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# CIO letter

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# 10 TRENDS THAT WILL SHAPE THE COMING DECADES

## PART 1

**There is more to life than AI – that could be the title of this new series of letters.** At a time when the main performance driver for financial markets is the conviction that artificial intelligence will not merely transform our world but also save it, we believe it is appropriate to examine other key trends (without claiming to be exhaustive) that are important for any long-term investor to consider.

Globalised capitalism in its current form (a quest for infinite growth made possible by the continuous fall in interest rates over the past 40 years and the over-optimisation permitted by globalisation) is dysfunctional to the point that it is threatening the human life on this planet. This model has damaged biodiversity and the climate, increased inequalities, created bubbles and led to capital misallocation. By prioritising efficiency over resilience, this model has compromised the long term in favour of the short term. **The next twenty years, characterised by deglobalisation and higher interest rates, will see the search for resilience dominate, leading to a weaker and less optimised growth cycle.** This new cycle calls for consideration of the limits of systematically using financial and ecological debt to finance economic growth. In this cycle, non-financial criteria will be predominant in generating financial performance while the contribution of debt towards the generation of financial performance will be smaller.

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**This quest for resilience requires creating more local ecosystems**, while also relocating the production of goods and services closer to consumers, along with higher and less optimised levels of capital for businesses. The age of financial engineering is likely over. Companies and governments that fail to act consistently over the long term could suffer not only financial setbacks, but also social, political and even existential crises.

**Against this backdrop, and in view of such far-reaching changes**, we believe that beyond economic forecasts, modelling expected returns on our funds, and day-to-day management activity, **it is essential to have convictions on the major fundamental trends that will shape the structure of our economies over the coming decades**, especially if the world enters a phase of weak and less optimised growth. In such an environment, identifying a few strong growth trends seems essential to maintain expectations of satisfactory performance.

Below are the ten trends that, in our view, will shape the coming decades:

1. Demographics: the Indian Ocean as the future centre of the world
2. Deglobalisation: shifting from a West-centred world to a multipolar world
3. Economic value creation: from efficiency to resilience
4. Risk approach: balancing risk-taking and insurance
5. Artificial intelligence: a revolution or an economic mirage?
6. The increasing weight of governments in economies
7. The debt problem
8. The boom in capital expenditure
9. Agriculture and urbanisation: a model that must pivot if it is to endure
10. Labour versus capital or the growth of inequality

**In this first letter, we will discuss the first five trends on this list and devote a second letter to the five remaining ones.**



# 1.

# Demographics: the Indian Ocean as the future centre of the world

In 2024 the world's population is 8.16 billion. In 1700 it had a population of 600 million. One hundred years later, in 1800, it reached around 1 billion, then 1.5 billion in 1900, before soaring to 6.1 billion in 2000. By 2100, it will be around 11 billion. It took over 50,000 years for the world's population to reach 1 billion, and it will take just 300 years to go from 1 billion to 11 billion. However, this exponential trajectory is slowing considerably, as the global population growth rate slowed by 2% a year at the end of the 1960s to around 1% today. It is set to halve again by 2050, converging on zero by 2100 if climate change does not hasten the decline in the world's population. The main reason for this drop is the considerable fall in the number of children per woman, from 5.3 in 1963 to 2.3 in 2022[1].

> IT WOULD THEREFORE COME AS NO SURPRISE IF, UNDER THESE CONDITIONS, THE WORLD'S ECONOMIC CENTRE WERE TO SHIFT TOWARDS THE INDIAN OCEAN.

According to Hans Rosling[2], this decline is a direct consequence of the decline in infant mortality rates, driven by women's education and advancements in medicine and technology. This is because the decline in mortality rate leads to a decline in birth rates, which in turn limits the growth of the world's population. The expected fertility rate in 2100 is 1.8 children per woman, which is below the generation renewal threshold (2.1 children per woman according to Insee). The world's population is therefore expected to peak between 2084 and 2088[3].

The geographical breakdown by age group is particularly revealing, as there are considerable demographic disparities between the continents. **Today, almost two-thirds of the world's population lives in Asia, mainly in India and China.** Forecasts broken down by region reveal that **by 2100, Africa and Asia will be home to 4.4 and 4.9 billion human beings respectively and together will account for 83% of the world's population**[4]. It would therefore come as no surprise if, under these conditions, the world's economic centre were to shift towards the Indian Ocean.

1. https://data.worldbank.org/indicator/SP.DYN.TFRT.IN
2. Factfulness – Hans Rosling, 2019
3. United Nations
4. United Nations - https://population.un.org/wpp/

## INDIA: THE NEW DEMOGRAPHIC POWERHOUSE

Take the example of India, the world's most populous country which had 1.45 billion inhabitants in 2024. Life expectancy in India has risen rapidly, from 58.7 years in 1990 to 70.6 years in 2024. The literacy rate has risen from 18%, when the country became independent in 1947, to 78% in 2024. **The median age of the Indian population was 27.3 in 2020 and is expected to reach 30.9 in 2030, which means that by 2030 the working population in India will have increased significantly compared with 2020. Today, India has a working population of 500 million people, which is growing rapidly.** China is following the opposite trend, with an average age of 37.4 years in 2020 and 42.7 years in 2030 for its entire population. China's working population peaked at 460 million in 2015 but will return to its 1990 level of 330 million by 2035. 20% of the world's population under 20 is Indian. In 2030, compared with other major economies, India will still have by far the youngest population. The average age is 30.9, compared with 39.7 in the United States, 41.6 in the United Kingdom, 42.7 in China, 45.9 in Germany and 51.5 in Japan. **Under these conditions, if democratic stability continues to maintain a favourable environment for investment, India's immense infrastructure projects will translate into significant economic growth through the structure of its population alone.**

Countries such as Pakistan, Indonesia and Vietnam are following similar demographic trajectories. Nigeria is set to become the third most populous country on the planet by 2050 with 400 million inhabitants, surpassing the United States for a surface area almost 10 times smaller.

## WHAT CAN WE CONCLUDE ABOUT SAVINGS AND INTEREST RATES FROM DEMOGRAPHICS?

Economist Charles Gave[5] has described savings and consumption trends by age segment. From a purely economic point of view, children consume and do not produce, but their education and growth require considerable investment in schools, housing and medical services. People of working age produce and gradually start to save for their retirement. The ability to save accelerates with age and higher incomes. Retired people start consuming again thanks to their accumulated savings. New investment is needed to accommodate an ageing economy. Consequently, **a peak in the working-age population leads to a surplus in savings and a shortfall investment, resulting in a capital export from a given geographical area**. An ageing population consumes more and imports capital for its investment needs. A surplus in savings must be invested and this has an impact on the level of interest rates and expected returns on savings.

It is therefore not surprising that **peaks in the working-age population correspond to periods of low interest rates**. Yet, China's integration into the global economy and its entry into the World Trade Organisation in 2001 doubled the size of the manufacturing workforce in developed countries. The combination of this phenomenon with the decline in birth rates in developed countries and the sharp rise in women's employment since the 1970s has

5. Gavekal Research The Savings Glut's Long Life and Slow Death, Charles Gave, October 2017



> PEAKS IN THE WORKING-AGE POPULATION CORRESPOND TO PERIODS OF LOW INTEREST RATES

led to a collapse in the dependency ratio, i.e. the ratio between the economically inactive and the economically active, between 1970 and 2010, generating the largest labour supply shock in history[6]. According to estimates, **the world's working-age population likely peaked around 2012, with the arrival of young Chinese people from the birth rate peak of the 1990s into the labour market**. The consequences of this shock were significant, beginning with the injection of considerable deflationary forces into the world economy as a result of an overcrowded population working for lower incomes and saving extensively. Another consequence was the impressive weakening of wage bargaining power around the world, with the corollary of the gradual impoverishment of the middle classes in developed countries, the great losers of globalisation, and China's admission to the world economic scene. This weakening is now leading to the rise in populism and growing inequalities.

**This deflationary trend is now reversing**, as the working-age population has begun a slow decline. When you consider that the 15-64 age group peaked in developed areas of the world (USA, Europe and Japan) in the 1970s (when the last baby-boomers entered the labour market) and at a global level in 2012 (when the Chinese baby-boomers of the late 1980s entered the labour market), you can probably better understand why **the significant downward cycle in interest rates began in the early 1980s and is now probably coming to an end**. **Interest rates probably bottomed out with the COVID-19 crisis.** The ageing of the world's working-age population is driving up consumption and incomes, as well as creating a labour shortage. The dependency ratio has been rising for several years, causing significant social pressure in some regions. In 20 years' time, Europe will have just 2.5 workers for every person over 65, compared with today's figure of 3.6[7].

> THE SIGNIFICANT DOWNWARD CYCLE IN INTEREST RATES BEGAN IN THE EARLY 1980S AND IS NOW PROBABLY COMING TO AN END

6. The Great Demographic Reversal Charles Goodhart, Manoj Pradhan, 2020
7. Euromonitor, UN

## WHAT EVENTS COULD CAUSE INTEREST RATES TO DEVIATE FROM THIS INFLATIONARY SCENARIO?

Here again, demography probably provides us with more clues than economics alone. In fact, according to Charles Goodhart and Manoj Pradhan[8], three phenomena could contradict this trajectory:

- The impact of technology through the automation of tasks,
- Greater participation in the labour market by women and people over 65,
- A replication of the Chinese phenomenon in India and Africa.

**None of these three factors is likely to be strong enough or certain enough to contradict the inflationary scenario.** We have already discussed the technological aspect in a previous letter[9]. The increase in participation by women and the over-65s has already been partially achieved and has its limits. As for replicating the Chinese scenario for India and Africa, it is true that these regions are following similar demographic trajectories to China, with a time lag of several decades, and have equivalent population sizes. However, these countries will find it hard to replicate the Chinese miracle. Africa is not a homogenous economic bloc, and India is the world's largest democracy.

Neither entity benefits from the Chinese command economy, which has enabled a spectacular transition from a developing country to one of the world's two leading economic powers by 2030. This dirigisme allowed for entry into the global economy with a controlled and massively devalued currency, strict control of population flows which enabled an orderly rural exodus, and massive investment in infrastructure and state enterprises financed by public banks. India and Africa do not have the economic, political and social structures needed to achieve this feat. Although India has the largest cohort of under-20s in the world, their incomes are currently three times lower than those of the same cohort in China[10].

**Nonetheless, India and Africa will remain important areas of economic growth in the decades to come**, as these regions began their demographic transition more recently and their working-age populations are still expanding significantly. However, a second Chinese deflationary miracle for the world is unlikely.

**The Indo-Pacific will probably be the centre of the economic world at the end of this century.**

8. The Great Demographic Reversal Charles Goodhart, Manoj Pradhan, 2020
9. CIO Letter Robot Rock, March 2021
10. BOFA research OK Zoomer: Gen Z Primer, Nov 2020 Haim Israel



# 2. Deglobalisation: from a West-centred world to a multipolar world



**After the Atlantic Ocean in the 20th century and the Pacific Ocean in the 21st, the Indian Ocean will probably be the centre of the economic world in the following century.** Seen from the West, deglobalisation appears to be an obvious trend. However, seen from the East, it looks more like the regionalisation of an economy that is focused on the Indo-Pacific region. **China is not seeking to control the global economy but rather to become a regional superpower**, and Indo-Pacific development could enable China to offset the decline in domestic growth due to unfavourable demographic factors and an economy that is struggling to decouple from state power.

The US sanctions on Russia have accelerated Indo-Pacific integration by encouraging certain countries to trade in currencies other than the dollar, most notably in the Chinese currency. These sanctions have also accelerated the shift of investment by some countries in the region towards their domestic economies rather than assets in developed nations (US Treasury bonds or real estate in major capital cities), with the aim of strengthening the resilience of their economies. In 2023, for the first time, China's supranational institutions (Exim Bank and China Development Bank) granted more loans in RMB to their trading partners (Asian, African and Middle Eastern countries) than in USD.

**The Indo-Pacific region is therefore a strategic one and China is gaining ground in this area by imposing the renminbi as an alternative to the dollar.** This is where the real battleground lies between Chinese and American currencies. Saudi Arabia's opening of swap lines in RMB, China's launch of oil and gold futures in RMB, and India's purchase of Russian oil in currencies other than the dollar are all signs that the US currency will be more contested in the future over its status as the sole currency used for trade in this part of the world.

**Because of its location in the world, American domination of the world economy requires an outlay of energy that will be much harder to maintain in a world where more than 80% of global population will be located around an ocean on the other side of the globe.** In his book "*Guerres invisibles*" (Invisible wars)[11], Thomas Gomart, Director of the Institut Français des Relations Internationales, quotes Halford John Mackinder, who identified the Eurasian-African bloc as early as 1904[12] as the "heartland", a large land mass whose control guarantees world domination. In his view, the development of Eurasian land infrastructures, and in particular the Trans-Siberian railway, represented a threat to British domination of the world by sea. And indeed, Germany's rise to power, thanks in particular to an ambitious rail development programme at the end of the 19th century and beginning of the 20th, undermined this hegemony. The United States has the same "heartland" problem. At the end of the Second World War, the United States accounted for over a third of the world's GDP and two-thirds of its gold reserves. The country's foreign policy focused on two priorities: lifting Europe and Japan to boost trade, and isolating the USSR. In *Après l'Empire* (After the Empire)[13], Emmanuel Todd attempts to explain the policy of American domination in terms of geography. **The United States must come to terms with Eurasia, a vast geographical bloc that stands in opposition to it.** A united Eurasia would relegate the United States to the periphery of the world. One only needs to look at a map of the world: with Eurasia at the centre of the map and the United States only a distant province. This geographic position has protected the territory from military threats and enabled it to achieve impressive domestic economic development. However, if you introduce an artificial barrier, for example at the level of the old Iron Curtain, and slide this barrier to the edge of the map, what do you see? A world centred on the United States, with, to the north and south, the zone of influence on the American continents; to the east, the Atlantic Ocean, bordered by the NATO allies; and to the west, the Pacific Ocean, bordered by the Japanese protectorate, the Taiwanese ally and the friendly Australian continent. The only dark spots on the horizon are China and Russia.

11. invisible wars – Thomas Gomart, 2021
12. "The Geographical Pivot of History" is a paper that Halford John Mackinder submitted to the Royal Geographical Society in 1904
13. Après l'Empire, Emmanuel Todd, 2002



## THE UNITED STATES WILL LIKELY FIND IT MUCH MORE DIFFICULT TO CONTAIN THE INTEGRATION OF THE INDO-PACIFIC REGION

The conclusion of this purely geographical analysis is that, once the United States has adopted a policy of global influence, the isolation of Russia and the demonisation of China (which justifies military presence in Europe, the Pacific and Asia) are necessary to guarantee global domination for America. Without it, the United States' role as guardian of peace and protector of the free world would not be necessary. From this point of view, the United States probably no longer have much to fear from Eurasian unity: the war in Ukraine has cooled relations between Europe and China, and China's industrial policy of overproduction of manufactured goods such as cars, solar cells, wind turbines and high-speed trains is threatening the economies of countries such as Germany and France.

However, the United States will likely find it much more difficult to contain the integration of the Indo-Pacific region. **America will only be able to maintain its unilateral domination embodied in the globalisation of the economy at the cost of a considerable capacity for military and technological projection on the other side of the world. The reason being that the Indo-Pacific region**, which is home to around two-thirds of the world's one hundred largest cities, **will continue to integrate**, with accelerated infrastructure projects aimed at connecting these cities and generating economic growth. These major cities have developed relatively independently due to the lack of infrastructure to connect them. However, the construction of high-speed rail lines, airports, ports and roads between these major population centres will accelerate the generation of economic value over the next few years. The region also has considerable pools of capital, with China and its financing capacity, as well as the countries of the Middle East and Singapore through their sovereign wealth funds, and India in the future. **This integration has already begun, and a significant proportion of global growth will therefore likely be concentrated in this region in the decades to come.**

## THE UNITED STATES WILL REMAIN A LEADING POWER

It goes without saying that the United States will remain a leading power, probably the world's leading superpower, thanks to its technological dominance, the depth of its capital markets and the pro-business environment at the heart of American culture. The dollar will remain the main trading currency for a long time to come, but it will probably no longer be the only one.

**The Indo-Pacific area is evidently not a homogenous one.** Relations between the countries in this area are complex. This is why the integration of the area will not erase the multipolar nature of the region. India and China, the world's two most populous countries, are competing to host supply chains for technology products. Pakistan (population 200 million), India's regional competitor, is the biggest beneficiary of Chinese loans under the Belt and Road project. Saudi Arabia, the United Arab Emirates and Qatar are no longer simply extraordinary providers of capital, but economic powerhouses that are developing their local ecosystems in impressive ways. Let us not forget Iran, which is isolated for the moment but remains a historic power with a population of over 100 million. Indonesia (population 250 million), Vietnam and the Philippines (population 100 million each) are seeing the emergence of a middle class as regional integration takes hold. **Flows between all these countries are increasing as infrastructure is being developed.** Alliances are being forged in the financial, industrial, military and monetary fields. The United States is seeking to maintain its influence through alliances such as AUKUS with Australia and the United Kingdom, or Quad with Japan, India and Australia. China is seeking to create a monetary bloc around its currency to encourage its trading partners to trade and borrow in renminbi. It is also seeking bilateral agreements with countries with less bargaining power. The Chinese supply chain is becoming more regional, with the emergence of countries such as Indonesia and Vietnam as trading partners of the Middle Kingdom.

**In this complex multipolarity, two currency blocs seem to be emerging: one centred on the US dollar and the other on the Chinese currency and gold. The first one is likely to experience a more marked inflationary trend than in previous decades**, due to the need to relocate supply chains and reindustrialise these countries against a backdrop of higher wages and an essential energy transition. These countries are likely to pursue expansionary fiscal policies, pushing up outstanding public debt to levels that justify higher long-term interest rates. **The second bloc will suffer less from the inflationary shock** thanks to lower wages and structural deflation in China due to state-run industrial overcapacity, the costs of which are absorbed by forced household savings. Bond investors may want to favour issues from countries in the second bloc over the first.

**To invest successfully in this multipolar world, it will be more important than ever to be "local"**, that is, to have a presence on the ground, at the heart of local ecosystems.



TO INVEST SUCCESSFULLY IN THIS MULTIPOLAR WORLD, IT WILL BE MORE IMPORTANT THAN EVER TO BE "LOCAL"

# 3.

# Economic value creation: from efficiency to resilience

We have already touched on this theme on numerous occasions in our letters and outlooks[14], so we will not go back over the reasons for this trend other than to mention that deglobalisation, multipolarity and the end of the long cycle of falling interest rates mean that creating resilience will be the main driver of growth in the coming decades. In this letter, we will try to understand how this creation of resilience marks the end of a growth model based essentially on the deepening of a financial and ecological debt.

Since the First Industrial Revolution 250 years ago, and particularly **since the end of the Second World War, economic growth has admittedly been generated** by productivity gains but also, and most importantly, **by the rise of two types of debt: financial debt and ecological debt.**

As a matter of fact, money creation and the massive exploitation of our planet's resources have both contributed to creating a large proportion of economic value. This globalised development model, centred around Western culture, has prioritised efficiency over resilience, global over local, lower prices over higher wages, companies over individuals and standard over human beings. **But this model is now reaching its limits.** The phase of steadily falling interest rates and globalisation that allowed this model of value creation to flourish has given way to a new era in which the key words are resilience, deglobalisation and a higher cost of capital. **In this context, it will no longer be possible to create financial value without taking extra-financial criteria into account.**

14. in particular Tikehau Capital's Outlook 2024, September 2023 and Tikehau Capital's CIO letter: Economic development, the climate wall and the human factor – parts 1 and 2



> EXTRA-FINANCIAL CRITERIA WILL PREDOMINATE IN THE GENERATION OF FINANCIAL PERFORMANCE

## THE INTEGRATION OF EXTRA-FINANCIAL CRITERIA: AN ESSENTIAL IMPERATIVE.

**Companies that do not score well on extra-financial indicators already have reduced access to available capital. Their financing costs and cost of capital are rising**, putting them at a significant competitive disadvantage compared with their peers who are performing better on these indicators. We see this in our investment activities in debt (private debt and debt traded on capital markets) and equity (private equity and listed equities), as well as in real estate and infrastructure. Insurance premiums for the worst performers are also rising rapidly, and the trend is accelerating.

The Glasgow Financial Alliance for Net Zero (GFANZ) initiative is an interesting example. On the sidelines of COP26, most of the world's major banks signed up to the GFANZ initiative, with the aim of achieving carbon neutrality for two-thirds of their assets by 2050. Given the current composition of banks' balance sheets, this suggests that the cost of financing non-carbon-neutral assets through the banking system would need to increase very rapidly to have any chance of achieving such a target. The equivalent initiative for asset management is called The Net Zero Asset Managers initiative ("NZAM"). It has been signed by 308 asset managers, including Tikehau Capital, generating $59 trillion, or around half of the world's assets under management.

**Extra-financial criteria will predominate in the generation of financial performance**, and this is excellent news, since capital can only be channelled in a significant way towards virtuous investments if these investments are financially profitable. Ignoring extra-financial criteria will not only lead to massive destruction of financial value, but will also generate considerable additional risks.

**The investment required to finance the transition to a sustainable model is so significant that, if properly executed, it will generate strong growth**

**in a world characterised by increasingly sluggish growth.** The example of the energy transition is particularly interesting. Beyond the climate issue, **the energy transition offers a competitive edge in a context of deglobalisation**. The need to relocate industrial production to the countries where consumers are located implies major investment and higher labour costs. Investing in the energy efficiency of buildings, production processes, supply chains and vehicle fleets will enable businesses to remain competitive. It is therefore clear that the energy transition is more than just a communications gimmick. Without energy efficiency, companies will lose their competitiveness and financial profitability. What is more, the energy transition creates jobs and is a factor of sovereignty for governments. The energy transition is attracting significant investment flows, already making it a strong growth megatrend. In 2024 the energy transition investment market will already be twice as large as the fossil fuel market: $2 trillion for the low-carbon value chain, compared with $1 trillion for fossil fuels. In other words, for each dollar invested in fossil fuels today, two are invested in the energy transition. This ratio still underestimates the reality of the situation, since it does not include the market linked to the necessary adaptation of our economic system to global warming: a market also estimated at around $2 trillion[15].

## SOVEREIGNTY 2.0: A NECESSITY FOR A MORE SUSTAINABLE ECONOMIC MODEL.

In our previous letters, we also mentioned the come-back of industrial policies, with the underlying idea of a return to the priority of state sovereignty in order to create resilience. We are of course talking about **"sovereignty 2.0", which does not mean retreating back to the notion of the nation, but rather building the resilience the world needs to overcome the hurdle of adopting a sustainable economic model, and this at the local level. Sovereignty 2.0 therefore entails persevering with dialogue and cooperation between geographies while also rebuilding more robust local ecosystems to respond to shocks such as those brought about by the COVID-19 health crisis and the war in Ukraine.** Because, in 2024, it seems impossible to have sovereignty over everything. The cost would be far too high. Not even the United States or China will manage it, despite their best efforts.

Why not? Because full sovereignty would entail a never-ending war for natural resources, which would prove far too costly.

15. World Energy Investment 2024 IEA



> **IN A WAR ECONOMY, THE GREATEST SOURCE OF VALUE COMES FROM THOSE WHO HAVE RETAINED CONTROL OF THEIR MEANS OF PRODUCTION**

Despite rising tensions between the United States and China on the one hand and between all the major economic blocs on the other, some form of cooperation will always be necessary in order to avoid an all-out war for resources, which, in addition to being expensive, would swiftly lead to the total exhaustion of said resources, and ultimately to our own self-destruction. The cost of such an initiative would also mean increased debt for both the United States and China, which would have to be financed by foreign investors (primarily their own trading partners), going against the very idea of striving for autonomy. Secondly, and again due to cost , the long-term transition to renewable energy necessitates international cooperation. In the short term, it is possible to remodel the existing system using tried-and-tested (low-tech) technologies. But in the long term, the advent of new energy sources such as nuclear fusion requires funding on a scale that no single nation is able to supply. Ultimately, the global debt excess (currently around three times global GDP), which Ray Dalio describes[16] as the end of a long economic cycle, may present us with an opportunity —an opportunity to discourage any country from giving in to the temptation of autarchy.

This creation of resilience, which generates a lower optimisation of supply chains and the creation of safety margins in all areas, from stocks of raw materials to the amount of equity capital needed to cope with crises, should support inflationary pressures and accelerate the process of deglobalisation, or at any rate multi-polarisation. The economist David Baverez details all these aspects in his latest book "Bienvenue en économie de guerre" (Welcome to the War Economy)[17], mentioning that "in a war economy, the greatest source of value comes from those who have retained control of their means of production". In this context, he points out that both governments and businesses must focus on securing their "interdependence", i.e. ensuring that their inevitable dependence in a world that remains open and where autarchy can only be utopian, is offset by a favourable balance of power in other aspects of the bilateral relationship.

16. *Principles for dealing with the Changing World Order* – Ray Dalio, 2021
17. Bienvenue en économie de guerre – David Baverez, 2024

# 4.

# Risk approach: balancing risk-taking and insurance

In a context where we are seeking resilience and lower optimisation of our economic system, it seems essential for governments to encourage risk-taking. However, the trend in insurance premiums shows that demand for risk protection is rising significantly. The sharp rise in weather-related losses and cyber-crime claims highlights both the need for massive investment in solutions to contain these risks, and the costs involved in insuring against them.

In "Risk Society" published in 1986[18], Ulrich Beck anticipates a potential economic decline as soon as risk tolerance decreases and the demand for insurability increases. In other words, if a company deploys more capital to insure itself against the risks it faces, this capital will not be used for investments and the result will be an economic slowdown. **Pursuing an economic model that generates more risk would de facto lead to inefficiency in the allocation of capital, which would ultimately call this model into question.**

**This mindset of seeking maximum insurance against risk is now amplified by the increased level of uncertainty in a context of deglobalisation, geopolitical tensions and climate change.** Insuring against extreme risk if the probability of its occurrence increases would be very expensive. Above all, allocating capital to the payment of these premiums would not be productive.

> A POTENTIAL ECONOMIC DECLINE AS SOON AS RISK TOLERANCE DECREASES AND THE DEMAND FOR INSURABILITY INCREASES

18. Risk Society - Ulrich Beck, 1986



> OUR APPROACH TO RISK COULD THEREFORE BE LINKED TO THE FEELING OF FEAR. PARADOXICALLY, THIS FEAR IS MAGNIFIED BY COMFORT

It may therefore be preferable to develop the system so the occurrence of extreme risk is minimised, i.e. so that growth is more sustainable. Hence the first observation: sustainable development goes hand in hand with financial stakes.

Pierre Rabhi has taken a more philosophical and sociological approach to this subject[19]. *"The creativity of young people has been confiscated by a society that is materially too secure. Young people probably aspired to a destiny to which risk and the unknown gave meaning and flavour. Life is only a great adventure when it's punctuated by small and big challenges that keep us on our toes, spark our creativity, stimulate our imagination and, in short, unleash our enthusiasm – the divine in us."*

In "Éloge de la peur" (In Praise of Fear)[20], mountain lover Gérard Guerrier looks at this relationship with risk. In his view, the hierarchy of fears is being distorted out of all proportion to the real risks. For example, the fear of terrorism far outweighs the fear of dying in a traffic accident although the probability of being in a car crash is much higher. In fact, responses to fear are less and less collective. The prevalence of traditional social units such as parishes, sports clubs and neighbourhood associations is declining. Solidarity is delegated to the state, authorities, the internet and voice bots answering "model questions". Having thousands of friends on social media is not enough to stop people from being left alone to face their fears. The author cites the work of American psychology researcher Jean Marie Twenge, who argues that the world has entered an age of fear. As it were, in the United States, fear is the second most common reason for consulting a psychologist after depression. But why? In a world that is actually far safer than it used to be, it is not surprising that the threshold for fear is higher in settings where people risk their lives every day. Gérard Guerrier points out that the concept of stress was unheard of until the 1950s. Feelings of fear do not, therefore, diminish with development and progress – quite the contrary. **And that is where the problem lies: to overcome the risk of destruction by our own technology, humanity will need to face up to the fear of "the Other", the fear of missing out and the fear of mortality, adopting instead an inclusive approach that allows us to use knowledge, not for confrontation or competition, but for collaborative value creation.** Our approach to risk could therefore be linked to the feeling of fear.

19. La sobriété heureuse – Pierre Rabhi, 2010
20. Éloge de la peur – Gérard Guerrier, 2019

> **IN THE COMING DECADES, OUR COLLECTIVE APPROACH TO RISK SHOULD BE DECISIVE FOR GENERATING ECONOMIC VALUE**

Paradoxically, this fear is magnified by comfort. The more human beings remain in their comfort zone, the more individualistic and isolationist their behaviour becomes, plunging them into the fear of missing out and the fear of "the Other". Risk-taking, which consists of making the effort to listen to others, to consider their point of view, to disrupt an established order through entrepreneurship, somehow removes the notion of fear, because accepting uncertainty forces collaboration and openness. **Comfort is therefore the enemy of risk, and societies that lock their citizens into the materialistic comforts of the consumer society could be condemned to repeat the errors of capital allocation that ultimately lead to economic decline.**

In the early 1970s, living standards in advanced economies stalled. Since then, growth has been largely due to countries such as China catching up, rather than to a shift in the technological frontier in advanced countries. Why not? Perhaps because, after a certain level of material wealth, the human mind becomes afraid of risk and seeks to protect its wealth: the richer we become, the more concerned we are about limiting our risk. To achieve this, the ruling classes introduce laws and standards to protect their gains. An excess of standards is then detrimental to growth. In several interviews, entrepreneur Peter Thiel has said that the only field that has grown exponentially since the 1970s is IT, because it is a field that developed far from the regulators, in a universe that was initially unknown to the general public. He also points out that the 1970s were a turning point in the evolution of the world's energy mix. This is the time when nuclear power should have taken over from oil. However, the comfort of developed societies after 30 years of strong growth ended this transition. The Chernobyl accident was used as a pretext to halt the development of nuclear power. By depriving the world of this energy transition, our risk aversion led to a phase of civilisational decline that only technological progress can delay. **We should note in passing the importance of energy in creating economic value and the considerable investment opportunity that the energy transition represents today.**

In the coming decades, our collective approach to risk should be decisive for generating economic value. Relearning to love risk seems essential. First, because protecting against it is becoming increasingly expensive, and second, because risk aversion creates division and partition. When faced with a problem like climate change, the only possible response is a collective one.



# 5. Artificial intelligence: a revolution or an economic mirage?

We cannot write about the ten trends that will change the next few decades without mentioning artificial intelligence, seen by many investors as the main source of value creation in the near future. The belief that generative AI technology will radically transform economies has been a major source of financial value creation in liquid markets since the launch of ChatGPT in November 2022.

**It seems relatively clear that artificial intelligence will make a considerable contribution to the creation of economic value in the decades to come.** Countless reports, each more optimistic than the last, have been published on this subject in recent years. So here we choose to take a more measured view of this phenomenon, even though we have no doubt that it is already revolutionising both the way people live and the global economy.

## HOW WE INVEST IN THIS REVOLUTIONARY MEGATREND?

Jim Covello, Head of Global Equities Research at Goldman Sachs, addresses the problem of investing in AI in the following terms[21]: the substantial cost of developing and implementing AI technology means that AI applications need to solve extremely complex and important problems for companies to achieve an appropriate return on investment (ROI). However, it is questionable whether AI can be programmed to solve problems complex enough to justify the costs. Will models trained on historical data be able to reproduce the most sophisticated human abilities one day?

21. Goldman Sachs Research, Top of mind – Gen AI: too much spend, too little benefit? – 2024

> **IT IS QUESTIONABLE WHETHER AI CAN BE PROGRAMMED TO SOLVE PROBLEMS COMPLEX ENOUGH TO JUSTIFY THE COSTS**

He also points out that **inventions that have been really life changing, such as the internet, have allowed low-cost solutions from the outset to disrupt expensive solutions. However, AI technology is already expensive.** And he is sceptical that AI costs will ever come down enough to make automating a large portion of tasks affordable, given the high starting point and the complexity of building critical inputs, such as GPU chips. He also doubts that AI will increase the valuation of companies that use the technology, as it is unclear what path should be taken to actually increase revenues. As for MIT professor Daron Acemoglu, he remains sceptical about the economic value that this capital expenditure will create in the short and medium term[22].

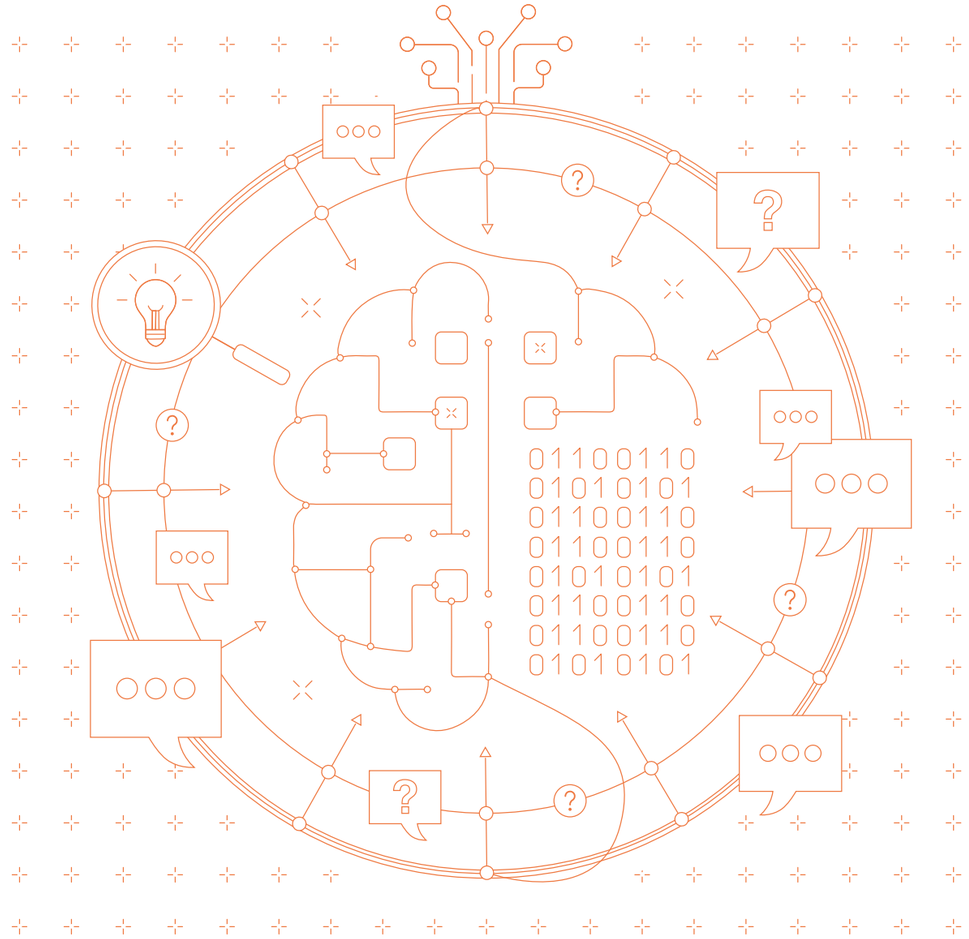
**So, the question remains: will AI costs decrease?** The answer is not clear cut, given the race for capacity in the field of computing power (data centres) or microprocessors, against the backdrop of a likely increase in the cost of electricity, which this industry consumes very significantly. **The starting point is so high that even if costs do come down, they would have to do so drastically to make automating tasks with AI affordable.** Reference can be made to the considerable decrease in the cost of servers a few years after their creation in the late 1990s, but the number of Sun Microsystems servers needed to power the internet technology transition in the late 1990s pales in comparison to the number of expensive chips needed to power today's AI transition. And that is without taking into account the replacement of the electricity network and the cost of electricity.

Furthermore, will AI sustainably increase the value of companies using the technology? That will depend on the actual productivity gains generated by AI and its ability to solve complex tasks, which does not yet seem to be the case. At present, there is nothing to suggest that they will be high enough to cause a revolution of the magnitude of those brought about by using coal, oil or computers.

There is little doubt, however, that AI will revolutionise certain sectors and, at least in part, the way we interact and access information. But from an investor's point of view, if we put aside the question of "how to use AI", which concerns everyone, a much less obvious question would instead be "how to invest properly in companies that will create economic value with AI", given the valuation levels of the sector on the one hand, and the amounts of capital deployed in investment expenditure by AI players on the other. **As with the dot-com bubble of the 2000s, it may be that the technology proves to be truly revolutionary, but that the big winners of this trend will only emerge later, both on the supplier side and on the user side.**

22. Goldman Sachs Research, Top of mind – Gen AI: too much spend, too little benefit? – 2024






**Investors' attention currently seems to be focused on the players who will offer the most powerful generative AI applications**, without really looking at the direct and indirect costs of developing them, or at how these applications will be used by the companies. **However, we feel it is just as important to analyse the real added value provided by these solutions in relation to their cost** as the degree of innovation they bring.

**On the face of it, experience shows that massive capital expenditure tends to be a drag on financial returns for equity investors.** All the more so as the sources of capital enabling these investments are abundant. **The dominance of passive management on equity markets has generated extraordinary capital flows to the tech giants** (inflows into index funds bring more capital to the largest index weights by definition), **who have thus benefited from a massive and cheap source of capital. These patterns are often synonymous with poor capital allocation.**

## AI REQUIRES VERY SIGNIFICANT CAPITAL EXPENDITURE

However, AI requires very significant capital expenditure. The promise that generative AI technology will transform businesses, industries and societies continues to be touted, which will lead tech giants, companies and public services to spend around $1 trillion on capital expenditure over the next five years[23], including major investments in data centres, chips, other AI infrastructure and the power grid.

**It will be interesting to see the return on investment in a few years' time.** Indeed, progress in artificial intelligence is closely linked to the deployment of computing power in data centres. These data centres are often single-use sites that consume a lot of electricity as well as water to cool the servers. Job creation linked to data centres is negligible. These three elements represent a potential obstacle to the development of these infrastructures insofar as political decision-makers may have difficulty convincing their electorate that hosting a data centre that does not create jobs, but consumes water and electricity, is a good thing for the constituency. The question of data centre obsolescence also arises, given the rapid advances being made in computing power. How quickly will these single-use infrastructures become obsolete? Of course, there are significant investment opportunities in data centres, both in terms of financing and capital. These include the need for digital sovereignty, which is encouraging governments to develop and maintain local data centres. However, we need to be particularly disciplined if we are to create long-term value, because laws such as the US CLOUD Act, which allows the US government extraterritorial access to data as long as the data centres are operated by US players, could ultimately destroy value for investors in these infrastructures.

## HOW IS AI REVOLUTIONISING THE WORLD?

As usual, we have chosen to take an unconventional look at this issue, approaching it from a philosophical perspective. There is no doubt that AI will generate considerable productivity gains in a number of areas and will provide a certain form of comfort in line with what 21st century technologies have contributed to humanity. **AI could also accelerate access to technologies, knowledge or energy sources that could massively change growth trajectories, such as nuclear fusion.**

But **do the goods and services offered by the artificial intelligence giants promote freedom, or do they threaten it?** The answer to this question is complex, and the coming years will shed more light on the matter. However, we can already make a few observations.

23. Goldman Sachs Research, Top of mind – Gen AI: too much spend, too little benefit? – 2024



## DO THE GOODS AND SERVICES OFFERED BY THE ARTIFICIAL INTELLIGENCE GIANTS PROMOTE FREEDOM, OR DO THEY THREATEN IT?

**By 2023, 67% of the world's population, or 5.4 billion people, had access to the internet**[24] and half of humanity were active on social networks. This thereby allowed for such a sizeable population to interact with more people around the world than ever before and gave them access to a gigantic mass of information. But the quality of the information and content, or the quality of the contact with those being interacted with, is much more difficult to verify compared to when people's circles of contacts were more restricted or when information was circulated through traditional media. **Exposure to erroneous information or malicious contact is a risk** that can lead groups of people to doubt the sincerity or accuracy of information or the instructions conveyed by public authorities. **This globalisation of information and the increasingly blurred nature of its origin and veracity paradoxically leads to a loss of reference points for users.** The tools for manipulating individual opinions have become more sophisticated because of AI. In a previous letter[25], we noted that debt had often led to situations of servitude and engendered a certain form of violence. Let us consider for a moment a potential contemporary form of servitude engendered by our relationship with data. In his book Gratuit (Free of Charge)[26], Olivier Bomsel explains that **the industrial era was one of accumulation of capital and material wealth. However, the industrial revolution we are living through is characterised by a decline in the value of material objects in the economy, with a potential long-term trend towards free goods, while services remaining paid for. In this context, the scarce resource becomes the consumer's attention span rather than raw materials.** The accumulation of data on consumer habits and its processing by AI makes it possible to refine the algorithms that will offer consumers more products or more content. The performance of these algorithms will determine how much users consume in terms of volume, but also in terms of time spent on the site consulting content that will expose them to advertising and suggestions that will keep them online for longer, and so on. **Capturing users' attention over the longest possible period is therefore becoming the main source of economic value creation for tech giants. Artificial intelligence makes it possible both to target this effort more effectively and to create more precise content with this aim in mind.**

24. International Telecommunication Union – United Nations
25. Tikehau Capital's CIO letter: Servitude, debt, extortion and war: an optimistic view of 130 centuries of economic growth – June 2019
26. Gratuit ! Du déploiement de l'économie numérique – Olivier Bomsel, 2007

This phenomenon is obviously not without danger for individual freedoms. First, because artificial intelligence is probably capable of detecting cognitive biases and influencing decision-making on the basis of these deductions. Is a judge more lenient after a good meal? Is an employee whose mobile phone is always more than 80% charged more disciplined than another and therefore more deserving of admission to a high-potential programme? In La Nouvelle Servitude Volontaire (The New Voluntary Servitude),[27] Philippe Vion-Dury goes even further, pointing out that **tech giants are now seeking to reverse the active-passive relationship between individuals and the media**. **Individuals are no longer merely actors who come to consume a service. The service comes to the individual, entering their intimate realm to create an offer perfectly suited to them, something that will trigger further demand.** By exploiting the cognitive bias that encourages people to favour and accept information that confirms their own point of view, these companies trap consumers in what Eli Pariser[28] calls **"a filter bubble"**. **People can choose their own version of the truth and have their views and beliefs reinforced by exposure to opinions that confirm their own, and this risks fragmenting society in a way that causes dialogue to break down.**

In a previous letter[29] we detailed Walter Lippmann's neoliberal theory, which consists of controlling a population incapable of adapting to the capitalist economic model on its own by imposing the norm and relying on the media and experts to tell the people what to think. The French philosopher Gilles Deleuze theorised the society of control. In a 1987 interview[30], he said: "When you are informed, you are told what you are supposed to believe. In other words, informing means circulating a watchword...Information is a system of control." Control is achieved through the gradual suppression of what makes us human, or in other words, the practices that encourage us to question our prejudices and emerge from our caves to preserve our freedom: social sciences, poetry and philosophy. Information is a controlled system of watchwords. Counter-information is effective when it becomes an act of resistance. Art can be an act of resistance. Generative AI produces content from mass-collected data whose source has been lost in the shuffle. AI could therefore be instrumental in replacing the human judgement that comes from reading and reviewing different documents that approach a subject from different angles and points of view. This exercise in observation and listening requires open-mindedness. Why did this author write this? What if he was right? By summarising and compacting information, generative AI could create comfort by relieving humans of this effort of reflection and review. However, this effort is the very condition of freedom. The philosopher Michel Foucault distinguishes between sovereign societies and disciplinary societies, which are authoritarian regimes. Disciplinary societies need hospitals, prisons and schools, i.e., spaces of confinement. Deleuze adds that **the future lies in the evolution of disciplinary societies towards societies of control in which those who look after our well-being no longer need places of confinement, thanks to the contribution of technology**. The use of artificial intelligence can obviously contribute to the advent of this type of society.

For Stefano Boni[31], technology is an inexorable process that allows us to shape the environment, animals, the body and even the human genome to our own liking. Artificial intelligence can speed up this process. Comfort is not an evil in itself, but the sensory consequences of its spread to consumers around the globe have been insufficiently studied. This lack of research has allowed the idea that technological progress has always been beneficial for humanity to take root. "**But the spread of comfort provided by technology has cemented our indifference to the destruction of the subtle bonds connecting us to our environment**, not to mention the disasters that occurred throughout the 20th century and were viewed as tragic mistakes (world wars, nuclear bombs and accidents, industrial disasters, endemic pollution)." The subjugation and exploitation of nature are the product of a convergence of interests between consumers and companies, governments and financial institutions, all influenced by the technological system. Some lament that artificial intelligence will have a hard time replacing natural stupidity. So much the better if AI helps to compensate for this human weakness. So much the better if it does not manage to replace it completely.

**Clearly, artificial intelligence is revolutionising our daily lives and this trend seems to be as strong as it is sustainable. This assumption does not absolve us from exercising our critical faculties in the face of what is presented to us as an Eldorado for investors and human beings.** For us as investors, will the costs of AI make it possible to generate the financial returns that current valuations seem to anticipate? For us as human beings too, will we be able to preserve our freedoms by resisting the considerable range of comforts offered to us by AI and by maintaining our cognitive abilities despite the temptation to delegate our critical thinking to AI?

27. La nouvelle servitude volontaire – Philippe Vion-Dury, 2018
28. Eli Pariser – The Filter Bubble, what the internet is hiding from you, 2011
29. Tikehau Capital's CIO letter: economic development, the climate wall and the human factor
30. https://iphilo.fr/2018/01/12/gilles-deleuze-linformation-cest-la-societe-de-controle/
31. Homo Confort – Stefano Boni, 2022

# What can we conclude from analysing these first five trends?

**Demographics tell us that the world's population is set to peak over the course of this century. With this in mind, the move towards a multipolar world and the dominance of resilience over efficiency should push people to protect themselves, or even isolate themselves from the rest of the world to protect their gains and their comfort.** As economic development progresses, the appetite for risk diminishes and the search for insurance increases. Finally, AI seems capable of embodying a kind of technological god, into whose hands humanity could place its destiny, hoping that its development will enable technology to serve humanity rather than destroy it.

**If we were to identify a risk common to these five trends, it might be that of a breakdown in the human bond, dialogue and the connection with living things. We will see in the next issue whether the last five trends also lead to the same conclusion.** At this crucial moment in our evolution, we have a choice of two roads before us. On the one hand, a continuation of the current model promoted by globalisation, stemming from Western culture based on norms, laws and rules as the regulators of the economic system.



This system grants humanity, or at least part of humanity, the right to dominate nature and its fellow human beings. This model magnifies ownership and encourages partition, protection and comfort. On the other hand, a model that accepts the premise that humanity can only avoid collapse by seeking a balance with its environment, by finding its place in the universe rather than trying to dominate it. Consciousness would then be the best possible regulation, because it would enable us to unify life and knowledge by reconnecting with ourselves, with others and with nature.

Is the latter nothing but a sweet utopia to be mocked? Not necessarily, as long as we realise that humility and respect allow us to broaden our perspective considerably and offer a much finer observation of our natural, economic and social environment than what is imposed on the analyst blinded by a vision imbued with certainties. An observation unbiased by dogma which allows us to envisage simple solutions, above and beyond vested interests. By welcoming dialogue and knowledge-sharing, this approach seems to be an interesting way of building a sustainable economic model.

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# CIO letter

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