

**RETURN MARGINS FOR ALBERTA BOTTLE DEPOTS**

**Rebuttal Evidence  
of**

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## 1 EXECUTIVE SUMMARY

2 ScottMadden confirmed in response to ABDA #13 that their Pre-Tax Return Margin (RM)  
3 recommendation of 7.21% to 7.55% indicates a **significant increase** to the existing approved  
4 after-tax margin of **3.85%** and the 2013-25 average of **3.72%** (relative increases to the  
5 magnitude of **31% to 42%**). Specifically, ScottMadden confirmed that (using a 30% tax rate):

- 6 1. A pre-tax margin of 7.55% corresponds to a **5.29%** after-tax margin.
- 7 2. A pre-tax margin of 7.21% corresponds to a **5.05%** after-tax margin.

8 ScottMadden **provides no evidence** that **significant changes in business risk** for the Depots  
9 or **changes in capital market conditions** support the need for such a large increase in the  
10 allowed RMs.

11 We note that their recommendation to increase the allowed RM is largely the result of four  
12 main assumptions – all of which result in **upward biases** to its RM estimates:

- 13 1. They completely exclude all observations when the RM is negative, yet include large  
14 positive RM outliers – this creates a significant (2.59 %) **upward bias in their RM**  
15 **estimates** compared to if they included the negative firms, and an **upward bias of**  
16 **1.33%** if they winsorized the RM data at 0%/20%.
- 17 2. They argue that due to the small size of Depots they should earn a premium (i.e., the  
18 RM estimates should lie at the high end of estimates) which creates a **+0.34% (i.e.,**  
19 **7.55% - 7.21%) upward bias** in their final RM recommendation. However, we do not  
20 observe a significant positive relationship between firm size and return margin among  
21 the comparable set of firms that would justify adjusting return margins based on size.
- 22 3. Their exclusion of Petroleum etc. (Wholesale) and Motor Vehicles etc. (Retail) from  
23 the Canadian proxy group (which are low RM sub-sectors) **upwardly bias** their RM  
24 estimates by 1.07% for the Canadian proxy group compared to Concentric's RM  
25 Canadian estimate, and an upward bias of 1.14% compared to employing a quantitative  
26 approach for excluding sub-industries based on the asset turnover of those industries.
- 27 4. Their use of a 0.50 to 3.50 asset turnover filter creates an **upward bias** of 1.48% in its  
28 U.S. RM estimate compared to Concentric's estimate, which creates an imbalance in  
29 the sample towards firms with very low asset turnover and higher RMs.

30  
31 These decisions materially reduce the representativeness of their estimates and biases its  
32 resulting RM recommendation upwards.

1 In contrast to ScottMadden’s estimates, our pre-tax margin recommendation of 5.07%  
2 translates into corresponding after-tax margins of 3.70% at a 27% tax rate, and 3.55% at a tax  
3 rate of 30%. These after-tax margins are more **consistent with previous approved after-tax**  
4 **margins** that have averaged 3.72% since 2013-2014; albeit slightly below the 2019-2020  
5 approved margin of 3.85%. Our recommended pre-tax margin also translates into after-tax  
6 margins that are **above** the average earned after-tax return margin for Alberta depots over the  
7 2018-2024 period of 3.33% (median 2.87%).

## 8 9 **2 SCOTTMADDEN COMPLETELY EXCLUDE ALL NEGATIVE RM** 10 **OBSERVATIONS BUT INCLUDE LARGE POSITIVE RM OUTLIERS**

11 ScottMadden recommends a pre-tax margin between **7.21% and 7.55%**. Where 7.21%  
12 represents its two-sample average of 7.21% (7.73% for U.S. sample and 6.69% for Canadian  
13 sample), and 7.55% is the average of the two sample “high” estimates (8.06% for U.S. sample  
14 and 7.03% for Canadian sample). We review and discuss ScottMadden’s analysis in the sub-  
15 sections below, beginning with their 7.73% RM estimate for the U.S. sample.  
16

### 17 **2.1 U.S. Estimates with Concentric Data**

18 ScottMadden introduces a significant upward bias in its RM estimate by completely excluding  
19 all observations with negative RM while retaining large positive outliers. We examine this  
20 issue using Concentric’s U.S. sample after applying the asset turnover (AT) filter of 0.50 to  
21 3.50 applied by ScottMadden (Section 5 discusses this stringent filter in more detail). Table 1  
22 reports the results.<sup>1</sup> When negative RM firms are included, the average RM falls to 5.13%,  
23 meaning that ScottMadden’s exclusion of these firms upwardly biases the RM estimate by  
24 2.59% (7.73% versus 5.13%). We note that Concentric also followed this approach, which we  
25 addressed in our evidence by “winsorizing” the RM data at 0%/20%. When we apply this  
26 0%/20% winsorization to ScottMadden’s filtered U.S. dataset in order to address outliers, the  
27 RM average falls to 6.39%, or 1.34% lower than ScottMadden’s estimate of 7.73% which does  
28 not address outliers using the winsorization technique which is standard in the literature.  
29

### 30 **Table 1**

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<sup>1</sup> For brevity we report only the final RM estimate. The estimate is computed using the same methodology that is used by both Concentric and ScottMadden: using the average of the simple and weighted average across all six industry and in the full sample of all 189 companies regardless of industry.

**Return Margin Estimates after Including Firms with Negative RM 0%/20%**  
**Winsorization in Concentric Sample**

|                                  | Low AT<br>Cutoff | High AT Cutoff | RM Estimate |
|----------------------------------|------------------|----------------|-------------|
| ScottMadden Estimate             | 0.50             | 3.50           | 7.73%       |
| Including Negative RM Firms      | 0.50             | 3.50           | 5.13%       |
| Applying a 0/20 RM Winsorization | 0.50             | 3.50           | 6.39%       |

**2.2 U.S. and Canadian Estimates with Compustat Data**

We next use Compustat data to verify the significant upward bias introduced by ScottMadden’s decision to completely exclude all observations when the RM is negative. The results confirm the pattern observed with Concentric’s data (which is compiled from data from S&P and Yahoo Finance). Table 2 shows that the RM estimate for U.S. data after applying ScottMadden’s 0.5 to 3.5 AT filter, and excluding negative firms is 6.35%. This figure is 4.21% larger than the 2.14% estimate when negative firms are included,<sup>2</sup> and 1.30% larger than the 5.05% estimate after applying the 0%/20% winsorization. For the Canadian data, we find that the estimate with ScottMadden’s 0.5 to 3.5 AT filter and excluding negative firms is 6.36%. This figure is 3.29% larger than the 3.07% estimate when negative firms are included, and 1.05% larger than the 5.31% estimate with the 0%/20% winsorization.

**Table 2**  
**Return Margin Estimates after Including Firms and with Negative RM 0%/20%**  
**Winsorization in Compustat Sample**

|                                       | Low AT<br>Cutoff | High AT Cutoff | RM Estimate |
|---------------------------------------|------------------|----------------|-------------|
| <b><u>U.S. Data</u></b>               |                  |                |             |
| ScottMadden Estimate                  | 0.50             | 3.50           | 6.35%       |
| Including Negative RM Firms           | 0.50             | 3.50           | 2.14%       |
| Applying a 0/20 RM Winsorization      | 0.50             | 3.50           | 5.05%       |
| <b><u>Canadian Data</u></b>           |                  |                |             |
| ScottMadden Estimate w. New AT Filter | 0.50             | 3.50           | 6.36%       |
| Including Negative RM Firms           | 0.50             | 3.50           | 3.07%       |
| Applying a 0/20 RM Winsorization      | 0.50             | 3.50           | 5.31%       |

<sup>2</sup> Note that we impose a “preliminary” winsorization on the Compustat data at the -100% and +100% levels to reduce the impact of extreme outliers that make it difficult to interpret results when these values are included – i.e., if we do not winsorize at this level the average RM estimate is negative. These RM outliers are driven by the Compustat data including firms with low levels of assets which is the denominator in the RM calculation. Dividing by a small level of assets can produce a very large negative RM value when after tax profits are negative and a very positive number when after tax profits are positive.

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2 **3 SCOTTMADDEN ARGUES THAT ALBERTA DEPOTS SHOULD EARN A**  
3 **PREMIUM DUE TO THEIR SMALL SIZE**  
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5 ScottMadden argues that due to the small size for depots they should earn a premium (i.e., the  
6 RM estimates should lie at the high end of estimates) which creates a +0.34% (i.e., 7.55% -  
7 7.21%) **upward bias** in their estimates.  
8

9 **3.1 Lack of Empirical Support Regarding the Existence of a Small Size**  
10 **Premium**

11 Recent academic empirical evidence calls into question the claim that small firms command  
12 higher risk premium than large firms. Banz (1981)<sup>3</sup> originally documented a size effect (i.e. a  
13 small firm risk premium), but more recent evidence has raised several problems with this  
14 finding. One concern is that data issues in small stocks create stale pricing and biased measures  
15 of risk and returns, which drove previous spurious results regarding an elevated risk premium  
16 for small firms.<sup>4</sup> A second concern, raised by Horowitz et al. (2000)<sup>5</sup> is that any premium that  
17 existed in the distant past appears to have disappeared since 1981.

18 We update the findings of Horowitz et al. (2000) by reporting the small-firm premium (Small  
19 minus Big, or SMB), defined as the return of U.S. small stocks minus the return of large stocks,  
20 to the end of October 2025. If small stocks command higher risk premiums than large stocks,  
21 we should observe that SMB is positive. The results, presented in Table 3, are inconsistent  
22 with this prediction. As in Horowitz et al. (2000) we find that there has been a negative SMB  
23 premium in the U.S. and Canada since 1982. We also look at a more recent sub-period (i.e.,  
24 since 2006), and find that SMB is also negative in the U.S. and Canada over this period.  
25

26 **Table 3**  
27 **The Lack of Evidence of a Small Cap Premium in U.S. and Canadian Markets<sup>6</sup>**

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<sup>3</sup> Banz, Rolf W. "The relationship between return and market value of common stocks." *Journal of Financial Economics* 9.1 (1981): 3-18.

<sup>4</sup> See Cliff Asness' discussion on the top titled "There is no size effect: Daily edition" is available at: <https://www.aqr.com/Insights/Perspectives/There-is-No-Size-Effect-Daily-Edition>.

<sup>5</sup> See Horowitz, Joel L., Tim Loughran, and N. E. Savin. "The disappearing size effect." *Research in Economics* 54.1 (2000): 83-100.

<sup>6</sup> Data is through October 2025. Canadian data starts in July 1989. Data Source AQR Data Library Accessed through Portfolio Visualizer's Factor Statistics feature

|                                   | Since Jan.<br>1982 | Since Jan.<br>2006 |
|-----------------------------------|--------------------|--------------------|
| Small Firm Premium (SMB) – U.S.   | -0.72%             | -1.42%             |
| Small Firm Premium (SMB) - Canada | -0.88%             | -0.87%             |
| Average                           | -0.80%             | -1.15%             |

### 3.2 Correlation of Firm Size and Winsorized Return Margin in the Concentric and Compustat Samples

We next examine whether firm size is related to RM in the sample of comparable firms in the Concentric and Compustat datasets. To do so, we compute the correlation between RM and firm size (measured by firm assets). This analysis is reported in Table 4. Panel A reports a positive correlation coefficient between RM and firm size in all three samples, which implies that small firms earn lower return margins - the opposite of ScottMadden's argument that smaller firms earn higher return margins.

**Table 4**  
**Return Margins and Firm Size**

#### Panel A: Return Margin & Firm Size (Assets) Correlations

| Return Margin - Firm Size Correlation | Concentric Data | Compustat Data - USA | Compustat Data - Canada | Average      |
|---------------------------------------|-----------------|----------------------|-------------------------|--------------|
| Correlation                           | 0.081           | 0.045                | 0.060                   | <b>0.062</b> |
| P Value                               | 0.177           | 0.215                | 0.518                   |              |

#### Panel B: Return Margin & Firm Size (Ln of Assets) Correlations

| Return Margin - Ln(Firm Size) Correlation | Concentric Data | Compustat Data - USA | Compustat Data - Canada | Average      |
|---|-----------------|----------------------|-------------------------|--------------|
| Correlation                               | -0.016          | 0.240                | 0.433                   | <b>0.219</b> |
| P Value                                   | 0.796           | 0.000                | 0.000                   |              |

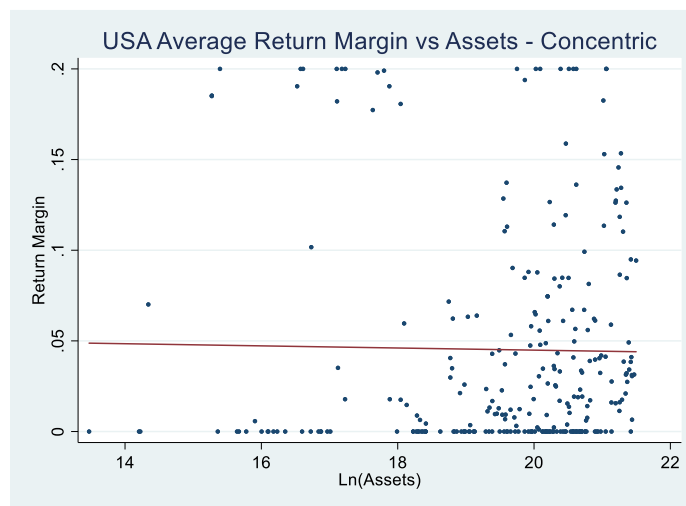
Panel B of Table 4 reports correlations between RM and firm size when firm size is measured using the natural logarithm (ln) of firm assets. Taking the natural logarithm of financial variables is standard practice in academic literature when a variable is right-skewed, as is the case with firm assets. Specifically, taking the ln shrinks very large values so a few huge firms do not dominate the analysis. In the Concentric sample the correlation is very close to zero (-0.016) and is statistically insignificant (p-value = 0.796). However, for both the U.S. and Canadian Compustat datasets we find large positive and statistically significant (p-value =

1 0.000) correlation coefficients of 0.240 and 0.433, between RM and firm size. In other words,  
2 in these samples, smaller firms have significantly **lower RM** than larger firms - the opposite  
3 of what is argued by ScottMadden.

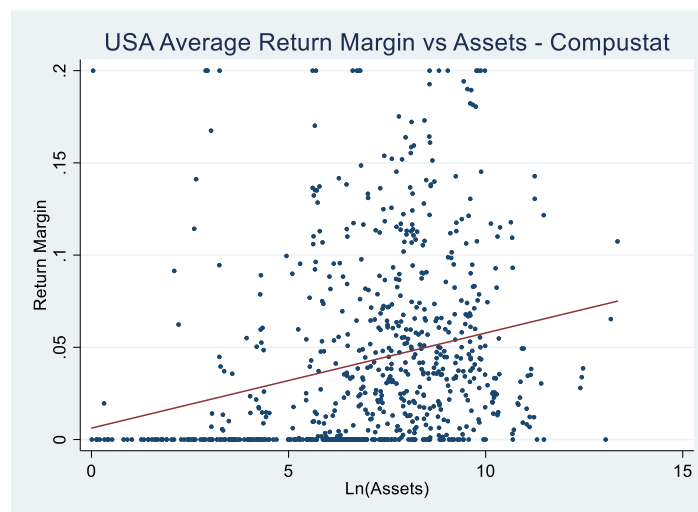
4 Figure 1 shows scatter plots for the three samples, which clearly depicts the positive  
5 relationship between RM and firm size in the Compustat samples, and a lack of any relationship  
6 in the Concentric dataset.

7  
8 **Figure 1**  
9 **The Relationship between Return Margin and Firm Size**

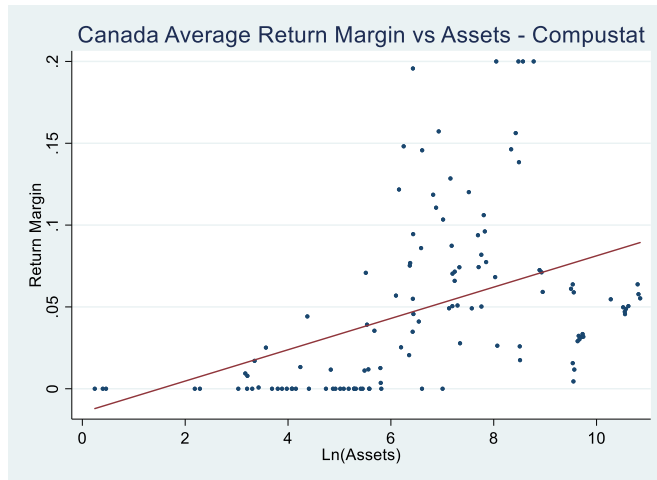
10  
11 **Panel A: Concentric Sample – U.S.**  
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13  
14 **Panel B: Compustat Sample – U.S.**  
15  
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17  
18 **Panel C: Compustat Sample – Canada**  
19  
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### 3.3 Return Margin Estimates across Small and Large Comparable Firms

We next split firms into two groups based on assets size: below-median and above-median firms. We then compute the RM for each group for the U.S. Concentric sample, the U.S. Compustat sample, and the Canadian Compustat sample.<sup>7</sup> The results of this analysis are reported in Table 5. Consistent with the observed correlations, our results show that on average, across the three sample, small firms (i.e., in the below median sized firm group) have a lower average RM of 3.97% than large firms (5.31%).

**Table 5**  
**RM Estimates for Small Firms and Large Firms**

|                           | <b>Below Median Sized Firms</b> | <b>Above Median Sized Firms</b> |
|---------------------------|---------------------------------|---------------------------------|
| Concentric Sample – U.S.  | 5.24%                           | 4.80%                           |
| Compustat Sample – U.S.   | 3.75%                           | 6.28%                           |
| Compustat Sample – Canada | 2.91%                           | 4.83%                           |
| <b>Average</b>            | <b>3.97%</b>                    | <b>5.31%</b>                    |

Taken together, the results reported in sections 3.1, 3.2 and 3.3 provide strong evidence refuting ScottMadden’s assertion that the RM estimate should be higher because of the small size of the depots.

<sup>7</sup> We use the methodology we proposed in our initial evidence that includes the 0%/20% RM winsorization and also weighting firms by sales.

1       **4       SCOTTMADDEN EXCLUDES THE PETROLEUM ETC. SUB-SECTOR**  
2       **FROM ITS CANADIAN WHOLESALE SAMPLE AND EXCLUDES THE**  
3       **MOTOR VEHICLES ETC. SUB-SECTOR FROM ITS CANADIAN RETAIL**  
4       **SAMPLE**

5  
6       ScottMadden’s decisions to exclude the Petroleum etc. (Wholesale) and Motor Vehicles etc.  
7       (Retail) from the Canadian proxy group (both of which are low RM sub-sectors) **upwardly**  
8       **bias** their RM estimates by 1.07% (i.e., 6.69% - 5.62%) for the Canadian proxy group  
9       compared to Concentric’s estimate.

10               **4.1       Impact of Excluding Individual Sub-Industries**

11       Table 6 shows how removing each sub-industry individually affects the RM estimate for the  
12       Retail (Panel A) and Wholesale (Panel B) sectors in the Canadian sample. Panel A shows that  
13       of the 31 Retail trade sub-industries that ScottMadden could have removed from the analysis,  
14       removing Motor Vehicles etc. had the largest positive impact on the return margin estimate for  
15       the Retail trade: +0.61% for the 2022 estimate and +0.73% for the 2023 estimate (+0.67%  
16       average). Similarly, Panel B shows that of the 37 Wholesale trade sub-industries that  
17       ScottMadden could have removed from the analysis, removing Petroleum etc. had the largest  
18       impact on the return margin estimate for the Wholesale trade: +1.36% for the 2022 estimate  
19       and +1.60% for the 2023 estimate (+1.48% average).

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21               **Table 6: Impact of Excluding Individual Sub-Industry on RM Estimate**

22  
23                               **Panel A: Retail Trade**

| <b>Retail trade, Total</b>  | 2022   | 2023   | Average |
|---|--------|--------|---------|
| Motor vehicle and parts dealers   | 0.61%  | 0.73%  | 0.67%   |
| Automobile dealers  | 0.57%  | 0.70%  | 0.64%   |
| New car dealers   | 0.43%  | 0.56%  | 0.49%   |
| Used car dealers  | 0.11%  | 0.10%  | 0.10%   |
| Other motor vehicle dealers   | N/A    | N/A    | N/A     |
| Automotive parts, accessories and tire retailers                                    | 0.00%  | -0.02% | -0.01%  |
| Building material and garden equipment and supplies dealers                         | -0.02% | 0.00%  | -0.01%  |
| Food and beverage retailers   | -0.18% | -0.24% | -0.21%  |
| Grocery and convenience retailers   | 0.56%  | 0.48%  | 0.52%   |
| Supermarkets and other grocery retailers (except convenience retailers)             | 0.52%  | 0.44%  | 0.48%   |
| Convenience retailers and vending machine operators                                 | 0.03%  | 0.02%  | 0.03%   |
| Specialty food retailers  | 0.00%  | 0.00%  | 0.00%   |
| Beer, wine and liquor retailers   | -0.65% | -0.62% | -0.63%  |
| Furniture, home furnishings, electronics and appliances retailers                   | -0.01% | 0.01%  | 0.00%   |
| Furniture, floor covering, window treatment and other home furnishings retailers    | -0.05% | -0.03% | -0.04%  |
| Furniture retailers   | -0.04% | -0.02% | -0.03%  |
| Floor covering, window treatment and other home furnishing retailers                | -0.01% | -0.01% | -0.01%  |
| Electronics and appliances retailers  | 0.04%  | 0.03%  | 0.04%   |
| General merchandise retailers   | 0.05%  | -0.05% | 0.00%   |
| Health and personal care retailers  | 0.05%  | 0.03%  | 0.04%   |
| Gasoline stations and fuel vendors  | -0.08% | -0.05% | -0.07%  |
| Gasoline stations   | -0.10% | -0.06% | -0.08%  |
| Fuel dealers  | 0.01%  | 0.01%  | 0.01%   |
| Clothing, clothing accessories, shoes, jewelry, luggage and leather goods retailers | -0.22% | -0.20% | -0.21%  |
| Clothing and clothing accessories retailers   | -0.15% | -0.13% | -0.14%  |
| Shoe retailers  | -0.03% | -0.03% | -0.03%  |
| Jewellery, luggage and leather goods retailers                                      | -0.03% | -0.03% | -0.03%  |
| Sporting goods, hobby, musical instrument, book, and miscellaneous retailers        | -0.10% | -0.08% | -0.09%  |
| Sporting goods, hobby, musical instrument, book retailers and news dealers          | -0.02% | -0.01% | -0.01%  |
| Miscellaneous retailers   | -0.07% | -0.07% | -0.07%  |
| Cannabis retailers  | N/A    | 0.00%  | 0.00%   |

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### Panel B: Wholesale Trade

| Wholesale trade, Total  | 2022   | 2023   | Average |
|---|--------|--------|---------|
| Farm product merchant wholesalers   | 0.10%  | 0.15%  | 0.12%   |
| Petroleum, petroleum products, and other hydrocarbons merchant wholesalers                            | 1.36%  | 1.60%  | 1.48%   |
| Food, beverage and tobacco merchant wholesalers   | 0.00%  | -0.15% | -0.07%  |
| Food merchant wholesalers   | 0.09%  | -0.03% | 0.03%   |
| Beverage merchant wholesalers   | -0.04% | -0.04% | -0.04%  |
| Cigarette and tobacco product merchant wholesalers  | -0.03% | -0.04% | -0.03%  |
| Cannabis merchant wholesalers   | -0.02% | -0.02% | -0.02%  |
| Personal and household goods merchant wholesalers   | -0.18% | -0.13% | -0.16%  |
| Textile, clothing and footwear merchant wholesalers   | -0.04% | -0.05% | -0.05%  |
| Home entertainment equipment and household appliance merchant wholesalers                             | 0.01%  | 0.00%  | 0.00%   |
| Home furnishings merchant wholesalers   | -0.02% | -0.01% | -0.02%  |
| Personal goods merchant wholesalers   | -0.03% | -0.02% | -0.03%  |
| Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers                              | -0.08% | -0.04% | -0.06%  |
| Pharmaceuticals and pharmacy supplies merchant wholesalers  | 0.01%  | 0.04%  | 0.02%   |
| Toiletries, cosmetics and sundries merchant wholesalers   | -0.09% | -0.08% | -0.08%  |
| Motor vehicle and motor vehicles parts and accessories merchant wholesalers                           | -0.15% | -0.17% | -0.16%  |
| Motor vehicle merchant wholesalers  | -0.08% | -0.07% | -0.08%  |
| New motor vehicle parts and accessories merchant wholesalers  | -0.06% | -0.08% | -0.07%  |
| Used motor vehicle parts and accessories merchant wholesalers   | 0.00%  | 0.00%  | 0.00%   |
| Building material and supplies merchant wholesalers   | -0.33% | -0.29% | -0.31%  |
| Electrical, plumbing, heating and air-conditioning equipment and supplies merchant wholesalers        | -0.16% | -0.16% | -0.16%  |
| Metal service centres   | -0.07% | -0.04% | -0.06%  |
| Lumber, millwork, hardware and other building supplies merchant wholesalers                           | -0.08% | -0.06% | -0.07%  |
| Machinery, equipment and supplies merchant wholesalers  | -0.34% | -0.59% | -0.47%  |
| Farm, lawn and garden machinery and equipment merchant wholesalers                                    | -0.05% | -0.08% | -0.06%  |
| Construction, forestry, mining, and industrial machinery, equipment and supplies merchant wholesalers | -0.17% | -0.24% | -0.21%  |
| Computer and communications equipment and supplies merchant wholesalers                               | -0.02% | -0.09% | -0.06%  |
| Other machinery, equipment and supplies merchant wholesalers  | -0.06% | -0.11% | -0.09%  |
| Miscellaneous merchant wholesalers  | -0.14% | -0.14% | -0.14%  |
| Recyclable material merchant wholesalers  | -0.01% | 0.00%  | -0.01%  |
| Paper, paper product and disposable plastic product merchant wholesalers                              | -0.01% | -0.03% | -0.02%  |
| Agricultural supplies merchant wholesalers  | -0.02% | -0.01% | -0.01%  |
| Chemical (except agricultural) and allied product merchant wholesalers                                | -0.07% | -0.10% | -0.08%  |
| Mineral, ore and precious metal merchant wholesalers  | 0.01%  | 0.02%  | 0.01%   |
| Log, wood chips, and other wood products merchant wholesalers   | 0.00%  | 0.00%  | 0.00%   |
| Other miscellaneous merchant wholesalers  | -0.03% | -0.02% | -0.02%  |
| Business-to-business electronic markets, and agents and brokers                                       | -0.02% | -0.03% | -0.02%  |

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7

The effect of removing a sub-industry on the RM estimate is a function of the sub-industry's average RM as well as its size. As a result, while the Motor Vehicles etc. category did not have the lowest RM of the comparable Retail sub-industries, its relatively large size means that excluding it had the largest effect on the final RM estimate.

8

#### 4.2 Impact of Excluding Combinations of Sub-Industries

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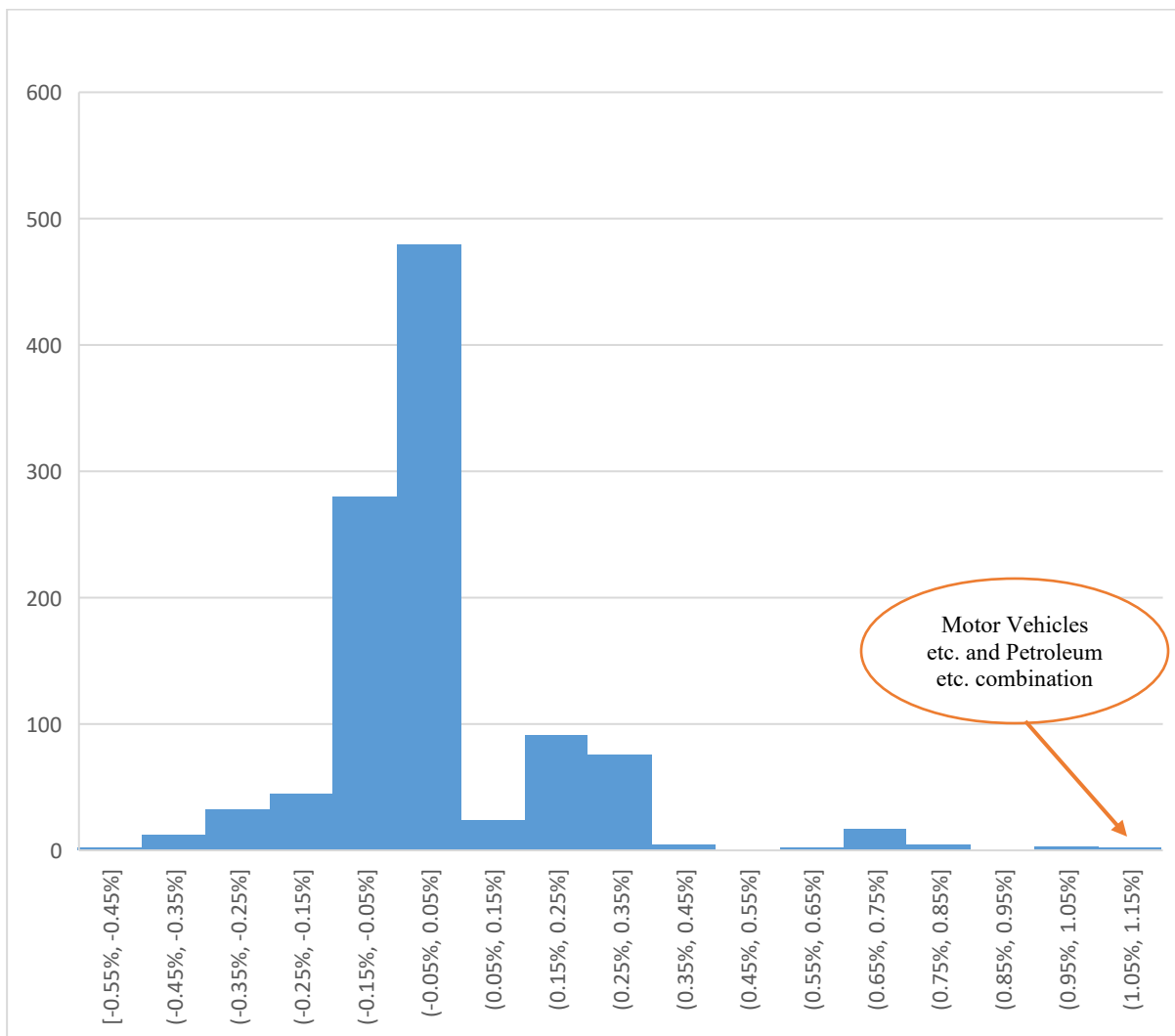
13

ScottMadden's analysis excludes one Retail trade sub-industry (Motor Vehicles etc.), and one Wholesale sub-industry (Petroleum etc.). Because there are 31 Retail trade sub-industries, and 37 Wholesale trade sub-industries, ScottMadden chose from 1,147 ( $31 \times 37$ ) Retail-Wholesale exclusion combinations. Figure 2 plots the effect of each of the 1,147 removal combinations on the Canadian RM estimate. The figure highlights the extreme impact that the removal of

1 the Motor Vehicles etc. and Petroleum etc. industries have on the RM Estimate (the 1.07%  
 2 value is at the extreme right end of the figure) compared the other 1,146 combinations that  
 3 ScottMadden did not choose. For example, the average impact on the return margin estimate  
 4 of any individual compensation is 0.01%, so the 1.07% impact of removal of Motor Vehicles  
 5 etc. and Petroleum etc. was more than 100 times greater than the average impact.<sup>8</sup>

7 **Figure 2**

8 **Impact of 1147 Sub-Industry Exclusion Combinations on Canadian Return Margin**



9 <sup>8</sup> There are two ways we quantify the probability of a combination of sub-industries being chosen that have such a large impact. The first is to ask what is the probability of picking the combination of two sub-industries that have the largest impact on return margin out of all possible combinations. The answer to that is 1 out of 1147, or 0.87%. Another way to quantify the impact is using the concept of standard deviation. The standard deviation of the impact of the 1147 combination on the RM restimate was 0.191%. The 1.07% impact of ScottMadden exclusion was thus 5.59 standard deviations greater than the average. In statistics, if we assume a normal distribution, we expect a value that is 5.59 standard deviation greater than the mean to occur approximately 1 in 87 million times or 0.00000113% of the time.

1  
2 In his American Finance Association presidential address about data mining, Campbell Harvey  
3 highlighted that: “*self-serving reasoning often leads researchers to convince themselves that*  
4 *the most significant result is the one the researcher originally intended to examine.*”<sup>9</sup>  
5 ScottMadden’s evidence provides its rationale for their decision to remove Motor Vehicles etc.  
6 and Petroleum etc. For example, with respect to the Petroleum etc. sub-industry ScottMadden  
7 states that: “... *this industry is ‘primarily engaged in wholesaling crude oil, liquified petroleum*  
8 *gases, heating oil and other refined petroleum products and hydrocarbons’.* *It is unclear why*  
9 *Concentric considers this industry as similar to the Depots...*” Ultimately none of the sub-  
10 industries is a perfect match for the Depots. Similar arguments to those that ScottMadden use  
11 to exclude Motor Vehicles etc. and Petroleum etc. can be made for the exclusion of virtually  
12 any of the sub-industries based on the difference between each sub-industry and the depots.

### 13 **4.3 A Quantitative Approach to Sub-Industry Exclusion**

14 An approach that is less arbitrary and more consistent with the rest of the ScottMadden’s  
15 analysis would be to filter industries on a quantitative metric such as AT, which both  
16 Concentric and ScottMadden apply to their U.S. analyses. Using Compustat data, we compute  
17 the average AT of firms in each of the sub-industries. We find that firms in the Motor Vehicles  
18 etc. sub-industry have an average AT of 1.77 and firms in the Petroleum etc. have an average  
19 AT of 2.56. Both of these figures are comparable to the average AT reported by ScottMadden  
20 of the Depots in 2017 (2.31), and the partial AT statistic reported for 2024 (1.53). We find that  
21 there are two sub-industries whose average AT falls outside the 0.5 to 3.5 range proposed by  
22 ScottMadden. The Gasoline stations and fuel vendors sub-industry (retail) has an average  
23 turnover of 0.40, and the Pharmaceuticals, toiletries, cosmetics and sundries merchant  
24 wholesalers sub-industry (wholesale) has an average AT of 4.49. As shown in Table 6,  
25 removing the Gasoline stations and fuel vendors sub-industry reduces the RM estimate for the  
26 retail trade industry by 0.07% (vs. a 0.67% increase from removing Motor Vehicles etc.), and  
27 removing the Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers sub-  
28 industry reduces the RM estimate for the wholesale trade industry by 0.06% (vs. a 1.48%  
29 increase from removing Petroleum etc.). Combined, removing these two industries results in a

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<sup>9</sup> Harvey, Campbell R., “Presidential address: The scientific outlook in financial economics.” The Journal of Finance 72.4 (2017): 1399-1440.

1 Canadian RM estimate of 5.55%, implying that by not using a quantitative approach to sub-  
2 industry exclusion, ScottMadden’s Canadian RM estimate of 6.69% is upwardly biased by  
3 1.14%.

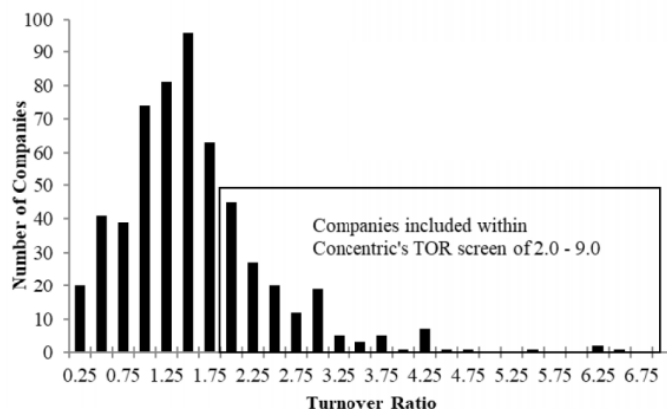
## 5 **SCOTTMADDEN EMPLOYS A 0.5-3.5 TURNOVER RATIO SCREEN**

7 In this section we examine ScottMadden’s decision to employ a 0.5-3.5 AT screen. Its  
8 justification for selecting this range rests on two claims: (1) it is consistent with the range and  
9 average of the Depots’ 2017 AT of 2.31, and their partial 2024 AT of 1.53; and, (2) it is  
10 consistent with the AT of the U.S. industries deemed comparable to the depots - in terms of  
11 the average AT for those industries, and also because 95% of the firms in the 2022-2024 U.S.  
12 Concentric sample fall within that range. Both of these justifications are problematic, as  
13 discussed below.

### 15 **5.1 The Imbalance of Firms within ScottMadden’s 0.5 – 3.5 AT Range**

16 Our results that are presented in Table 7 highlight one of the ways that the range is not  
17 representative of the 2.31 average AT of the depots in 2017 nor the partial 1.53 average of the  
18 depots in 2024. The issue stems from the right-skewed nature of AT, which can clearly be seen  
19 in Chart 1 of the ScottMadden evidence (reproduced below).

21 **Chart 1 of the ScottMadden Evidence:**  
22 **Histogram of Turnover Ratios of Comparable U.S. Companies 2022-2024.**



23 Because the distribution is right-skewed, there are many more firms with low AT than high  
24 AT within ScottMadden’s proposed AT range. Table 7 quantifies the extent of this imbalance.  
25

Specifically, of the 122 firms remaining after the 0.5 to 3.5 AT filter, there are over 7 times more firms below the 2.31 average AT of depots in 2017 than are above it (i.e., 107 versus 15). Using the 1.53 threshold for 2024, 74 firms fall below the threshold and 48 above it. The same pattern holds in the sample that includes negative-RM firms and applies a 0%/20% winsorization: with 140 versus 17 below and above the 2.31 threshold, and with 98 versus 59 around the 1.53 threshold.

**Table 7**  
**Firms Above and Below the 2023 and 2017 Depot Average AT**

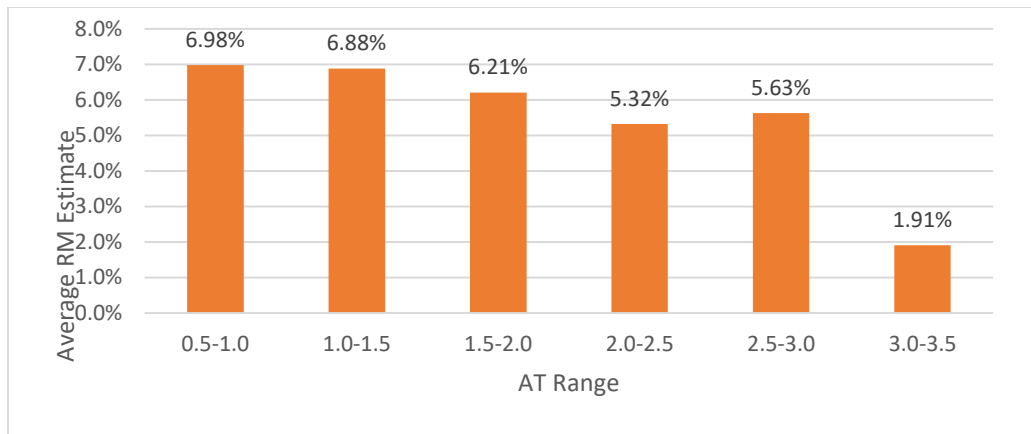
|   | Low<br>AT<br>Cutoff | High<br>AT<br>Cutoff | Firms<br>Below<br>2.31<br>AT | Firms<br>Above<br>2.31<br>AT | Firms<br>Below<br>1.53<br>AT | Firms<br>Above<br>1.53 AT |
|---|---------------------|----------------------|------------------------------|------------------------------|------------------------------|---------------------------|
| ScottMadden AT filter                   | 0.50                | 3.50                 | 122                          | 107                          | 15                           | 48                        |
| SM AT filter with 0/20 RM Winsorization | 0.50                | 3.50                 | 157                          | 140                          | 17                           | 59                        |

### 5.2 Upward Bias in RM Estimate Introduced by the Imbalance of Firms within ScottMadden’s 0.5 – 3.5 AT Range

The imbalance of firms around the averages that is documented in Section 5.1 biases the RM estimate upwardly because firms with low AT tend to have higher RM than firms with high AT, which can be seen in Figure 3. Specifically, Figure 3 reports RM estimates for 0.5-wide AT buckets within ScottMadden’s proposed 0.5 to 3.5 AT range.<sup>10</sup> It shows firms within the 0.5 to 1.0 AT range have an RM estimate of 6.98%, firms within the 1.0 to 1.5 AT range have an RM estimate of 6.88%, firms within the 1.5 to 2.0 AT range have an RM estimate of 6.21%, firms within the 2.0 to 2.5 AT range have an RM estimate of 5.32%, firms within the 2.5 to 3.0 AT range have an RM estimate of 5.63%, and firms within the 3.0 to 3.5 AT range have an RM estimate of 1.91%.

**Figure 3**  
**RM Estimates for firms within Various AT Ranges**

<sup>10</sup> Given the small number of firms in some of the buckets, we estimate RM using the 0%/20% winsorization methodology to reduce noise potentially introduced by the small sample. Also for simplification we only report RM estimates within ScottMadden’s proposed AT range of 0.5 to 3.5, but the pattern persists if we include the 19 firms with AT below 0.5 (RM estimate = 11.45%) or the 6 firms with AT above 3.5 (RM estimate = 2.39%).



Given that ScottMadden’s final RM estimates average all firms within the 0.5 to 3.5 AT range, the disproportionately higher number of low-AT firms gives extra weight to firms with higher RMs, which further biases ScottMadden’s RM estimate upward.

## 6 CONCLUSIONS

ScottMadden confirmed in response to ABDA #13 that their Pre-Tax RM recommendation of **7.21% to 7.55%** indicates a **significant increase** to the existing approved after-tax margin of **3.85%** and the 2013-25 average of **3.72%** (relative increases to the magnitude of **31% to 42%**). Specifically, ScottMadden confirmed that (using a 30% tax rate):

1. A pre-tax margin of 7.55% corresponds to a **5.29%** after-tax margin.
2. A pre-tax margin of 7.21% corresponds to a **5.05%** after-tax margin.

ScottMadden **provides no evidence that significant changes in business risk** for the depots or **changes in capital market conditions** support the need for such a large increase in the allowed RMs. In contrast to ScottMadden’s estimates, our pre-tax margin recommendation of 5.07% translates into a corresponding after-tax margin of 3.55% (at a tax rate of 30%), which is much more **consistent with previous approved after-tax margins**.

ScottMadden’s RM recommendation of **7.21%-7.55%** also greatly exceeds Concentric’s recommendation of a **5.93%** (i.e., **22% to 27% higher**) pre-tax margin, which our evidence demonstrates are also too high (but to a lesser extent). Specifically, our evidence also shows that Concentric’s 5.93% pre-tax margin recommendation is also **upwardly biased** (even though it is 22%-27% below ScottMadden’s RM recommendation). ScottMadden’s estimates are even further above our best estimate of the appropriate pre-tax margin that should be approved for Alberta depots of **5.07%** (i.e., **42% to 49% higher**).

1 We demonstrate that ScottMadden's recommendation to **significantly increase the allowed**  
2 **RM** is largely the result of four main assumptions – all of which result in **upward biases** to its  
3 RM estimates:

4 1. They completely exclude all observations when the RM is negative, yet include large  
5 positive RM outliers – this creates a significant (2.59 %) **upward bias in their RM**  
6 **estimates** compared to if they included the negative firms, and an **upward bias of 1.33%**  
7 if they winsorized the RM data at 0%/20%.

8 2. They argue that due to the small size for Depots they should earn a premium (i.e., the  
9 RM estimates should lie at the high end of estimates) which creates a **+0.34% (i.e., 7.55%**  
10 **- 7.21%) upward bias** in their final RM recommendation. However, we do not observe a  
11 significant positive relationship between firm size and return margin among the  
12 comparable set of firms that would justify adjusting return margins upwards based on size.

13 3. Their exclusion of Petroleum etc. (Wholesale) and Motor Vehicles etc. (Retail) from the  
14 Canadian proxy group (which are low RM sub-sectors) **upwardly bias** their RM estimates  
15 by 1.07% for the Canadian proxy group compared to Concentric's RM Canadian estimate,  
16 and by 1.14% when compared to employing a quantitative approach for excluding sub-  
17 industries based on the AT of those industries.

18 4. Their use of a 0.50 to 3.50 Asset Turnover filter also creates an **upward bias** of 1.48%  
19 in its U.S. RM estimate when compared to Concentric's estimate, which creates an  
20 imbalance in the sample towards firms with very low asset turnover and high RMs.

21  
22 This concludes our evidence.