

## Islamic Finance, Artificial Intelligence, and the Debt Embedded in the Ex Nihilo Monetary Creation System



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**ABSTRACT:** The aim of this study is to shed light on a relationship that has not been explored until now. This is the relationship between the world of Islamic finance that of AI, and the debt embedded in the ex nihilo monetary creation system induced by bank loans with *ribā*. As a result, by making excessive use of AI under the pretext of the need to adopt disruptive innovations that generate exponential growth, Islamic finance feeds this system. This raises a paradox: Islamic finance, which is reputed to be *ribā*-free, uses AI, which feeds on *ribā*, to grow exponentially in a context of chip war between the United States, China, and Europe that intensifies day by day. This cognitive trap into which Islamic finance has fallen also applies to Islamic economics. The reason is that AI, as well as finance and economics, could not be part of the debt system if they were not disembedded from society by disintegrating traditional social structures. Hence the importance of the quadriptych *rizq*, *waqf*, *ma'āsh*, and *'umrān*, which opens the field to local practices that create social connections, and help people live better. It is then a question of using AI to satisfy local needs when necessary, and not to increase the power of digital giants through a race for stock market capitalization, which artificially inflates profitability. Against this backdrop, investors may demand clearer monetization roadmaps, which could burst the AI bubble.

**KEYWORDS:** Islamic finance, AI, *ribā*, debt, Ex nihilo monetary creation system

### I. INTRODUCTION

According to the Wall Street Journal, OpenAI chief executive Sam Altman was seeking to raise \$7 trillion to reorganize the global semiconductor industry and build dozens of factories to manufacture chips, the essential components needed to power large artificial intelligence models (Hagey, Fitch, 2024). At that time, that was more than twice the GDP of France and barely less than the combined valuations of Microsoft, Apple, and NVidia, the three biggest AI companies.

This data that might seem foreign to Islamic finance actually concerns it much more than one can imagine. It is the whole art of making the data speak through reading by meaning that allows to link worlds that seem at first sight foreign to each other. Islamic finance is known to be ethical and *ribā*-free, AI feeds on the debt embedded in the system of ex nihilo monetary creation. By adopting AI in a general euphoria, Islamic finance reinforces the debt system resulting from ex nihilo monetary creation. While the worlds of Islamic finance and AI may appear friendly, they are fuelled by practices that are in tension from time immemorial. A question then arises: How can we resolve this paradox, which calls for analysis to be extended beyond the engineering of Islamic financial products?

In such a context, this study was conducted to draw attention to the fact that neither the concepts of Islamic economics, nor those of Islamic finance, are able to provide a comprehensive picture of the close link between AI and debt embedded in the system of money creation induced by bank lending with *ribā*. The reason for this is that most of the concepts of Islamic economics and finance were developed by imitating the concepts of mainstream economics by mirror effect. Hence the need to restore their letter of nobility to the meanings that have been veiled by the notion of economy and finance, particularly those translated by the words *rizq*, *waqf*, *ma'āsh*, and *'umrān*, which refers to modes of existence or ways of life from below on a consultative basis (Belabes, 2025), according to the Word of God: (*Allah would never change a people's state until they change their own state*) (Qur'ān, 13: 11).

## II. METHOD

The word method refers to a way of conducting one's thoughts, of thinking, of saying or doing something according to certain principles and with a certain order, that is in already made compartments. However, everything that is put in already made compartments is no longer of much interest. To have a method is to find nothing. Talking is one thing, knowing is another, as the word of Allah testifies: (*And you said with your mouths what you had no knowledge of*) (Qur'ān, 24: 15). The enemy of knowledge is not ignorance, but the illusion of knowledge.

If I had followed a method, I would never have come up with this research. In fact, what led me to develop it was reading by meaning beyond academic fields. Reading the books *al-Khaṣā'is* (The characteristics) by Ibn Jinnī, *Asrār al-Balāghah* (Secrets of eloquence) and *Dalā'il al-I'jāz* (Proofs of the inimitability of words of Allah) by al-Jurjānī, helped me to understand what I was following by intuition, namely that meaning, as something that is in our *nafs* (soul, spirit), is master and words are their servants. As Henri Poincaré (1908: 144) wrote in *Science and Method*: "*It is by logic that we prove, but by intuition that we discover*".

If I had confined myself to the routine of Islamic finance circles, I would have adopted speeches like these 'Unleashing the power of artificial intelligence in Islamic finance', 'AI revolution in Islamic finance', 'AI and Islamic finance: Transforming the future of ethical banking', 'Integration of AI in Islamic finance for Sustainable Development', 'Harnessing AI for the next gen of Islamic finance'. The most striking common feature of these allegorical titles is that they are based on a reading by words rather than a reading by meaning. This reflects a lack of knowledge of Islamic finance, AI, or both.

It is not wise to continue to think linearly in a non-linear world, or commutatively in a non-commutative world, or Euclideanly in a non-Euclidean world. In this regard, as part of the revival of my course on advanced quantitative analysis, I was led to take an interest in data science to offer students a complement to econometrics. Data science gradually led me to delve deeper into AI, leading to the chip war (figure 1). Chips are ubiquitous, essential and invisible.

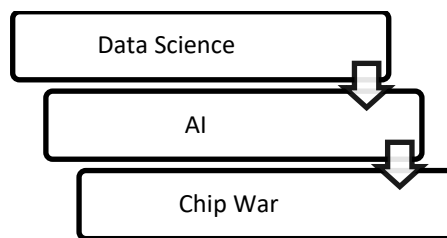


Figure 1. From data science, to AI, then to chip war

Source: Author's own

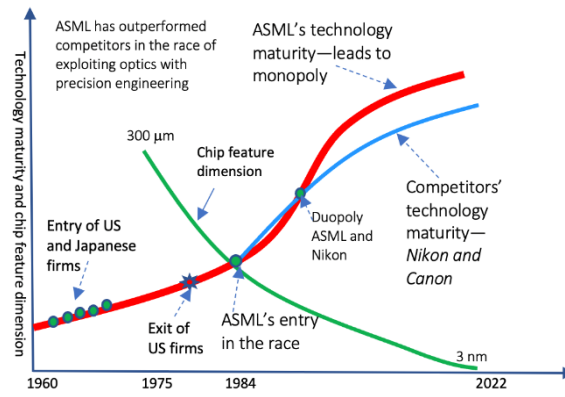
Studying the chip wars in turn led me to understand that manufacturing highly advanced chips for AI required colossal investments with private and public debt funds (CRS, 2023).

What was most surprising was my discovery that most people's lives are based today on the following formula regarding the critical dimension  $CD$ :



$$CD = k_1 \frac{\lambda}{NA}$$

This is the Rayleigh criterion, which defines how the empirical resolution factor  $k_1$ , the wavelength of light  $\lambda$ , and the numerical aperture  $NA$ , work together to enable the smallest possible structures to be printed on a photosensitive wafer in which the maximum number of electronic components will be integrated. Exploiting the physics of light sources and optics with high-precision engineering has transformed the activity of a start-up based on this criterion into a world leader. ASML has overtaken Nikon and Canon, who were leaders in this highly specialized field, as illustrated in figure 2.

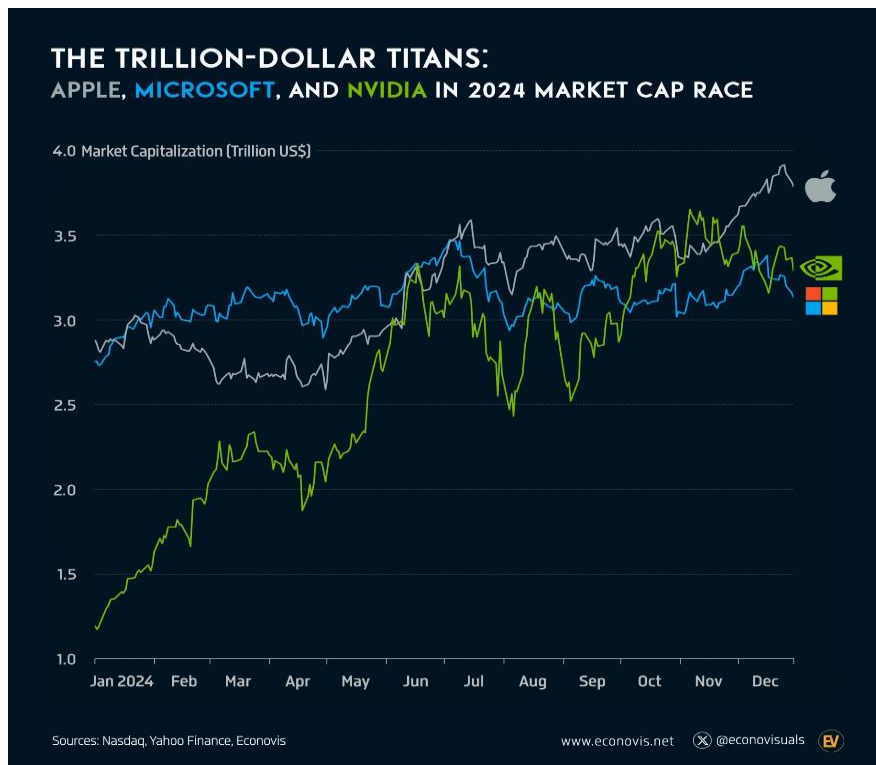


**Figure 2. ASML: world leader in the manufacture of lithography equipment for the semiconductor Industry**  
 Source: Zaman (2022)

Given that what we perceive is only a tiny part of the iceberg, and that things are more complex than they appear at first sight, I was led to wonder about the relationship between AI and a debt system based on money creation ex nihilo, because AI chips require huge investments. As proof, ASML's latest High-NA EUV lithography machine, which is priced at \$380 million, is currently only available to the three leading-edge foundries, TSMC, Intel and Samsung, who received their order at the end of 2024. These three world's largest manufacturers of advanced semiconductor chips prepare to launch mass production of 2 nanometres chips in 2025 If everything is going well.

**III. DISCUSSION AND FINDINGS**

The virtual marriage between AI and finance is welcomed from all sides, first and foremost by the financial markets which are making colossal profits from this bubble fuelled by speculative behaviours. This is evidenced by figure 3, which illustrates the race for market capitalization in 2024 of the trillion-dollar AI titans: Apple, Microsoft and NVidia. It is worth noting that the 6 largest American companies in terms of market capitalization among the 7 largest operate in the field of AI (Companies Market Cap, 2024).



**Figure 3. The Trillion-Dollar AI Titans: Apple, Microsoft, and NVidia in 2024's Market Cap Race**  
 Source: Soltani (2025)

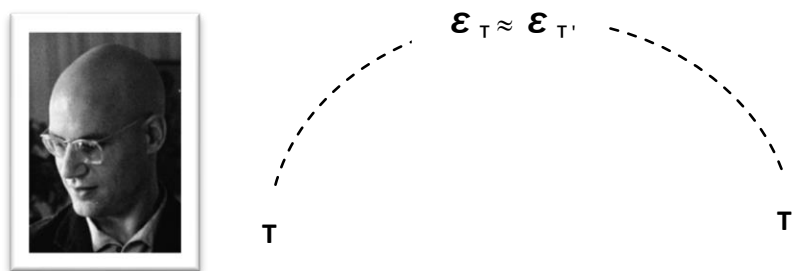
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Islamic finance is increasingly drawn into this euphoria without questioning its underlying layered structure which plunges it even further into the debt system. It should be noted that, in the world we live in today, more than 90% of the money in circulation is generated through debt. This is what is commonly referred to in highly specialised economic circles as the creation of money ex nihilo, i.e. out of nothing.

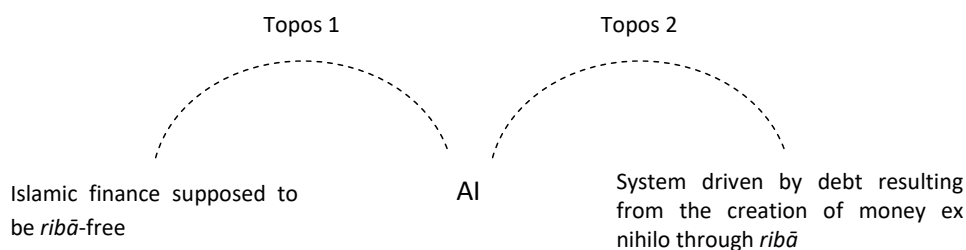
In this respect, a commercial bank is not a financial intermediary that facilitates the transfer of money between parties with surplus capital and parties in need of capital. It is a private enterprise with the right to mint money ex nihilo. I used the word 'mint money', which dates back to the Middle Ages. At the time, it referred to the rights that feudal lords had, including the right to 'mint money', that is, to make coins themselves. However, there was a considerable difference in size between the lords of the Middle Ages who minted money with gold, silver and other minerals, and today's commercial banks who mint money from nothing with a simple set of entries.

Deposits are therefore not a prerequisite for granting credit. In fact, when a bank creates money by granting credit, it also creates a bank deposit by making the money thus created available to its customer. It is loans that make deposits and not the other way round, as is taught in economics faculties, finance programs, including in Islamic economics and finance programs, because the subject requires multidisciplinary expertise, which remains rare today (Belabes, 2022a).

The cognitive trap into which Islamic finance is drawn, through AI under the pretext of the need to adopt disruptive innovations that generate exponential growth, was made possible through the notion of Grothendieck's topos:



In this regard, the notion of *topos* allows, through reading by meaning (Belabes, 2024a), to link things that cannot be linked by reading by words, nor by Euclidean mathematics, nor by the language models of AI, in all their forms existing today on the market (LLMs, LCMs, SLMs), as illustrated in figure 4:



**Figure 4: Link between Islamic finance, AI, and Debt system through toposes**

Source: Author's own

This connection between the world of Islamic finance and that of AI has the merit of drawing the attention to the complexity of the world of finance, which is changing every day and revealing the limits of the traditional tools of economics, finance, law, and the jurisprudence of financial transactions. Hence the importance of the ethics of AI and the geo-economics of AI whose relevance has increased with the chip war, that is the global rivalry for AI chips designed to accelerate the computationally intensive tasks involved in AI and machine learning algorithms.

The issue of debt is not limited to so-called Islamic financial products, including *al-Murābahah*, *al-Tawaruq*, *Bay' al-Īnnaḥ*, and *al-Ijārah al-Muntahiyah bi-al-Tamlīk* (leasing ending with ownership), it extends to the high technology used by the world of finance which feeds on debt beyond anything that can be imagined. This is an exciting discovery in the sense that it calls for renewing the tools of analysis of the world of Islamic finance beyond the engineering of financial products whose limits are revealed day after day. As Ibn Qayyim (2003, 1: 278) wrote in his book *Madārij al-Sālikīn* (Ranks of the Divine Seekers): "If the

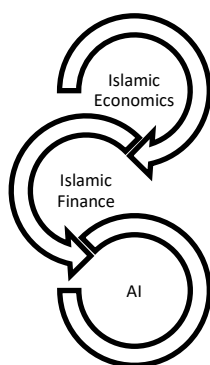
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*servant of God does not advance, he is necessarily behind. He must forward movement and not remain still. He ascends, descends, advances, or retreats. There is no standing at all in nature or in the Shari'ah".*

While debt is not a problem in itself as long as it is not based on *ribā*, and as long as it finances real-life activities at specific proportions, by being backed by tangible assets, it becomes a problem insofar as it is based on interest through the process of money creation ex nihilo, while fuelling speculation in financial bubbles. In this case, economic theory and its key indicators obscure the reality, given that there is no growth without debt generated by the creation of money which is based on commercial bank loans with interest (Belabes, 2022b).

The paradox facing Islamic finance is that the more it adopts AI, regardless of its form, the more it somehow reinforces this invisible system, which leads to the concentration of wealth in the hands of a very small minority, which reinforces the financial power of the richest 1% who own an impressive amount of the world wealth, and does not take into account the Word of God: *(So that wealth may not merely circulate among your rich)* (Qur'ān, 59: 7).

In this context, the discourse according to which Islamic finance is more efficient than conventional finance appears in turn as a veil which masks a dynamic whose consequences have not been explored. If finance, in the broadest sense of the term, is increasingly present in our lives, it becomes more and more complex, exhibiting a dynamic and non-linear phenomena (figure 5).



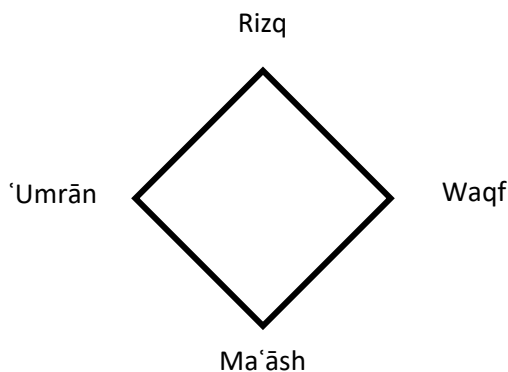
**Figure 5. Islamic finance journey: From the world of Islamic economics to that of AI**

Source: Author's own

Islamic finance researchers, analysts, and practitioners, must take this dynamic and non-linear development into account if they want to be credible, because it will not spare anyone. Hence the need to free themselves from the binary logic that governs the discourse on Islamic finance through dichotomies, first of all '*fiqh/economy*', that only serve to maintain fuzzy debate. This requires the rediscovery of what existed before the emergence of Islamic economics as an autonomous discipline under the influence of the literature on political economy (Belabes, 2017).

In this respect, it appears that the fundamental issue is not that Islamic finance has become detached from Islamic economics, but that Islamic economics has been built on the model of political economy as a market system based on exchange through money instead of barter (Smith, 1776), which results from the disembedding of the economy and its autonomy from all the social, moral, customs, and traditions of traditional human societies (Polanyi, 1944).

This awareness invites to restore the nobility of the meanings that have been veiled by the notion of economy, notably those translated by the words *rizq*, *waqf*, *ma'āsh*, and *'umrān*, through meticulous research into the history of the *bayt*, better known today under the name of Ka'aba, the first *waqf* in the history of humanity (Belabes, 2024b), as illustrated by the figure 7.



**Figure 7. The Quadriptych Rizq, Waqf, Ma'āsh, and 'Umrān**

Source: Author's own

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This quadriptych has the merit of reminding us that life is based on the *rizq* of which money is only one of the forms, it is neither the only form, nor the most important. Consequently, life cannot be embedded in the money system, just as money cannot be embedded in the debt system based on money creation ex nihilo.

### IV. CONCLUSIONS

Reading through meaning has the merit of freeing us from the method of writing an answer to a problematized question in order to link things that cannot be linked by method, because to have a method is to find nothing except to imitate what is fashionable; known in academic circles as a paradigm, that is a philosophical or theoretical framework of any kind. In contrast, not having a method means not having a ready-made answer. This opens up a whole range of possible mode of existence and ways of living which do not rely on debt embedded in the system of ex nihilo monetary creation via commercial bank loans with *ribā*.

Therefore, the cognitive trap into which Islamic finance has fallen by supporting the debt system based on money creation ex nihilo, through the excessive adoption of AI under the pretext of the need to adopt disruptive innovations that generate exponential growth, also applies to Islamic economics. The reason is that AI, as well as finance and economics, could not be part of the debt system if they were not disembedded from society by disintegrating traditional social structures, to the point of assimilating the *waqf* to trust, or to a cumulative capital for the society, what amounts to the same thing.

The problem with Islamic finance is not that it has become disembedded from Islamic economics, but that Islamic finance is the product of Islamic economics, itself conceptualized from political economics under the effect of mimetic desire (Belabes, 2014). Islamic finance has become disembedded from Islamic economics, once the world of finance has become detached from that of economics in the United States and Europe.

Hence the importance of the quadriptych *rizq*, *waqf*, *ma'āsh*, and *'umrān*, which opens the field to local practices that create social connections, and help people live better. To do this, it is first of all necessary to find the original meanings, such as *'al-waqf li'* (the auxiliary *waqf* intended to found the major *waqf*) and *'al-waqf 'ala'* (the auxiliary *waqf* intended to serve the major *waqf*), which are veiled respectively by the words *'financing the awqāf'* and *'investing of awqāf'*, which embed the *awqāf* in finance, itself embedded in the debt system by the money creation ex nihilo induced by the production of bank loan with *ribā*.

Ethical finance practitioners must look beyond simple financial engineering, structured products, and the social and environmental impact, to have a broader understanding of the financial world, its stratified complexity, and its involvement, in terms of reinforcing the debt system based on the creation of money ex nihilo, overestimation of the value of companies on the stock market, and hoarding of wealth by a minority. While the stocks of AI giants have soared, adding more than \$10 trillion to market capitalization, earnings have lagged behind. Against this backdrop, investors may demand clearer monetization roadmaps, which could burst the AI bubble.

As usual, researchers, analysts, and practitioners of ethical finance will claim that their model is more resilient to financial crises than the one that caused the crisis. This after-the-fact reading becomes tiresome in the long run, because it fails to take account of the fact that ethical finance feeds the system of money creation ex nihilo, induced by the production of bank loan with *ribā*, in one way or another, if only through the use of AI. Hence the importance of studies which only exert their influence, deep, extensive and lasting, through inner rigor, modesty and the most delicate attention at all times granted to the creatures of God, humans, things, without bias, ulterior motives, and preconceived ideas.

If technology is not neutral because it conveys the values of its creator, the Islamic finance industry must adopt a holistic approach in order to build an ecosystem that serves the values it claims to uphold. Otherwise, by adopting the AI they buy, Islamic banks will only reinforce the gap between what they say and what they do. Doing well is better than saying well. Managing this gap in the best possible way is a very motivating challenge for any human being who aspires to be consistent in living without a mask. This is the main message of Dostoyevsky's famous novel *Идиотъ* (literally *The Idiot*), that is the one who can be none other than himself. This authenticity allows him to read by meaning, which is not within the grasp of the AI, which is designed to please others and not to live its own life.

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