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Thumbs Up or Thumbs Down?

Re-examining the Use of Rules of Thumb in the Valuation of Business Interests

CHARTERED BUSINESS VALUATORS™

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The exact origin of the colloquial phrase “rule of thumb” is unknown. It is sometimes held that the expression derives from 16th century wood workers who were so skilled in their craft that they rarely relied on rulers or exact measurement, but instead used approximations such as the length of their thumbs. Others believe that the expression originated with brewers of old, who, before the invention of thermometers, would use their thumbs to test the temperature of beer during the brewing process, relying on experience to assess whether or not the ideal temperature had been reached. Regardless of its exact origins, a “rule of thumb” is commonly used to refer to a rough and ready method of calculation or measurement, which is not necessarily rooted in precise, scientific principles.

The “rule of thumb” approach has long been used in a similar fashion in the business community. In an effort to minimize the costs of preparing a formal valuation by a subject matter expert – i.e. a Chartered Business Valuator (CBV) – business stakeholders requiring a ballpark estimate of value for their business or acquisition target will often resort to the use of industry benchmarks/standards or rules of thumb such as multiples of revenue, earnings, and assets to estimate the value of the subject business.

Certainly, the rule of thumb approach has the advantage of being straightforward and economical to apply. For example, if a rule of thumb for legal practices suggests that enterprise value (i.e. the combined value of an entity’s equity and debt) would be represented by a multiple of 0.9 to 1.0 times annual revenue, a law firm generating $500,000 in annual revenues would result in an enterprise value in the range of $450,000 to $500,000.

Yet while generally useful, the rule of thumb approach is also wrought with many challenges. Applying these rule wholesale without properly considering its applicability in a transactional context, or failing to note key underlying assumptions implicit in the specific rule of thumb being applied, can easily lead to the gross mispricing of a business interest. The result: a business could be overvalued or undervalued, or certain assets or synergies might not be being considered at all. So, while business owners may wish to save time and expense at the outset by not retaining a credentialed CBV to prepare a formal valuation, there are many potential consequences of relying principally on a rule of thumb approach. These include:

- Materially undervaluing the business, resulting in a disadvantage to the seller
- Materially overvaluing the business, resulting in a disadvantage to the buyer
- Underestimating or overestimating the fair market value of a business in connection with an estate freeze or corporate reorganization. As such transactions have income tax implications, the determined fair market value may be disputed by the Canada Revenue Agency (CRA)
- Opening one’s self to critique from a third party if the valuation was not prepared by a credentialed valuator in accordance with the prerequisite standards of the profession and with the level of rigour and analysis required by the courts

While CBV’s may use the rule of thumb methodology, it is most often to test the reasonability of conclusions derived from other, more fulsome analyses such as an income or market approach. These primary approaches are the standard methodologies utilized by business valuators and comprise rigorous, objective and subjective analysis, unlike the application of rules of thumb alone.

As explored further in the sections that follow, individuals that have relied solely on rules of thumb to assign value to business interests have faced substantial criticism from opposing experts and the courts, on the basis that the level of analysis incumbent upon the expert to provide to the court was deficient.

1. POTENTIAL PITFALLS OF RELYING ON RULE OF THUMB SURVEY DATA

The rule of thumb approach seems simple enough – multiply the given rule of thumb by the applicable business metric such as revenues or earnings and the resultant figure represents the value of the subject business. However, while the potential benefits of this approach (i.e. its ease of use) are clear, extreme caution must be exercised as application of the rule of thumb approach alone carries many inherent risks. Here are a few of those risk considerations:

Who Makes the Rules?

A key question to ask when evaluating the veracity and rigour of a "rule of thumb" is: how was it developed, and by whom?

In some cases, rules of thumb are developed simply through word-of-mouth. Consider, for example, a business owner based in Toronto who sells a minority interest of his business. The implied enterprise value multiple of this transaction was 5x Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA). Through casual discussion at a national industry conference, this number is conveyed to another industry participant who operates a similar, less profitable business in a small town in Manitoba. The latter decides to use a 5x EBITDA multiple to set the price for 100% of his business. Alarmingly, despite the fact that the only common thread between these two transactions is that they are in the same industry, the compound effect of these informal discussions could be the emergence over time of a new rule of thumb, almost as a self-fulfilling prophecy – and, notwithstanding the fact that this new "rule" is completely unsubstantiated by the underlying economics of the industry and specific business conditions.

In addition to perpetuating the loose application of rules of thumb via word-of-mouth, business owners sometimes turn to publications that collect and aggregate business-specific rules of thumb or activity ratios. Commonly referenced sources include the *Business Reference Guide* published by Business Brokerage Press and Glenn Desmond's *Handbook of Small Business Valuation Formulas and Rules of Thumb*, the most recent edition of which was published some time ago – in 1993. None of these sources profess to be a "one-stop-shop" pricing guide – and all caution against the exclusive, unadjusted use of their data for valuation purposes. Regrettably, despite the disclaimers, many business owners rely on this type of information as authoritative because it is easy to understand and inexpensive to access and use.

Further, it is important to note that in many cases the quoted "rules of thumb" are simply a compilation of questionnaire responses provided on a voluntary basis by trade associations and industry participants that have applied to be "experts" in their given industry. They are not scientific, nor peer reviewed. Aside from the fact that qualification as an "industry expert" does not appear to be a rigorous process, it is also unclear whether or not the responses represent data from actual transactions or simply the respondent's general "sense" of a multiple the market might bear at a given point in time. Calculating value based on a general sense of the market could be likened to buying shares of a particular high-risk stock based solely on a tip overheard in an elevator. Certainly, the tip could be right, but it could also be very wrong.

Exceptions to the Rule

Let's set aside the fact that responses to "rule of thumb" surveys may principally represent respondents' "sense and sensibility" in regards to an appropriate rule of thumb in a particular industry and assume, instead, that the collected responses represent actual transactional data. A clear shortcoming that arises, then, is that vastly different types of companies could be included in the aggregated data – including companies in various stages of the company life cycle and those with varying levels of profitability, which could substantially skew the data.

To understand why, let's delve into the life cycle issue a bit more. One common difficulty faced by professionals valuing early-stage businesses is that the expenses these young companies incur to generate future business (i.e. large upfront marketing and selling expenses) are often included with the cost of generating current revenues, thereby reducing profitability in the near term in exchange for potential future growth and expansion. A discrepancy arises if a rule of thumb is applied indiscriminately to two different companies earning the same level of revenues, but with completely different cost structures.

For example, consider two carpet cleaning companies that each generate $100,000 in annual revenues. Assume that one business is a relatively new start-up operating in a region with high-growth potential and advertising expenses of approximately 20% of revenues. The other carpet cleaning business is a mature operation that has an established customer base and almost no advertising expenditure. Using the *2013 Business Reference Guide* published rule of thumb for carpet cleaning companies of 50 to 55 percent of annual revenue (plus inventory) would suggest that both businesses are worth between $50,000 and $55,000, all else being equal. The idea that two businesses operating in fundamentally different locations and with entirely different cost structures could be worth an identical amount obviously raises questions as to the appropriateness and applicability of using these rule of thumb metrics without proper justification or adjustment.

While the example presented above is certainly simplistic, it is meant to highlight how easy it could be to go astray by only using rules of thumb and ignoring the true future economic benefit that a business is expected to generate for its stakeholders.

It should be noted that *The Business Reference Guide*, one of the chief sources of aggregated rule of thumb data, does provide a breakdown of the “typical” cost structure of each industry it covers which can be used to assess the cost structure of a benchmark business against the subject business being valued. While this type of analysis might provide a useful starting point to adjust a rule of thumb for a business with a different cost profile than that considered typical, the same note of caution applies to this benchmark data as the rule of thumb data derived from survey responses in that these figures also appear to be unsystematically collected from self-styled “industry experts” and only include major categories of expenses.

Location, Location, Location

Similar to the problem discussed above, another probable deficiency with aggregated rule of thumb survey data is that it may reflect a locational bias. Assume, for example, 100 surveys are returned from respondents who operate in close proximity to their suppliers, thereby enjoying direct, low-cost access to the majority of their inputs. Assume, further that these responses suggest that a multiple in the range of 5-6x EBITDA is appropriate. Five responses are received from another remote part of the country where the same resources are limited and expensive to import. These responses suggest an appropriate multiple of 3-4x EBITDA. The weighted average multiple would be around 5.4x and would have a strong prejudice towards the region from which most responses were received. It is clear that using such data could produce a potentially misleading valuation result, if the user does not have an understanding of how rules of thumb were derived.

Ancient History

Rules of thumb are sometimes imbedded into shareholder and franchise agreements, but often when the time comes to apply these metrics (i.e. a potential transaction between shareholders or the repurchase by the franchisor of a franchise), they may no longer represent the current economic reality.

For example, consider a franchise agreement that specifies that a restaurant franchisor will repurchase the franchise in question using a multiple of 3x last twelve months (“LTM”) EBITDA if the franchisee decides to exit the business and is unable to find a third party purchaser. The franchisee decides to dispose of his investment after ten years. Assume, further, that in those ten years the franchisee's exclusive region has enjoyed strong demographic and economic growth and the franchisor's brand has developed into a high-end brand such that similar restaurants are transacting at multiples between 5x and 6x. In this example, the franchisee is clearly disadvantaged by the use of the outdated multiple set out in the franchise agreement. In contrast, if the franchise holder was not bound by an obsolete and formulaic approach to determining value, a CBV would perform a valuation analysis based on the expected future cash flows of the business taking into account the various risks associated with achieving those cash flows including the general health of the business and economy, its historic performance, the state of repair and appearance of the franchise's location, and the competitive environment in which it operates. Undoubtedly, the latter approach would yield a result more representative of current economic circumstances.

What Might be Missing?

In the sections above, we considered examples of factors that reduce the applicability of general rules of thumb to the valuation of specific business interests, such as differences in profitability and geography. It is important to note that there are numerous additional considerations that impact value which may be overlooked by applying rules of thumb alone, such as:

- Whether shares or assets are being bought/sold
- The amount and impact on value of debt held by the entity
- Owner's compensation
- Industry developments that may render previously ubiquitous rules of thumb inapplicable
- Intangible assets and/or proprietary data/software
- Interest rates/inflation
- Marketability and/or minority discounts
- Income tax considerations
- Special interest purchasers

The above list is by no means exhaustive. But it certainly highlights the highly subjective nature of business valuation (why it is often called both an "art" and a "science") as well as the many complexities of which are not considered when a rule of thumb methodology is applied without further corroboration.

2. VIEWS FROM THE BENCH

We reviewed a number of Canadian legal judgments (i.e. case law) to gain a better understanding of how rules of thumb and their application in a business valuation context have been assessed by the courts.[1]

In general, we found that the courts have been circumspect in their acceptance of estimates of value based on rules of thumb and have cited many of the pitfalls/issues we noted above with respect to rules of thumb as reasons to disallow or limit their use in a valuation context. Our findings in this regard are set out below.

The Litmus Test

There is general consensus in case law that rules of thumb should be used *only* to validate the reasonableness of value conclusions arrived at by applying more commonly accepted valuation methodologies like the income, market, or asset approaches or vice versa (i.e. ensuring the conclusions reached pursuant to rules of thumb are substantiated by the more robust approaches.)

In *R.R.A.G.* v. *S.N.G.*, a marital dispute which required the valuation of a mutual fund brokerage, one expert applied a rule of thumb or industry-specific ratio as the principal valuation methodology, justifying the selected approach by stating simply that "that's what the industry does."[2]

While a capitalized cash flow (i.e. income approach) was considered secondarily by the expert, little emphasis or rigour was applied in this respect. Unsurprisingly, the opposing expert (and ultimately, the court) challenged the expert's submission because of the emphasis placed on the rule of thumb approach and the significant divergence between the value conclusions reached pursuant to the rule of thumb and income approaches. The court concluded that the rule of thumb needed to be "supported by another substantial valuation method" and further, the "secondary method used… simply does not support the value of the company reached by his application of the rule of thumb."[2]

In *Elliott* v. *The Queen*, an income tax dispute related to the valuation of goodwill assigned to an accounting practice and a calculation of the resultant capital gain implicit thereon. Experts for both the plaintiff and the tax authority considered rules of thumb pervasive in the valuation of accounting practices, in addition to a number of other methodologies including a calculation of discounted cash flows. In this instance, the court found that one expert had "relied intrinsically on the rule of thumb method as being the best method available and in reality placed too high a reliance on this method… The Court is satisfied that this was not the best method for determining the fair market value of the in this case. The Court is satisfied that the rule of thumb method has its place, but the other methods should have been given more weight…"[3]

The court's dissatisfaction with the application of the rule of thumb rule without proper reconciliation underscores the necessity for valuations to be conducted with significant rigour, using methodologies that satisfy multiple angles of enquiry and can be defended before a judge. This, in effect, is what CBVs are commissioned to do – use a wide range of robust methodologies to reach value conclusions and applying rules of thumb only as a litmus test or reasonability check. Neither the courts, nor CBVs, advocate the use of rules of thumb on their own.

Inappropriate Application of Rules of Thumb

We discussed earlier that one of the most significant potential hazards with the use of rules of thumb derived from survey data is the likelihood that these statistics may not be applicable to the specific circumstances of the subject company being valued.

The courts have echoed this concern, stating that all too often, one-size-fits-all rules are applied in scenarios with significantly different variables, rendering the application inappropriate.

For example, in *L.M.H.* v. *K.J.H.*, a marital dispute which required a valuation to be prepared of the parties' farm and ancillary dairy assets, the court found issue "in the use of the quota/asset ratio as a dependable test for the valuation of the business due to the huge variability of many factors inherent among businesses in the industry."[4]

Returning to the example in *R.R.A.G.* v. *S.N.G.*, the expert who relied principally on rules of thumb cited consolidation the mutual fund industry as evidence of the applicability of the rule of thumb approach, assuming that "industry-wide commonality and the ongoing consolidation of the smaller independent brokerages…resulted in the industry developing and following valuation norms."[2] However, in the months leading up to the valuation date, the subject company had lost a founding shareholder and a number of its officers were faced with allegations of securities misconduct, both of which negatively affected the business' performance and outlook. While the expert in question did attempt to make a downward adjustment to his rule of thumb derived value conclusion to reflect the impact of these adversities, the court deemed the expert's adjustment to be imprecise and arbitrary, citing the fact that the expert was unable to "successfully justify before the court why such a large figure would be deducted."[2]

According to the courts, if rules of thumb *are* to be successfully applied in a valuation context, it is important they would be properly researched and supported by direct market comparables (i.e. the market approach).

Continuing with the example presented from *R.R.A.G.* v. *S.N.G.*, while the court took no issue with the comprehensiveness of the expert's research into the selected rule of thumb, it found that "unfortunately what is missing…is specific direct market comparisons. In order to accept a rule of thumb approach the court needs examples of similar businesses sold in the relevant period of time which yielded the specific multiple used…no evidence was presented to the court of even one single similar sale which confirmed the utilized rule of thumb multiplier."[2]

The general findings of the court in *R.R.A.G.* v. *S.N.G.*, with respect to the rule of thumb approach used, is summarized as follows: "The court has reached the conclusion that the rule of thumb multiplier used… is not appropriate. The reliability of the information base was not established. No evidence was given as to its content. In fact no direct comparables were utilized. Obviously under these circumstances no adjustments could be made to explain any difference between comparables and the subject company. [2]

The court ultimately accepted the conclusion of the opposing expert, who submitted a capitalized cash flow approach, which considered the tenuous recent performance of the firm and the risks associated with achieving future cash flow projections.

3. CONCLUSION: WHEN ARE RULES OF THUMB APPROPRIATE

Ultimately, rules of thumb can be good preliminary tools for business owners (and valuators!). They have the advantage of being commonly used and inexpensive to access using survey data available through a range of databases mentioned earlier.

However, as discussed throughout this paper, using rules of thumb alone can be potentially problematic as most business owners are likely to overlook many issues and inconsistencies that may arise from their use. As illustrated by case law, using a rule of thumb that is unsubstantiated or unsupported by another more, rigorous methodology, may leave a valuation vulnerable to critique and more importantly, result in an estimate of value that simply does not reflect the economic circumstances at play. Essentially, the principal question users of rules of thumb should ask is: does the value arrived at using the rule of thumb approach make sense and reconcile to an economically supported estimate of value, one that considers the factors that a more rigorous approach would reflect?

CBVs are useful, even necessary, to help address the above-noted question. CBVs have the requisite competencies to discern how and when to apply rules of thumb and when to apply more appropriate primary valuation approaches and techniques to arrive at a much more comprehensive, defensible determination of fair market value.

ABOUT THE AUTHOR

Tara K. Singh, B. Comm, CBV, CFE is a Senior Associate with Cohen Hamilton Steger & Co. a leading Canadian boutique firm specializing in damages quantification, business valuation and forensic accounting. She may be contacted with comments or questions at tsingh@cohenhamiltonsteger.com.

[1] Specifically, we focussed on Canadian legal judgements released between 1999 to 2015, which made specific reference to the valuation of business interests or intangible assets pursuant to "rules of thumb."
[2] *R.R.A.G.* v. *S.N.G.*, 2000 MBQB 207 (CanLII).
[3] *Elliott* v. *The Queen*, 1999 CanLII 117 (TCC).
[4] *L.M.H.* v. *K.J.H.*, 2001 MBQB 341 (CanLII).