Alternative Profitability Measures and Marketing Channel Structure: The Franchise Decision

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Analysis of marketing channel structure in general, and the decision to franchise in particular, has assumed that the decision maker is seeking to maximize the long-term economic value of the firm. In this article, we consider an alternative accounting-based objective function. We explore some circumstances that might lead to the use of an accounting-based objective function, including the incentive structure faced by non-owner managers, the life cycle of the firm including an impending initial public offering, and data availability considerations. A simple model of franchisor performance is developed and several scenarios of franchise system expansion examined. Decisions to open franchised or company-owned outlets are compared using the competing objective functions.

Comparison of AV and EV Measures

AV measures, such as net income (NI) and earnings per share (EPS), are calculated using Generally Accepted Accounting Principles (GAAP). GAAP “encompasses the conventions, rules, and procedures necessary to define accepted accounting practice at a particular time” (AICPA, 1995, p. 485). In a franchising firm with a simple capital structure, NI
is calculated by deducting ordinary expenses from ordinary income. Ordinary expenses include the costs related to the selling of franchises (e.g., recruiting franchisees), of servicing (i.e., monitoring) franchised units, and of operating and servicing company units. EPS is calculated by dividing NI by the number of shares of stock outstanding.

In contrast, EV measures, such as net operating profit after tax (NOPAT) and r (the operating return on assets), are calculated by making adjustments to their AV counterparts (NI and EPS). There are numerous residual income or EV-based measures of firm performance. We use a simplified version of the most familiar measure Economic Value Added or EVA® (Stewart, 1991), noting that there are over 160 versions of that particular measure (Myers, 1996). EVA relates NOPAT to capital employed as follows: \[ EVA = [(NOPAT/Capital) - Cost of Capital] \times Capital. \] The component (NOPAT/Capital) is the EV performance measure and must exceed the cost of capital to add value to the firm. In our model, we assume the proportion of debt to equity (i.e., the capital structure) to be invariant with respect to the franchising decision. Thus, the cost of capital is not affected by that decision, and our EV analysis focuses solely on the NOPAT/Capital component.

In a firm with a simple capital structure, NOPAT starts with NI, and adds back two categories of expenses that were deducted in calculating NI: (1) expenses paid to providers of capital other than holders of common stock, and (2) expenses deemed to lack “economic reality” with respect to company valuation. The purpose of the first category of add backs is to reflect the firm’s total operating return. In a firm that incurs debt, these add backs include interest expense after tax. The second category of add backs is made because GAAP conventions represent compromises between reporting the operating economics of the firm and reporting information that is usable for other purposes (e.g., for decisions about extending credit). The EV measure, r, therefore, is calculated by dividing NOPAT by total invested capital (not just equity capital, as in EPS) (see Table 1).

Although the EV measure, r, and the AV measure, EPS, differ both with respect to their numerators (the income-derived term of the measures) and with respect to their denominators (the capital-base-derived term), it is the difference in their denominators that has the greatest impact on the decision to favor either franchised or company-owned outlets. The effect of the differences in the denominators is that franchisors who use AV measures may favor asset accumulation (company-owned outlets) in circumstances in which EV measures, which focus on asset efficiency, may discourage asset accumulation (and thereby favor franchised units).

### Economic and Alternative Assumptions in Franchising Research

From the outset, the assumption that franchisors pursue an economic value maximizing approach (using EV measures) has been the foundation of most of the research concerning franchising (Rubin, 1978). As March (1962, p. 670) has noted, however, “modern observers of actual firm behavior report persistent and significant contradictions between firm behavior and the classical assumptions” (i.e., the assumptions of profit or utility maximization). Consequently, some researchers have considered other goals for franchisors, such as growth (Kaufmann and Dant, 1996), survival (Shane, 1996), and power and control, for example, the greater ability to control strategic input from franchisees as compared with heavily invested venture capitalists (Lafontaine and Kaufmann, 1994). Nevertheless, because relatively few researchers have applied non-economic approaches directly to the questions of franchise ownership structure and ownership redirection, the standard economic assumption has dominated research in this area.

We contend that the assumption that franchisors invariably seek to maximize economic value is too strong and may lead to a misinterpretation of observed choices with respect to the ownership of units. We are not suggesting that franchisors act irrationally. We do suggest that there are circumstances in which a franchisor may be guided directly by AV measures or by an alternative objective function that involves the use of AV measures. Empirical evidence suggests that improving a firm’s performance on AV measures has been an important goal for many senior executives in the United States. In fact, Jensen (1989) suggests that one of the critical problems with the public corporation is that managers traditionally seek to maximize earnings (an AV measure) instead of value.

### Size-Based Managerial Compensation

One driving force behind a franchisor’s focus on AV measures may be executive compensation. The connection between increases in executive pay and increases in firm size has been consistently demonstrated (Murphy, 1985). Thus, senior managers of publicly held franchise companies may favor building the company’s asset base by increasing the proportion of company-owned units, even if a lower proportion would maximize EV measures of performance. On the other hand, if firms move toward the use of compensation plans based on residual income or firm value, the importance of AV measures to top management would diminish (Wallace, 1996).

### Data Availability

It is quite difficult for inside management to compile the data necessary to create accurate EV measures (Myers, 1996); it is even more difficult for outside investors to get independent access to the data necessary to construct the measures [although some proprietary measures are available for purchase, see Biddle, Bowen, and Wallace (1996)]. EV adjustments, such as the valuation for goodwill amortization and changes in reserves, often are too idiosyncratic to permit efficient comparisons across firms. On the other hand, AV data concerning franchisors and public companies are readily available, and
Table 1. Comparison of AV and EV Metrics

<table>
<thead>
<tr>
<th></th>
<th>AV</th>
<th>EV</th>
<th>Informational Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Measure</td>
<td>Net income (after tax) (NI)</td>
<td>Net operating profit after tax (NOPAT)</td>
<td>AV measures net income after interest is deducted. EV measures operating profit before interest is deducted. AV and EV are both after tax measures.</td>
</tr>
<tr>
<td>Standardized by</td>
<td>Number of shares (none when NI is used alone)</td>
<td>Invested capital</td>
<td>Primary AV measure becomes EPS, primary EV measure is r, operating return on capital (or assets).</td>
</tr>
<tr>
<td>(Denominator)</td>
<td></td>
<td></td>
<td>AV evaluates operations and financing together. EV separates efficiency of operations (r) from financing decisions.</td>
</tr>
<tr>
<td>Units of Measure</td>
<td>EPS is $</td>
<td>r is %</td>
<td>The EV metric (r) is compared to the cost of capital. The aggregate $ EV is calculated after scaling by capital employed.</td>
</tr>
<tr>
<td>Interpretation of</td>
<td>Absolute size</td>
<td>Relative efficiency</td>
<td>AV requires a benchmark to judge efficiency. EV relates to a direct efficiency benchmark—the cost of capital. The cost of capital should be minimized by the astute use of leverage in the financing decisions.</td>
</tr>
<tr>
<td>Measure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

investors are accustomed to analyzing data in AV form, a process explicitly facilitated by the use of GAAP guidelines.

Even if EV measures have become more popular for internal management purposes, AV measures remain important measures for investors. Thus, franchisors who wish to attract or maintain the interest of investors are likely to attend to AV measures. In addition, investors' assessments of firm value are based not just on the present value of cash flows from assets in place, but also on the present value of growth opportunities. When the growth opportunities component of firm value dominates, the estimation of EV measures is much more difficult, and AV measures are more likely to be used to assess the firm’s value.

Other Firm Life-Cycle Considerations

Many franchisors began as small retail entrepreneurs, and have used franchising to expand their business far beyond their initial dreams and aspirations. In some cases, the business sophistication of those franchisors lags their expansion success, and the use of more familiar AV measures continues even when the system should have outgrown the initial naivete. In a franchise system’s life cycle, therefore, AV measures may dominate until the firm moves from its initial entrepreneurial orientation to become a more professionally run company.

Even sophisticated franchisors who are contemplating an initial public offering of their equity (an IPO) may be driven to favor AV measures. Investment bankers commonly advise companies to build both NI and assets in anticipation of an IPO (Continental Franchise Review, 1995). To fully benefit from an IPO, a company must be large enough in terms of revenue and earnings to attract institutional investors and be followed by industry analysts. Common target levels of revenue and net income are $20 million and $1 million (Blowers, Ericksen, and Milan, 1995). It is interesting to note that franchise companies often emphasize total system sales from both franchised and company-owned outlets when speaking to the press even though the franchisor’s revenue may only be a small portion of those sales.

The importance of AV performance to the success of an IPO leads many investment bankers to advise franchisors to open more company-owned units and to buy back existing franchised units, even if the units must be reacquired at higher prices than would be justified using EV measures. Opening company-owned units or buying back previously franchised units may depress EV measures (because of the increase in the investment base—the denominator of r), but it increases the franchisor’s current and expected NI and EPS, as well as its asset base. (Pure franchising companies often have relatively few assets other than their franchise contracts, which typically are not valued by investors as highly as the bricks and mortar of company-owned units.)

After an IPO is completed, management still may have good reason to use AV measures. Although there is some disagreement (see Stewart, 1991), EPS still appears to be the market’s pre-eminent measure of firm performance. EPS “commands more interest and is more instrumental in determining market price” of a stock than any other measure (Sharp, 1986, p. 38). “The strongest influence on stock prices is investor expectations of a company’s future earnings” (Klott, 1987, p. 179).

Academic studies find a close, long-term correspondence between earnings and stock prices (Elton and Gruber, 1995; Fischer and Jordan, 1995). The relationship is not merely statistical, but has a “strong base in the theory of investment value” (Harrington, Fabozzi, and Fogler, 1990, p. 137). Although he decries it, Rappaport (1986, p. 19) agrees that “there is an obsessive fixation on earnings per share as the scorecard...
of corporate performance.” Finally, in a direct test of the relative information content in EV and AV measures, Biddle, Bowen, and Wallace (1996) find no evidence to suggest that EV measures outperform AV measures in predicting stock prices.

The positive impact of increasing the proportion of company-owned outlets on stock price was demonstrated by Brickley, Dark, and Weisbach (1991). They posited that the stock price increase was the market’s response to changing monitoring costs (i.e., the franchisor’s decision to increase the proportion of company outlets signals that the franchisor’s cost of monitoring outlets has decreased). However, the stock price increase also is consistent with a market response to the positive changes in AV measures that result from the higher proportion of company outlets.

A Simple Model of Franchisor Results Using EV and AV Measures

As suggested above, for a variety of reasons including the anticipation of an IPO, franchisors may focus on AV measures. The impact of this focus is to lead them to acquire franchised outlets or to shift to opening company units. To demonstrate this effect, we use a simple algebraic model of franchise economics.

Description of Model

The model transforms input assumptions into two sets of measures of franchise system value: AV measures and EV measures. The AV measures are based on growth in NI. The EV measure, \( r \), is a measure of the return on capital employed (see Appendix A). Two potential revenue streams a franchisor may receive are included in the calculations: revenue from franchising, and revenue from company-owned units. We vary the number of franchised and company-owned units added to the system each year to reflect three alternative expansion strategies (all units company-owned, all units franchised, and a mix of both), and examine the results in terms of the AV and EV measures. We also examine measures of firm size under each expansion strategy.

The model uses the following input variables and assumed values:

1. Initial franchise fee = $20K
2. Ongoing royalty rate = 6% of gross sales
3. Average volume of a franchised unit = $300K per period
4. Franchisor’s cost to service (monitor) each franchise unit = $10K per period
5. Franchisor’s cost to sell a franchise = Initial franchise fee
6. Average volume of a company-owned unit = Average volume of a franchised unit
7. Average operating expense ratio of company-owned units = 75%
8. Franchisor’s cost to service (monitor) each company-owned unit = 3X the Franchisor’s cost to service (monitor) each franchised unit
9. Each franchised unit requires the franchisor to make a one-time infrastructure investment of $2K
10. Each company unit requires the franchisor to make a one-time infrastructure investment = 2X the one-time infrastructure investment required for each franchised unit
11. It requires an investment of $150K to open a unit
12. Franchisor borrows 50% of the investment needed to open a unit
13. The interest rate on franchisor borrowing is 8.0%
14. The franchisor incurs a total effective tax rate of 50%

Using these assumptions, the model returns plausible results that are consistent with published analyses. For example, the assumptions produce earnings before interest, taxes, depreciation, and amortization (EBITDA) with respect to franchise royalties of 44%. In two separate analyses of franchise system earnings, SohlenRosenfeld Capital used EBITDA values of 25% (Continental Franchise Review, 1995) and “40 percent plus” (Continental Franchise Review, 1996). Thus, the assumptions provide reasonable results with respect to the first revenue stream: revenue from franchising. In fact, the model’s assumptions produce results on the high end for franchise revenue. This suggests that if bias exists in the model’s AV measures, it would act to reduce the preference for company-owned units over franchised units. The assumptions also produce unit-level EBITDA margins of 15% for company-owned units. This figure equals the margins used by SohlenRosenfeld Capital (Continental Franchise Review, 1995) and supports the reasonableness of the assumptions with respect to the second revenue stream: revenue from company-owned units.

We calculate three AV measures of firm size and two AV measures of profitability. The three measures of firm size are: (1) total revenue in year 10, (2) NI in year 10, and (3) total capitalization in year 10.

The AV measures of profitability are based on the growth of NI over the 10-year period. For tractability purposes we have assumed a simple equity structure (i.e., a structure with common stock only), and have assumed that the number of shares remain constant. The effect of these assumptions is that growth of NI is equivalent to growth of EPS. The NI growth rate is measured as (1) the average growth rate over the 10-year period, and (2) the compounded growth rate for the 10-year period. The EV output measure is the average \( r \) over the 10-year period.

Findings and Interpretations

Firm Size

A firm’s management will favor a company-owned development strategy if it perceives compensation or IPO benefits to be related to AV measures of firm size (see Table 2).
Table 2. AV Measures of Firm Sizea

<table>
<thead>
<tr>
<th></th>
<th>Revenue in Year 10</th>
<th>NI in Year 10</th>
<th>Total Capitalization in Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franchising</td>
<td>$7,640</td>
<td>$1,520</td>
<td>$1,000</td>
</tr>
<tr>
<td>Company-owned</td>
<td>$114,000</td>
<td>$5,985</td>
<td>$61,800</td>
</tr>
</tbody>
</table>

a Adding 40 units per year for 10 years, all franchised or all company-owned; all figures in 000s.

Firm Profitability

Using the same two scenarios as in Table 2, we use the model to calculate AV and EV profitability figures over the 10-year period. Table 3 shows the resulting AV-measures (average and compound growth rate of NI) and the resulting EV measure, r, under each scenario.

If the firm must choose a pure strategy and uses EV measures, it will franchise its units because the r achieved is greater than if it owns the units. The AV profitability measures do not favor either pure strategy, so the firm will make its decision using other criteria (perhaps including a size criterion which will favor company ownership, as shown in Table 2).

Next, we use the model to simulate a familiar scenario: a franchisor which has franchised in its earlier years, and now must decide whether to continue franchising. This decision may become salient because the franchisor is considering an IPO or because the franchisor now believes (perhaps mistakenly) that capital is more available to it, and it doesn’t “need” to franchise (Oxenfeldt and Kelly, 1968).

We assume the franchisor franchises for five years and then either (1) continues franchising during years 6–15, or (2) switches to company-owned units. Table 4 shows the AV and EV-measure results for the 10 years after the decision is made (i.e., for years 6–15).

If the firm uses EV measures, it will continue to franchise because the r achieved is greater than if it switches to a company-owned strategy. If the firm used AV measures, the profitability results are better if it does switch to company-owned outlets. AV measures of firm size in year 15 also favor switching to company-owned units.

The phenomena portrayed in Table 4 do not depend on the particular year in which the switch is made and are not sensitive to reasonable changes in the model’s assumptions. (As a whole, the assumptions favor franchising.)

The effect of making a switch from franchised to company units is consistent, even if the switch involves a mixed ownership scenario. In the pure scenario described above, the firm switches from all franchised units (40 per year) to all company-owned units (also 40 per year). In the mixed scenario, the firm opens 30 franchised units and 10 company units per year over the first five years, and then must decide whether to maintain or alter that mix. The firm may continue to favor franchised units (30 per year) over company units (10 per year) or may switch to a strategy that favors company units (30 per year) over franchised units (10 per year). Table 5 shows the AV- and EV-measure results for the 10 years after the decision is made.

Consistent with the analysis of the pure strategies, if the firm uses EV measures, it will continue to franchise most of its units and will not increase the proportion of company-owned units. If the firm uses AV measures, it has strong incentives to increase the proportion of company-owned units.

Discussion and Implications for Related Research

Oxenfeldt and Kelly (1968) posited that franchisors franchise begrudgingly, and only do so in order to attract capital for the initial expansion of their operation. Franchisees are hard to control, so when franchisors no longer face human and financial capital constraints, they will buy back the franchises and operate all but the marginal outlets as company stores. At the core of Oxenfeldt and Kelly’s idea was the accepted belief that capital could be more efficiently acquired by selling franchised outlets than by selling shares in a company chain. This thesis set in motion a series of theoretical and empirical papers that sought to prove or disprove their basic contention [see Dant, Paswan, and Kaufmann (1996) for a meta-analysis of the relevant research].

Rubin (1978) attacked their basic assumption and argued

Table 3. EV and AV Measures of Profitabilitya

<table>
<thead>
<tr>
<th></th>
<th>NI Average Growth Rate Years 1–10</th>
<th>NI Compounded Average Growth Rate Years 1–10</th>
<th>r Average Years 1–10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Franchising</td>
<td>0.46</td>
<td>0.39</td>
<td>1.12</td>
</tr>
<tr>
<td>Company-owned</td>
<td>0.46</td>
<td>0.39</td>
<td>0.10</td>
</tr>
</tbody>
</table>

a Adding 40 units per year for 10 years, all franchised or all company-owned.
Table 4. EV and AV Measures with Complete Change in Strategy

<table>
<thead>
<tr>
<th></th>
<th>NI Average Growth Rate Years 6–15</th>
<th>NI Compounded Average Growth Rate Years 6–15</th>
<th>$r$ Average Years 6–15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue franchising</td>
<td>0.11</td>
<td>0.11</td>
<td>1.51</td>
</tr>
<tr>
<td>Switch to company-owned</td>
<td>0.23</td>
<td>0.22</td>
<td>0.14</td>
</tr>
</tbody>
</table>

*a Adding 40 franchised units per year for five years, then continuing or changing strategy for the next 10 years.

that if capital markets are efficient, then the greater diversification offered to investors in a chain of stores (and the commensurate reduction in risk) would make the sale of shares less costly than capital provided by franchisees (because franchisees bear the undiversified risk of owning only one store). Consequently, Rubin argued, the rationale for franchising must lie elsewhere: in the incentives created by the franchisees’ claims to profits and the bonding effect of the franchise fee. Lafontaine (1992) responded that if Rubin’s incentive arguments were correct, then investors would be aware of the motivation and monitoring problems faced by a company using employee store managers. This would cause investors to demand higher returns on their share holdings, which could make franchisee-provided capital relatively more efficient after all. Thus, the need to finance expansion remains a possible rationale for franchising (Kaufmann and Dant, 1996).

The question of whether franchising reflects a preferred method of financing expansion or the solution to agency problems takes on a different meaning if we change the basic assumptions about the objective function of the franchisor. As shown above, if a franchisor is seeking to maximize AV, it will benefit more from capital invested in company units than from capital invested in supporting franchising, even though the capital invested in company units may be less efficient according to EV measures than capital invested in franchising. Company outlets deliver more NI than franchise royalties deliver, and AV measures are driven by NI. Therefore, all else being equal, a franchisor maximizing AV will favor company outlets and will franchise only if it must (i.e., only if it has no access to capital other than from franchisees).

To this point, we have focused on the efficiency of capital. What is the impact of considering agency issues? Franchisees are assumed to be less likely to shirk and thus deliver greater store level returns than employee managers. An AV maximizing retailer will franchise an outlet if, and only if, store managers shirk so severely that the operating profits from a company outlet are less than the net royalties (i.e., royalties minus the operating expenses of running the franchise system) the franchisor would receive from the outlet in the hands of a franchisee. Because royalties are typically a relatively small percentage of sales, this rarely occurs. Therefore, for AV-maximizing retailers, franchising is more likely to reflect the lack of an alternative source of capital than an attempt to solve agency problems.

On the other hand, for EV maximizing retailers, the cost of the capital tied up in company-owned outlets is charged against NI, and the franchising becomes more attractive even when sufficient capital is available to open company-owned units.

Our analysis has significant implications with respect to Oxenfeldt and Kelly’s thesis. Retailers who manage their busi-

Table 5. EV and AV Measures with Partial Change in Strategy

<table>
<thead>
<tr>
<th></th>
<th>NI Average Growth Rate Years 6–15</th>
<th>NI Compounded Average Growth Rate Years 6–15</th>
<th>$r$ Average Years 6–15</th>
</tr>
</thead>
<tbody>
<tr>
<td>All 40 franchised, year 6 switch to franchising 30 and opening 10 company-owned</td>
<td>0.11</td>
<td>0.11</td>
<td>0.18</td>
</tr>
<tr>
<td>All 40 company-owned, year 6 switch to opening 30 company-owned and franchising 10</td>
<td>0.16</td>
<td>0.16</td>
<td>0.14</td>
</tr>
</tbody>
</table>

*a Adding 40 franchised or company-owned units per year for five years, then changing to a mixed strategy for the next 10 years.
ness so as to maximize AV instead of EV will be more likely to favor owning company units, and vice versa. Consequently, if a franchisor shifts from EV to AV objectives (for example, in anticipation of an IPO), one would expect to see the franchisor move toward the greater proportion of company-owned outlets predicted by Oxenfeldt and Kelly, but for an entirely different reason than the one they proposed.

On the other hand, if a franchisor shifts from AV to EV measures, it is likely to franchise a greater proportion of its outlets. This shift is contrary to Oxenfeldt and Kelly’s hypothesized life-cycle tendency toward company-owned outlets, and may explain some of the contradictory empirical results in this area (Dant, Paswan, and Kaufmann, 1996).

We have discussed the reasons a firm may shift from EV to AV measures. Shifts in the other direction also are occurring. EV measures are being marketed aggressively by consulting firms, including Stern Stewart & Co., HOLT Value Associates, and the Boston Consulting Group. At the same time, large U.S. companies are developing their own EV measures in-house (Myers, 1996). A number of public companies have shifted from AV to EV measures. For example, lamenting the amount of capital required to open company-owned restaurants, the chairman of Pepsico told analysts that by leveraging its funds to open more franchised outlets, Pepsico subsidiary Pizza Hut could double its “free” cash generation (Rudnick, 1995). A shift to a more EV-focused strategy may be one explanation for Pepsico’s abrupt reversal from a clear strategy of reacquiring franchises in the late 1980s to a program of selling company-owned outlets to franchisees (PRNewswire, Sept. 26, 1996). It is also consistent with the recent decision to spin off the entire restaurant group.

Our model and analysis have a narrow focus. We have considered the influence of the choice of EV versus AV financial measures on firm structure in only one context: the marketing channel decision to franchise. Most of our consideration of the decision to franchise falls within one framework: a framework of economic rationality. Our analysis may be limited to franchisors who are sophisticated enough to understand and attend to the differences between EV and AV approaches. Nevertheless, because of the demonstrated impact of a shift in orientation from EV to AV measures or vice versa and because of the evidence that these shifts do occur, we believe it is important for researchers to identify firm-specific objectives and to incorporate them in the analysis of the decision to use franchised or direct channels.

References


Appendix A

The AV measure, \( NI \) is calculated in the model as follows:

\[
NI = Rev - Exp
\]

where \( Rev = Rev_{fr} + Rev_{co} \)

\( Rev_{fr} \) = revenue from franchising = initial franchise fees (IFF) + periodic royalties (Roy)

\( Rev_{co} \) = revenue from company units = gross sales at company units

and

\( Exp = Exp_{fr} + Exp_{co} + \text{Depreciation} + \text{Taxes} \)

\( Exp_{fr} \) = expenses of franchising = [exp of selling franchises (Sell) + exp of servicing [monitoring] franchises (Mon_{fr})]

\( Exp_{co} \) = expenses of company units = [operating exp of the units (OpExp) + exp of servicing [monitoring] co units (Mon_{co})].

Re: Franchising:

\( IFF = 20,000 \times \text{number of new franchised units opened during period (New_{fr})} \)

\( Roy = 0.06 \times \text{average gross sales of a franchised unit (AGrSales_{fr})} \times \text{average number of franchised units open in period (A#Units}_{fr}) \)

\( A#Units_{fr} = \text{number of franchised units open at end of prior period} + 0.5 \times \text{New}_{fr} \)

\( Sell = IFF \)

\( Mon_{fr} = Mon$Fr \times A#Units_{fr}, \quad \text{where Mon$_{fr} = $10,000} \)

Re: Company units:

\( OpExp = 0.75 \times Rev_{co} \)

\( A#Units_{co} = \text{number of company units open at end of prior period} + 0.5 \times \text{number of new company units opened during period (New}_{co}) \)

\( Mon_{co} = 3 \times Mon$Fr \times A#Units_{co} \)

The EV measure, \( r \), is calculated as follows:

\[ r = \frac{NOPAT}{Total \, Capital} \]

where \( NOPAT = NI + \text{Increase in Equity Equivalents in Period} + \text{Interest Expense after Tax} \)

and

\( Total \, Capital = \text{Total Debt (DbtTot)} + \text{Total Equity (EqTot)} + \text{Cumulative Total Equity Equivalents} \)