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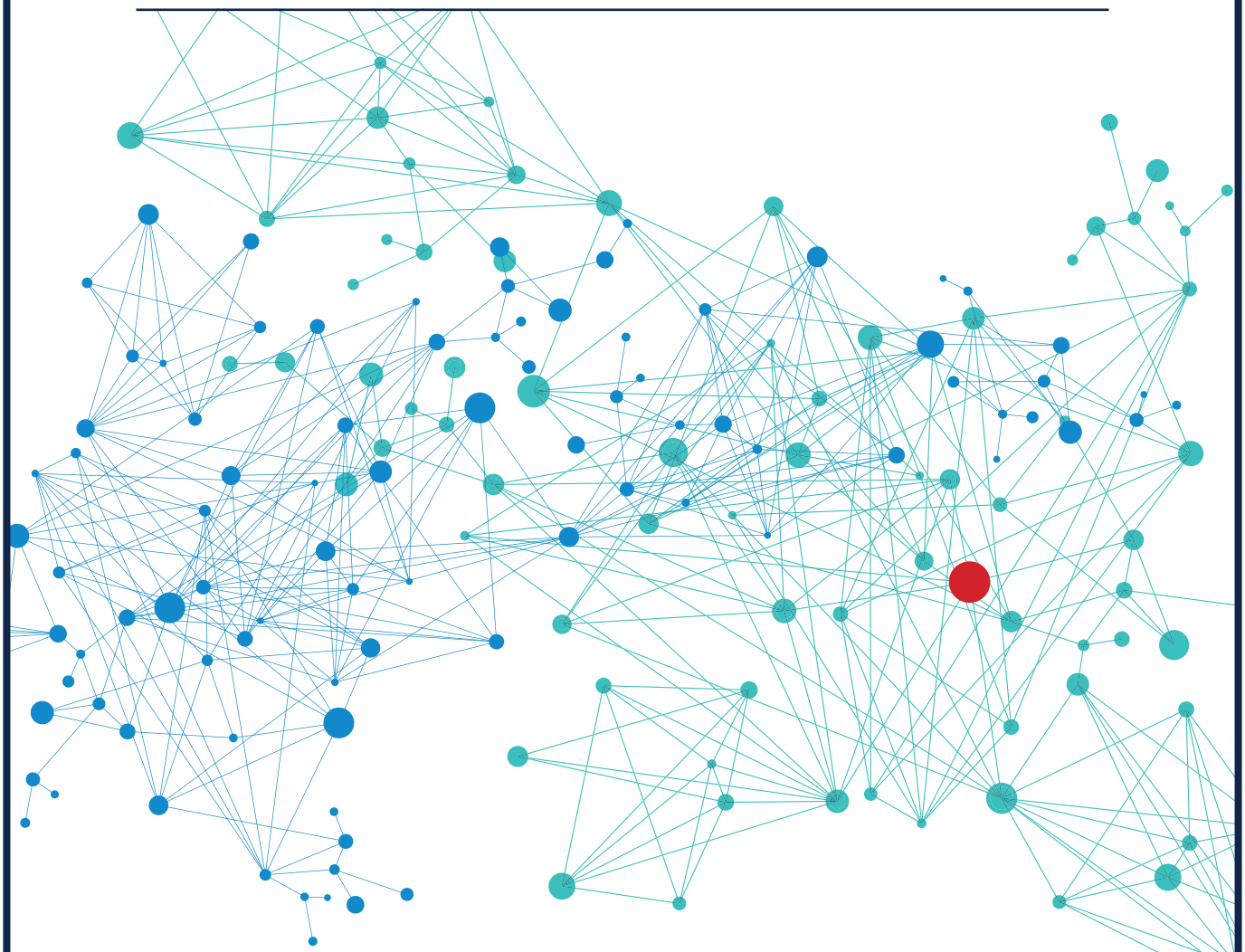

HARD-TO-VALUE INTANGIBLES SANS MYSTERE

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"Unlike the debutant affection of the OECD, we discourage using projected profits or cash flows to measure hard-to-value-intangibles for transfer pricing purposes because this method is speculative and based on numerous impeachable assumptions."

On May 23, 2017, the OECD released a draft of Action 8 of the Base Erosion and Profit Shifting (BEPS) plan, providing taxpayers and tax administrations with a new transfer pricing approach to measure hard-to-value-intangibles (HTVI):

Click here to view OECD document

Deviating from the past, the new OECD guidance states that "a tax administration is entitled to use, in evaluating the *ex-ante* pricing arrangements, the *ex-post* evidence about financial outcomes to inform the determination of the arm's length pricing arrangements that would have been made between independent enterprises at the time of the transaction." This provision is near the US "commensurate with income" rules applied to controlled intangibles.

Unlike the debutant affection of the OECD, we discourage using discounted projected profits or cash flows to measure hard-to-value-intangibles for transfer pricing purposes because this method is speculative and based on numerous impeachable assumptions.

Instead, we recommend use of objective, tractable data from separate and identifiable past enterprise investments to measure capital stock, including intangibles.

In practice, capital expenditures (CAPX) recorded on the cash flow statement of an enterprise measures investment in property, plant, and equipment (PPENT), excluding intangibles. Thus, we must find intangible producing investments, such as detailed historical advertising, R&D, and software incurred expenses obtained from the tested party's general ledger or from comparable aggregate disclosed filings.

According to current accounting practices, research and development (XRD), advertising (XAD), and software expenses are deducted in the fiscal year incurred and are not accumulated on the tested party's balance sheet or its comparables.

To start, we collect separate annual expense streams X_t to construct an identifiable asset, ditto net capital stock:

$$(1) \quad \Delta K_t = X_t - D_t$$

counting each fiscal period backwards, starting with the current t, $t-1$, $t-2$, etc. The symbol Δ represents one-period change, such as $\Delta K_t = K_t - K_{t-1}$.

Although cumulative XRD, software, and XAD expenses add to an enterprise capital stock, they do so with a different time-lag than PPENT, and we can accommodate these differences. In general, we assume a fixed depreciation (or amortization) rate calculated on the value of the capital stock (or discernible assets) at the end of a measured period:

(2) $\quad D_t = \delta K_{t-1}$

where the parameter $0 < \delta < 1$ is the depreciation (or amortization) rate specific to each identifiable asset we need to measure.

In economics, tangible assets (or tangible capital) represent the accumulation of CAPX. Likewise, intangibles represent the accumulation of XRD, software, or XAD investments, which we measure in the combined or aggregate form of production (also called "trade"), software, and marketing intangibles, or by considering the separate accumulated flows of XRD, software, or XAD annual investments (treated as deductible expenses for tax purpose).

We combine (1) and (2), and obtain a recursive formula for capital stock based on past annual expense flows:

(3) $\quad K_t = X_t + \beta K_{t-1}$

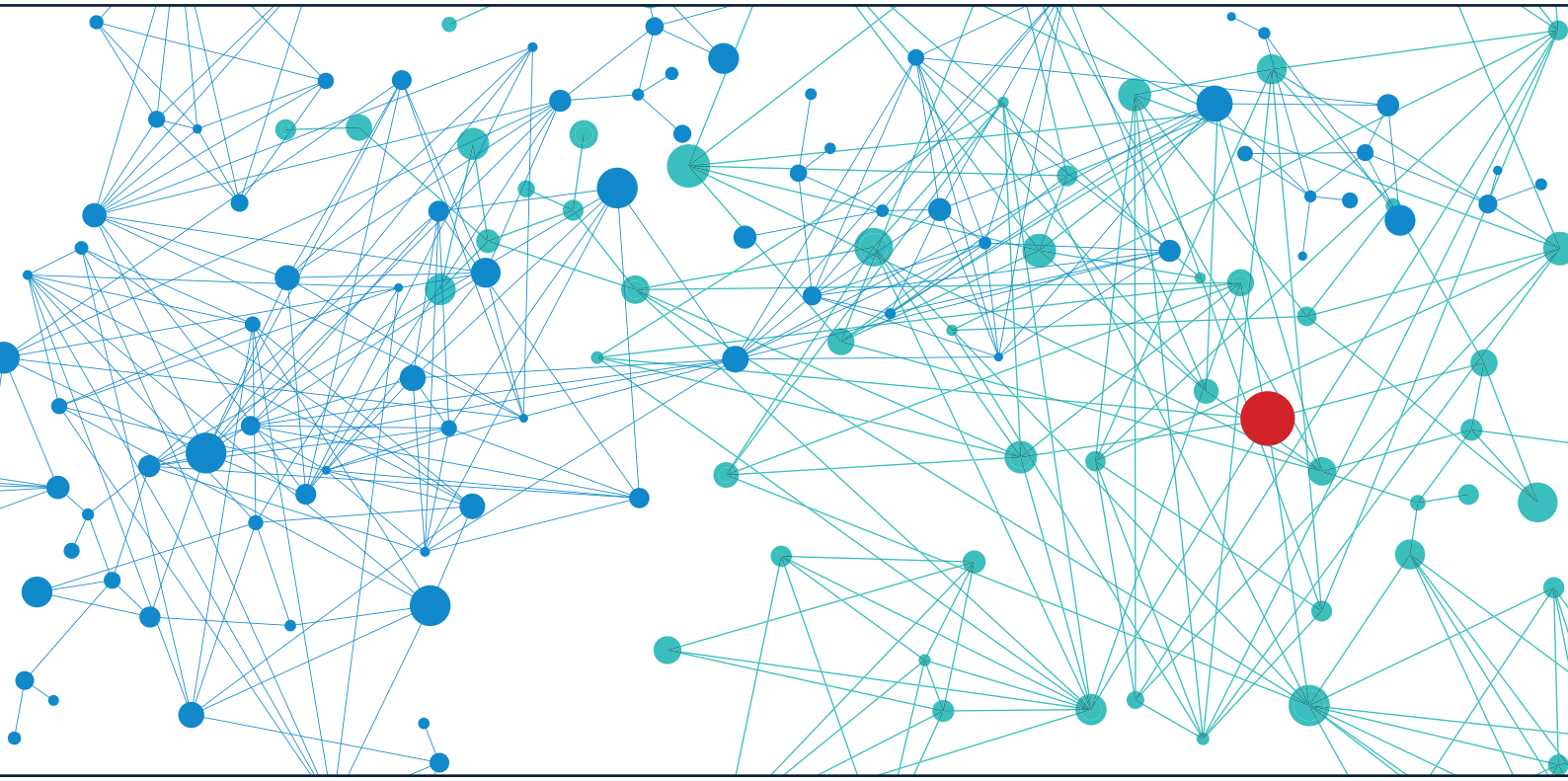
where $0 < (\beta = (1 - \delta)) \leq 1$ is the rate of capital accumulation.

Next, we lag (3) repeatedly and substitute back to create a recursive formula:

(4) $\quad K_t = X_t + \beta X_{t-1} + \beta^2 X_{t-2} + \ldots + \beta^k K_{t-k}$

where the index k counts the terminal year back.

Declining depreciation of CAPX and amortization rates of identifiable annual X_t (XRD, software, or XAD) expenses imply that we don't need to backtrack to



time immemorial because several years backward iterations can produce reliable results. For example, if $\delta = 0.2$ (or 20% depreciation rate per year), $\beta = 0.8$, and we obtain from the recursive formula (4) going back three years:

$$(5) \quad K_t = X_t + 0.8\, X_{t-1} + 0.64\, X_{t-2} + 0.512\, X_{t-3} + 0.4096\, K_{t-4}$$

Tracking back 12 years of identifiable expenses, we would obtain the vanishing residual $0.0687\, K_{t-13}$, which means that only a diminished 6.87% of the capital stock in the 13th year adds to the accumulated sum (4), and eventually the beta coefficients become too negligible to count into (5).

The recursive formula (4) is general, and thus applies for CAPX, XRD, software, XAD or any separate and identifiable expense flow. Intangibles are not hard-to-value if we use an objective (known data, no speculative profit projections into an uncertain future) economic formula (4) and approach this HTVI problem *sans mystère*.

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Ednaldo Silva is a recognized expert in transfer pricing and intangibles valuation.

Dr. Silva has served as a senior tax economist and consultant for large multinational corporations and tax authorities. He has also acted as economic expert in corporate income tax and IP litigation, notably in GlaxoSmithKline Holdings (Americas), Inc. v. Commissioner of Internal Revenue, Dockets 5750-04 and 6959-05.

Dr. Silva was the first senior economic adviser at the IRS Office of Chief Counsel and, as a drafting member of the 1994 US transfer pricing regulations, developed the 'comparable profits method' and 'best method' rule. Dr. Silva was also the IRS advance pricing agreement program's first economist.

He holds a PhD in economics from the University of California at Berkeley.

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