Convexity of Valuation Accuracy Function: Empirical Evidence for the Canadian Economy

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Abstract. We investigated the benefits (more accurate valuations) obtained from the use of more specific measure, such as the use of specific price indexes, rather than a general price index, to approximate the current value of historical cost accounting numbers. We found the valuation accuracy function for the Canadian economy to be highly convex; that is, marginal gains in accuracy decline sharply as the specificity of price indexes increases. A few broad price indexes yield a relatively accurate valuation of assets, and little accuracy is gained by using more specific price indexes. These results are consistent with empirical studies conducted in the United States (Hall 1982; Sunder and Waymire 1983; Shriver 1986) and Australia (Tippett 1987). These results suggest that Canadian standard setters may be able to achieve their objective of getting relatively accurate valuations for industrial assets by adopting a simple and verifiable price index methodology, rather than resorting to costly and complicated computations such as those required by Canadian Institute of Chartered Accountants (CICA) Handbook Section 4510.