

NOT THE EQUAL ACCESS TO RESOURCES, BUT THE EQUAL ACCESS TO INFORMATION CREATES EXPONENTIAL VALUE

The entire theory of finance rests upon measuring the relative value that expectations (otherwise known as interest rates) add or subtract to/from an asset's *intrinsic* value. For instance, as high certainty -low interest rates- increases the value of expected cash flows Future Value (Box), it becomes the largest component of price Present Value (Box). In fact, if that belief is shared by many, the future value component of price becomes exchangeable (liquid), investable and reproducible as *Information Symmetry*¹ rises across time, place and social hierarchy. For instance, Property Rights² when truly enforced, instantly produce information symmetry across all relevant boundaries and with it, exponential rises in the value of most economic resources. The same principle applies to the value multiple created by Competition, Freedom of Choice, Supply/Demand, Free-Markets³ and all patterns our minds associate with survival expediency and intuitively, long-term (economic) sustainability. Unfortunately, the philosophical thought influencing both sides of the political spectrum today, comes from a time in history, when it would have been hard to separate the exclusively mathematical origin of financial value from the uneven impact its influence exerted on the European social fabric, after the 17th century. Fortunately, unbiased research and a vast supply of empirical data leave no room for controversy. Massive wealth creation correlates to information symmetry expansion throughout the charts, tables, and videos shown below.

THE ACCIDENTAL BIRTH OF CENTRAL BANKING, INTRODUCES SYSTEMIC INFORMATION SYMMETRY, IN A WORD: CAPITALISM

The principles of Central Banking came about 400 years ago, when the *Bank of Amsterdam* imposed systematic, present-day certainty on the future value of Dutch guilders.⁴ It took another century for Central Banks to become the source of last resort lending that would later unleash *fractional banking*'s power to reproduce capital. As banks began financing High-Repayment Potential projects, a virtuous cycle led to the fastest period of economic growth in human history. British Professor *Angus Maddison*⁵ confirmed it, by painstakingly compiling the database depicted by *Camdor Global*, in *Geary-Khamis Dollars* in Figure 9, where arrows point the clear break between low exponential growth-rate GDP (human population growth) from 1 and 1600 AD and after central banking spreads through the region that today contains the most developed economies in the globe. Eventually, the exponential power of Virtuous (versus Ponzi) fractional banking financed the public infrastructure and prolific development that another heavy-weight of statistical science, Swedish Professor *Prof Hans Rosling*, compiled, using the United Nations' historical database on Life Expectancy and Income Per Person Database. [See him explain](#) it in person⁶ or check his *200 years that changed the world*.

CONCLUSIONS

TWO WORLDS

1. For over 30,000 years, the *majority* of *Modern humans* lived in functional or declared servitude of small power elites or if 'in the state of nature' as Hobbes (1588-1679) describes in *Leviathan*, the life of man, [was] solitary, poor, nasty, brutish, and short..."
2. In 1609, Amsterdam, in its zeal to compete against other commercial ports along the North Sea shore, decided to offer foreign merchants and creditors, a concrete system to hedge against the chronic currency debasement carried on by *Dutch banks* owned by municipal Dutch feudal lords. Thus, began the methodical sustenance of currency value across time, geography, social hierarchy, etc., the Information Symmetry that eventually magnified the power of fractional-banking and led to the modern era.

THREE INFERENCES

1. Regardless of what you call a political system when only the power elite has access to information, it grabs its benefits, at the expense of the rest. As living standards drop for the majority, economic growth becomes unsustainable.
2. Wealth or Income redistribution policy consistently leads to behavior that is detrimental to innovation, productivity, and economic growth. Much worse, it involves, precisely the arbitrary dynamics that create Information Asymmetry.
3. Designing Information Symmetry Systems across all private-interest barriers would bring sustained, exponential growth in living standards, to the 90% of world population, whose future is already compromised by Information Asymmetry.

¹ [The] "knowledge that some system is symmetrical reduces what we need to know about the system by eliminating possibilities that would be permitted if the system were not symmetrical. This reduction of required information is greater, the more pervasive the symmetry. The relatively low information content resulting from symmetries is reflected in the high epistemic value of knowledge of these symmetries."

² "Property Rights and Markets. The optimal solution to the allocation problem requires the participants to have accurate information about the marginal costs and marginal benefits associated with specific alternatives. Problems arise when exchange is not voluntary and property rights are attenuated. Pure competition is one way to ensure that no one buyer or seller has the ability to alter the outcome of market exchanges and the information revealed in prices."

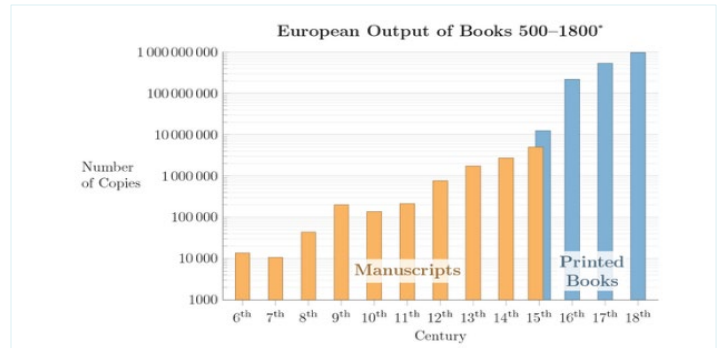


FIG. 8 EUROPEAN BOOK OUTPUT 500 TO 1800 BY 5 ORDERS OF MAGNITUDE AFTER PRINTING REVOLUTION

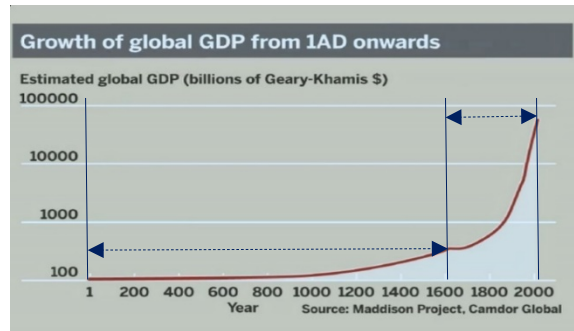


FIG. 9 WORLD GDP PER CAPITA FROM 1AD TO

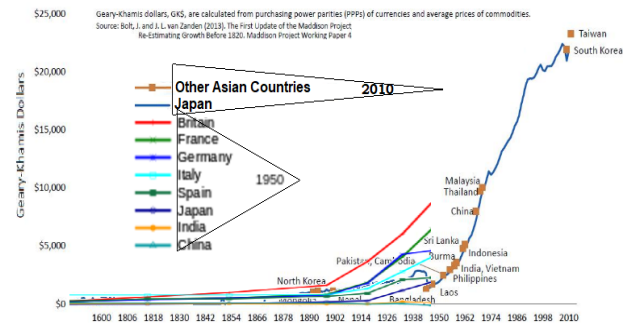


FIG. 10 GDP PER CAPITA FROM 1500 TO 1950 SELECTED EUROPEAN & ASIA VS FIG. 11 ASIA'S GDP FROM 1600 TO 2010

PRESENT VALUE

Due to uncertainty, a dollar in hand is more valuable than a dollar in the future. And since uncertainty depends on the amount of time and risk you take while you wait, it can be expressed as a percentage cost of those two variables and appropriately named **INTEREST RATE**. Finally, by subtracting the cost of uncertainty from any dollar you're expecting in the future, you can price what it is worth today. In short, you can express the Present Value of any income stream you expect from an investment by discounting the interest rate cost from each of the expected cash flows: $PV = CASH\ FLOW / (1 + INTEREST\ RATE)^{NUMBER\ OF\ TIME\ PERIODS}$.

FUTURE VALUE

A way of understanding Present Value is to require that the opposite of the statement above be true. That is: $FV = CASH\ FLOW * (1 + INTEREST\ RATE)^{NUMBER\ OF\ TIME\ PERIODS}$. Thus, unless there is **ZERO UNCERTAINTY** about the future (**INTEREST RATES** ~ zero), the nominal price or Future Value of a cash-flow income stream must always be larger than one. Yet, for almost a decade, G-7 **REAL POLICY INTEREST RATES** have been below zero (see [Graph 5](#)), while certain privileged public and financial sector entities or their clients have issued endless sums of debt, whose proceeds help guarantee or directly purchase the future value of income-producing assets at prices below the premium imposed by the time value of money.

³ See [David Ricardo's original postulates](#)

⁴ The City of Amsterdam opened the Bank of Amsterdam in January 1609. The Exchange Bank was introduced specifically to insulate the bill market from debasement.

⁵ Professor Angus Maddison (1926 - 2010) was able to synthesize vast amounts of information into a clear form through his quantitative analysis approach to economics making his contributions invaluable to anyone trying to understand why some parts of the world are so much richer than others. You can access the [Maddison Project Database](#),⁵ in Excel.

⁶ Hans Rosling's 200 Countries, 200 Years, 4 Minutes - The Joy of Statistics