2ND EDITION: RISK MANAGEMENT

2025 ECOMOMIC FORECAST
NEXT CRISIS PROBABILITY

DATA IS THE MAJOR
FOCUS FOR TECH PLAYERS

DATA DRIVEN
DECISION MODELS

FINTECH IMPACT IN
SBL RISING RISK

MARKETING BUDGETS
& SOCIAL IMPACT

AI ACT RULES
CALIFORNIA AI LOW

DATA BREACH RISK &
RESPONSABILITIES

VT RISK

Valuable Technology

VT | Magazine

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GLOBAL ECONOMY

ECONOMIC OUTLOOK

2025 Data Input

The US S&P 500 index rose by more than 20% for the second consecutive year, marking its best two-year performance this century.

US: The new administration's strategy — reconstruction can go hand in hand with reconciliation. But for reconciliation to take place, there must first be truth, writes technology entrepreneur and investor Peter Thiel.

EU engines: With weakened leaders, rising extremists and struggling economies, France and Germany, the two traditional engines of the European Union, are weakened and their vulnerability is worrying: "In France and Germany, the two systems seem to have reached the end of a certain logic"

The Japanese economy is the fourth-largest in the world, as measured by GDP, enters a new strategic era.

Investors expect deflationary pressures in China to become even more entrenched should policymakers fail to provide more determined stimulus.

US corporate bankruptcies hit 14-year high as interest rates take toll

Investment banks prepare for crunch year in 2025

The national debt world wide is big and getting bigger. Does it matter?

How Trump Is Rethinking Economic Power

His defense of the dollar reflects a belief that tariffs are better than sanctions. In September, Donald Trump made an impassioned defense of the dollar's status as the world's reserve currency: "If we lost the dollar as the world currency, I think that would be the equivalent of losing a war."

That status is so important to Trump that this past weekend he threatened <u>to impose tariffs of 100% on the Brics</u>—a group of emerging economies led by Brazil, Russia, India, China and South Africa—if they created an alternative to the dollar.

I would add they will consider the real cost of the lost opportunities not having an real strategy in collaboration EU. Also see the cost of investment and technology transfer to Asia, in present and next 100 years.

First 100 days of the new Commission mandate: have to build a new Strategy to Reform the European Economic Model. The future of European competitiveness: Draghi report could serve as a roadmap for the new European Commission, with three key challenges for the European Union:

- closing the innovation gap with the US, and maybe consider a new collaboration plan
- enhancing economic security by reducing dependencies
- ECE countries retention in EU, building a real economic strategy, corelated with culture and geopolitical position (EU-USA partnership?)
- Create a environment for new companies to grow, an equal chances for Western and Eastern companies
- New members Moldavia, Ukraine, Albania.

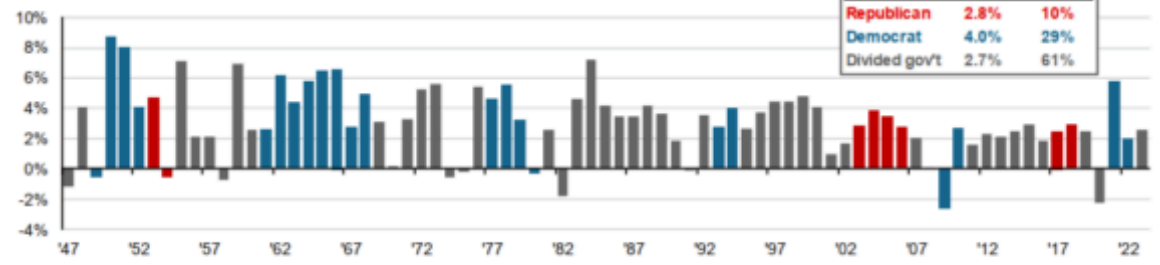# REPUBLICAN PARTY VICTORY HISTORICALLY HAS A HIGHER CRISES PROBABILITY?

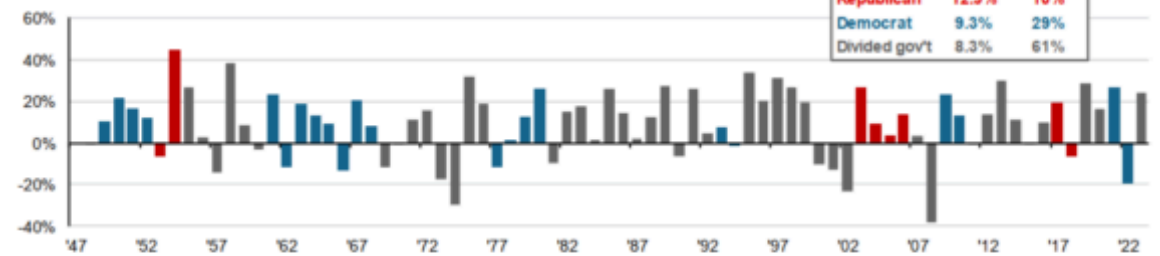**The economy and markets tend to fare well under all government configurations.**   GTM | U.S. | 68

Real GDP
Year-over-year % change, annual

	Average	% of time
Republican	2.8%	10%
Democrat	4.0%	29%
Divided gov't	2.7%	61%

S&P 500 Price Index
Calendar year returns

	Average	% of time
Republican	12.9%	10%
Democrat	9.3%	29%
Divided gov't	8.3%	61%

Source: BEA, Standard & Poor's, FactSet, J.P. Morgan Asset Management. Data is calendar year.
Guide to the Markets – U.S. Data are as of September 30, 2024.

J.P.Morgan
ASSET MANAGEMENT

Since 1947 the S&P 500 has returned 12.9% under Republicans and 9.3% under Democrats, real GDP has grown on average 2.8% under Republican rule and 4.0% under Democratic rule.

There's consistent turnover in the political agendas that forces compromise. Despite this you will consistently hear narratives about how the stock market or economy perform better under certain types of regimes. None of it is supported by meaningful data!
More importantly, the economy and markets aren't driven by political changes in an economy like the USA where the **government is so intentionally decentralized across different branches, states and local entities.**

The Trump era has begun, although there are still few days until 20th January.
Three effects estimated for Europe:
1. Resetting the US relationship with the EU: is a new opportunity to recover technology gap (and institutional) for the EU (with the stake of long term economic revival) and for the USA a chance to built on the economic potential between the two most POWERFUL economic areas in the world. America was at the peak of its glory ("great") during massive investments in Europe, most likely there is no other way, even few are considering.
2. The Black Sea region and Central and Eastern Europe are in an era of uncertainty, but with a strong geopolitical position. And uncertainty is expensive. Considering current risk we should look at West Germany, Japan, Korea, etc. as examples of pragmatism in negotiation and capitalizing on a geostrategic position, through a solid partnership. Romania as the only Latin and pro-European, with the strongest growth in the last 20 years, should look very close at the American institutions, also (re)connect with the 1848-1918 country vision and the main pillars of state construction.
3. Hope for peace? Russia's economy has been put on "war mode". What else will they produce? Returning to the status of gas station and gas reservoir of Europe is BANKRUPTCY. Then the alternative remains of Russia's involvement in existing technology transfer projects, impossible to built without the participation of the US & EU.

2024 ECONOMY NOBEL PRIZE: "for studies of how institutions are formed and affect prosperity"
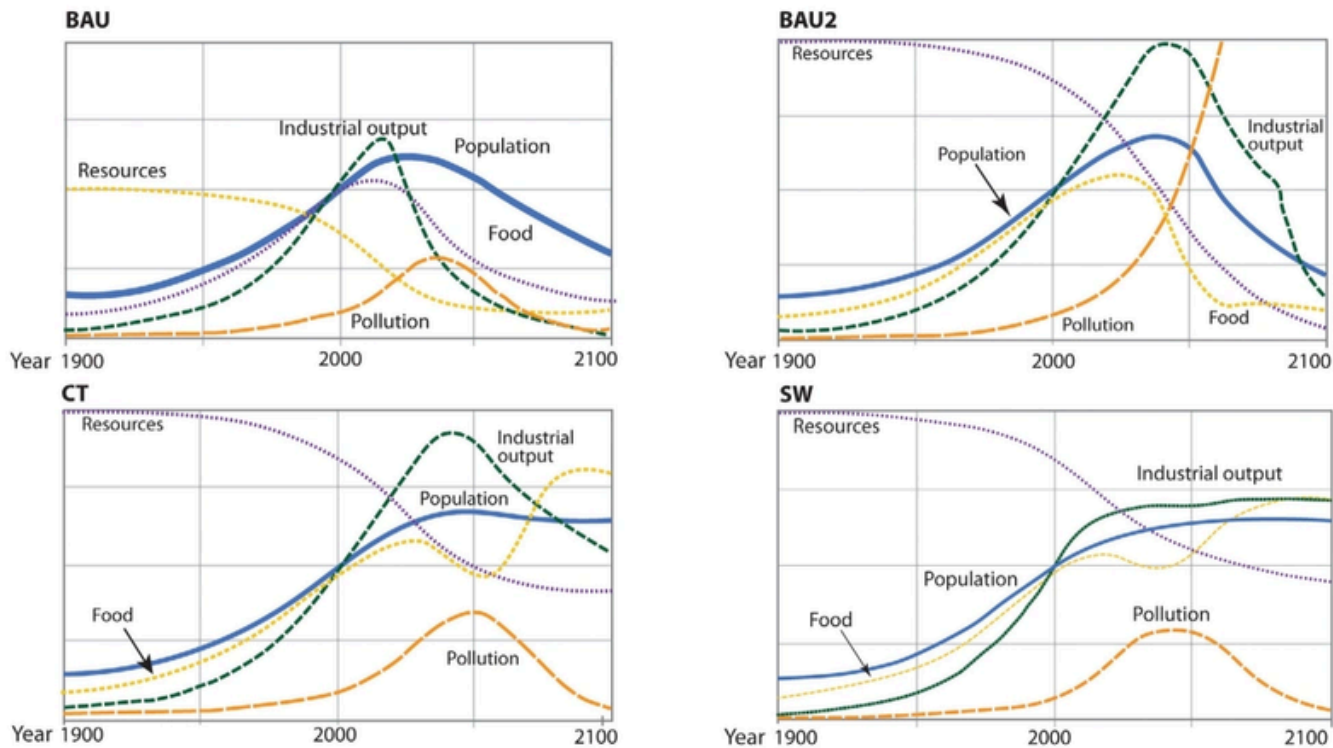

FIGURE 1   The BAU, BAU2, CT, and SW scenarios. Adapted from *Limits to Growth: The 30-Year Update* (p. 169, 173, 219, 245), by Meadows, D. H., Meadows, D. L., and Randers, J., 2004, Chelsea Green Publishing Co. Copyright 2004 by Dennis Meadows. Adapted with permission

This year's laureates have provided new insights into why there are such *vast differences in prosperity between nations*. The laureates claim the introduction of inclusive institutions has had a positive long-term effect on economic prosperity. Indeed, these institutions are today found primarily in **high-income countries in the west**.
Inclusive institutions – such as those that enforce property rights, protect democracy and limit corruption – foster economic development, according to the laureates. In contrast, extractive institutions, which give rise to a high concentration of power and limited political freedom, seek to concentrate resources in the hands of a small "elite" and thus stifle economic development.

Societies with a poor rule of law and institutions that exploit the population do not generate growth or change for the better": The laureates' research showed how European colonisation had dramatic but divergent impacts across the world, depending on whether the coloniser focused on *extraction* of resources or the setting up of *long-term institutions* for the benefit of European migrants. This, they found, resulted in a "reversal of fortune" where former colonies that were once rich become poor, while some poorer countries - where institutions were often set up - were in the end able to garner some generalised prosperity through them.

Current risk: raising concerns about rapid advancements in artificial intelligence and how they will affect humans (also mentioned by other Nobel winners) and data gathered by pro-democracy groups showed that public *institutions and rule of law in many parts of the world were currently being weakened.* The fact that some groups of countries with poor institutions are focused to use new technology (to impose power) could be considered a high risk in the context of the present research.
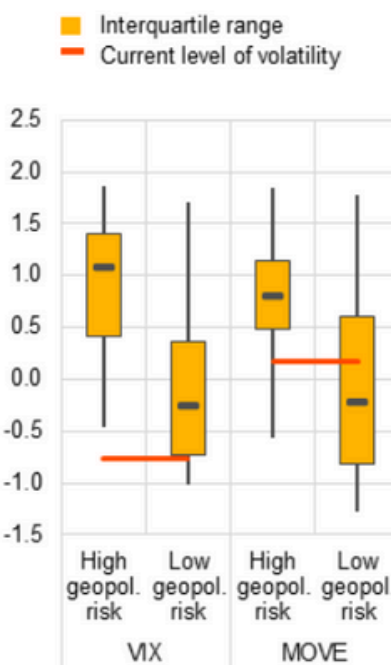
GEOPOLITICAL TENSIONS

a) Global equity markets and high-yield corporate bond spreads
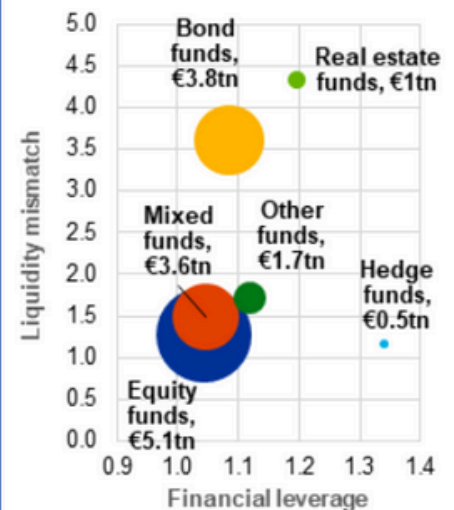
(1 Jan. 2021-7 May 2024; index, basis points)

Legend:
- Global equity markets
- Global high-yield bond spreads (right-hand scale)
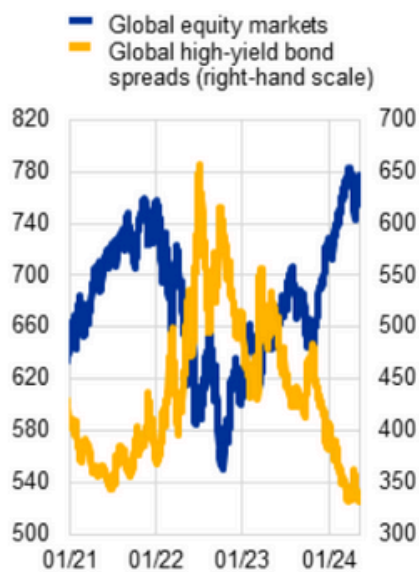
b) Historical volatility distributions, by geopolitical risk regime

(3 Jan. 2000-7 May 2024, indices)

Legend:
- Interquartile range
- Current level of volatility

c) Liquidity mismatch and leverage among euro area investment funds

(Q4 2023, ratios, bubble size: total assets, € trillions)

- Bond funds, €3.8tn
- Real estate funds, €1tn
- Mixed funds, €3.6tn
- Other funds, €1.7tn
- Hedge funds, €0.5tn
- Equity funds, €5.1tn

Liquidity mismatch (y-axis) vs Financial leverage (x-axis)

Geopolitical tensions may spark volatility and trigger adjustments in financial markets, which could be amplified by non-banks with low liquidity and high leverage. Given deeply integrated global equity markets, financial stability risks for the euro area might stem from adverse spillovers from the United States. Heightened concentration and high valuations in equity markets, notably in the United States, indicate scope for greater volatility and potential for a market correction.
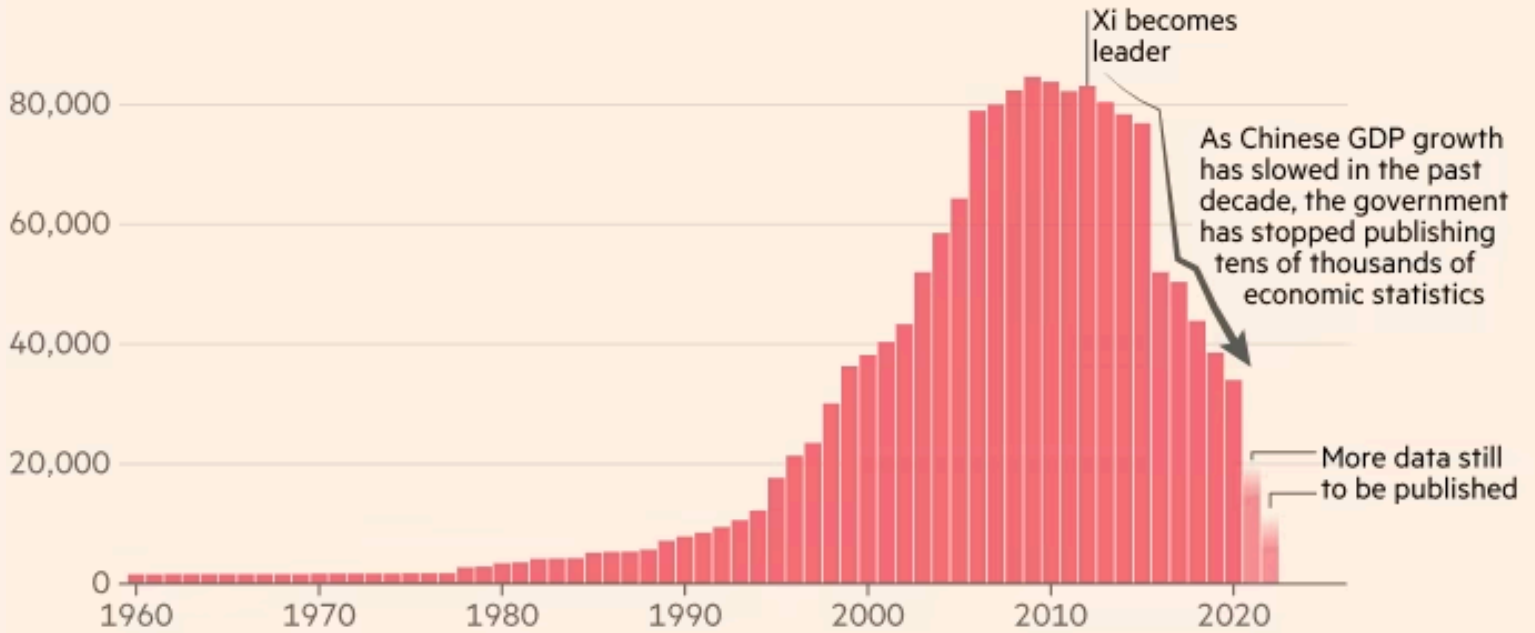
The non-bank financial intermediation sector could still amplify any market correction, given liquidity vulnerabilities, leveraged exposures and rising concentration risks

China is becoming much less transparent about its economic performance, quietly discontinuing thousands of statistical series

Annual number of economic indicators made available by China's National Bureau of Statistics

Xi becomes leader

As Chinese GDP growth has slowed in the past decade, the government has stopped publishing tens of thousands of economic statistics

More data still to be published

Source: FT analysis of CEIC; Chinese National Bureau of Statistics
FT graphic: John Burn-Murdoch / @jburnmurdoch

Overseas and domestic VC fundraising in China have fallen, as the country's entrepreneurs shy away from launches

Aggregate amounts in $bn

Dollar-denominated funds
Rmb-denominated funds

Companies founded

FINANCIAL TIMES   Sources: Prequin; IT Juzi • 2024 data ends in August and is incomplete; funding data is YTD

Debt is a crucial legacy of the real estate bubble

China sectoral debt, as a % of GDP

Non-financial corporates   Financial sector   Household   Government
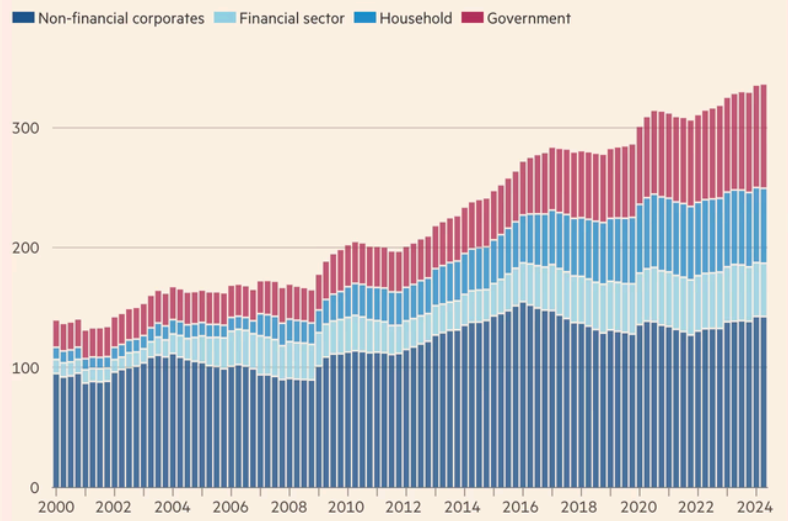
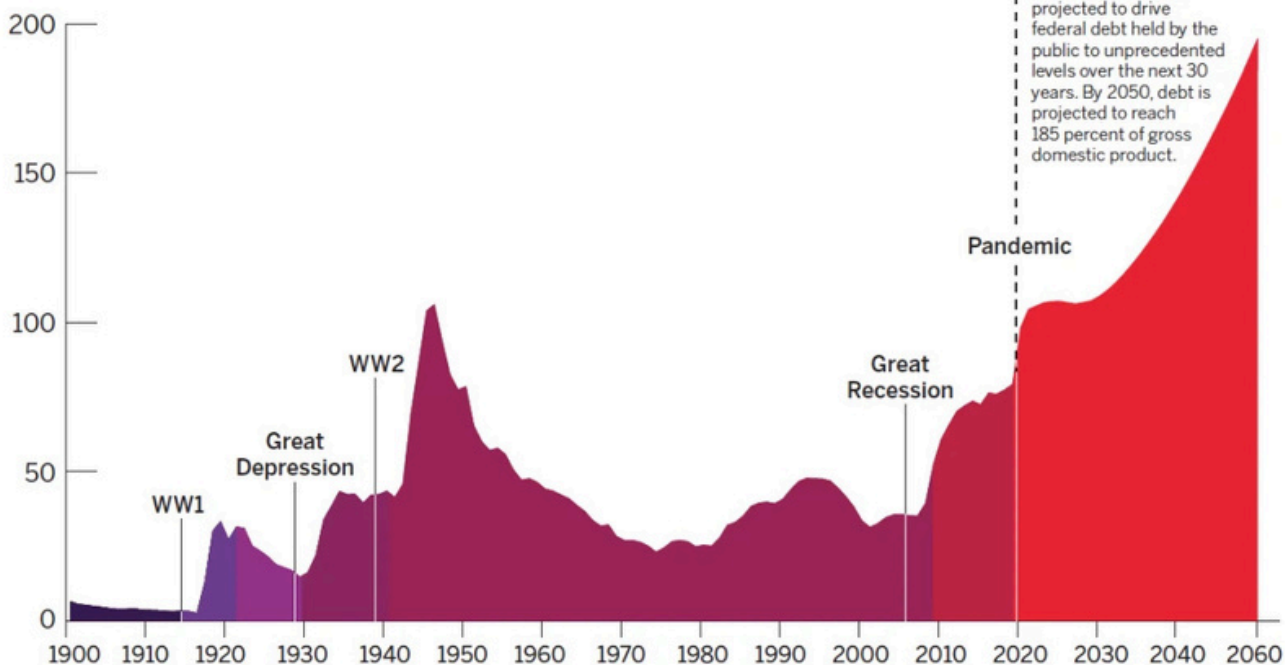FINANCIAL TIMES   Source: Institute of International Finance

NEXT 12 MONTHS RECESION PROBABILITY

THE FINANCIAL CRISIS IN 2008 AND THE RISE IN INFLATION OVER THE PAST YEARS HAVE BOTH STARTED IN THE US, THEN SPREAD AROUND THE WORLD.

Federal debt held by the public, 1900 to 2050
Percentage of Gross Domestic Product

Projected
Growing deficits are projected to drive federal debt held by the public to unprecedented levels over the next 30 years. By 2050, debt is projected to reach 185 percent of gross domestic product.

Pandemic

Great Recession

WW2

Great Depression

WW1

Changes expected in US economic strategy influence what economists are thinking and how their predictions and also the economy changed. After looking at the charts, see whether.

Main challange is to bring down inflation without recesion.

Consumer price index, 12-month change

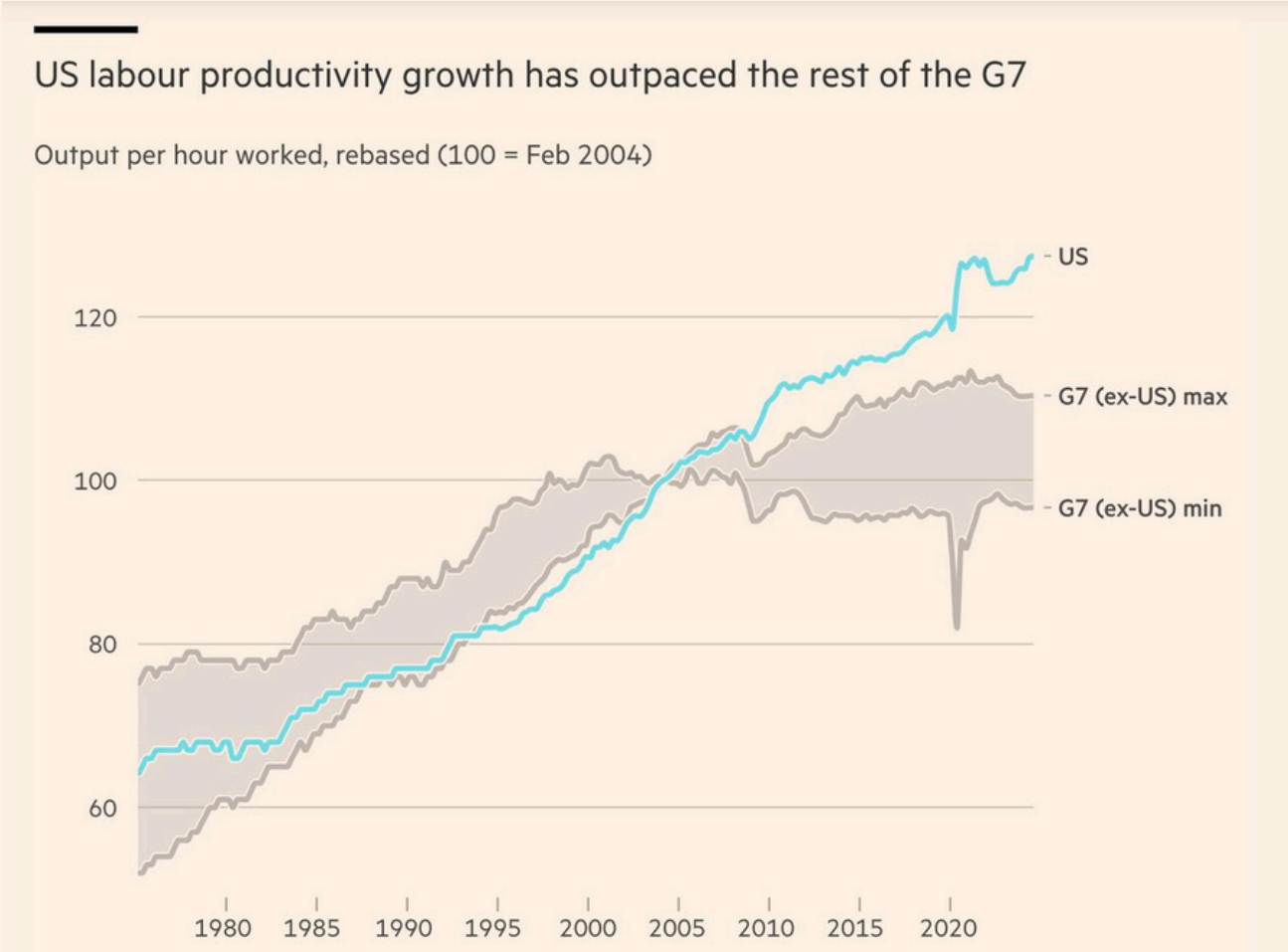RECESSION

■ Core +3.3%
■ Overall +2.4%
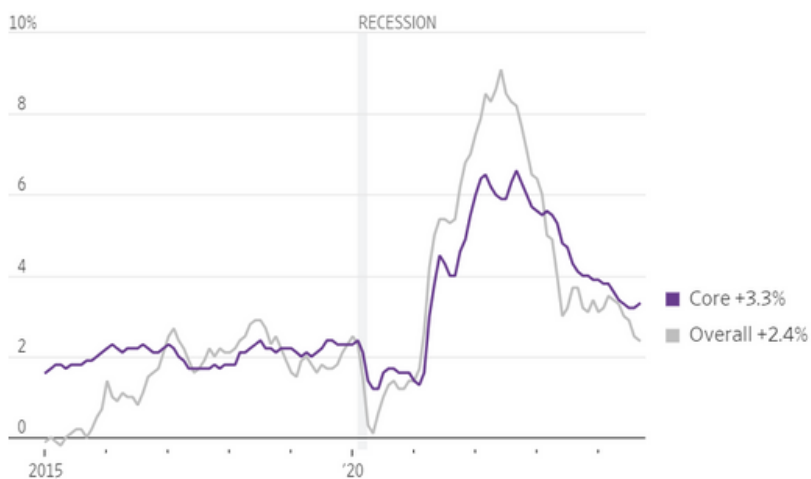
Source: Labor Department

More than a decade after the financial crisis, the change continues to roil the regulatory landscape. Lawmakers are <u>rolling back post-crisis regulations</u> and taking a close look at new and emerging digital currencies, <u>some from tech companies,</u> all while keeping a watchful eye out for what might spark the next crisis.

COMMERCIAL BANKING

US labour productivity growth has outpaced the rest of the G7

Output per hour worked, rebased (100 = Feb 2004)

Opinion: The accelerated rise of private credit brings systemic risks.
New research shines a light on the next arenas of competition: the high-growth industries of today that will transform the business landscape of tomorrow.

THE INDUSTRIES RESHAPING OUR GLOBAL ECONOMY

As AI becomes more prevalent reshaping global economy - the next arenas of competition—namely, a set of dynamic, high-growth industries that are fundamentally redefining the global economy and changing the game for businesses across the board.

New research shines a light on the next arenas of competition: the high-growth industries of today that will transform the business landscape of tomorrow.

Top risk stakes: deciding which tools to invest in, where to find the right talent, and most important LEADERS.
"There will be fewer and fewer top managers, prepared to run complex businesses", "I would say that both here and in the world, the form matters more and more to the detriment of the content. More specifically, it seems that what you say matters more than what you do" Ovidiu Dîmbean-Creta (Forbes interview).

What is the true value of leadership in times of accelerated change?
"The use of modern technologies, including AI, not only for communication, but also for analyzing and managing leadership processes, is becoming essential. Tomorrow's leaders must be transformational, motivational, and combine empathy with the effective use of technology." It is a question that often sparks debate, but it also prompts us to reflect on the role of education and varied experiences in developing leadership skills. "Leadership has no single formula, but its value derives from many sources. Native traits are useful, but insufficient" Ovidiu Dîmbean-Creța, Rector of ASEBUSS, the first business school in Romania to organize an Executive MBA in partnership with a powerful American university. First business school to include a Digital Transformation course. In 2023, ASEBUSS Business School celebrated 30 years of activity - an occasion for reflection and pride. During all this time, the school has trained over 1,500 alumni and created the strongest and most active community of Executive MBA graduates in Romania.
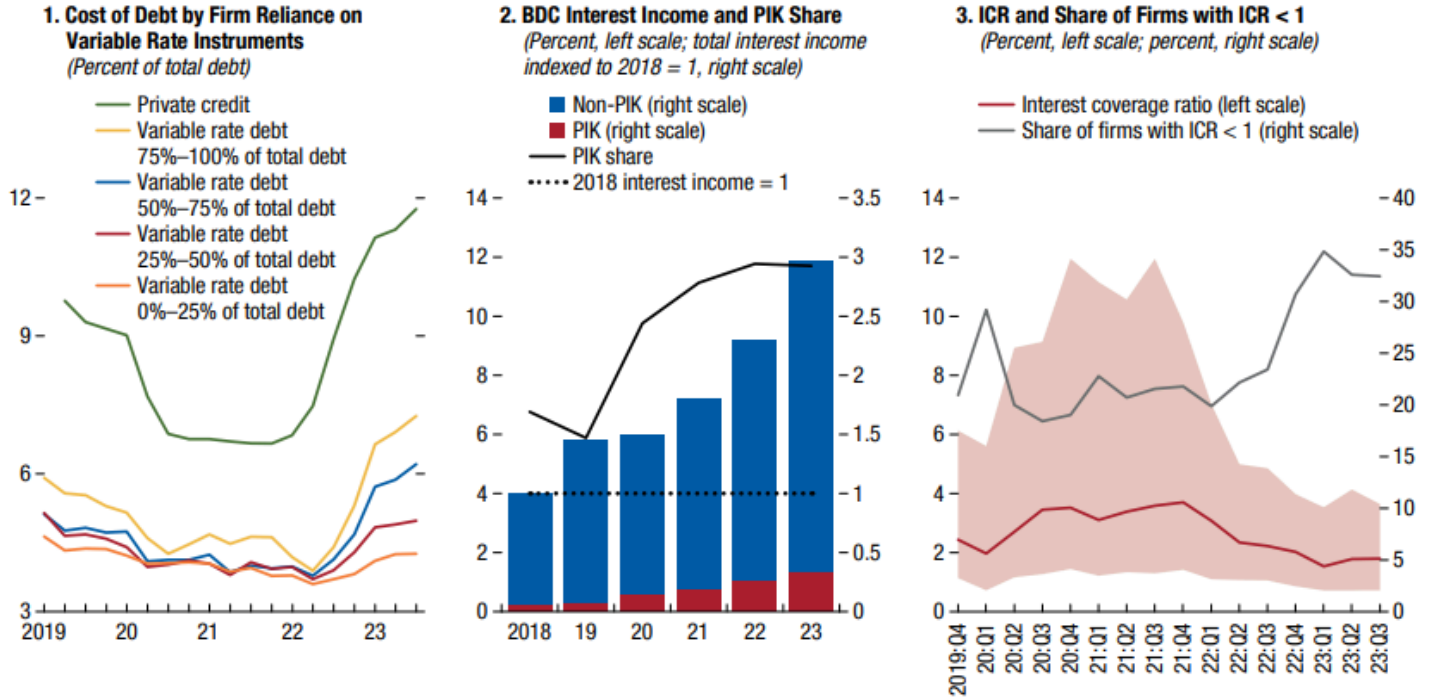
ACCELERATED RISE OF PRIVATE CREDIT BRINGS SYSTEMIC RISKS

Figure 2.4. Private Credit Firms Face a Steep Increase in the Cost of Their Variable Rate Debt

The transmission of higher rates into firms' cost of debt has been more swift for firms with variable rate debt.

Payment-in-kind interest payments have surged for BDC portfolios.

Public firms with size and leverage characteristics similar to private credit firm have shown a deterioration in their ability to pay interest.

1. Cost of Debt by Firm Reliance on Variable Rate Instruments
(Percent of total debt)

2. BDC Interest Income and PIK Share
(Percent, left scale; total interest income indexed to 2018 = 1, right scale)

3. ICR and Share of Firms with ICR < 1
(Percent, left scale; percent, right scale)

Private credit has been one of the fastest-growing segments of the financial system over the past 15 years. This type of credit creates significant economic benefits by providing long-term financing to firms too large or risky for banks and too small for public markets.

However, credit migrating from regulated banks and relatively transparent public markets to the more opaque world of private credit creates potential risks.

Banks have tested their risk appetite, learned from many mistakes and survived through crises, vs Privat credit have not tested their resilience through crises yet.

Firms borrowing private credit tend to be smaller and riskier than their public market counterparts, and the sector has never experienced a severe economic downturn at its current size and scope. Such an adverse scenario could see a delayed realization of losses followed by a spike in defaults and large valuation markdowns

Private credit borrowers are vulnerable to interest rate shocks. Private credit borrowers almost exclusively use floating rate loans.

Rising interest rates could ultimately lead to a deterioration in credit quality. The rise in benchmark rates has increased the interest burden for private credit borrowers, prompting some firms to resort to payment-in-kind interest. This flexibility may help borrowers withstand temporary stress, but it can lead to compounding losses if a firm's underperformance cannot be reversed.

- The rapid growth of private credit, coupled with increasing competition from banks on large deals and pressure to deploy capital, may lead to a deterioration in pricing and non-pricing terms, including lower underwriting standards and weakened covenants, raising the risk of credit losses in the future.
- If the asset class remains opaque and continues to grow exponentially under limited prudential oversight, the vulnerabilities of the private credit industry could become systemic.

HIGH DEBT & INFLATION A PATH TO NEXT CRISES

As the IMF has warned, the rise and rise of private credit brings systemic risks. Not hard for guessing where the next financial crisis will emerge. Also the global public debt to pass $100tn this year (IMF). Government debt, hit record during the Covid-19 pandemic, has continued to rise as countries embrace higher spending to stimulate economic growth.

EVERCORE | LAZARD | PJT | Moelis | P / W / P | Houlihan Lokey
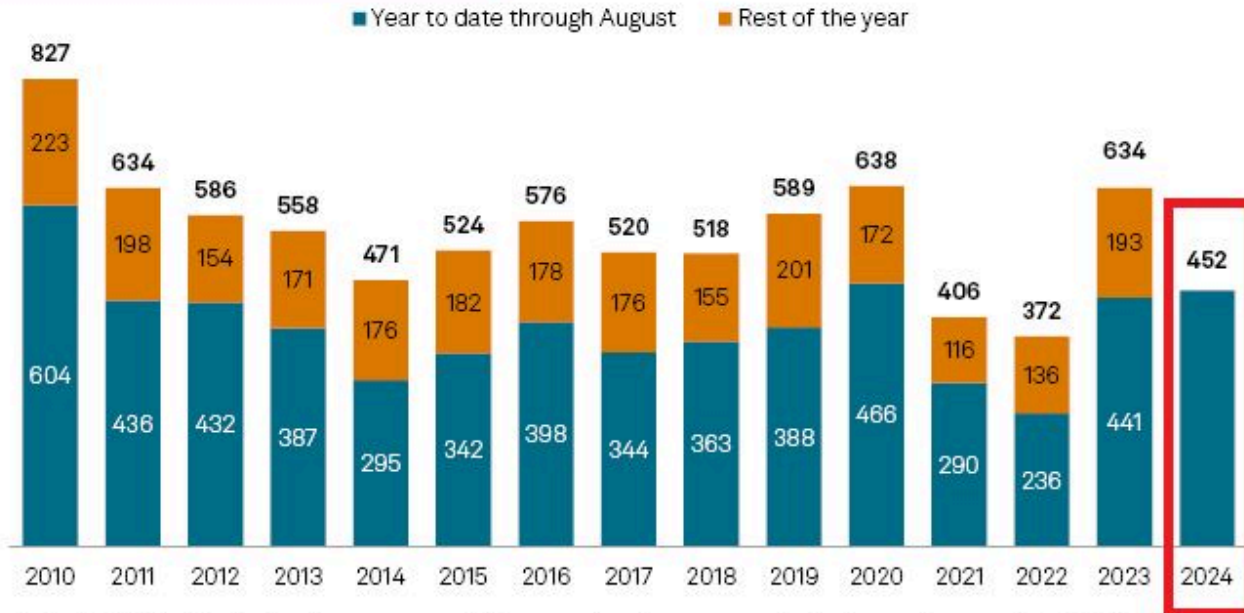
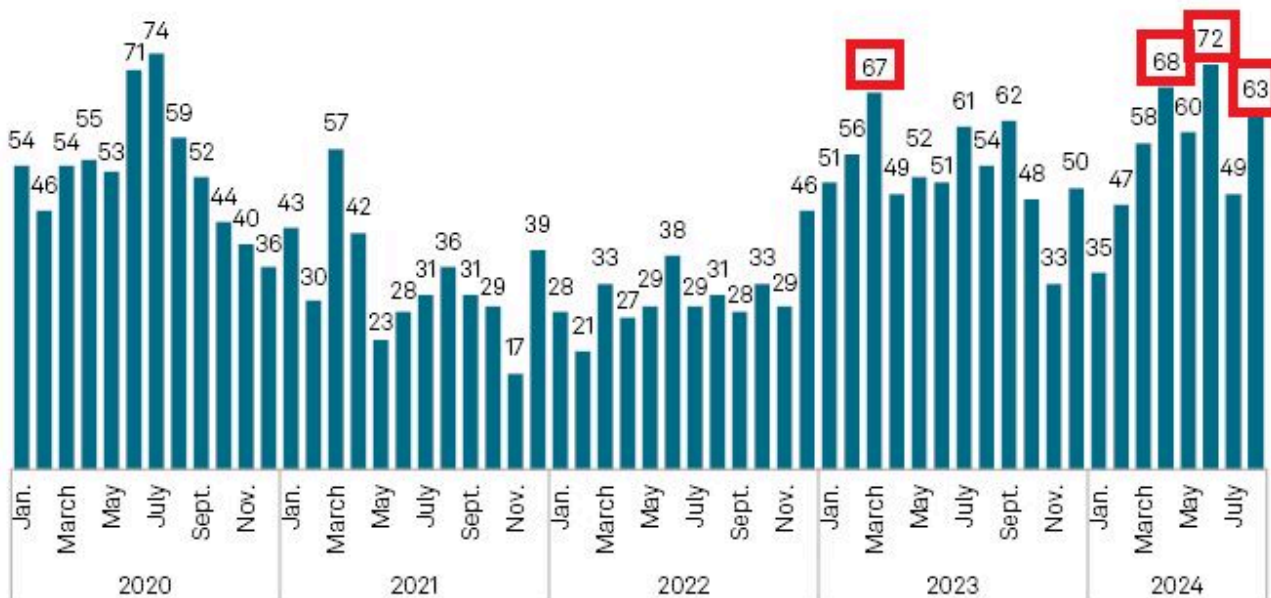Investment banks prepare for 2025 crunch

BANKRUPTCIES ON THE RISE

US corporate bankruptcies have hit their highest level in 14 years, with at least 686 companies filing for bankruptcy in 2024.Most bankruptcies have been seen in the consumer discretionary sector.

US bankruptcy filings by year

■ Year to date through August ■ Rest of the year

Year	Year to date through August	Rest of the year	Total
2010	604	223	827
2011	436	198	634
2012	432	154	586
2013	387	171	558
2014	295	176	471
2015	342	182	524
2016	398	178	576
2017	344	176	520
2018	363	155	518
2019	388	201	589
2020	466	172	638
2021	290	116	406
2022	236	136	372
2023	441	193	634
2024	452		

Includes S&P Global Market Intelligence-covered US companies that announced a bankruptcy between Jan. 1, 2010, and Aug. 31, 2024.

US bankruptcy filings by month

2020: Jan. 54, 46, March 55, 53, May 71, 74, July 59, 52, Sept. 44, 40, 36, Nov.

2021: Jan. 43, 30, March 57, 42, May 23, 28, July 31, 36, 31, Sept. 29, 17, Nov. 39

2022: Jan. 28, 21, March 33, 27, May 29, 38, July 29, 31, Sept. 28, 33, 29, Nov. 46

2023: Jan. 51, 56, March 67, 49, May 52, 51, July 61, 54, Sept. 62, 48, 33, Nov. 50

2024: Jan. 35, 47, March 58, 68, May 60, 72, July 49, 63

Data compiled Sept. 2, 2024.

Includes S&P Global Market Intelligence-covered US companies that announced a bankruptcy between Jan. 1, 2020, and Aug. 31, 2024.

S&P Global Market Intelligence's bankruptcy coverage is limited to public companies or private companies with public debt where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to $2 million, or private companies where either assets or liabilities at the time of the bankruptcy filing are greater than or equal to $10 million. Involuntary bankruptcy filings are also included.
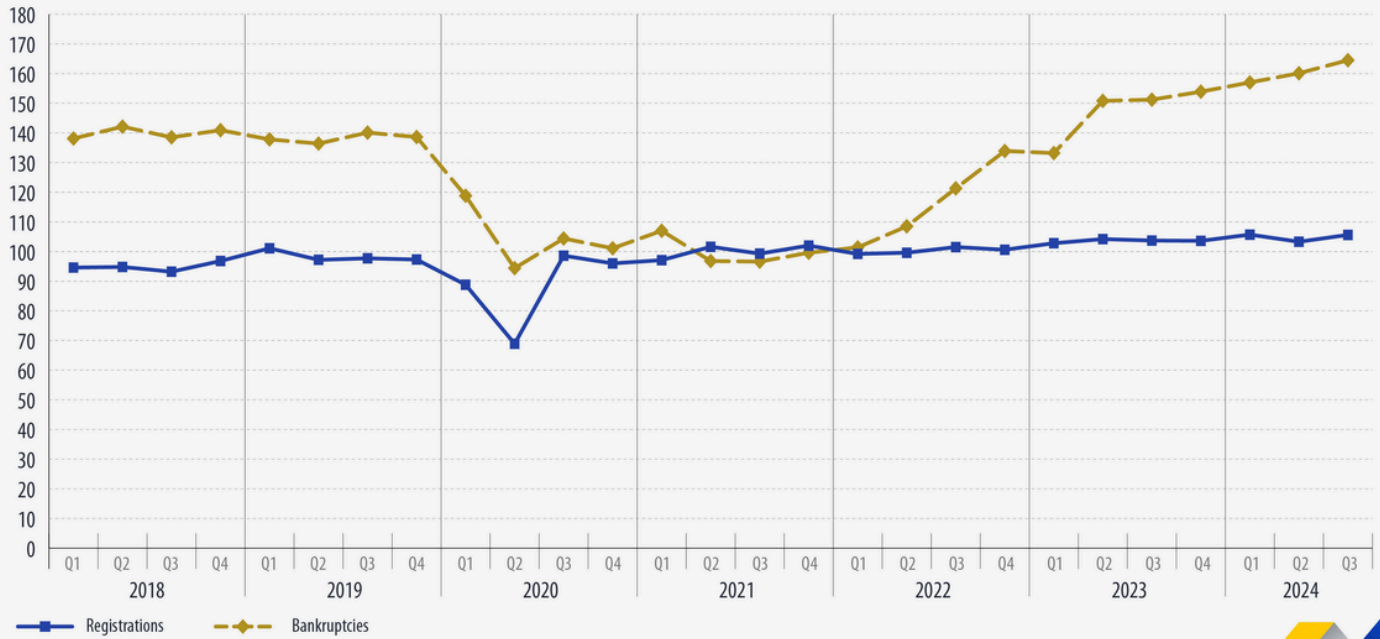
Source: S&P Global Market Intelligence.

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VT RISK

THE NUMBER OF BANKRUPTCY DECLARATIONS INCREASED IN MOST SECTORS

Registrations of businesses and declarations of bankruptcies in the EU, Q1 2018 to Q3 2024

(seasonally adjusted data; 2021=100)

EU data show that the number of business registrations went up in most sectors of the economy. France and Germany, the two traditional engines of the European Union, are weakened.

When compared with the previous quarter, in the third quarter of 2024, the largest increases in the number of bankruptcies were recorded in transport (28.8%), information and communication (15.3%), and accommodation and food services (9.8%). On the other hand, bankruptcy declarations decreased only in education and social activities (-16.3%) and the financial sector (-6.8%).

US corporate bankruptcies at the highest level in 14 years, is proving to be a result of postponed effects of COVID crises through the aid-policies for the U.S. businesses. The rising number of corporate bankruptcies highlights the challenges many companies are facing, from inflation to market instability.

Most bankruptcies have been seen in the consumer discretionary sector. More and more Americans are defaulting on their credit card debts. A similar situation occurred in 2008, shortly before the crisis. "The poorest 30% of Americans are stuck in debt. They have no savings at all."

.

DECISION-MAKING IN THE AGE OF AI :
THE BROKEN LOOP IN HIGHER EDUCATION
HOW TO FIX IT?

The rise of AI presents an opportunity. However, human capabilities, like making moral judgments, and using imagination or intuition, are often untrained, impulsive, or implicit.

Experts agree that many twentieth-century leadership practices won't work in the turbulent twenty-first century. This engaging book gives you the insights you'll need to navigate in a fast-changing business landscape. Traditional executive education programs are no longer sufficient business leaders need. That's because business schools and other traditional educators aren't adept at teaching the soft skills vital for success today, people don't always stay with the organizations that have paid for their training, and learners often can't apply classroom lessons to their jobs (business professors Mihnea Moldoveanu). Further he considers that AI's rapid advancement has ignited enthusiasm about its potential to revolutionize corporate decision-making by substituting for expensive, fallible humans. But it's naïve to believe that by gathering ever more data and feeding it to ever more powerful algorithms alone, businesses can uncover the truth, make the right decisions, and create value. We call this false belief "dataism." (The Irreplaceable Value of Human Decision-Making in the Age of AI by Martin Reeves, Mihnea Moldoveanu)
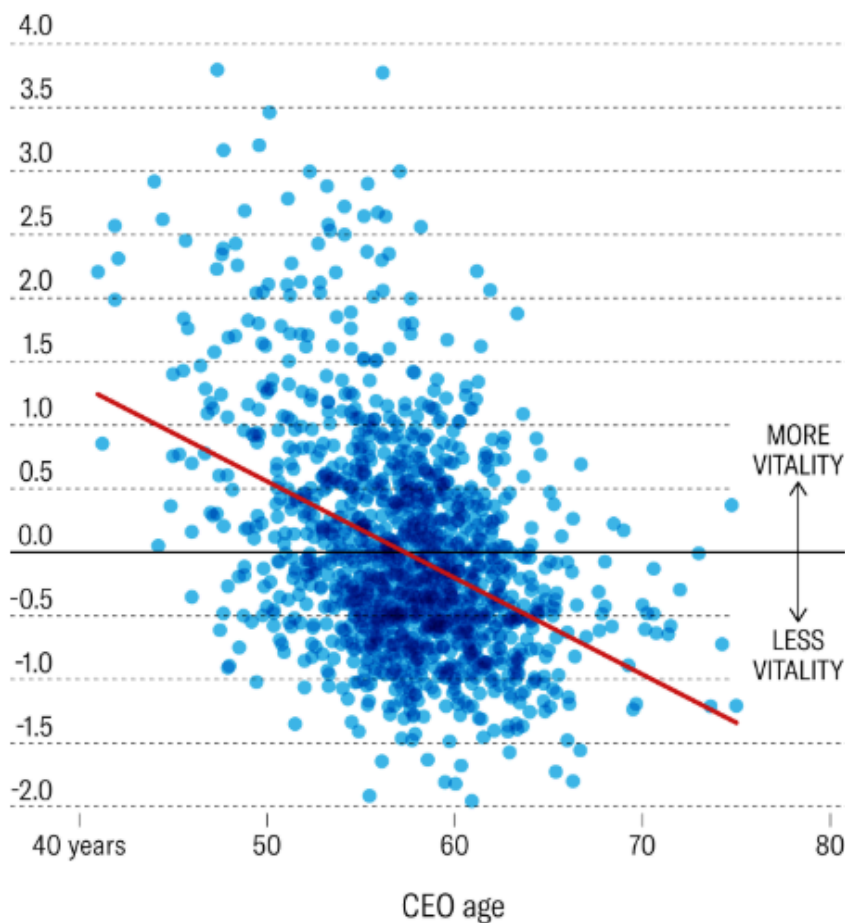
Businesses Need to Bring Younger Employees into Their Leadership Ranks?

"There will be fewer and fewer top managers, prepared to run complex businesses". "Leaders in training need to be exposed to different contexts, multiple challenges, and take on varied roles to broaden their perspective. We encourage leaders to be open to continuous learning and to look for models of success, not only in business, but also in fields such as science, sports, or culture." Ovidiu Dîmbean-Creta, Rector of Asebuss Business School.

Corporate vitality score, by CEO age

Source: BCG Henderson Institute ▽HBR

Corporate Vitality Declines with CEO Age

BCG Henderson Institute researchers studied more than 1,000 publicly listed companies with at least $20 billion in market value or $10 billion in revenue over the course of 2022 to measure their vitality — an indicator of their long-term growth potential. Underlying this measurement is a predictive model, which quantifies a company's long-term prospects based on a variety of financial and nonfinancial indicators — such as market valuation and recent sales growth, strategic orientation, investments in technology, quality of the patent portfolio, and the diversity of leadership. Corporate vitality was found to be negatively correlated with CEO age. This effect holds after controlling for firm age and size.

BEHAVIOR ECONOMICS SCORE CARDS

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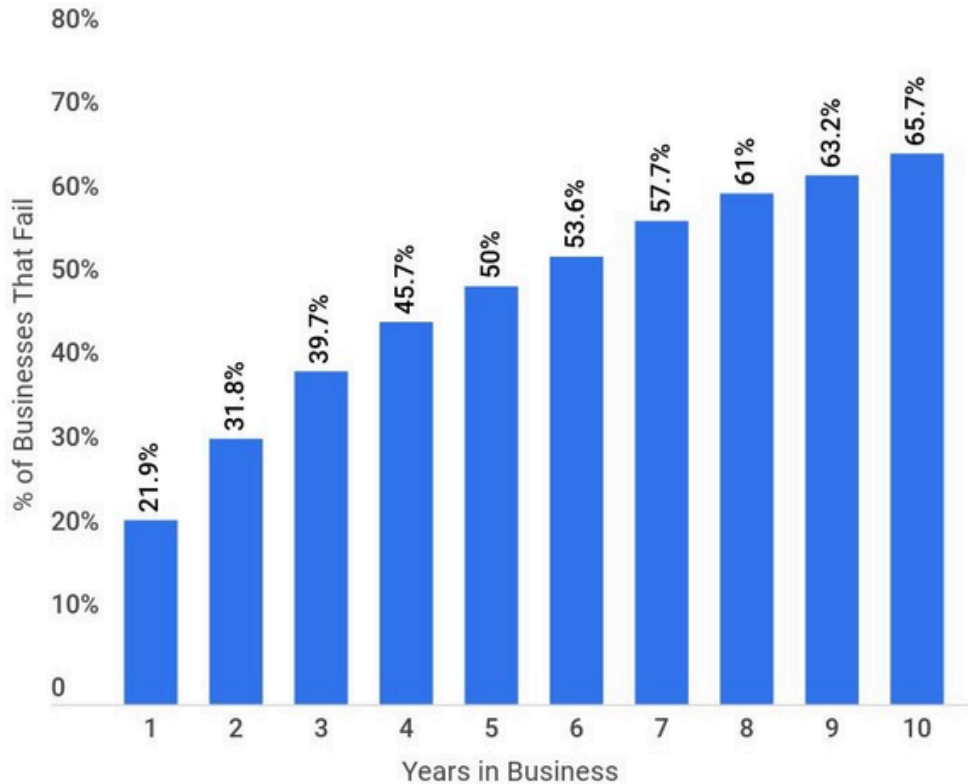
TECHNOLOGY START-UP

VT RISK

SMALL BUSINESS

"Every time someone starts a new small business, it's an act of hope and confidence in our economy." (one year ago, U.S. President)

The U.S. government under incoming President should consider SB contribution in times when America "was great" and make a call on unethical big corporations can be and how much damage they make.

Also EU new strategy should consider the vitality and economic + social impact of SB, with a focus on financing tech businesses.

SMALL BUSINESS FAILURE RATE

A bar chart titled "SMALL BUSINESS FAILURE RATE" showing the percentage of businesses that fail by years in business:
- Year 1: 21.9%
- Year 2: 31.8%
- Year 3: 39.7%
- Year 4: 45.7%
- Year 5: 50%
- Year 6: 53.6%
- Year 7: 57.7%
- Year 8: 61%
- Year 9: 63.2%
- Year 10: 65.7%

The y-axis is labeled "% of Businesses That Fail" and the x-axis is labeled "Years in Business".

SB Lending Lost KnowHow (2)

Data on small business lending are fragmented, incomplete, and not standardized, making it difficult to conduct meaningful comparisons across products and over time. With current data it is not possible to confidently answer basic questions regarding the state of small business lending.
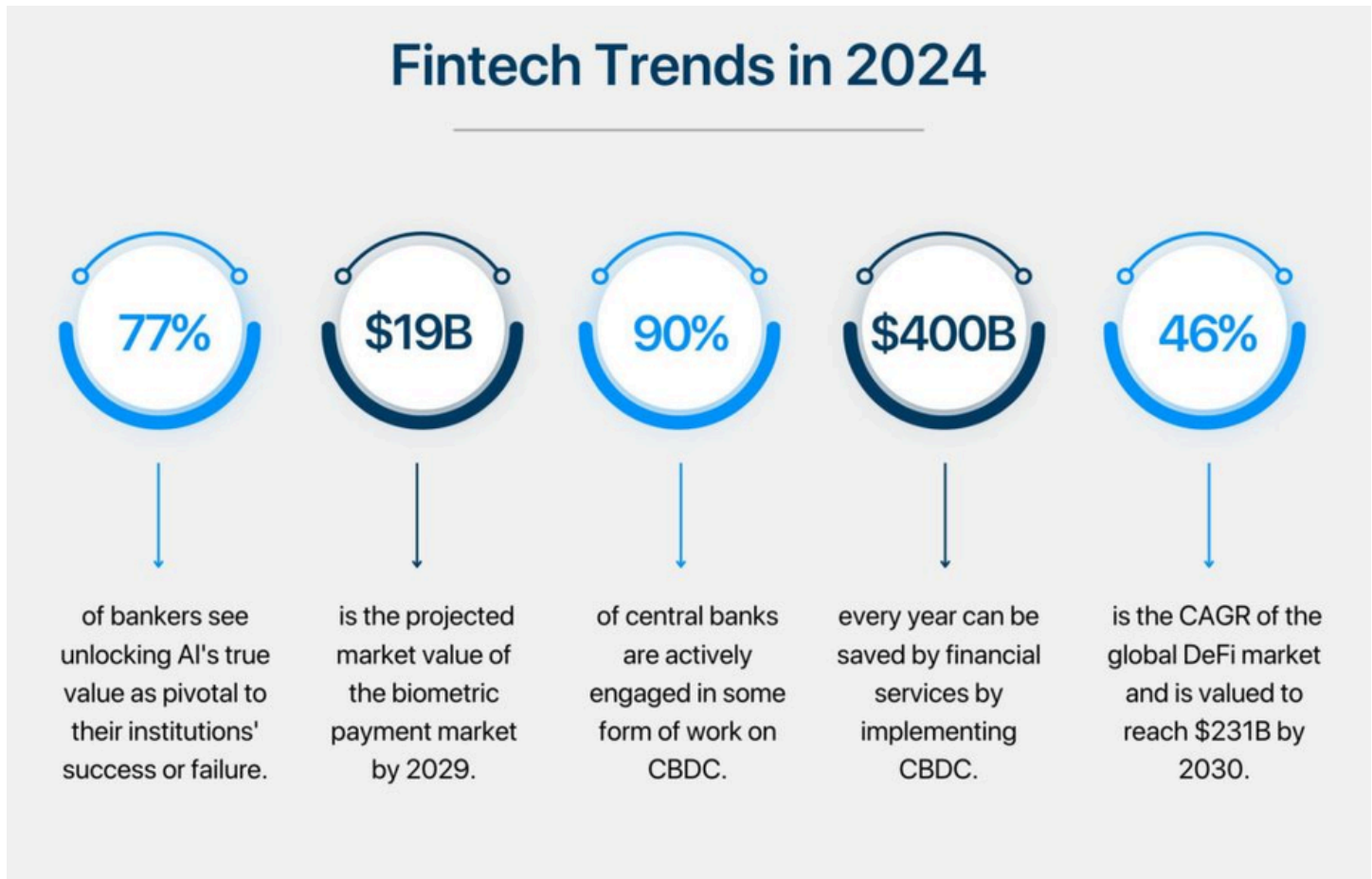
For example, absent better data, it is hard to determine if relatively lower levels of bank loans to small businesses in the decade before the pandemic began were reflective of a net relative decline in lending to small businesses as compared to large businesses or rather a shift within small business lending from banks to alternative lenders.

The leading cause of business failure is insufficient **cash flow**. Here are the other top reasons why small businesses fail:

- 79% fail because they start with too little money
- 78% fail because they lack a well-developed business plan, including insufficient research on the business
- 77% fail because they didn't price things properly or failed to include all necessary factors when determining prices
- 73% fail because they were overly optimistic about achievable sales, money required, and what they need to do to be successful
- 70% fail because they don't recognize, or accept, their weaknesses and don't seek help from others

THE IMPACT OF FINTECHS ON SB LENDING

Fintech Trends in 2024

77% of bankers see unlocking AI's true value as pivotal to their institutions' success or failure.

$19B is the projected market value of the biometric payment market by 2029.

90% of central banks are actively engaged in some form of work on CBDC.

$400B every year can be saved by financial services by implementing CBDC.

46% is the CAGR of the global DeFi market and is valued to reach $231B by 2030.

The rise of financial technology companies-"fintechs"-is changing the way money moves around the world, leading to greater financial inclusion and closing a credit gap that historically has hampered small businesses.

According to the World Bank, small and medium enterprises (SMEs) is the engine driving world economies, representing 90% of all businesses worldwide, providing 50% of all employment, and responsible for up to 40% of national income in developing economies

40% unmet financing need

Even so, research has shown that 65 million businesses-or 40% of SMEs in developing economies-face an unmet financing need of $5.2 trillion per year.

This gap translates to 19% of the gross domestic product of the 128 countries surveyed and attests to the vital role that SMEs play in the world economy as a driver of employment and overall economic health.

STUDIES: FINTECHS IN SB LENDING

Small business lending (SBL) plays an important role in funding productive investment and fostering local economic growth. Nonbank lenders have gained market share in the SBL market in the United States, especially relative to community banks. Among nonbanks, <u>fintech</u> lenders have become particularly active, leveraging alternative data and complex modeling for their own internal credit scoring.

Some examples of fintech business models (building on old lending categories through fast/digital decision-making):
- OnDeck (SBL)
- Kabbage (SBL)
- Funding Circle (SBL)
- Tradeshift (supply-chain financing)
- BlueVine and Fundbox (digital-first factoring companies).

Using proprietary loan-level data from two <u>fintech</u> SBL platforms were explored the characteristics of loans originated (https://www.sciencedirect.com/science/article/abs/pii/S1572308924000755). Results show that these fintech SBL platforms lent relatively more in zip codes with higher unemployment rates and higher business **bankruptcy** filings.

- **Fintech platforms' internal credit scores were able to predict future loan performance more accurately than traditional credit scores, particularly in areas with high unemployment**. Overall, while not all fintech firms follow the same approach, find that fintech lenders could help close the credit gap, allowing small businesses that were less likely to receive credit through traditional lenders to access credit and potentially at lower cost.

- How they did it? Using **data driven strategy** they build models to predict whether a borrower will repay or, ultimately, default on the obligation. Some have business models that rely on untraditional external data sources, fintech company <u>Kabbage</u>, which uses data from social media, sales, shipping records, and more to help determine the creditworthiness of small businesses.

The fundamentals of predictive analytics became part of core business model: understanding the data, data preparation, balanced and unbalanced data sets, constructing training-validation-holdout sets, cross-validation, predictions and target leakage. Technical solutions used by fintech platforms include:
(1) Decision trees as a modelling technique, overfitting and induction bias, model validation;
(2) Random forest as an ensemble-style modelling technique, bootstrapping, random feature selection;
(3) Log loss as a metric for evaluating and comparing models, feature impact.

Fintech performance is variable across Europe, with the United Kingdom, Sweden, and northern European countries leading.

■ Top third¹ ■ Middle third ■ Lower third ■ Not considered

Countries with GDP > $100 billion
Countries with GDP < $100 billion
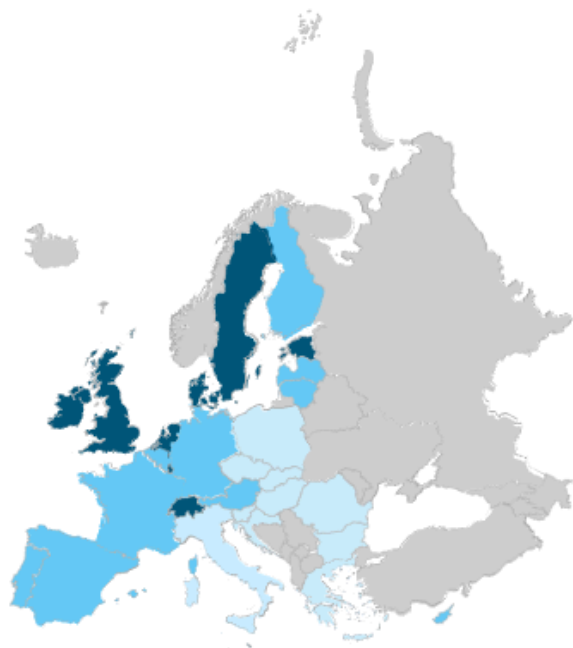
Fintech ranking by performance

United Kingdom	Germany	Italy
Sweden	*Republic of Cyprus*	Hungary
Malta	*Lithuania*	*Slovenia*
Luxembourg	Finland	Czech Republic
Switzerland	Austria	*Croatia*
Estonia	France	Poland
Ireland	*Latvia*	Greece
Netherlands	Spain	*Bulgaria*
Denmark	Belgium	Romania
	Portugal	Slovakia

Fintech SBL platforms have been able to expand credit access to those underserved small business owners who are not likely to receive funding from traditional lenders. This may be particularly relevant for those small business owners with a short credit history (over 30% SB).

For the financial ecosystem, Fintechs are a catalyst for disruptive innovation and growth. With their agility and speed, fintechs are well equipped to accommodate many new trends in the financial sector, including embedded finance and distributed-ledger technology (DLT). They tend to launch new products and services much faster than incumbent banks, with an average time to market of two to six months versus 12 to 18 months for incumbents. Fintechs also act as ongoing challengers and front-runners in providing a unique customer experience and lean-banking processes. Today, many leading European banks rely on various fintech partnerships across a wide range of areas, particularly in operations and payments.

Conclusion: As economic cycles are faster and overall SBL is less available (vs economy dynamics) compared with COMMERCIAL CREDIT, companies are forced to acquire adequate knowhow to sustain commercial credit. SB buy consulting, services, and technology to manage their complex receivable management process.

DATA ANALYTICS COURSE

You'll have the unique opportunity to engage directly with experts, on pragmatic subjects:

- Understand the data science business opportunities
- Learn major concepts and tools in the field
- Curating, organizing, and wrangling data
- Explain uncertainty, causality, data quality
- Evaluate value of data use and misuse

🌐 **vlad@getonrecovery.tech**

GET COURS INFO

CONSUMER BANKING

More and more Americans are defaulting on their credit card debts. A similar situation occurred in 2008, shortly before the crisis. "The poorest 30% of Americans are stuck in debt. They have no savings at all."

Banks can use mobile to orchestrate and coordinate customer journeys across channels.
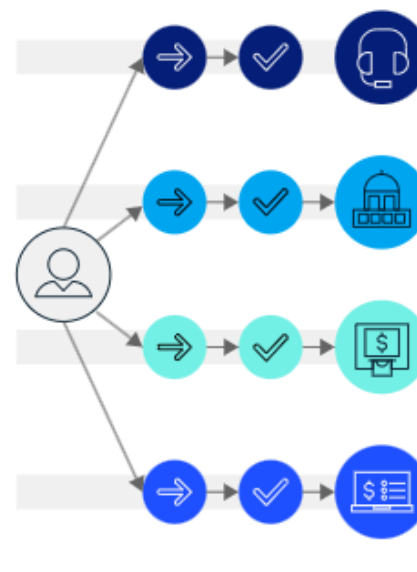
Channel strategy archetypes

Single channel
Each customer segment has access to 1 channel
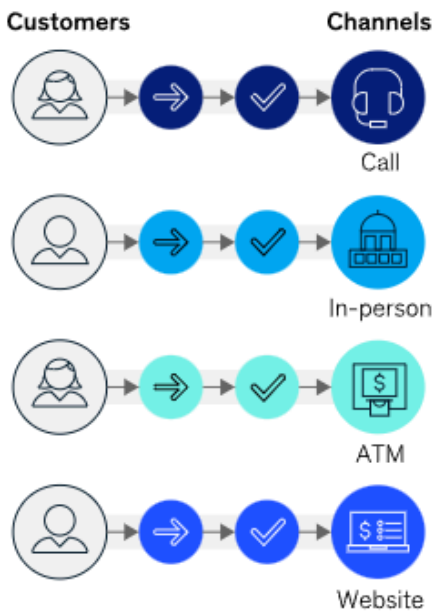
Multichannel
Each customer segment can access the bank through multiple channels, but channels are not connected

Omnichannel
Each customer segment can access the bank through multiple channels with channel orchestration and seamless handovers

Customers — Channels

Call
In-person
ATM
Website

Mobile as the relationship orchestrator
One primary channel (mobile) serves as starting point for all customer journeys and orchestrates interactions with other channels

FINTECHS ARE ADDING PRESSURE ON COST OF RISK

Lending standards were loose during the lending boom of the mid-2000s, for example, when credit spreads and default rates were low. And standards were relatively tight during the credit crunch in 2008 – 2009, when default rates were high, and they continued to be tight even during the recovery that followed, so credit spreads also remained high.

Financial technology startups are now lending like banks, approving loans with just a few taps on a cellphone — but without the same degree of regulation. For example, short-term point-of-sale lending, known as "buy now, pay later," stealing market share. These companies make loans with a soft credit check based on "what is being purchased, where it's being bought, and maybe even when".

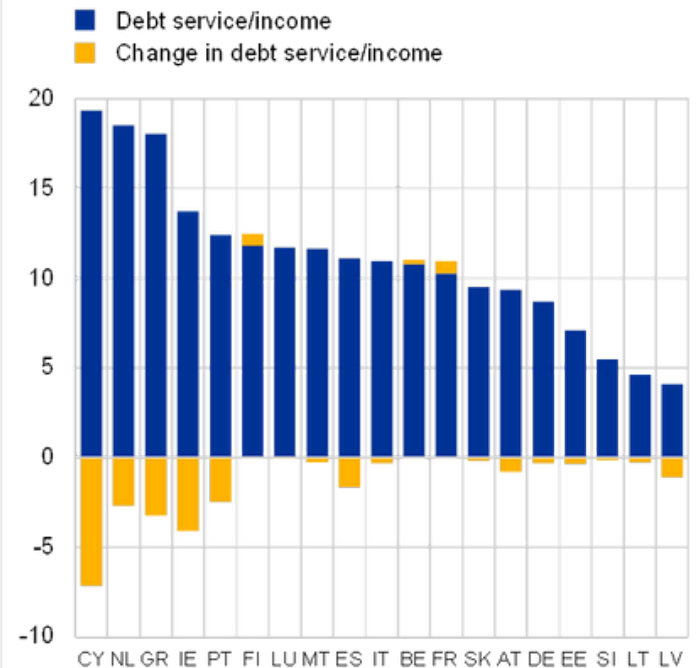# PREDICTING THE LIKELIHOOD AND SEVERITY OF FINANCIAL CRISES

Household debt-to-GDP ratio and changes over the past three years

(percentages, percentage points)

- Debt/GDP
- Change in debt/GDP
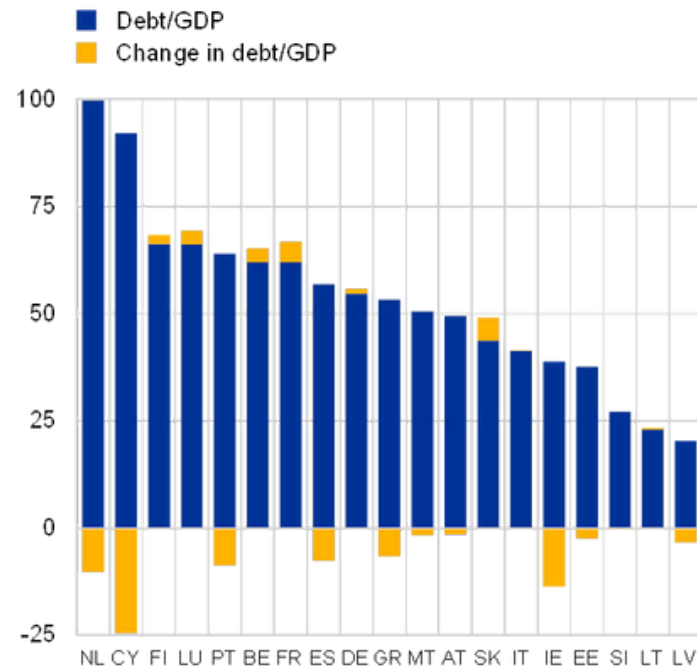
Household debt service-to-income ratio and changes over the past three years

(percentages, percentage points)

- Debt service/income
- Change in debt service/income

The global financial crisis has shown that the unravelling of systemic risk can have large detrimental effects on the output and welfare of societies. Losses during past systemic financial crises:

- in EU countries estimated to 8% of GDP on average,
- worldwide output losses amounted on average to 23% of GDP

NOW: The increase in household debt over the past few decades has been largely due to a rise in mortgage debt. This high level of household debt relative to income raises two potential vulnerabilities. Because mortgage lending is such an important part of bank balance sheets, any difficulties in the residential mortgage market could translate to credit quality issues for banks.

Considering what we have learned in the very recent financial crises 2007-2011, is it important to answer to the questions: is banking system potentially very exposed to a decline in credit quality of outstanding mortgages? Is good for the economy the drift from b2b credit portfolio structure?
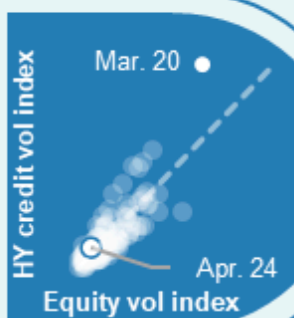
Risks to the economic outlook may threaten private sector debt service

- Economic and geopolitical uncertainty ahead
- Financing conditions remain tight for firms
- Rising share of vulnerable households
- Outlook for commercial real estate remains fragile

GDP growth forecast distributions

2024
2025
< -1   0   1.5   3
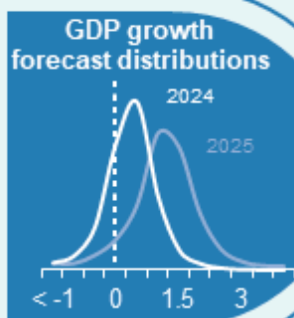
Low risk pricing can mask vulnerabilities and lead to excessive risk taking

- Lower volatility supports tighter spreads
- Total bond funding costs might rise further
- "AI rally" raises concentration risk
- Markets price in higher geopolitical risk

Mar. 20
HY credit vol index
Apr. 24
Equity vol index

The euro area banking system is resilient and well-placed to face higher risks thanks to active prudential policy in recent years.

Enhanced macroprudential policy space, regulatory reform and faithful implementation of the final parts of Basel III can help to ensure durable resilience.

Structural vulnerabilities in non-banks continue to require a comprehensive policy response.
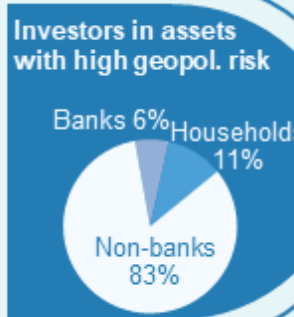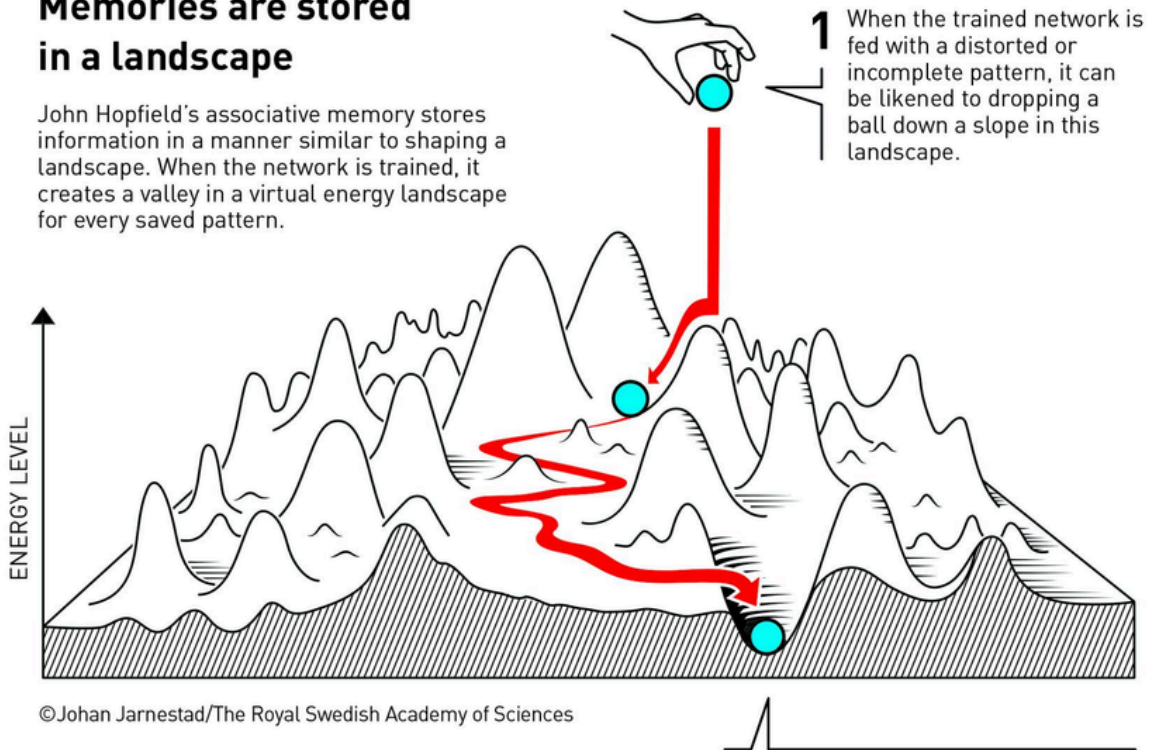
Euro area banks face headwinds from weaker asset quality, lower revenues and cost of funding

- Market valuations of banks remain subdued
- Deteriorating commercial real estate asset quality
- Rollover of bank funding at higher interest rates
- Lower income from variable-rate loans expected

Bank valuations

1.33   US   1.26
0.6   0.77
Euro area
01/20   05/24

Non-banks remain vulnerable to shocks amid low liquidity buffers

- Rising concentration risk in equity portfolios
- Persistent liquidity mismatches in funds
- Risk of losses on real estate exposures
- Uncertain profitability outlook for insurers

Investors in assets with high geopol. risk

Banks 6%   Households 11%
Non-banks 83%

Memories are stored in a landscape

John Hopfield's associative memory stores information in a manner similar to shaping a landscape. When the network is trained, it creates a valley in a virtual energy landscape for every saved pattern.

1 When the trained network is fed with a distorted or incomplete pattern, it can be likened to dropping a ball down a slope in this landscape.

INPUT PATTERN

©Johan Jarnestad/The Royal Swedish Academy of Sciences

2 The ball rolls until it reaches a place where it is surrounded by uphills. In the same way, the network makes its way towards lower energy and finds the closest saved pattern.

SAVED PATTERN

ENERGY LEVEL

2024 NOBEL PRIZE

TECHNOLOGY

European Artificial Intelligence Act (AI Act)2024

AI LOW TO SHAPE GLOBAL LEGISLATION

Inside Global Tech

California Legislature Passes Landmark AI Safety Legislation

From AI Doomers to E/Accs: How SB 1047 and the 38 AI Laws in California Are Shaping Future AI Law

California's Safe and Secure Innovation for Frontier Artificial Intelligence Models Act is one of the first significant regulations of artificial intelligence in the United States that, if signed, would place liability on the developers of AI models.

Geoffrey Hinton, 75, a professor emeritus at the University of Toronto and 2024 NOBEL Prize winner for and until recently a vice president and engineering fellow at Google, announced in early May that he was leaving the company — in part because of his age, he said, but also because he's changed his mind about the relationship between humans and digital intelligence.

Hinton said generative intelligence could spread misinformation and, eventually, threaten humanity: "I'm sounding the alarm, saying we have to worry about this" .

Hinton's concern with this burgeoning power centers around the alignment problem — how to ensure that AI is doing what humans want it to do. "What we want is some way of making sure that even if they're smarter than us, they're going to do things that are beneficial for us," Hinton said.

Artificial intelligence can also learn bad things — like how to manipulate people "by reading all the novels that ever were and everything Machiavelli ever wrote," for example. "And if [AI models] are much smarter than us, they'll be very good at manipulating us. You won't realize what's going on," Hinton said.

On 1 August 2024, the **European Artificial Intelligence Act** (AI Act) enters into force. The Act aims to foster responsible artificial intelligence development and deployment in the EU. The following types of AI system are 'Prohibited' according to the AI Act:
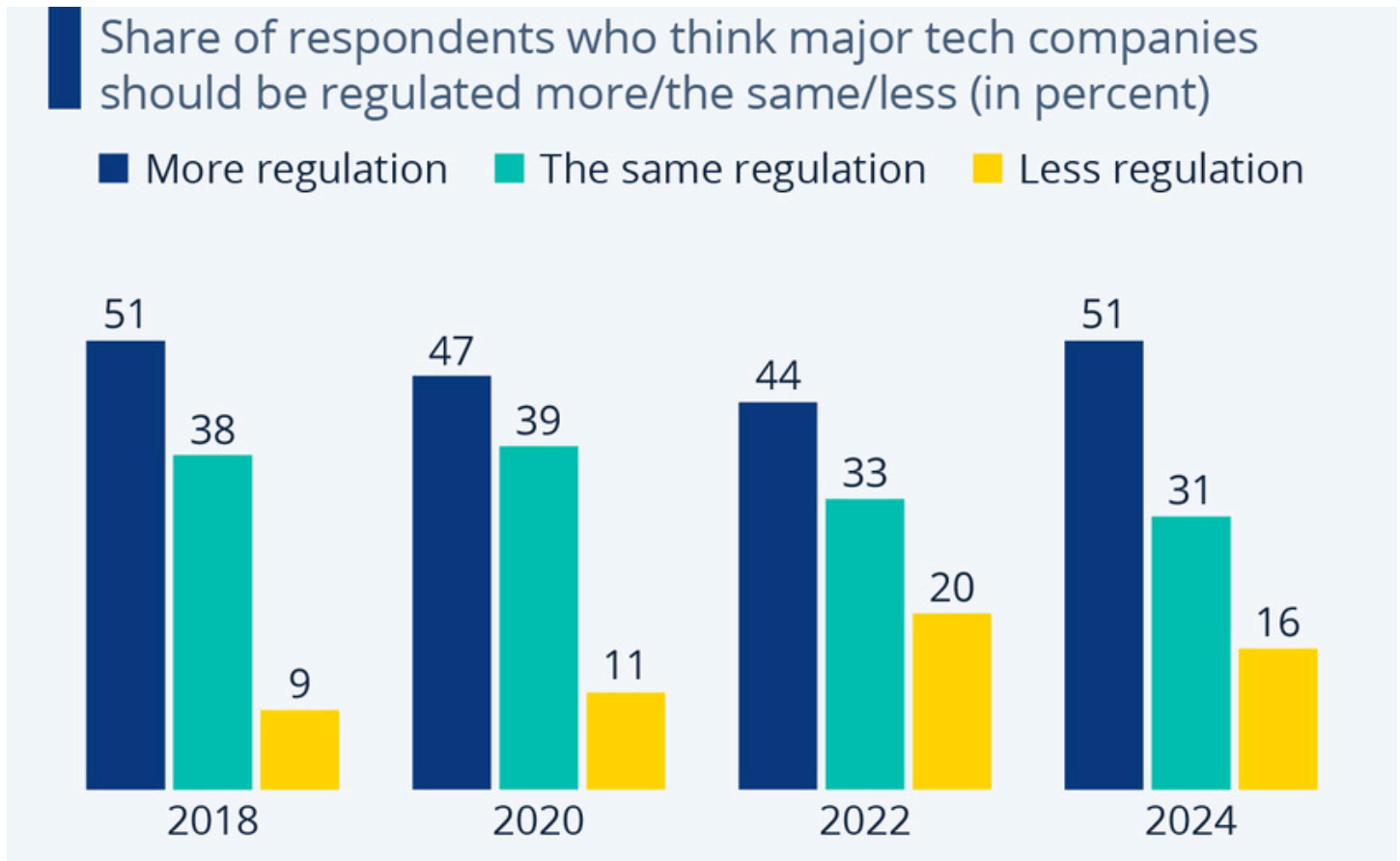
- deploying **subliminal, manipulative, or deceptive techniques**
- **exploiting vulnerabilities**
- **biometric categorisation systems** inferring sensitive attributes
- **social scoring, i.e., evaluating or classifying individuals**
- **assessing the risk of an individual committing criminal offenses**
- **compiling facial recognition databases**
- **inferring emotions in workplaces or educational institutions**

In late August, after months of intense debate, **California** lawmakers passed the **Safe & Secure Innovation for Frontier AI Models Act (SB 1047)**, a trailblazing effort to regulate AI systems capable of causing serious public harms. The Act would establish an expansive AI safety and security regime for "covered model" developers, including annual audits, incident reporting, and a duty of reasonable care to implement AI safeguards.

If AI models are smart, or much smarter than us, should they respect low, or should be regulated by specific lows? Developers are responsible for consequences?

TECH VS MORAL RESPONSABILITY

Share of respondents who think major tech companies should be regulated more/the same/less (in percent)

■ More regulation ■ The same regulation ■ Less regulation

Year	More regulation	The same regulation	Less regulation
2018	51	38	9
2020	47	39	11
2022	44	33	20
2024	51	31	16

51% US RESPONDENTS ASK STRONGER TECH RECGULATION

Like the EU's General Data Protection Regulation (GDPR) in 2018, the EU AI Act could become a global standard.

The man in charge of social media platforms used by billions should show some moral courage, writes Jemima Kelly. https://on.ft.com/4aiXj5A.
One must take great care about predictions, especially about the future. And we must accept that we might be wrong. In this report, we ask ourselves, why might we be wrong, and what are the swing factors? When we step back from that, the really big things—geopolitics, the pace of the energy transition, and the rate of technology development—stand out.

In today's rapidly evolving technological landscape, the Ethics of Technology have become an increasingly pressing and complex issue. As innovation continues to push boundaries and transform various aspects of our lives, it is crucial to strike a delicate balance between progress and responsibility. The Ethics of Technology delves into the moral and ethical implications that arise from the development, deployment and use of technology in society.
By proactively addressing ethical challenges, fostering collaboration, implementing robust frameworks and promoting awareness, we can best ensure that technology continues to drive innovation while being used in a way that is ethical, fair and beneficial to society as a whole.

Dilemma of running out of available data

Decisions when to invest in new technology

Data is the big-money game right now.

Private equity giant Blackstone Group is making a $300 million strategic investment into DDN, valuing the Chatsworth, California-based data storage company at $5 billion.

Founded in 1998, DDN — formerly called DataDirect Networks — helps companies store, analyze and manage data — a value commodity as more businesses look to create and train AI models.

The company plans to use the new cash to expand in industries ranging from healthcare to autonomous vehicles and accelerate product innovation, including for its AI data intelligence platform.

Dilemma of running out of available data? Elon Musk for example made such a statement recently and many other AI luminaries have repeatedly and loudly raised that very same concern.

Publicly available data for teaching AI language models might dry up between 2026 and 2032. Let's take a look at why and what this may mean:

1. **Generative AI vs. Predictive AI: What's the difference?**
   - Generative AI (gen AI) is artificial intelligence that responds to a user's prompt or request with generated original content, such as audio, images, software code, text or video.
   - Predictive AI can use smaller, more targeted datasets as input – such as historical trends, numbers or patterns – and uses that to predict future (ML scorecareds predicting future payment behavior)
2. **Current Sources of AI Training Data**

AI companies traditionally use many sources to train their models. They look at web content, online resources, and data from social media. The internet is full of data, like posts and content made by users, blogs, and so on.

Tech companies are always looking for new data sources. For example, Google and Microsoft have access to customer data they often use to train models. However, that data is being processed rather quickly. Looking for creative solutions, some even began reaching out to publishing houses – such as Meta showing interest in buying Simon & Schuster to train AI earlier this year.

DOES AI INCREASE CLOUD COMPUTING RISKS?
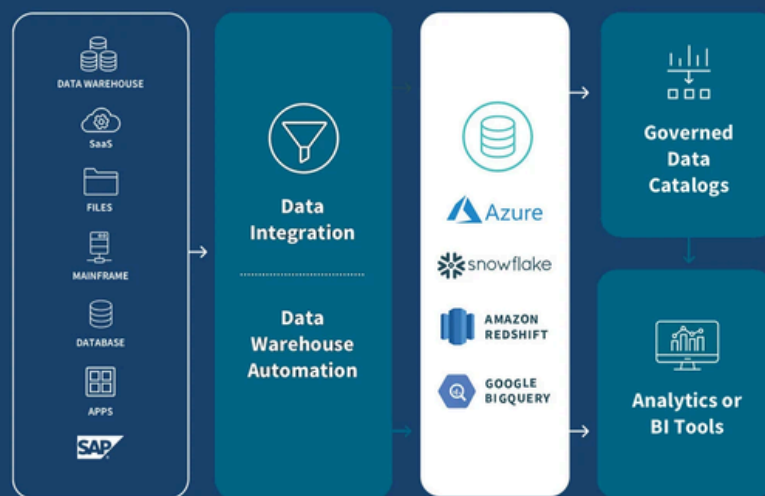
Citigroup has begun moving some software applications from its data centers to Google Cloud and is experimenting with Google's AI technology through a multiyear agreement.

The bank plans to start with enterprise analytics, high performance computing for its markets business, desktop solutions for employees including customer service agents, and customer-facing apps. The move is part of a broader modernization effort that Citi CEO Jane Fraser mentioned in several earnings calls. It's also part of an industry-wide shift toward cloud computing that has some regulators worried.

Citi is the latest large bank to announce a major move to cloud computing. In 2020, Capital One closed all its data centers and moved everything to Amazon Web Services. In 2021, JPMorgan Chase said it would use a cloud-based core banking system from Thought Machine for its retail bank, and Wells Fargo said it would migrate several applications to Microsoft Azure and Google Cloud. The next year, KeyBank said it would put primary applications in Google Cloud and U.S. Bank planned to move most applications to Microsoft Azure.

In a separate project, Citi's developers continue to use GitHub Copilot to speed up their work.

Does AI increase cloud computing risks?

- First, banks migrated software applications to clouds hosted by Amazon, Google and Microsoft. Now, they are using large language models that in many cases come from these same companies, sometimes called hyperscalers.
- The Treasury Department came out with a report last year that raised many concerns about the increasing use of cloud computing in financial services. Among them were issues around security, resilience, incident disclosure and response, concentration risk (too many banks relying on a small number of vendors, like Microsoft, Google, Amazon and IBM) and imbalances of power between bank users and large tech company providers.

DATA BREACH

Bank of America notifies over 57,000 customers in a data breach that contains stolen customer data.

As Internet services are conected to large databases, <u>Data breaches</u> is a concern for financial services, but recent trends suggest the threat is intensifying. TransUnion analyses of data breaches in 2024 showed while the number of data breaches didn't rise, those that occurred became more severe.

A data breach at Infosys McCamish, a financial software provider, compromised the name, address, date of birth, Social Security number, and other account information of 57,028 deferred compensation customers whose accounts were serviced by <u>Bank of America</u> (other example is one of the largest in 2023 that affected <u>500,000 Texas Dow Employees Credit Union members</u>). <u>Bank of America</u> provided standard two-year identity theft protection to the affected customers. The breach occurred on Nov. 3, 2023, according to the letter, and Infosys McCamish notified <u>Bank of America</u> about the breach on Nov. 24. The number of records leaked in data breaches this year was greater than the number of people living in the U.S. In fact, one breach — from data broker <u>National Public Data</u> — was singly responsible for 2.7 billion of these leaked records.

In recent years, the typical cost of a personal identity package that includes a person's name, date of birth and Social Security number has been around **$10 on the black market, and often as little as $1**. These ballpark estimates come from multiple analyses of black market data sales by credit bureau <u>Experian</u>, cyber threat intelligence platform <u>Flashpoint</u> and security awareness training firm <u>KnowBe4</u>.

CREDIT DECISION MODELS

Challenges of Legacy Credit Decisioning Systems

Cost Implications	• Expensive specialized expertise required • High cost of integration with latest technologies
Slow Origination Process	• Overly complex and difficult change processes • Limited transparency
Inability to Optimize Risk Models	• Inadequate technology to run advanced models • Poor simulation tools
Lack of Compliance	• Documentation and execution not in sync • Limited control

Many banks struggle with transitioning to a more advanced credit model. They face significant capability, technology, and cultural hurdles, including a limited set of data sources; simple analytical engines; a heavy reliance on subjective assessments from relationship managers (RMs) and underwriters; outdated, inflexible models that have been patched over time; and concerns about the length of implementation and regulatory reviews.

These challenges are real and should not be downplayed. But the benefits of overcoming them should not be downplayed either. Banks that have already embedded high-performance credit-decisioning models into their digital lending have reaped three key benefits:

- **Increase in revenue.** The new models have led to a revenue increase of 5 - 15% through higher acceptance rates, lower cost of acquisition, and better customer experience. By better distinguishing between creditworthy and noncreditworthy customers, banks can improve acceptance rates and pricing. Meanwhile, a credit-decisioning model that automates large parts of the assessment process and eliminates paper-heavy steps lowers the cost of acquisition and improves the customer experience.
- **Reduction in credit-loss rates**. Companies have seen a decrease of 20 - 40% in their credit losses by using models that could more precisely determine customers' likelihood to default. That element affects the levels of provisions and capital that a bank must hold.
- **Efficiency gains.** Use of the new models have resulted in 20 - 40% improved efficiency, thanks to a combination of more highly automated data extraction, case prioritization (for example, using straight-through processing for low-risk cases while analyzing higher-risk cases more thoroughly), and model development.

POTENTIAL RESULTS AND BIASES USING AI/ML MODELS IN CREDIT DECISIONS

First investigation: Credit scoring has traditionally used methods like logistic regression and new AI models which may improve prediction accuracy. In some scientific paper (Andreea Bozagiu) it was tested and evaluated these models baseline methods (logistic regression), deep learning (Gradient Boosting Machine and Neural Networks), and LLM-based models for feature extraction and prediction looking at performance in areas like accuracy, precision, and recall. The results show that deep learning and LLM-based models perform better with complex data, while traditional models still work well with lower computational demands. (Phd. Andreea Bozagiu)

A second investigation performed (Alexie Alupoaiei): investigate potential biases related to using AI/ML models for default predictions or credit scoring, choosing gender (female) as protective attribute. We propose a new methodology based on the principle of „equal risks, equal rights", using Deep Learning Networks. Specifically, we investigate the probability of AI/ML models generating Type I errors (false positives) depending on the borrowers' risk levels. We use a database containing all consumer and mortgage loans with value higher than EUR 4000 (nearly 900,000 debtors) granted by a European Union banking sector. The results show that proper use of ML model feeded with unbias dataset do not generate bias in outcome. (Phd. Alexie Alupoaiei)

IS FINTECH THE KEY TO BETTER DEBT COLLECTIONS?

AI/ML in debt collections

Ninety debt collection firms were asked how they currently, or plan to, use AI/ML-based technology.

Source: Datos Insights/TransUnion Third-Party Debt Collections Survey • Q2 2023Q
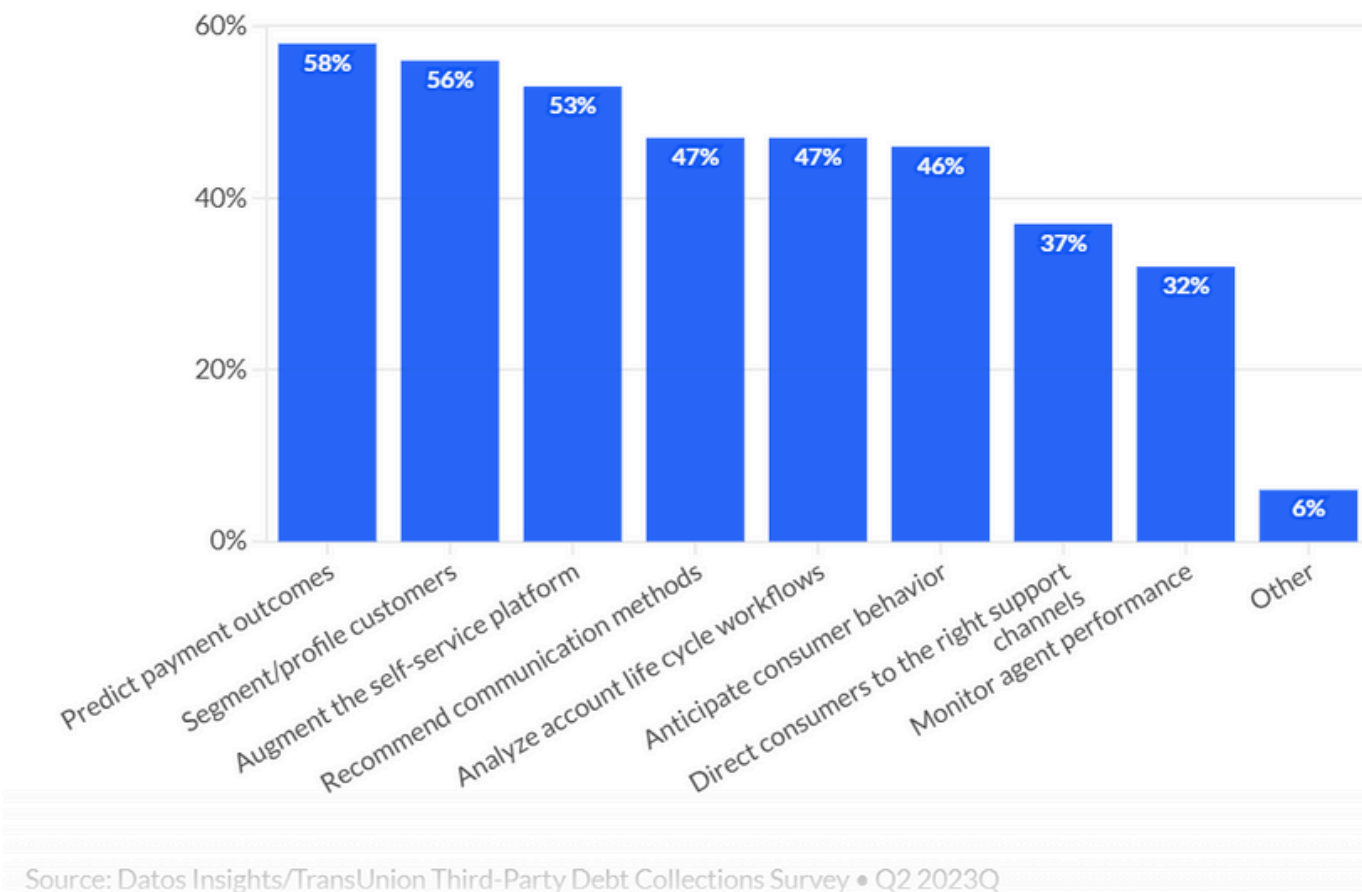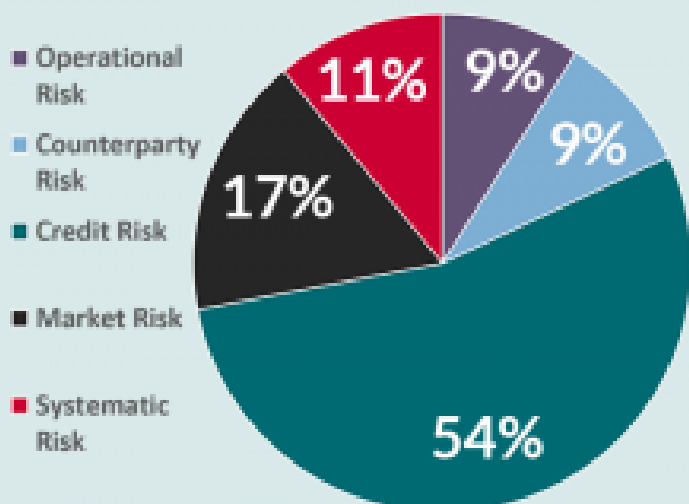
Two different studies confirming successful implementation

1. Improving debt collection using predictive models for contact center information: Debt collection models (i) allow making accurate projections of future cash flows and receivables, (ii) improves the success of collection operations. Debt collection data driven decisions, are applied for: (1) customer segmentation, (2) agent assignment, staffing, (3) identification of self-cure customers, decision scheme based on the debt collection process via contact centers, (4) forecast Portfolio at Risk, Value-at-risk. Thanks to predictive analytics, the role of contact centers has evolved dramatically, becoming a strategic differentiator for companies instead of basic service providers. (by Catalina Sánchez)

2. Forecasting recovery rates on non-performing loans with machine learning: Comparing the performance of a wide set of regression techniques and machine-learning algorithms for predicting recovery rates on non-performing loans, using a private database from a European debt collection agency. The study find that rule-based algorithms such as Cubist, boosted trees, and random forests perform significantly better than other approaches. (by Anthony Bellotti)
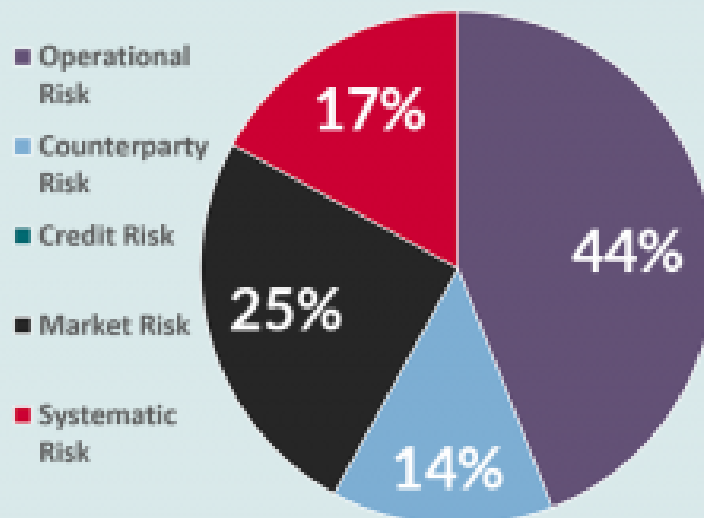
Challenges of ML in Risk Assessment

Applying Machine Learning

Which area of Risk Management is Machine Learning most easily applied to?

- Operational Risk
- Counterparty Risk
- Credit Risk
- Market Risk
- Systematic Risk

9% — 9% — 54% — 17% — 11%

Which area of Risk Management is Machine Learning the most difficult to apply to?

- Operational Risk
- Counterparty Risk
- Credit Risk
- Market Risk
- Systematic Risk

44% — 14% — 25% — 17%

Using data-driven approaches to financial risk comes with its own set of challenges. Some of the challenges of machine learning in risk management and assessment include

- Data Privacy Concerns: The utilisation of large datasets raises concerns about data privacy and the need for robust data protection measures. Financial institutions must implement stringent data governance practices to ensure that customer data is collected, stored, and used in a responsible and compliant manner.
- Regulatory Compliance: Financial institutions must adhere to a complex and evolving regulatory landscape, which can pose challenges when implementing ML-powered risk assessment models. Regulatory requirements may mandate specific controls and transparency measures to ensure that ML models are fair, unbiased, and auditable.
- Human Oversight and Understanding: While ML algorithms can provide valuable insights, financial institutions must maintain human oversight and understanding of the risk assessment process. This oversight ensures that ML models are used responsibly, ethically, and in alignment with the institution's overall risk management strategy.

The use of machine learning in financial risk assessment has proven to be a game changer. Choosing the right AI/ML partner is important for financial institutions: business know how of the implementation team and experience in successful projects are as important as decisions to choose type of technology used.

Prediction Technical Solutions

ROI Delivered by GenAI Investments
Sum of top three rank

In the race to harness the transformative power of generative AI, companies are betting big – but are they flying blind? Most companies are still struggling with what gen AI can even do, much less being able to quantify it. As billions pour into gen AI initiatives, a stark reality emerges: enthusiasm outpaces understanding.

A recent KPMG survey reveals a staggering 78% of C-suite leaders are In the July survey, business leaders said: confident in gen AI's ROI. However, confidence alone is hardly an investment thesis.
- IT is the top area where they have the highest integration of genAI, with 66 percent saying they have fully integrated or are in the process of executing a holistic genAI program
- 83 percent say they believe genAI investments will increase over the next three years
- Executives say revenue growth is the top goal for genAI investment, with the remainder saying productivity is a top goaL

Unlike traditional IT investments with predictable returns, gen AI's impact often unfolds over months or years. This delayed realization of benefits can make it difficult to justify AI investments in the short term, even when the long-term potential is significant.

RISK: By 2028, more than 50% of enterprises that have built large AI models from scratch will abandon their efforts due to costs, complexity and technical debt in their deployments (Source: Gartner)
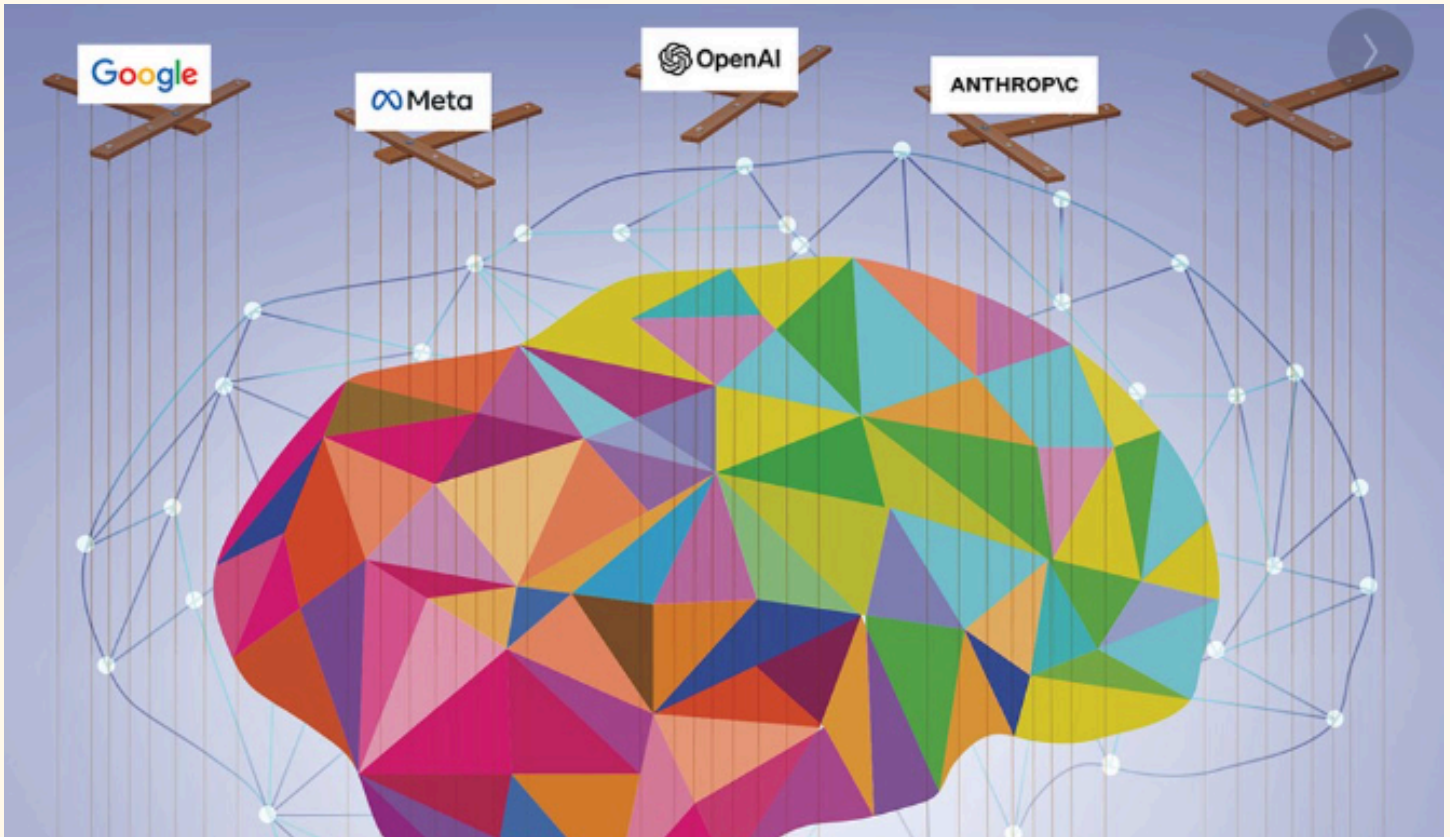
Digital Tranzition

We work in partnership with all the major *technology* solutions

Leverage top-tier technology partnerships for robust BI solutions. Empower your business with our comprehensive tech ecosystem.

Contact Us

ESG

In "Republica," Plato once noted that people, by nature, "will find no cessation from evil." His observation is incredibly relevant today as our world faces major challenges like geo-political tensions (actual or hybrid), economic instabilities, demographic shifts, societal and political fractures, and widespread dissatisfaction and disengagement among various stakeholders. These forces, layered upon the aftermath of the worst pandemic in over a century, created a landscape where leaders have little time to absorb new concepts, leading to underperformance, stress, and burnout. A pressing question is how leaders can sustain their effectiveness and well-being in an environment defined by endless survival mode. (by Serban Toader)
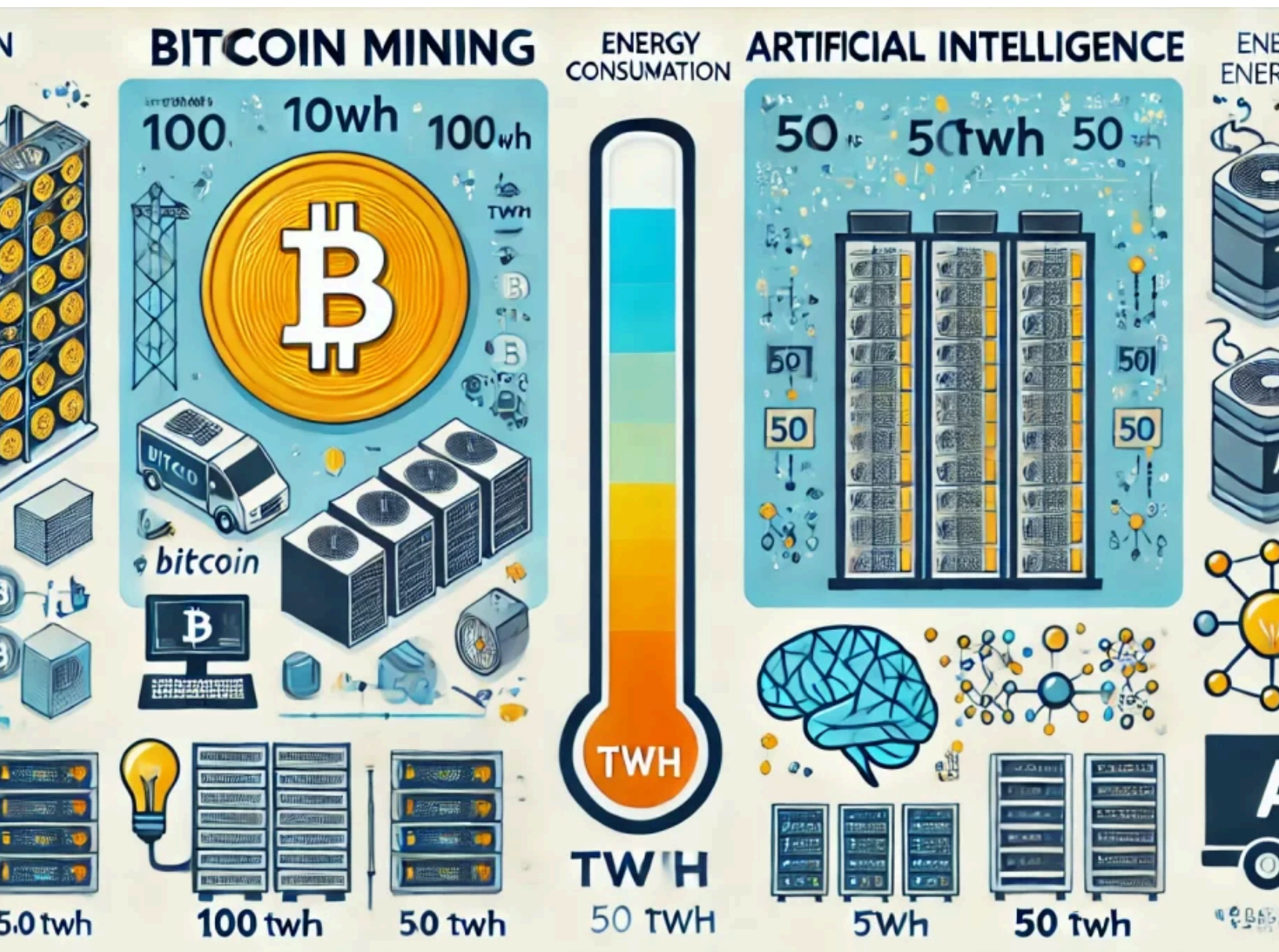
The big switch in technology development is the promise of AI. If we just look at the projections, how many gigawatts of training clusters are we going to have? If you look at the predictions, they're radically far apart. They go up a lot. But in a world where to train a model, you need a gigawatt cluster—meaning you need a nuclear plant to fare each single learning—that's a radically different world of capability, cost, spend, and escalation. So those swing factors really matter.

CHALLENGE OF POWERING AI

There are more than 10,000 data centers globally, each one a huge warehouse containing thousands of computer servers and other infrastructure for storing, managing, and processing data. There are now over 5,000 data centers in the United States, and new ones are being built every day—both in the U.S. and worldwide. U.S. data centers consumed more than 4% of the country's total electricity in 2023, and by 2030 that fraction could rise to 9%, according to the Electric Power Research Institute. A single large data center can consume as much electricity as 50,000 homes.

We are in the early stages of a geopolitical competition for the future of artificial intelligence. The winners will dominate the global economy in the 21st century. But what's been too often left out of the conversation is that AI's huge demand for concentrated and consistent amounts of power represents a chance to scale the next generation of clean energy technologies. If we ignore this opportunity, the United States will find itself disadvantaged in the race for the future of both AI and energy production, ceding global economic leadership to China.


Tech companies keep finding new ways to bring AI into every facet of our lives. AI has taken over my search engine results, and new virtual assistants from Google and OpenAI announced last week are bringing the world eerily close to the 2013 film Her (*in more ways than one*). As AI has become more integrated into our world, I've gotten a lot of questions about the technology's rising electricity demand. You may have seen the headlines proclaiming that AI uses as much electricity as small countries, that it'll usher in a fossil-fuel resurgence, and that it's already challenging the grid. So how worried should we be about AI's electricity demands? Well, it's complicated.

However "a naive utopianism often accompanies technological innovation", even if companies that approach decision making should see AI's urgent demand for power density as an opportunity to kick-start a slew of new technologies, taking advantage of new buyers and new market structures—positioning the US to not only seize the AI future but create the markets for the energy-dense technologies that will be needed to power it.

MARKETING BUDGETS VS POWER OF MANIPULATING

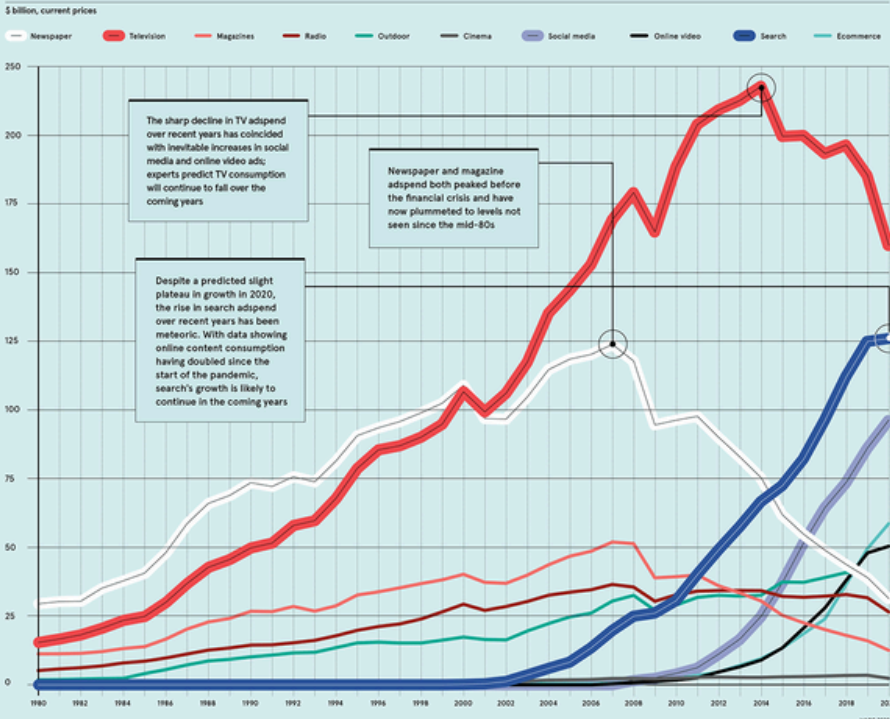## Growth of advertising spending worldwide from 2000 to 2024
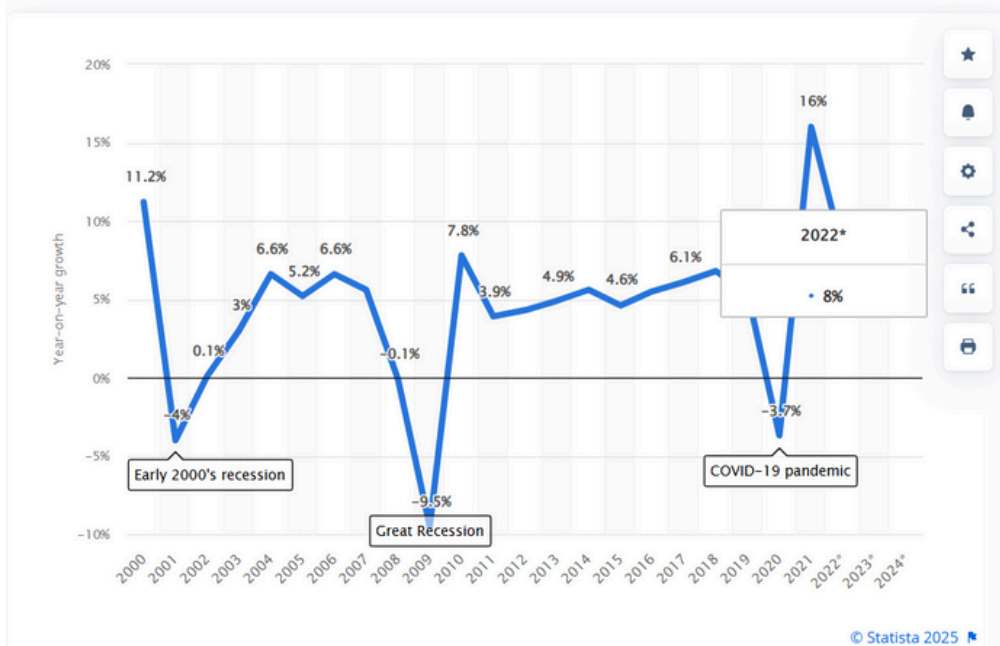
Artificial intelligence can also learn bad things — like how to manipulate people "by reading all the novels that ever were and everything Machiavelli ever wrote," for example, says the 2024 Nobel prize winner Geoffrey Hinton. "And if [AI models] are much smarter than us, they'll be very good at manipulating us. You won't realize what's going on," Hinton said. "So even if they can't directly pull levers, they can certainly get us to pull levers. It turns out if you can manipulate people, you can invade a building in Washington without ever going there yourself." At worst, "it's quite conceivable that humanity is just a passing phase in the evolution of intelligence," Hinton said. Biological intelligence evolved to create digital intelligence, which can absorb everything humans have created and start getting direct experience of the world. "It may keep us around for a while to keep the power stations running, but after that, maybe not," he added. "We've figured out how to build beings that are immortal. These digital intelligences, when a piece of hardware dies, they don't die. If … you can find another piece of hardware that can run the same instructions, you can bring it to life again. So we've got immortality, but it's not for us."

Sustainability has become an important topic for businesses and scholars. Green marketing was one of the first approaches to sustainability, but scholars and businesses have discovered that isolated efforts and lack of strategy do not impact sustainability significantly, nor benefit the company. Approaching sustainability from a customer perspective is still one of the best approaches for companies. Each generation both influences ensuing generations and is influenced by preceding generations. As the most consumption-oriented and ethnically-diverse generation in history, Generation Y will likely change the landscape of the marketplace: the relationship between self-reported authority credence, needs determinism and altruism and un/ethical decision choice. In this way, the attention shifts from a curricular focus to a participant (student) focus in business ethics education. Some studies suggest that Generation Y students may possess different value orientations that may or may not be accordant with traditional teaching methods or content areas. (Prof. Sheb L. True, Kennesaw State University).

How is their opinion formed? Are companies investing in marketing responsible of social impact?

The advertising landscape has changed beyond recognition over the past three decades, with digital channels now accounting for more than half of total adspend, and strong growth in social media, video, ecommerce and search over the past ten years has come at the expense of more traditional channels, such as TV and print

GLOBAL ADSPEND OVER THE YEARS BY MEDIUM
$ billion, current prices

Legend: Newspaper · Television · Magazines · Radio · Outdoor · Cinema · Social media · Online video · Search · Ecommerce

The sharp decline in TV adspend over recent years has coincided with inevitable increases in social media and online video ads; experts predict TV consumption will continue to fall over the coming years

Newspaper and magazine adspend both peaked before the financial crisis and have now plummeted to levels not seen since the mid-80s

Despite a predicted slight plateau in growth in 2020, the rise in search adspend over recent years has been meteoric. With data showing online content consumption having doubled since the start of the pandemic, search's growth is likely to continue in the coming years

WARC 2020

$299bn
was spent on global internet advertising in 2019, almost twice as much that was spent in 2015 ($156 billion)
WARC 2020

13.5%
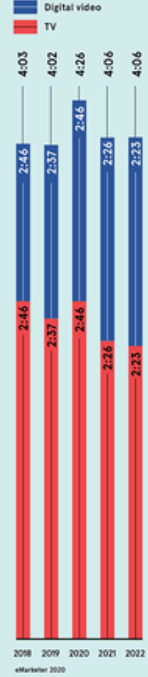estimated decline in the amount of time UK consumers will spend consuming print media in 2020
eMarketer 2020

6:59
daily amount of hours and minutes , up from 3 hours 17 minutes at the start of the pandemic
DoubleVerify 2020

$183bn+
additional amount expected to be spent online by consumers as a result of coronavirus in 2020
WARC 2020

53%
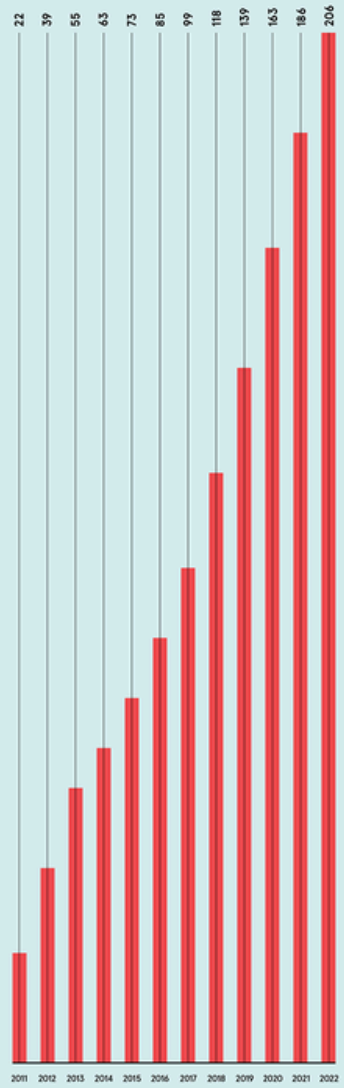of global adspend is expected to be on online advertising in 2020
WARC 2020

SOCIAL SURGE TO CONTINUE
Percentage of US senior marketers' budgets allocated for social media

8.9% — 15.2% — 20.6%
2012   2016   2020
Deloitte/American Marketing Association 2020

COVID TO CAUSE VIDEO SPIKE IN 2020
Time spent per day consuming TV and digital video among UK adults (hours:mins)

Digital video | TV
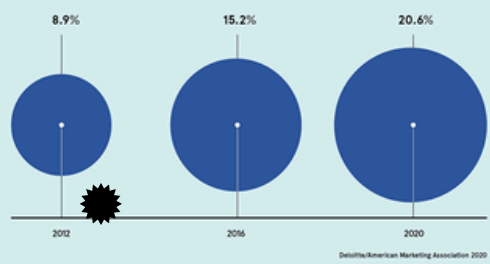
	2018	2019	2020	2021	2022
Digital video	4:03	4:02	4:26	4:06	4:06
	2:46	2:37	2:46	2:26	2:23
TV	2:46	2:37	2:46	2:26	2:23

eMarketer 2020

GROWTH IN SMARTPHONE USAGE
Average daily usage by adults in China in minutes

22 · 39 · 55 · 63 · 73 · 85 · 99 · 118 · 139 · 163 · 186 · 206

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022
eMarketer/LinkedIn 2020

RACONTEUR

HOW INDUSTRY DOMINATES AI RESEARCH

While nearly for centuries management and technology were deployed in administration and business from army, now industry dominates top tech research. Industry interest in measuring their cultural impact is a far a way subject for most. Meanwhile, social is developed on long term and as an other Economic Sciences explain in "studies of how institutions are formed and affect prosperity".

Defence spending by Nato countries in Europe as % of GDP

■ 3% and above
■ 2.5% - 2.99%
■ 2% - 2.49%
■ Less than 2%

SWEDEN · FINLAND · NORWAY · ESTONIA · LATVIA · LITHUANIA · UK · POLAND · FRANCE · SLOVAKIA · HUNGARY · ROMANIA
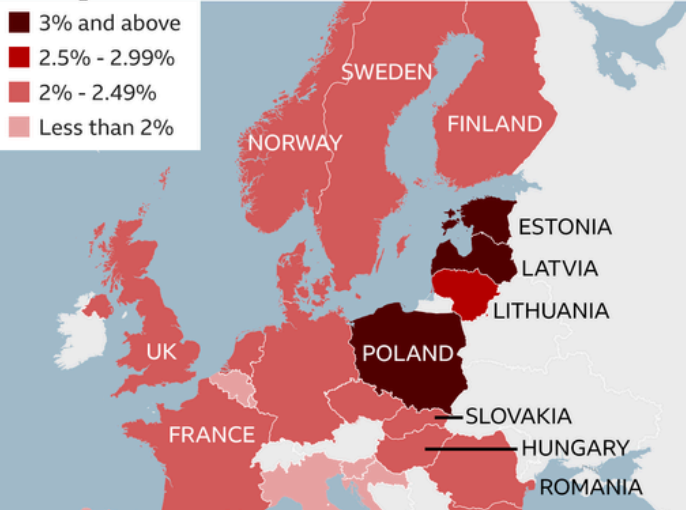
Considering AI potential impact and MARKETING BUDGETS, governments will soon be forced to do more than regulate.

The role of government is not simply to regulate AI, for example Social media presents specific challenges, which often started as basic information feeds and developed into recommendation engines, *forming and transforming peoples opinion, but mainly on mercantile interest or political, not real interested on their impact on young generations, or dependence vulnerability.*

China dominates global manufacturing

Share of world gross production in manufacturing (%)

Legend: China · US · Japan · Germany · Italy · France · UK · Canada
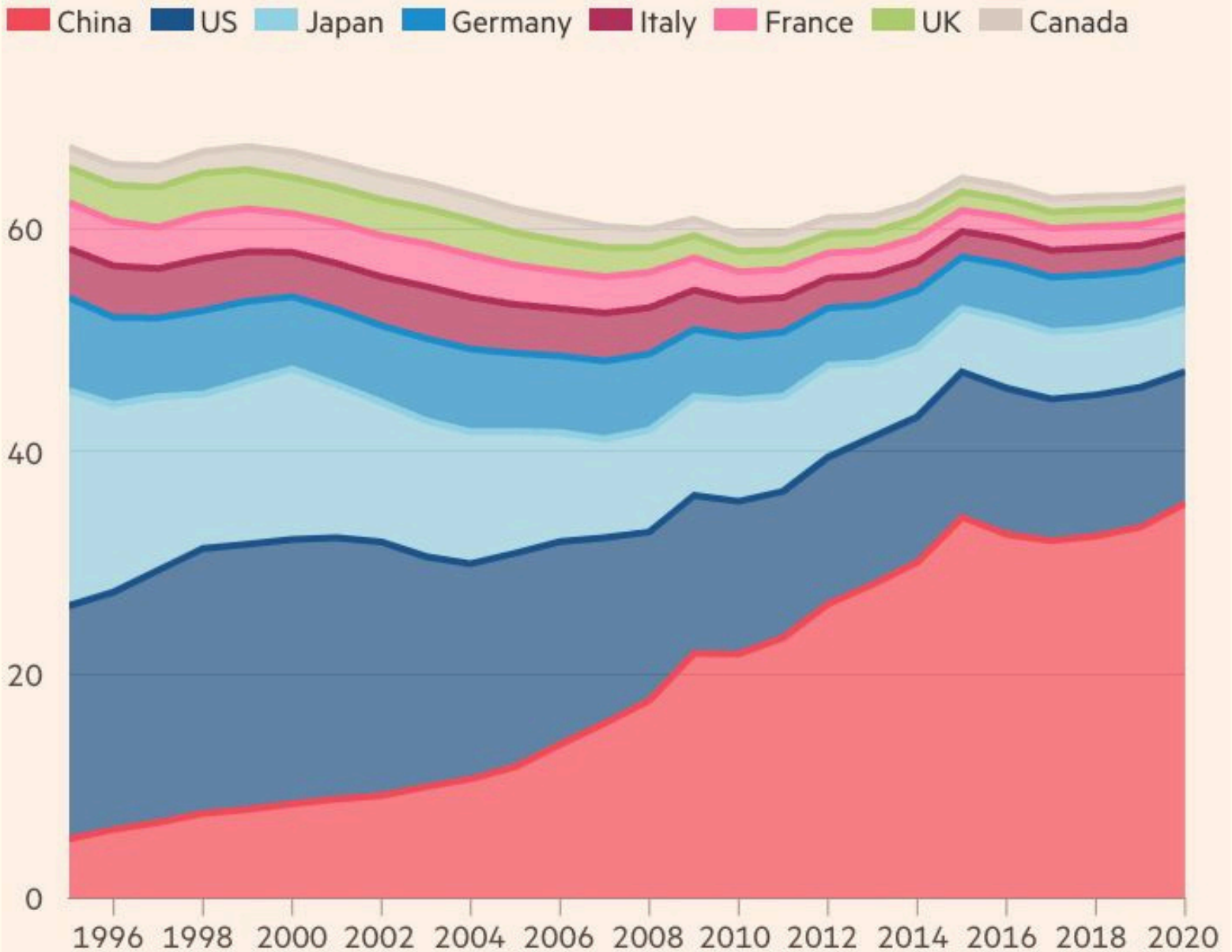
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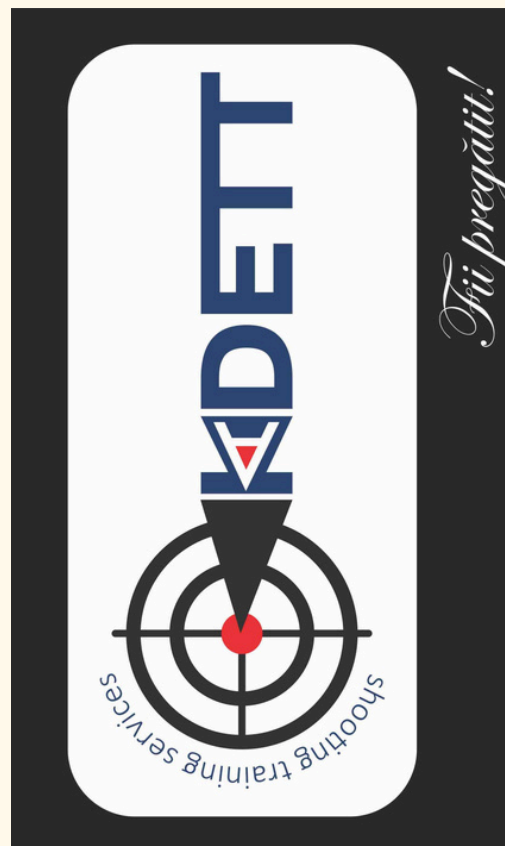* Îmbunătățirea reflexelor și a timpilor de reacție.

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FROM THE EDITOR

The **Valuable Technology RISK** magazine appeared with the goal to publish online articles that present cutting-edge thinking on essential business and management topics. With the challenges of the new technology and first steps of AI, we face rapid changing decisions that require to draw on all available knowledge bases.

Valuable Technology is a 2004 Joint Venture, including iReal Soft SRL develops data driven decision models since 2003. We offer all the support and documentation necessary for the implementation and use of the data models both from a technical and business point of view (establishing the best strategies, know-how, best practices). We also provide full support for successful model deployment. In addition, iReal Soft can provide software solutions for automation of the use of models, customized according to customer's requirements.

VT RISK @

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