cash flows). Commercial databases do not have sufficient information for this analysis, and so we used source financial statements (balance sheet, income statement, cash flow statement, and statement of changes in stockholder equity) from Securities and Exchange Commission (SEC) Forms 10-K (1993–2000) filed by the respective firms. The SEC generally makes these available back 7 years, back to when our sample begins in 1993. Market prices and split adjustments for common stock shares are from Commodity Systems, Inc. (2000).
The financial statement income and cash flows include (i) net operating profit (internally generated capital), less (ii) net investing (cash outflows for investments in working capital, property plant, and equipment, other assets, and acquisitions of other firms), and (iii) any miscellaneous nonoperating cash flows (minor amounts generated from low-risk assets including excess cash and marketable securities; see Copeland et al., 2000, pp. 162, 169–170). Nonoperating cash flows are separated so that net operating profit gives clearer information on performance of the firm’s core business that is the principal source of its value generation and that distinguishes it from competitors.

Operating and Investment Fund Flows

The analysis results in a comprehensive annual statement of fund flows to investors:

Generation Of Fund Flows To Investors:

Sales
− Cost of goods sold
Gross profit
− Operating expenses and income taxes
Net operating profit
− Net Investing
+ Net miscellaneous nonoperating cash flows

Fund Flows To Investors

Fund flows to investors are amounts paid to investors, including interest and dividends paid to debt and equity claimants, debt paydowns, and stock repurchases for the treasury. If net fund flows generated by the firm are negative, then the shortfall must be covered by funds from investors, such as new debt issuance (increase in debt), stock issuances, or other securities transactions. The disposition of fund flows is summarized as follows:

Disposition of Fund Flows to Investors:

Interest expense paid to debt investors
+ Dividends paid to equity investors
+ Net debt paydowns (issuances)
+ Net common stock repurchases (issuances)
+ Net funds from other securities transactions

Fund Flows to Investors

Table 1 shows summary data of the generation of fund flows to investors over the 7-year interval for the three case firms. Kroger has stood as the largest U.S. food retailer in terms of sales for the whole sample interval. All three have experienced significant sales growth as a result of investments and acquisitions, particularly in the last 3 years of the study. Albertson’s $13.5 billion net investing in 1999 consisted mostly of the $12 billion acquisition of American Stores Company, which included major grocery and drug chains with sales of $20 billion (Acme Markets, Jewel Food Stores, Lucky Stores, Osco Drug, and Sav-On Drugs). Kroger’s $14.75 billion net investing in 1999 consists mostly of its $12.75 billion acquisition of Fred Meyer, Inc., a chain with $15 billion in sales, which itself had previously acquired Smith’s Food & Drug Centers and Quality Food
TABLE 1. Income and Investment Flows of Large U.S. Retail Food Firms From Fiscal Years 1993 Through 1999

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><em>Albertsons</em></td>
<td></td>
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</tr>
<tr>
<td>Sales</td>
<td>117,713</td>
<td>37,478</td>
<td>16,005</td>
<td>14,690</td>
<td>13,777</td>
<td>12,585</td>
<td>11,895</td>
<td>11,284</td>
</tr>
<tr>
<td>Net operating profit (Loss)</td>
<td>3,904</td>
<td>890</td>
<td>609</td>
<td>553</td>
<td>559</td>
<td>492</td>
<td>439</td>
<td>361</td>
</tr>
<tr>
<td>Fund flows to (from) investors</td>
<td>(24,305)</td>
<td>(12,507)</td>
<td>(12,609)</td>
<td>261</td>
<td>11</td>
<td>152</td>
<td>204</td>
<td>181</td>
</tr>
</tbody>
</table>

| *Kroger* |        |      |      |      |      |      |      |      |
| Sales       | 194,575| 45,352| 28,203| 26,567| 25,171| 23,938| 22,959| 22,384|
| Net operating profit (Loss) | 4,857 | 1,508 | 623 | 706 | 612 | 511 | 462 | 435 |
| Net (Investing) divesting | (15,925) | (14,754) | (181) | (295) | (580) | (131) | 40 | (23) |
| Fund flows to (from) investors | (11,067) | (13,247) | 442 | 411 | 31 | 30 | 502 | 412 |

| *Safeway* |        |      |      |      |      |      |      |      |
| Sales       | 140,336| 28,860| 24,484| 22,484| 17,269| 16,398| 15,627| 15,215|
| Net operating profit (Loss) | 5,012 | 1,460 | 1,009 | 821 | 640 | 421 | 402 | 260 |
| Net (Investing) divesting | (6,151) | (2,498) | (1,848) | (1,900) | (1,85) | (109) | 128 | 261 |
| Fund flows to (from) investors | (1,009) | (1,035) | (839) | (1,038) | 445 | 336 | 596 | 527 |

| *Total for 3 firms* |        |      |      |      |      |      |      |      |
| Sales       | 452,623| 111,690| 68,693| 63,741| 56,217| 52,920| 50,480| 48,882|
| Net operating profit (Loss) | 13,774 | 3,858 | 2,241 | 2,080 | 1,811 | 1,425 | 1,303 | 1,056 |
| Net (Investing) divesting | (50,262) | (30,627) | (15,246) | (2,487) | (1,313) | (580) | (67) | 58 |
| Fund flows to (from) investors | (36,382) | (26,788) | (13,006) | (366) | 487 | 869 | 1,303 | 1,120 |

Sales = revenues reported in audited financial statements of corresponding fiscal year; net operating profit (Loss) = profit (loss) from operations before interest expense; net (Investing) divesting = net investments in working capital, property, plant and equipment (net of depreciation expense which is charged to net operating profit), other assets, and acquisitions; fund flows to (from) investors = net profits less net investing = net payments to (financing from) interest-bearing debt and equity investors (i.e., interest expense, dividends, and securities transactions, including value of stock issued and debt assumed for acquisitions). Derivations follow:

| Generation of fund flows to (from) investors: | Disposition of fund flows to (from) investors: |
| Sales | Cost of goods sold (production costs) | Interest expense paid to debt investors |
| Gross profit | Operating expense and income taxes | Dividends paid to equity investors |
| Net operating profit (Loss) | Net (Investing) divesting | ± Debt paydown-decrease (issue-increase) |
| ± Non-operating cash flows (outflows) | Fund flows to (from) investors | ± Common stock repurchased (issued) |
| Fund flows to (from) investors | = | ± Funds paid (received) through other securities transactions |

Centers. These are record-size acquisitions in the U.S. retail food industry that highlight its changing structure. Safeway has not made such large acquisitions, but its investing and sales growth have been strong over the past 3 years, boosted by a series of acquisitions: Randall’s and Carr-Gottstein Foods Company in 1999, Dominick’s Supermarkets in 1998, and Vons Companies in 1997.

Table 1 also shows that each of the three firms’ investments exceeded the funds they internally generated from net operating profits in recent years (and even exceeded undis-
counted totals over the 7-year interval. The result is that fund flows to investors have been negative and that funds must have flowed from investors in order to finance the investments. Albertson’s and Kroger each financed their huge 1999 acquisitions with over $8 billion in stock issued to the acquired firm’s shareholders plus debt assumed from the acquired firms.

**Acquisitions**

Acquisitions account for most of the sales growth indicated in Table 1. Unfortunately, current rules allow for different ways of accounting for the effect of an acquisition on the acquirer’s income and balance sheets. Acquisitions may be accounted for either as a *purchase* accounting or as a *pooling of interest*, the choice of which affects how one must interpret the subsequent balance sheets and noncash flow items on the income statement. Here we provide a brief explanation of the difference in these two accounting methods and the implications for evaluating firm performance based on how the purchaser-acquirer records the purchase.

**Purchase Price of Acquisition:**

+ Value of acquired firm’s tangible capital
+ Purchase price of acquired firm in excess of tangible capital (goodwill)

Total acquisition purchase price recorded as invested capital by purchaser-acquirer.

Under purchase accounting, the acquiring firm records the tangible capital of the acquired firm at its estimated value in its own accounts for current assets and liabilities, property, plant, and equipment, and other tangible assets. The purchase price almost always exceeds the value of the tangible assets, and the acquirer records this excess as an intangible asset, often termed *goodwill*. This intangible capital represents the cash-generating potential of the acquired firm’s capabilities, brand names, technology, management, production and marketing knowledge, and other forms of organizational capital. Recognizing the value associated with these intangible assets, the market values most firms at a price above the value of their tangible capital.

Further, when an acquirer seeks to purchase a firm, its bid price normally includes an *acquisition premium* over the market price that prevailed before the acquisition bid was announced. This acquisition premium entices the target firm’s board of directors and shareholders to sell their investment. Other potential acquirers may enter the bidding, further raising the acquisition premium. Table 2 shows the implied acquisition premiums offered by Albertson’s, Kroger, and Safeway in their recent large acquisitions. These range from 10% to 30% of the respective target’s preannouncement market price. Acquiring firms expect to justify the acquisition premiums by complementarities or synergies that they will realize from the combination. Unfortunately for acquiring firm shareholders, actual realized synergies often turn out to be insufficient to justify the acquisition premium, mitigating subsequent returns (e.g., see Bradley, Desai, & Kim, 1988). More important for our current analysis, if a purchase transaction includes an acquisition premium, that additional value paid for the target will also be included in the goodwill recorded in the acquirer’s invested capital.

In some cases where the acquirer pays for the acquisition by issuing common stock (without cash payment), it can account for the merger as a *pooling of interests* rather than a purchase. Under pooling accounting, the acquirer simply merges the acquired firm’s
TABLE 2. Acquisition Premiums Offered by Large U.S. Retail Food Firms for American Stores, Fred Meyer, Dominicks, and Vons

<table>
<thead>
<tr>
<th>Acquision</th>
<th>Announcement date</th>
<th>Last trading date before announcement</th>
<th>Albertson’s closing stock price on last trading date</th>
<th>Albertson’s shares exchange rate for ACS shares</th>
<th>Implied offer for ACS (Albertson’s price $\times$ 0.63 exchange rate)</th>
<th>ACS closing stock price on last trading date</th>
<th>Implied premium (Implied offer less ACS stock price)</th>
<th>Percent premium (Implied premium/ACS stock price)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albertson’s Acquisition of American Stores Company (ACS)</td>
<td>8/2/98</td>
<td>7/31/98</td>
<td>48.0000</td>
<td>0.63</td>
<td>30.2400</td>
<td>23.1875</td>
<td>7.0525</td>
<td>30.42%</td>
</tr>
<tr>
<td>Kroger Acquisition of Fred Meyer, Inc. (FMY)</td>
<td>10/18/98</td>
<td>10/15/98*</td>
<td>49.9375</td>
<td>1.0</td>
<td>49.9375</td>
<td>45.3125</td>
<td>4.6250</td>
<td>10.21%</td>
</tr>
<tr>
<td>Safeway Acquisition of Dominick’s Supermarkets (DFF)</td>
<td>10/13/98</td>
<td>10/12/98</td>
<td>49.0000</td>
<td>1.425</td>
<td>41.3750</td>
<td></td>
<td>7.6250</td>
<td>18.43%</td>
</tr>
<tr>
<td>Safeway Acquisition of Vons Companies (VON)</td>
<td>12/15/96</td>
<td>12/13/96 10/29/96*</td>
<td>38.3750</td>
<td>1.425</td>
<td>54.6844</td>
<td>48.8750</td>
<td>5.8094</td>
<td>11.89%</td>
</tr>
</tbody>
</table>

*Safeway made its initial tender offer on Oct 30. Because the Safeway stock price subsequently dropped, terms were renegotiated and a final deal announced December 15. The second column shows the premium of the final terms over the price of VON prior to the original offer.

*Although the merger was officially announced October 18, rumor of the transaction reached the market on October 16. Thus, we use October 15 as the preannouncement closing date.
assets and liabilities into its own accounts (at the acquired firm’s recorded accounting values, including any goodwill that it already had on its books). Thus, the two firms’ accounts are pooled as if they had always been one firm. The excess of the value of the acquirer’s exchanged stock over the accounting value of the acquired assets is not recognized or recorded (i.e., no new goodwill is recorded). More generally, the investment cost of the acquisition is not recorded in poolings. Pooling accounting was eliminated from Generally Accepted Accounting Principles by the Financial Accounting Standard Board in 2001, but is pertinent here because both Albertson’s and Kroger’s huge 1999 acquisitions were accounted for as poolings. This difference in accounting procedures between Albertson’s, Kroger, and Safeway must be taken into account in comparing their post-acquisition performances.

**PERFORMANCE MEASUREMENT**

A firm’s net investing and operations result at any point in time in invested capital balances representing the accumulated, depreciated investment cost of its assets. These assets include investments in (i) tangible capital and (ii) intangible capital consisting primarily of goodwill:

**Invested Capital:**

- Working capital (current assets net of current liabilities)
- Property, plant, and equipment (PPE)
- Other assets

**Tangible capital**

- Intangible capital (e.g., goodwill from purchase acquisitions of other firms)

**Invested Capital**

These assets are employed in the firm’s operations to generate sales and operating profits. While more invested capital has the potential to generate more operating profits, the invested capital must be financed by debt and equity claims with corresponding capital costs. So, a comprehensive profitability measure of a firm’s performance is a ratio of profits to invested capital, ROI:

\[
ROI = \frac{\text{Net operating profit}}{\text{Beginning invested capital}}
\]

which improves only when operating profits increase proportionately more than the capital invested to generate those profits. An economically profitable firm will have an ROI greater than or equal to the cost of invested capital.³

³An alternative transformation of the same concept is economic value added (EVA) popularized by the consulting firm of Stern and Stewart (Stewart, 1990): EVA = net operating profit – (invested capital × cost of capital), where the cost of capital is a weighted average cost of the debt and equity claims used to finance the invested capital. With all else equal, a smaller invested capital balance results in a higher EVA, a measure of economic profit since it reflects returns greater than the opportunity cost of invested capital. Note that market-to-book (market value to book value of equity) and Tobin’s q (market value to replacement value of firm assets) ratios greater than 1 represent market expectation of future economic profits where expected return on capital will exceed the opportunity cost of capital. Accordingly these are ex-ante market-based formulations in relation to ex-post EVA and related historical measures.
Accounting rates of return to the firm represent weighted average returns for all its individual investments that individually vary in profitability. Accounting rates of return depend on the “time shape” of an investment’s benefits, whereby, for example, the early less profitable stage may yield a low ROI and the later stage will yield a high ROI (Fisher & McGowan, 1983); in mature industries this effect is smoothed in whole-firm ROI that aggregates numerous investments at different stages (such as grocery store investments). Accounting performance measures also depend on underlying assumptions, such as depreciation rates, that can hamper comparisons across firms. While these conditions mean that ROI cannot be expected to be constant through time, there are limits to how much it can vary across similar underlying businesses. For example, accounting assumptions that extend assumed fixed asset lives lessen annual depreciation expense and result in larger net operating profits. But this also results in higher (less depreciated) net asset balances that boosts invested capital. The overall impact on ROI is ambiguous.

Overall, however, ROI is the most stable and comprehensive profitability gauge, and is the single most important driver of firm value (Fama & French, 2000; Copeland et al., 2000, p. 157; Cottle, Murray, & Block, 1988, p. 160). ROI and related accounting measures are used to assess firm performance across time, forecast expected cash flows, and estimate firm value. We evaluate several components of ROI for the three leading food retailers. Under the DuPont financial analysis framework, ROI is factored into net operating profit margin and turnover:

\[
ROI = \frac{\text{Net operating profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Beginning invested capital}}
\]

\[
= \text{Net operating profit margin} \times \text{Turnover}
\]

The turnover and profit margin combination is dependent on the industry and type of business. Many low-margin businesses have high turnover. For example, food retailing typically has lower margins but higher turnover than packaged food manufacturing. In another example, if a food retailer decides to integrate back and internalize distribution, then this should save costs formerly paid to wholesalers, and increase net profit margin. Yet this will also require additional investment (an increase in invested capital), thereby reducing turnover. Whether ROI would rise or fall depends on whether the net profit margin improvement is proportionately greater than the increased capital requirements.

### Turnover Measures

Turnover is an efficiency ratio that measures how many dollars of sales are generated for each dollar of invested capital at the beginning of the sales period (we adjust the ratio to account for sales and assets from acquisitions as if acquired midyear). It is a measure of how efficiently the firm uses invested capital (all else equal, less invested capital yields a higher turnover and higher ROI) (Brealey & Meyers, 2000, pp. 827–828, 834–835; Copeland et al., 2000, pp. 159–166). Turnover includes and is reduced by intangible capital reflecting goodwill and related acquisition premiums associated with purchases of other firms. This is investors’ capital that management has invested in the acquired operations and upon which it should earn a competitive return.

Consider a firm that acquires another firm with market power. The acquirer will realize the value of the acquired firm’s market power through high net operating profits, the
numerator of the profit margin and ROI. However, the acquisition purchase price demanded by the sellers should reflect this by capitalizing the value of this extra-normal earning power. This capitalized value will be included in goodwill within the resulting invested capital of the acquirer, the denominator of the turnover ratio and ROI. Thus, the extra-normal profits enhance net profit margins while the goodwill in invested capital reduces turnover efficiency; countervailing effects on ROI. An acquisition’s overall net effect on future ROI would be small if the acquirer pays a purchase price that accurately estimates the value of the acquired firm’s extra-normal earning power. If the acquirer successfully realizes synergies, complementarities, or new market power from the business combination, then ROI could rise as even greater operating profits are earned. On the other hand, if the acquirer pays an acquisition premium greater than that justified by the acquired firm’s extra-normal earning power and any new economies from the combination, then overall ROI would be expected to decline and disappoint the acquirer. Thus, ROI is a measure of how effectively management has invested and used investors’ capital—at least for purchase transactions. Because poolings treat the investment value of acquisitions differently, a straightforward ROI calculation may not be comparable across firms using different acquisition accounting mechanisms.

To better measure extra-normal returns, apart from goodwill and the capitalized value paid to acquired firm stockholders, we also evaluate turnover on *tangible* invested capital and the corresponding return on tangible invested capital (excluding intangible capital such as goodwill).

\[
\text{Turnover-tangible} = \frac{\text{Sales}}{\text{Beginning tangible invested capital}}
\]

\[
\text{ROI-tangible} = \frac{\text{Net operating profit}}{\text{Sales}} \times \text{Turnover-tangible}
\]

ROI-tangible should reflect extra-normal returns from acquisitions that boost net operating profits, since tangible invested capital does not include the capitalized value of those high profits. In general, ROI-tangible reflects any extra-normal returns whether generated from internally developed businesses, or from businesses acquired with or without goodwill or acquisition premiums.

**Profit Margins Measures**

Net operating profit margin measures how much of each dollar of sales is converted to profits. The *gross* profit margin (see above discussion on *generation of fund flows to (From) investors*) is an important component of net profit margin

\[
\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Sales}}
\]

where gross profit = Sales – Cost of Goods Sold (COGS). COGS represents product costs. What remains after COGS are operating expenses, including marketing, research and development, general and administrative expenses, and taxes; the final residual after all operating costs and expenses is net operating profit.
Relative to net operating profit margin, gross profit margin is a less noisy indicator of the relation between a firm’s input and output prices, and has predictive power for future earnings (Lev & Thiagarajan, 1993; Abarbanell & Bushee, 1997). Sales reflect output prices received, while COGS reflects corresponding input prices. Similarly, sales and COGS reflect the corresponding quantity sold. Thus, gross profit margin relates more directly to the questions of how much pricing power the firm commands in both (i) output markets (through differentiation, or oligopolistic power), and (ii) input markets (through low-cost operating capability, pecuniary economies, or oligopsonistic power). These effects are netted in gross profit and cannot be separated and distinguished.

PERFORMANCE OF THE LARGE RETAILERS

Table 3 shows the return on investment analysis with the six performance measures for each of the three large retailers. While it has been difficult to model causes of firm performance, our goal here is to find evidence showing whether there have been changes in performance. To yield evidence on significant change over the 7-year period, each of the performance measures for each firm i was regressed on a trend variable and an intercept

\[ Performance \ measure_i = \alpha_i + \beta_i \cdot \text{Trend} \]

where the Trend variable \( \{1, 2, \ldots, 7\} \) corresponds to the 7 fiscal years. The trend variable coefficient estimates are reported in Table 3 as “Estimated annual change (\( \beta_i \))” with its corresponding p value. Our intent here is to provide evidence on whether and to what degree changes in these measures over the 7 year period reflect an ongoing trend, a concern of policy makers observing industry evolution. This analysis provides some insight on whether these various performance measures reflect trends, apart from hypotheses about contributing factors.

Turnover Performance of Food Retailers

Turnover efficiency, the level of sales generated for each dollar of investment, could be expected to improve with size and expected economies of scale. When firms merge, an often-sought source of synergy is the elimination of duplication between the merged firms’ assets. Remaining assets may yield greater capacity utilization, extending scale economies. To the extent that the assets are intellectual or intangible, capacity may not be clearly finite, further extending potential economies. Table 3 indicates that turnover efficiency has mostly decreased through the 7-year interval. Results show significant (.05 level or less) annual turnover declines of .25 and .28 for Albertson’s and Kroger, respectively. Turnover rose and fell for Safeway, resulting in an overall insignificant decline.

Turnover on tangible assets (Turnover-tangible; Table 3) has tracked full turnover relatively closely for Albertson’s and Kroger until the last year because these firms had not
made substantial acquisitions. In 1999, Albertson’s $12 billion acquisition of American Stores and Kroger’s $12.75 billion acquisition of Fred Meyer were both accounted for as poolings, without new goodwill reflected in invested capital. In recent years, Safeway has made a series of smaller acquisitions accounted for as purchases with goodwill, and so its turnover-tangible has consistently exceeded its turnover.

Turnover-tangible does not show a significant trend for either Kroger or Safeway. That is, there is no significant trend in the amount of sales that they generate per dollar of investment in tangible, operational assets such as working capital, property, plant, and equipment. This indicates that Kroger and Safeway have maintained operational capital

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### TABLE 3. Performance of Large U.S. Retail Food Firms: Changes in Each Annual Performance Measure Estimated From 7-Year Regressions on Trend Variable And Intercept

<table>
<thead>
<tr>
<th></th>
<th>Trend Estimation</th>
<th>Actual Realized Annual Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>p</td>
</tr>
<tr>
<td>Albertson’s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>0.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>Turnover – tangible</td>
<td>0.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>Gross profit margin</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Net operating profit margin</td>
<td>0.00%</td>
<td>.435</td>
</tr>
<tr>
<td>ROI</td>
<td>0.0%</td>
<td>.048*</td>
</tr>
<tr>
<td>ROI – tangible</td>
<td>0.0%</td>
<td>.047*</td>
</tr>
<tr>
<td>Kroger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>−0.28</td>
<td>.810*</td>
</tr>
<tr>
<td>Turnover – tangible</td>
<td>0.03</td>
<td>.873</td>
</tr>
<tr>
<td>Gross profit margin</td>
<td>0.26%</td>
<td>.235</td>
</tr>
<tr>
<td>Net operating profit margin</td>
<td>0.18%</td>
<td>.027*</td>
</tr>
<tr>
<td>ROI</td>
<td>0.7%</td>
<td>.156</td>
</tr>
<tr>
<td>ROI – tangible</td>
<td>1.8%</td>
<td>.125</td>
</tr>
<tr>
<td>Safeway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turnover</td>
<td>−0.20</td>
<td>.252</td>
</tr>
<tr>
<td>Turnover – tangible</td>
<td>0.04</td>
<td>.723</td>
</tr>
<tr>
<td>Gross profit margin</td>
<td>0.43%</td>
<td>.001*</td>
</tr>
<tr>
<td>Net operating profit margin</td>
<td>0.51%</td>
<td>.000*</td>
</tr>
<tr>
<td>ROI</td>
<td>1.2%</td>
<td>.114</td>
</tr>
<tr>
<td>ROI – tangible</td>
<td>2.7%</td>
<td>.002*</td>
</tr>
</tbody>
</table>

* p value (lowest alpha level at which insignificance of trend can be rejected) indicates significant estimate at .05 level.

Trend Estimation:
Annual change = coefficient estimate for annual trend variable on which firm performance variable was regressed
Estimated equation: Performance measure, $= \alpha_i + \beta_t \times$ Annual trend
Positive change estimate indicates increase or improvement; negative trend estimate indicates decrease.

Turnover = Sales/Beginning invested capital (operating assets).
Turnover – tangible = Sales/Beginning invested capital excluding intangible assets (e.g., goodwill).
Gross operating profit margin = (Sales − Cost of goods sold)/Sales = Gross operating profit/Sales (see lower Table 1).
Net operating profit margin = Net operating profit before interest expense/Sales (see lower Table 1).
ROI = Return on investment = Turnover × Net profit margin = Net operating profit before interest/Beginning invested capital.
ROI – tangible = Return on tangible investment = Turnover on tangible assets × Net profit margin.

4 Both American Stores and Fred Meyer already had recorded goodwill from their own previous purchases, and these intangible capital amounts were pooled into the invested capital balances for Albertson’s and Kroger, respectively.
efficiency while showing some overall turnover decline when accounting for intangible goodwill from acquisitions. Safeway has made a series of modest-size acquisitions into which it has been able to more effectively apply its management practices and integrate into its business system. Also helping acquisition performance, Safeway tends to buy chains in more urban areas where there is less competition from Wal-Mart Supercenters (American Institute of Food Distribution, Inc., 2001). Albertson’s, however, shows a significant decline in turnover-tangible. The efficiency of its tangible operational assets has declined, even when not accounting for any acquisition premiums or goodwill in its invested capital. This has been exacerbated recently by its problems in integrating the American Stores acquisition into its operations.

Overall, there is not yet evidence of increased capital efficiency for the leading firms on the front line of consolidation. Recent business combinations may have temporarily restrained improvements in operational efficiencies for even Kroger or Safeway. It may be too early in implementing plans to eliminate duplicate assets. Another factor that could offset efficiency gains is that the retailers have been investing in store improvements to make them more attractive and to support higher profit product lines and services (SEC, 1993–2000). This requires new additions to invested capital, putting downward pressure on turnover performance. Thus, the mix of turnover efficiency and profit margins would change with the upgraded product mix. We next look at profit margin performance.

Profit Margin Performance of Food Retailers

The large food retailers have improved gross profit margins (Table 3). Albertson’s and Safeway significantly improved their gross margin by approximately a half percentage point annually. Albertson’s, Kroger, and Safeway attribute gross margin improvements to store improvements and sales mixes with higher proportions of value-added products and services such as prepared foods, take-out foods, in-store dining, pharmacies, and florists (SEC, 1993–2000). Not surprisingly, the firms do not claim increased market power in their Form 10-K annual reports (SEC, 1993–2000). While increased market power should also have the effect of increasing gross margin, we see that gross margin is an average of multiple product lines and that the product mix is changing over time, confounding efforts to separate market power effects. During the 7-year period, the consumer price index for food at home increased a moderate 2.6% per annum (BLS, 2001), suggesting that gross margin improvements have not been wholly derived from broad retail industry price increases.

Albertson’s, Kroger, and Safeway further attribute improvement to increased buying efficiencies (SEC, 1993–2000), consistent with the initially cited “Wal-Mart model” of increased size. However, note that internalizing distribution operations can be expected to increase gross margins apart from increased efficiencies because input prices will be lower through direct procurement (bypassing wholesalers). Yet, this does not necessarily improve ROI because internalization also requires (i) increased investment that reduces turnover and (ii) greater operating expenses, which reduce net profit margin; both of these are a drag on ROI. For internalization to be an effective investment, related complementarities, operational coordination, and other benefits should increase ROI or at least generate an ROI in excess of the weighted average cost of the invested capital.

Overall net operating profit margin accounts for operating expenses for skilled management and marketing that would support upgraded product mixes with higher gross margins. Table 3 shows that Safeway improved its net operating profit margins, as it did
with gross margins. While Safeway has modernized and sought to differentiate its stores and its customers’ shopping experience, it has also controlled operating expenses through a continuing program of cost control. It claims its cost control to be the best among major food retailers (SEC, 1993–2000). Safeway has very skillfully selected and integrated its acquisitions over the years (Zwiebach, 2001). Kroger’s net profit margin improved more modestly. Kroger claims its synergy savings from the Fred Meyer acquisition to be exceeding expectations (Springer, 2000; Zwiebach, 2001).

In contrast, Albertson’s gross margin improvements did not carry through to net profit margins due to increased operating expenses. Albertson’s net operating profit margins have not shown a significant trend over the 7-year period. However, Table 3 shows a large decrease in the last year due to (i) initiatives to improve stores and increase sales, and (ii) merger expenses such as integration costs, labor and severance costs, general and administrative expenses, and related store divestitures required by government antitrust officials (SEC, 1993–2000; Zwiebach, 2000).

Return on Investment of Food Retailers

By the overall profitability measure, Table 3 shows that Safeway and Kroger have improved net operating profit margins enough to improve ROI. ROI has significantly declined at Albertson’s.

All firms have been able to improve their gross profit margins over the past 7 years. This has been expected for large firms based on their increased size yielding pecuniary economies and bargaining power. But the retailers have also changed the shopping experience and increased the mix of value-added products and services to increase gross margins. Such upgraded product and service mixes usually require greater operating expenses for marketing and greater tangible investments. Yet Safeway and Kroger have also improved net operating profit margins, while maintaining the efficiency of their tangible operating investments (turnover-tangible). To support the upgrade in their product and service mix, these firms have also invested in store improvements, adding to tangible invested capital. Yet Safeway and Kroger have been able to maintain turnover efficiency on tangible assets. In contrast, Albertson’s has struggled with store improvement and merger expenses so that their net profit margins and the efficiency of their supporting tangible investments have declined.

Through ROI, we consider the return to all recorded invested capital, including goodwill, the capitalized value of an acquired firm’s extra-normal earning power over the value of the underlying tangible assets. This capitalized value is realized and received by the selling stockholders of the acquired firm. The objective for the acquirer is to ultimately justify the purchase price with any acquisition premium by subsequently realizing even higher extra-normal returns. The acquirer can achieve this through new complementarities, synergies, or market power from the new business combination. Considering this, Safeway has still been able to improve its overall ROI. Though the increase in overall ROI is not as significant, it is evidence that Safeway’s acquisitions have not dragged down its returns on overall invested capital. It is tempting to say the same for Kroger, since its overall ROI has also improved. However, Kroger’s improvement is less significant and its recent large acquisition of Fred Meyer was accounted for as a pooling. Pooling does not account for the full acquisition price and thus it is not reflected in total invested capital, tending to overstate overall ROI.
In the next section, we analyze internal rates of return that account for acquisitions, purchase, or pooling, at their full value through investing fund flows. This is a cumulative return that incorporates market valuations of the firms to yield information on how the capital markets have assessed these firms’ overall performance, including investing activity and associated prospects. Expectations about the future are pertinent to this case of how the leading retailers are investing to prepare for the still unfolding future of food retailing.

**INTERNAL RATE OF RETURN TO INVESTMENT**

The success of investments depends on future returns that we cannot now observe or measure. Albertson’s and Kroger’s record-size acquisitions just occurred in 1999 and their effects have not been fully revealed. However, when valuing companies, capital market participants must develop expectations about future performance, including firms’ abilities to integrate acquisitions, cut costs and expenses, invest to exploit new opportunities, and stabilize operations.

In this analysis, we assume that U.S. markets are relatively efficient at incorporating information and knowledge into performance expectations and stock prices. Resulting valuations are thus interpreted to represent relatively informed and unbiased expectations about these major firms’ future performances from which we can make inferences about continuing prospects. We incorporate the firms’ fund flows to investors over the 7-year interval (Table 4) with the beginning and ending capital market valuations to determine the firm’s internal rate of return (IRR). Thus fund flows to investors incorporate information on performance over the sample interval and ending market value incorporates information about expected future performance. We follow Fama and French (1999), where the IRR is the discount rate that sets the beginning value of investor funds equal to the net present value of the firm’s fund flows to investors plus the ending market value of investor funds:

\[
\text{Beginning market value of investor funds}_{i,t=0} = \sum_{t=1}^{T} \frac{\text{Fund flows to investors}_{i,t}}{(1 + \text{IRR}_i)^t} + \frac{\text{Ending market value of investor funds}_{i,T}}{(1 + \text{IRR}_i)^T}
\]

where for each firm \(i\) fund flows to investors are as defined previously, year \(t = 0\) represents the beginning of the first fiscal year (1993), \(T = 7\) represents final fiscal year (1999), and the market value of investor funds equals (i) the market value of its equity (share price multiplied by number of shares outstanding) plus (ii) the accounting book value of debt and preferred stock, which closely estimates market value (use of book value follows Fama and French [1999] as well as others; e.g., Megna and Klock [1993]). Beginning market value data are taken as of the start of the beginning fiscal 1993 date \((t = 0)\), and ending market value data are taken as of the fiscal year-end 1999 ending date \((t = 7)\).

5We assume that markets are efficient to the extent that valuations are unbiased so that trading for extra-normal profits cannot be expected. Stock market efficiency is the prevailing theory in that there is not a comprehensive alternative that better describes the wide range of market behavior and anomalies (Fama, 1997).
The second and third columns of Table 4 show the beginning and ending fiscal year dates, corresponding market values of investor funds, and corresponding dividend- and split-adjusted common stock share prices. The fourth column of Table 4 shows the IRR to investor funds. The fourth column also shows the returns to just common stock shares underneath the IRR for each firm (IRR is the return to total investor funds, independent of the capital structure mix of debt and equity). A greater ending market value incorporates expectations about greater future performance, and results in a higher IRR on investment to date. When so incorporating expectations about future performance with 7 years of realized performance, Safeway again emerges as the top performer with an IRR = 33.1%, followed by Kroger’s IRR = 12.7%.

Albertson’s and Kroger made significant acquisitions and, as is typical, had to pay a premium over the prevailing market price of the acquired firms (increasing net investing and reducing fund flows to investors). Thus, while the merged firm may earn a strong return on its tangible invested capital, the returns to investors may not do as well because
of a high acquisition price. The value of the common stock issued to acquire these firms is included in investing fund flows, reducing fund flows to investors and so reducing IRR. As shown in Table 2, Albertson’s premium for acquiring American Stores was over 30% above the prevailing market value. Albertson’s deteriorating ROI performance has lessened funds generated from operations, weakening fund flows to investors, and lowering market expectations and valuations. The result is that Albertson’s market IRR has been very weak. Although the firm may earn extra-normal profits through economic efficiencies, differentiation, or market power, Albertson’s investors will not necessarily benefit due to the high acquisition price (shareholders of the acquired firms benefit by selling at the premium).

Safeway’s acquisitions have been smaller, both in total dollar value and in the premiums paid, while its investments have earned high returns. Kroger acquisitions have been large, but like Safeway, Kroger also paid a much lower premium for Fred Meyer (roughly 17%) than Albertson’s paid for American Stores. Kroger’s stockholders have still realized strong market returns (20.7%). This is because the firm has performed well (ROI), and because it was highly leveraged (small equity base) from the beginning of the period, allowing its shareholders to realize returns substantially larger than returns to total investor funds.

Because fiscal years differ across firms, the last column of Table 4 shows returns to common shares from the last fiscal year-end to 2000 calendar year-end. This updates the stockholder returns to a common date (this is not possible for the IRR, which is a comprehensive calculation that requires data from the unavailable full annual financial statement). These recent returns are high for Kroger and Safeway, reflecting continuing market confidence in their ability to earn strong returns in the future. This contrasts Albertson’s negative return, reflecting continuing concerns about its ability to fully recover soon.6

CONCLUSION

Overall, we find only modest evidence that the financial returns to the rapid growth strategies of the three largest food retailers have begun to be realized through fiscal year 1999. We do find that gross margins have risen across the board. At least part of the gross margin improvement is attributable to investments in store improvements meant to enhance and differentiate the consumer shopping experience as well as support higher value-added products and services. For Kroger and Safeway, increased cost control and buying efficiencies also seem to have contributed to gross margin improvement. It is possible that increased product market power may also have contributed, but there are no separately observable measures that would allow us to determine if and to what extent market power was indeed a cause.

Although gross margins have increased, overall accounting returns on investment have not. A probable cause is that the added invested capital associated with store improvements and value-added services has reduced turnover efficiency of tangible capital. Albertson’s has been reporting difficulty in controlling costs and expenses that has pushed

6Note that a market rate of return, either IRR or returns to shareholders, excess over the cost of capital represents the rate of economic value creation. We have not attempted here to measure the cost of capital due to substantial error that plagues measurement of the cost of equity capital, particularly at the firm level. Instead we note that differences in returns across firms in this analysis are substantial and exceed any differences that would exist across their respective costs of capital, and so would not affect the conclusions.
down its net profit margin, turnover, and return on investment. Albertson’s shows evidence of inefficiencies from its acquisitions, which may subside over time as it integrates its new merged structure. Capital market valuations do not now indicate that it is expected to realize a strong collective return on its investments to date. This may reflect the high price paid for their acquisitions.

By contrast, Safeway has been a strong performer all around. It is the one Standard and Poor’s 500 food retailer to significantly increase its operating ROI, and its valuation implies market confidence in its future performance. There is not yet clear evidence that larger size will result in greater returns. Yet it is early in the game, and when expansion slows, the large food retailers, including Albertson’s, may stabilize at significantly higher levels of return on investment.

REFERENCES

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