

# This is **Less Perfect.**

A report on the American reality.

Part I

# About the Author



*American Realist*

## Michael Bruno

Head of Defense Investing, ----- Family Office

Former Marine Infantry Officer

- **Pretty names on my resume:** United States Naval Academy, Johns Hopkins SAIS, Columbia Business School, Goldman Sachs, Capitol Hill, Asia and Middle East deployments, Summited Mt. Rainier, Warhammer 40k aficionado
- First generation college graduate
- Father of two toddlers, husband to a wife

*Members of Research Staff*



## Why did I create this report (response)?

This is in response, to a truly wonderful report built by Christian Keil, an a16z investment partner.

**READ CHRISTIAN'S REPORT FIRST. It will help frame this response.**

This response was not created to play “stump the chump” games.

**I built this because we cannot achieve our Destiny without accurately recognizing reality.**

Christian's report is great. I respect him. However, I have different conclusions.

It serves no one to **underestimate** our enemies nor our internal crises.

## This is just Part I. And I present this report with the following quotes in mind:

*"It is **not the critic who counts**; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to **the man who is actually in the arena**, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but **who does actually strive to do the deeds.**"*

- Theodore Roosevelt

*"Any **fool** can **criticize, condemn, and complain** – and most fools do."*

- Benjamin Franklin

# A Reader's Guide: Part I and Beyond

This report is Part I of my alternative view of “More Perfect”.

I'm not playing blame games. I'm identifying the problems.

**Part II will be my vision for the American Future.**

And attempt to **highlight the companies** currently trying to solve the problems I'm about to identify that face our Nation.

**If you know of them, ping me on X (@brubarian).**

**If you had just 30 minutes  
to tell a Founder about  
the last 250 years in America,**

*What would you say?*

# I'd start by saying:

In the first 200 years, we fulfilled your words. We became an Empire. And we planted an American flag on the moon.

But in the last 50 years, we have fallen. We are in deep trouble. And we are **fing** lying to ourselves about it.



# And ~~technology~~ character made it possible.

Christian starts his presentation by highlighting the American triumphs of the Civil War, World War I, and World War II. As well as the progress of social revolutions that have occurred through the Civil Rights movement. **All Victories which should elicit pride in each American.**

He uses a great case study of technological improvement (Malthus v. Bosch) in agriculture and how we were able to thrive due to that invention. **Which is true.**

But the claim that "technology" is the primary driver of American accomplishment is a **half-truth bedtime story we tell ourselves to fall asleep at night.**

Wars are not won on technology.

**Wars are won at the intersection of technology, production, and national character.**

We don't have to look far to understand that - were we technologically superior in Afghanistan? Iraq?

# Technology has shaped the modern world.

## Connectivity



Christian: "Everyone in the world can talk to everyone else, daily."

Me: **But no one knows who or what to believe.**

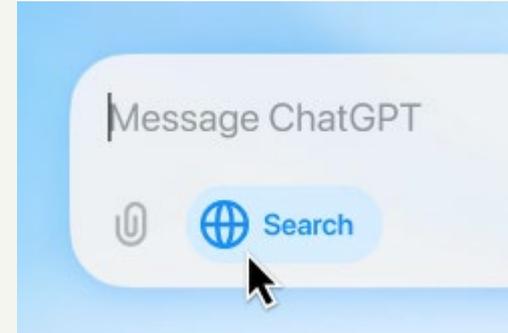
## Computing



Christian: "Everyone has a machine in their pocket that can think."

Me: **Yes, but are WE thinking more?**

## Artificial Intelligence



Christian: "Those machines might be sentient. We're not sure."

Me: **Yet to be determined if it's a positive or negative.**

# Technology has shaped the modern world.

## Healthcare



Christian: “Invisibly-small creatures are killing you guys, but we know how to kill them now.”

Me: **And we don’t make them anymore.**

## Nuclear Power and Weapons



Christian: “We learned how to split atoms. What are atoms? Well...”

Me: **And we threw away infinite and abundant energy to appease hysterics.**

*And other wonders beyond all comprehension.*

Uber  
DoorDash  
Pinterest  
Tumblr  
Airbnb  
WeWork  
CandyCrush  
Tinder

*...this list could be indeterminately long...*

# And America did lead the way in technology.

Christian's slide here is true.

**But it is skewed to the left, in time.**

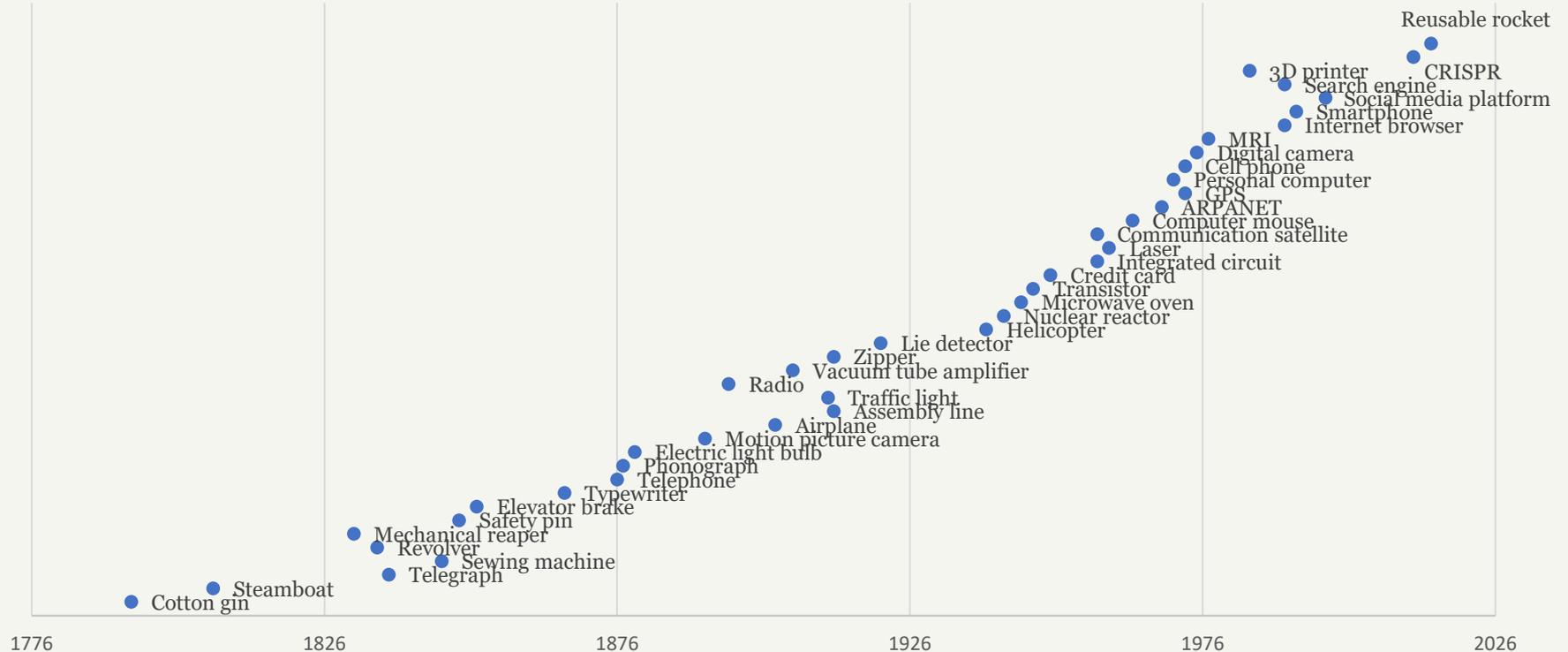
**Americans invented** the cotton gin, steamboat, telegraph, sewing machine, revolver, mechanical reaper, safety pin, elevator brake, typewriter, telephone, phonograph, electric light bulb, motion picture camera, airplane, assembly line, traffic light, radio, vacuum tube amplifier, zipper, lie detector, helicopter, nuclear reactor, microwave oven, transistor, credit card, integrated circuit, laser, communication satellite, computer mouse, ARPANET, GPS, personal computer, cell phone, digital camera, MRI, internet browser, smartphone, social media platform, search engine, 3D printer, CRISPR, reusable rocket...



# We are not achieving as we once did.

(Inventions listed are from "More Perfect", not comprehensive of the entirety of the last 250 years)

Ross Douthat wrote a book about it, "Age of Decadence", and Tyler Cowen calls it the "Great Stagnation".



**But would this tech progress  
impress our founders?**

By what standards would they judge us?

Christian framed this question through the lens of **Preamble from the Constitution**. It's an excellent way to handle this discussion.

But we will add more context and examine beneath the initial claims.

\*I respect that Christian used the Constitution's Preamble. It is an ingenious framework, and I was surprised that he used this. Not because it's inappropriate, and quite frankly, I doubt I would have had the mind to use it on my own, but because, well, it's not a commonly used rubric to judge our societal progress.

# So, Christian's roadmap will be our roadmap:

## General Welfare

- Lifespan & Health
- Material Wealth
- Essentials
- Health Care
- Housing
- Energy

## Common Defense

- Existential Risk
- National Security
- American Soft & Hard Power
- Economic Might
- Critical Supply Chain Control

## Justice & Tranquility

- Violent Crime
- Recidivism
- Rule of Law
- Community
- Trust & Confidence

## The Blessings of Liberty

- Democratic Ideals
- Happiness
- The American Dream

# General Welfare

# General Welfare

Lifespan & Health

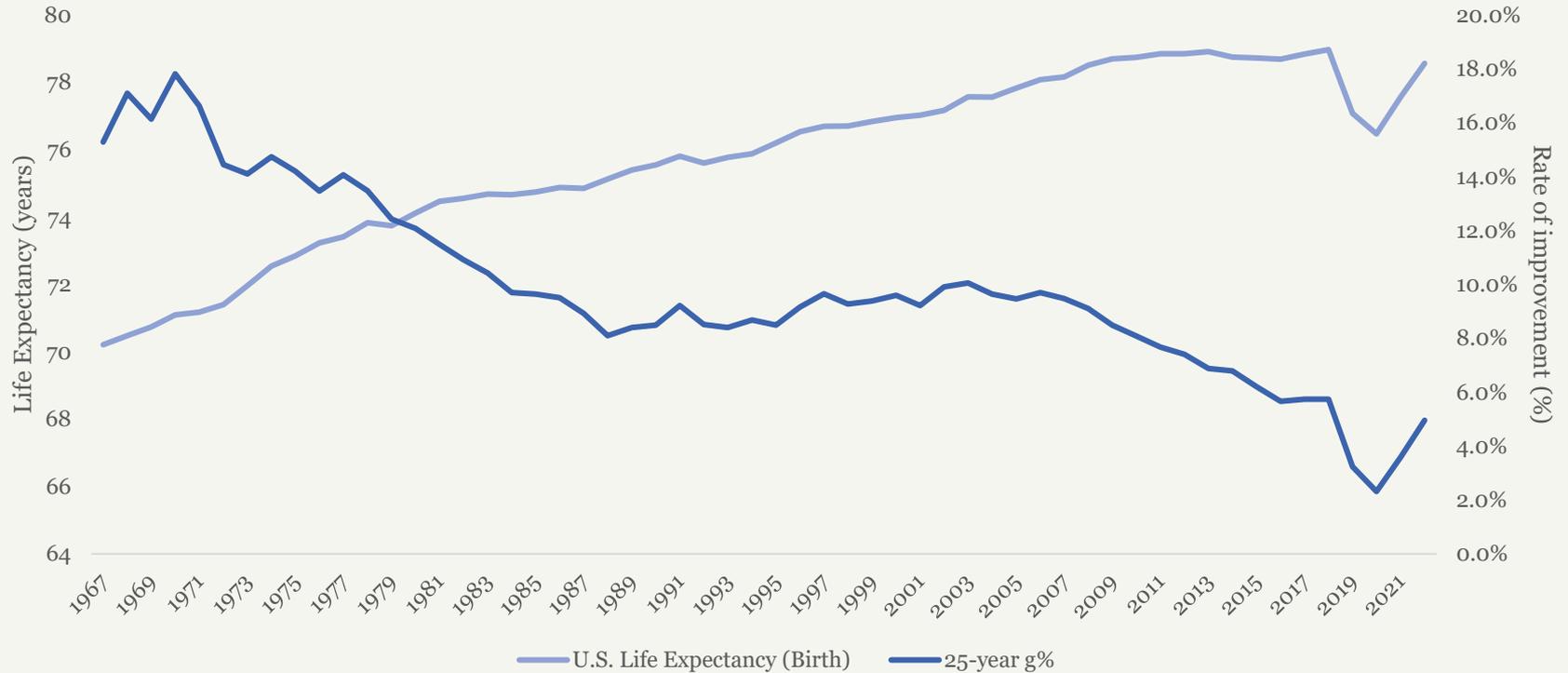
Material Wealth

Essentials

Health Care

Housing

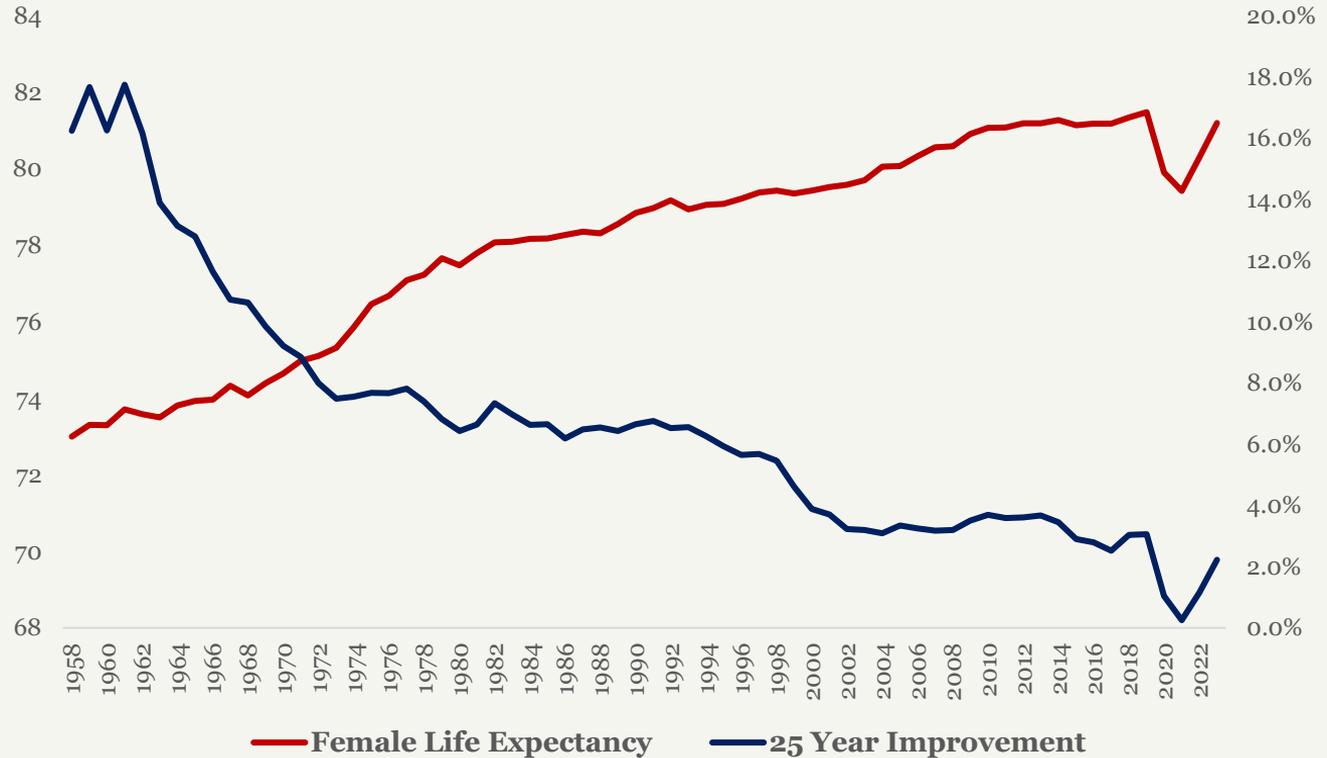
# We are living longer... but we've stalled that progress.



# And American women skew the data.

**They live longer.**  
(Which I love as a father of two daughters.)

**But their rate of improvement has fallen.** Measured by the increase of life expectancy over 25 years. (Which I hate as the father of two daughters.)



## So, are we doing better or worse in life expectancy?

I chose 25 years as a marker that allowed for development, testing, fielding, impacts, and potential side effects of new drugs.

What is my takeaway?

**We haven't meaningfully improved American life expectancy in over 25 years. American women skew the life expectancy and men skew improvement rate.**

And pessimistically, American men live longer because we, in aggregate, haven't had a world war, and rarely work in extremely hazardous physical conditions.

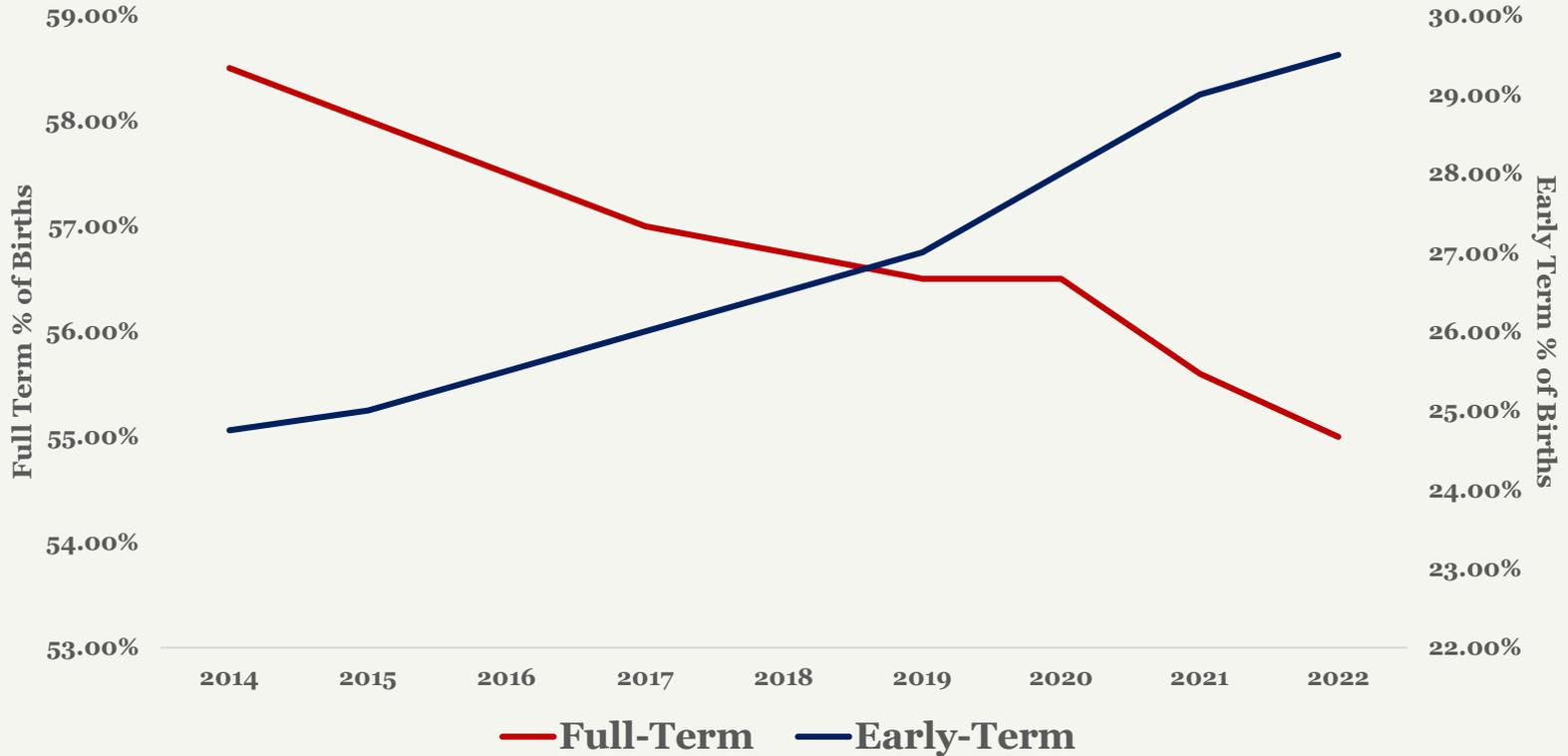
Not because of technological medicinal breakthroughs.

**Christian shows a dramatic improvement here. ~50% decrease in infant mortality over 40 years.**

And we should be proud of the drop in infant mortality.

**But what about the health of our mothers and children?**

# The percentage of full-term births over the last decade has dropped.



# As the percentage of low birthweights also increase.

6.7%

Designated “Low weight” births in 1983

8.5%

Designated “Low weight” births in 2022

Is the air cleaner due to technology?

**Or because we've moved chemicals, industrials, and manufacturing overseas?**

Is food health equivalent to how many times we don't get food sickness?

**Or should it be measured by its quality?**

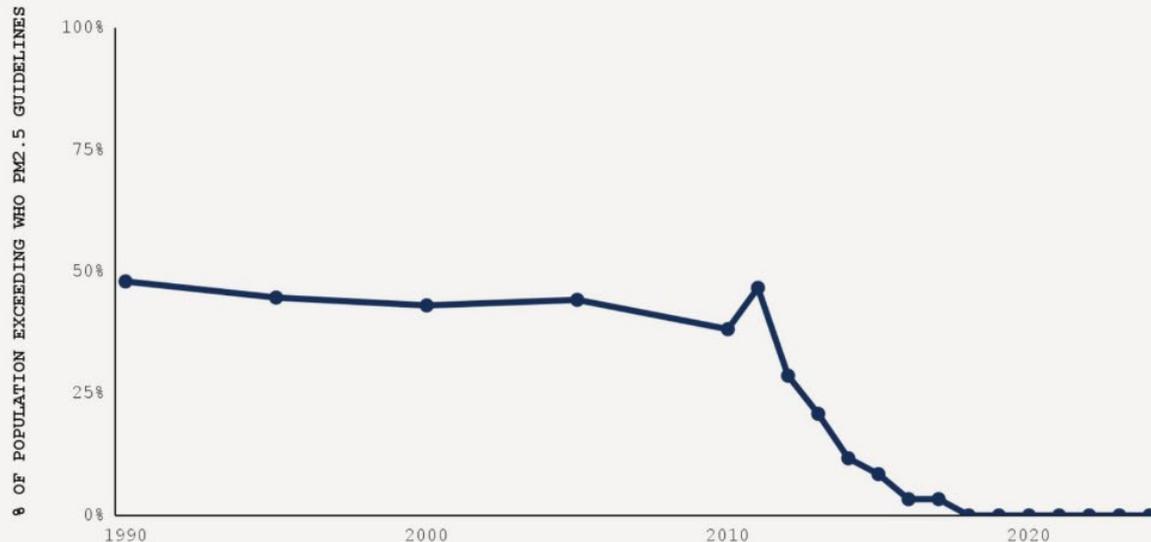
Is our water truly clean?

**Or do we have a data collection problem and lagging definitions?**

# This looks nice. But what is PM<sub>2.5</sub>?

GENERAL  
WELFARE

Air pollution levels have fallen significantly, and almost the entire population lives below WHO guidance levels.



Well. It's "**Particulate Matter**" 2.5 micrometers or smaller in diameter.

And it's categorized by direct emissions and precursor emissions. It's basically a measurement of sulfur dioxide, nitrogen oxide, ammonia, and volatile organic compounds.

(I don't know how they measure it, you can look stuff up too.)

But the **main industrial drivers** of PM<sub>2.5</sub>? (e.g., sulfur dioxide, etc.)

**Coal** (combustion). **Iron and Steel** (coking). **Cement and Building** (calcination). **Mining** (fugitive-mineral dust). **Chemical and Petroleum Refining** (smog).

**Uh-oh.**

# Let's look at the change of operational plants in the USA since 1990.

Industry	1990	2025
Coal Power Plants	700	~205
Iron and Steel	225	116
Oil Refineries	205	132
Cement Plants	110	90
Active Mines (000's)	110	50

## If we move nearly half the industries that cause PM2.5 out of country...

...it would follow that PM2.5 would drop dramatically.

So, I'm not convinced that technology solved this problem. I think **regulations and globalism** drove the necessity for remaining plants to become more efficient.

But let's be objective. We had the shale boom in the early 2010s that certainly helped. And we have been more efficient in producing relatively the same levels of steel. As well as improvement in scrubbers and vehicle emissions.

**In summation, it's partly due to technology, but not entirely - and probably not the main driver.**

# Water issues are uncommon.

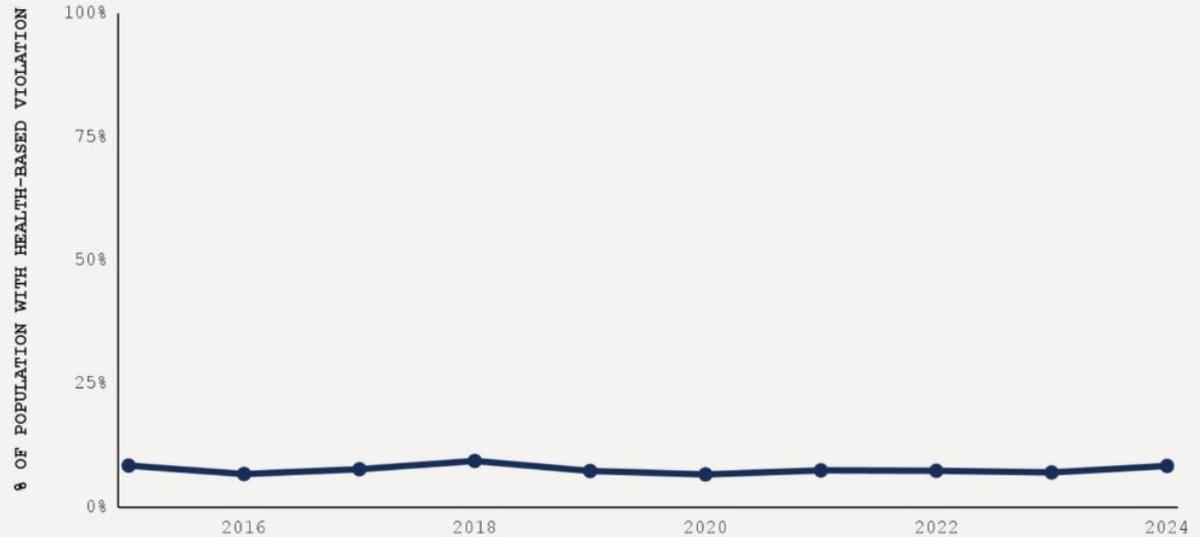
This graphic leads you to believe that roughly ~10% of Americans drink water with "health-based violations".

(Again, **stagnant** for a decade.)

But what does that mean?

And who's reporting?  
Or not reporting.

## Water system issues are uncommon.



## Water reporting issues are common.

Cutting through the percentage here, between **22 and 30 million Americans** are served by systems with at least one health-based violation.

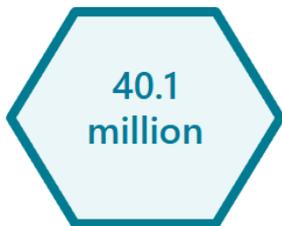
**Nearly 93%** of public water systems (PWS) in "enforcement priority status", basically the ones that are the most messed up, are small systems serving fewer than 3,300 Americans.

But **20% of PWS**, (~30,000 water systems) "failed to meet at least one monitoring or reporting requirement, about what contaminants were present in their drinking water was late, incomplete, or not reported at all."

If we consider the new EPA ruling that incorporates PFAS ("forever chemicals") in our water, **then over 172 million Americans**, e.g., half the country, are drinking contaminated tap water.

**Food. We don't get stomach bugs anymore (safety). But we get something (quality). It's philosophical, but if quality leads to chronic diseases, it's not safe either.**

### Fast Facts on Diabetes



Estimated number of people with diagnosed or undiagnosed diabetes in the United States, 2023

#### Total Diabetes

12.0%

Estimated percentage of the US population with diabetes

#### Prediabetes

115.2 million

Estimated number of US adults aged  $\geq 18$  years with prediabetes

#### Diagnosed Diabetes

29.1 million

Estimated number of people with diagnosed diabetes in the US

*Including 28.8 million adults aged  $\geq 18$  years*

#### Type 1 Diabetes

2.1 million

Estimated number of people with diagnosed type 1 diabetes in the US,

*Including 1.8 million adults aged  $\geq 20$  years and 314,000 children and adolescents younger than age 20 years*

#### Undiagnosed Diabetes

27.6%

Estimated percentage of adults aged  $\geq 18$  years with diabetes who are undiagnosed

*Representing 11.0 million people*

#### Prediabetes: $\geq 65$ years

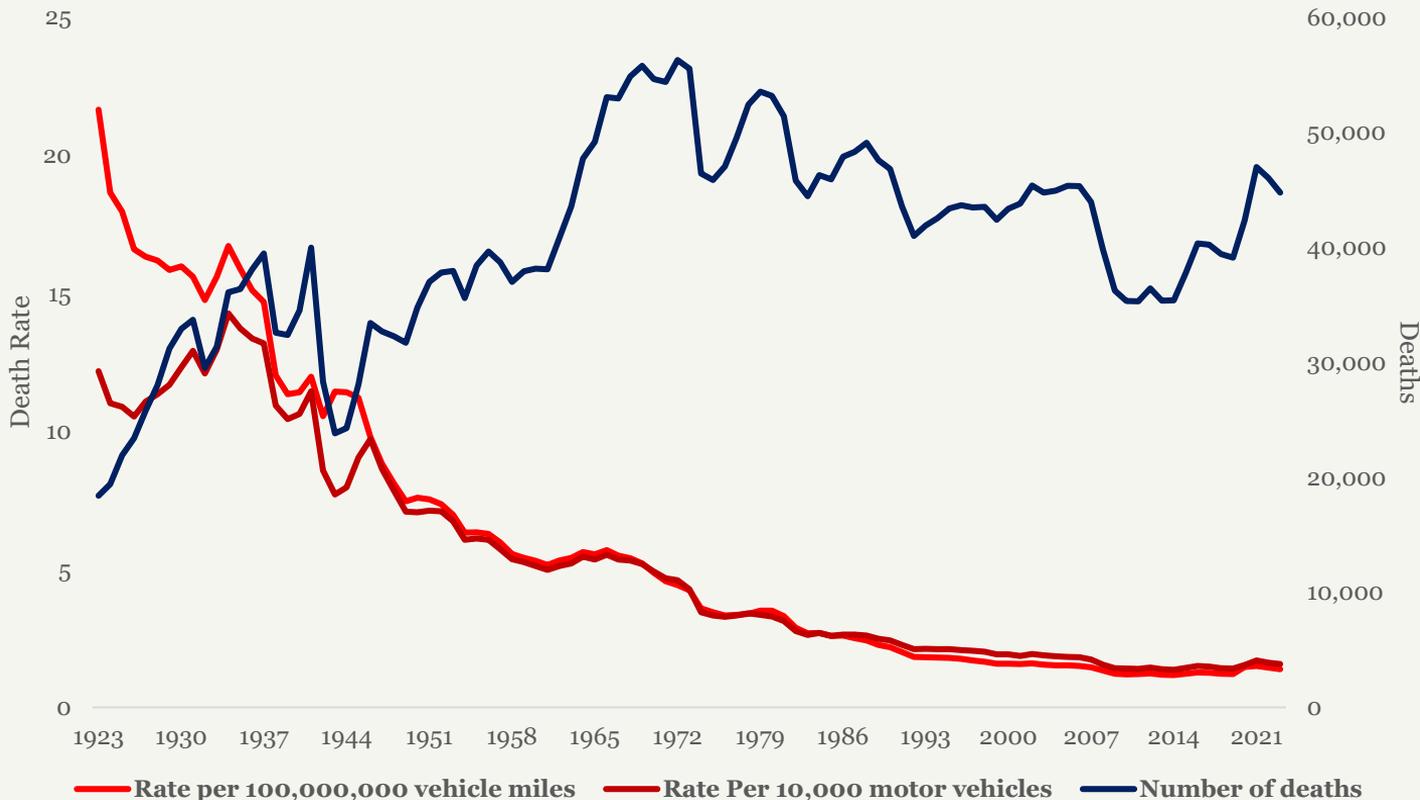
31.3 million

Estimated number of people aged 65 years or older (52.1%)

**Driving is safer per unit. But we still have the same fatalities as the 1990s.**

*This is the "rate vs. volume" statistical paradox we learn in stats.*

While the rate decreases, the volume increase, leading to more deaths.



We are surviving all kinds of cancers at higher rates than before.

**Another great call-out by Christian.**  
Here are some more data points illuminating this trend.

4%

Decrease in rate of New Cancers  
Per 100,000 Americans since 2013

14%

Decrease in rate of Cancer Deaths  
Per 100,000 Americans since 2013

Today, everyone has better technology at home  
than anyone had in the 1800s.

True.

Christian's metric means that all of us have **better amenities than John Rockefeller**, one of the richest Americans ever to live. And it is a sign that the Union has achieved much.

But...

*“Envy, the meanest of vices, creeps on the ground like a serpent.”* – Ovid

As Americans, we have much to Envy between ourselves. (Wealth gap discussion up ahead.)

# Americans believe they are significantly closer to living their "best possible" lives...

JUSTICE &  
TRANQUILITY

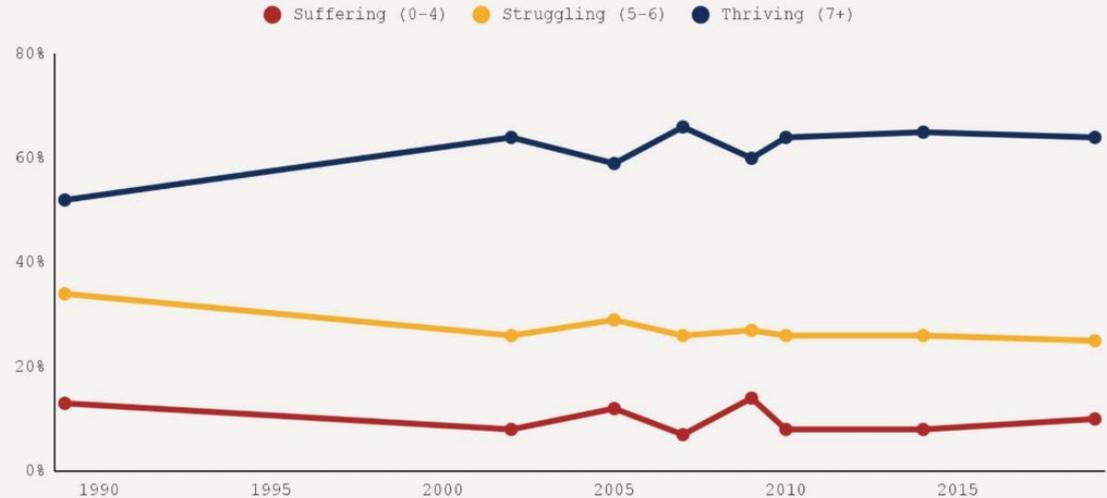
Americans believe they are significantly closer to living their "best possible" lives than their "worst possible" lives.

...than their "worst possible" lives.

This is **just more stagnation.**

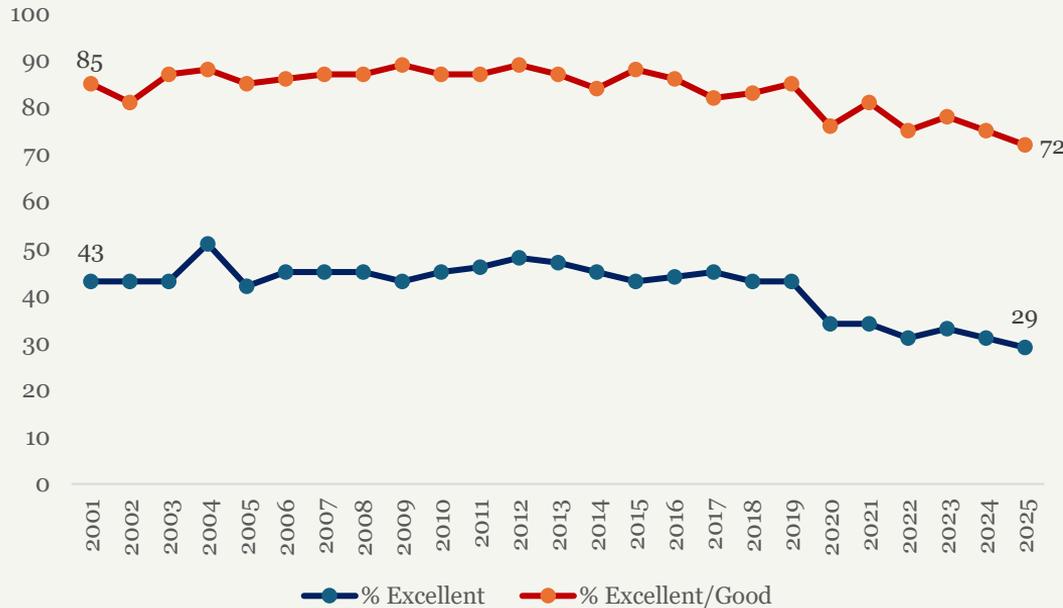
Flat since 2000.

And probably the same socio-economic people.



# And I think we may have some adverse selection here.

These aren't signs of people living their best lives. Gallup shows a decrease in mental health reported by all Americans.



# 45%

U.S. Adults say if they could, they would **live sometime in the past.**

**This slide** (*slide 39, “Most of the American labor force is gainfully employed”*) **is why I decided to examine each part of Christian's deck deeply.**

While I thought the first 38 slides were rosy, I was impressed by Christian's optimism and as a venture capitalist, that's his natural inclination.

But I'm a former grunt, and an “east-coast” (special sits, opportunistic, etc.) investor. I am paid to manage risk and underwrite investments, often alone. So, when I bet money or life and limb, I start with the down-side case and move up “towards the light”.

As such the presentation and insinuation of this slide - of what the data truly measures and portrays, led to this narrative response.

# Here is Christian's slide.

GENERAL  
WELFARE

Most of the American labor force is gainfully employed.



More Perfect.

Richmond Fed. U-3 rate: "the percentage of the civilian labor force that is jobless and actively looking for work, calculated as unemployed divided by the labor force."  
Accessed 2025.

39

# Definitions are important.

Would you consider a person **who works a few hours a week**, say, as a 1099 employee, to be employed?  
I'm talking about 5-20 hours of monthly paid work.

No? Neither would I. **But the U-3 definition of employment does.**

Would you include an **American who has been trying for two years to get a job** but simply can't, as unemployed? For whatever reason. But they are trying and failing. And are too discouraged to try again.

I would. They are able-bodied and not receiving a paycheck. Well, **U-3 definitions don't include** those people in their unemployment estimates.

**A Former Comptroller of the Currency places the unemployment rate closer to 24%.**

And that's also shown by John Williams' "*Shadow Government Statistics*" blog.

# Let's talk CPI, The Fed, and Money Supply

Real wages are measured by taking CPI (Consumer Price Index), which is a “basket of goods”, **controlled by the government**, at ratios the government chooses. The rise in the price of that basket year-over-year is labeled inflation.

(This is the 30,000-foot view of inflation measurement.)

So, when economists say, real wages have been increasing, what they mean to say is, “Look, you peasants can still buy the same, and in some cases, more widgets and food and lifestyle items with your salary!”

What's not as widely discussed (or explained to lay people, I had no idea about any of this until going to graduate school) is the growth of M2 (**how many dollars exist in the system**) compared to our nominal wage. **As M2 increases, the money flows down in a waterfall.**

In broad strokes, the Fed “creates” money and buys assets from banks and financial institutions. Only 24 institutions can interact with the Fed. They are called primary dealers. These institutions sell their assets to the Fed at attractive prices. The banks now have cash.

(This is the 30,000-foot view of quantitative easing.)

The banks take this new cash and start lending and investing into companies. As there is more money, there's more demand for assets, driving the prices up.

So, the wealthy or those who own assets, grow their wealth.

And by the time it gets to you, employee. Your ability to participate in the wealth growth, is severely diminished.

# Here's the math.

	EOY 1990	EOY 2000	EOY 2010	EOY 2024
<b>Nominal Median Household Income</b>	\$29,943	\$42,148	\$49,276	\$80,610
<b>CPI (1982-84=100)</b>	130.7	172.2	218.1	314.0
<b>Real Wage (2024 dollars)</b>	\$71,900	\$76,855	\$70,950	\$83,730
<b>S&amp;P 500 (year-end close)</b>	330	1,320	1,257	5,882
<b>S&amp;P "shares" buyable with nominal income</b>	<b>90.7</b>	<b>31.9</b>	<b>39.2</b>	<b>13.7</b>
<b>Median Home Price</b>	\$123,000	\$169,000	\$221,800	\$420,400
<b>20% Down Payment</b>	\$24,600	\$33,800	\$44,360	\$84,080
<b>Down payment as % of annual income</b>	<b>82%</b>	<b>80%</b>	<b>90%</b>	<b>104%</b>
<b>M2 Money Supply</b>	\$3.28T	\$4.93T	\$8.83T	\$21.04T

**541%**

Growth of money supply (1990-2024)

**242%**

Median Home Price growth (1990-2024)

**1682%**

S&P500 Growth (1990-2024)

Your CPI adjusted real-income is up **16%**, between 1990 & 2024.  
But your purchasing power over wealth-building assets **fell 85%**.

Economists call it the “**Cantillon Effect**”.

And an average American would describe it using other words.

# Poverty Rates. Here we go again with definitions.

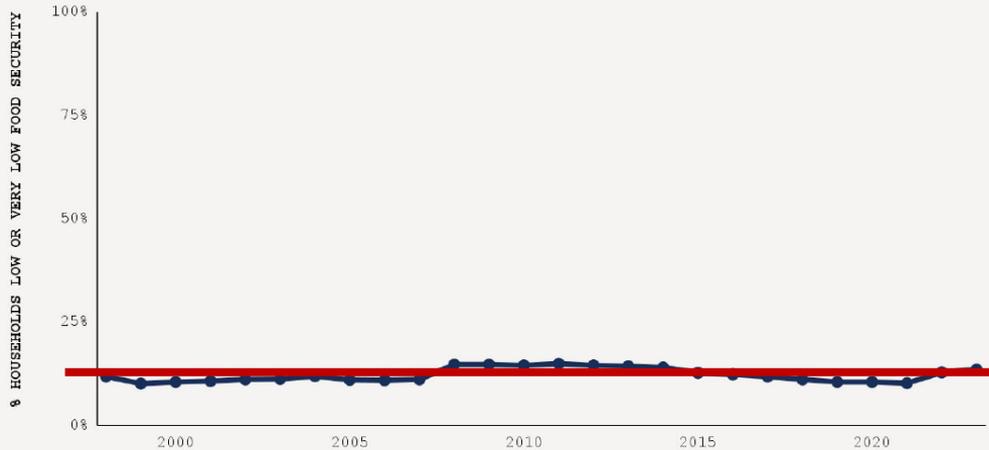
Size of family unit	Weighted average thresholds
One person (unrelated individual):	15,940
Under 65 years.....	16,320
65 years and over.....	15,050
Two people:	20,220
Householder under 65 years.....	21,100
Householder 65 years and over.....	18,980
Three people.....	24,950
Four people.....	32,130
Five people.....	38,110
Six people.....	43,130
Seven people.....	48,970
Eight people.....	54,740
Nine people or more.....	64,900

The definition the American government, e.g., the U.S. Census Bureau, uses for poverty is **“...calculated as three times the cost of a minimum food diet in 1963, adjusted for inflation.”**

An American **family of four** must earn **under \$32,000 a year** to be considered in poverty.

**Another system of the Union is broken.**

Only a small minority of Americans still experience food insecurity.



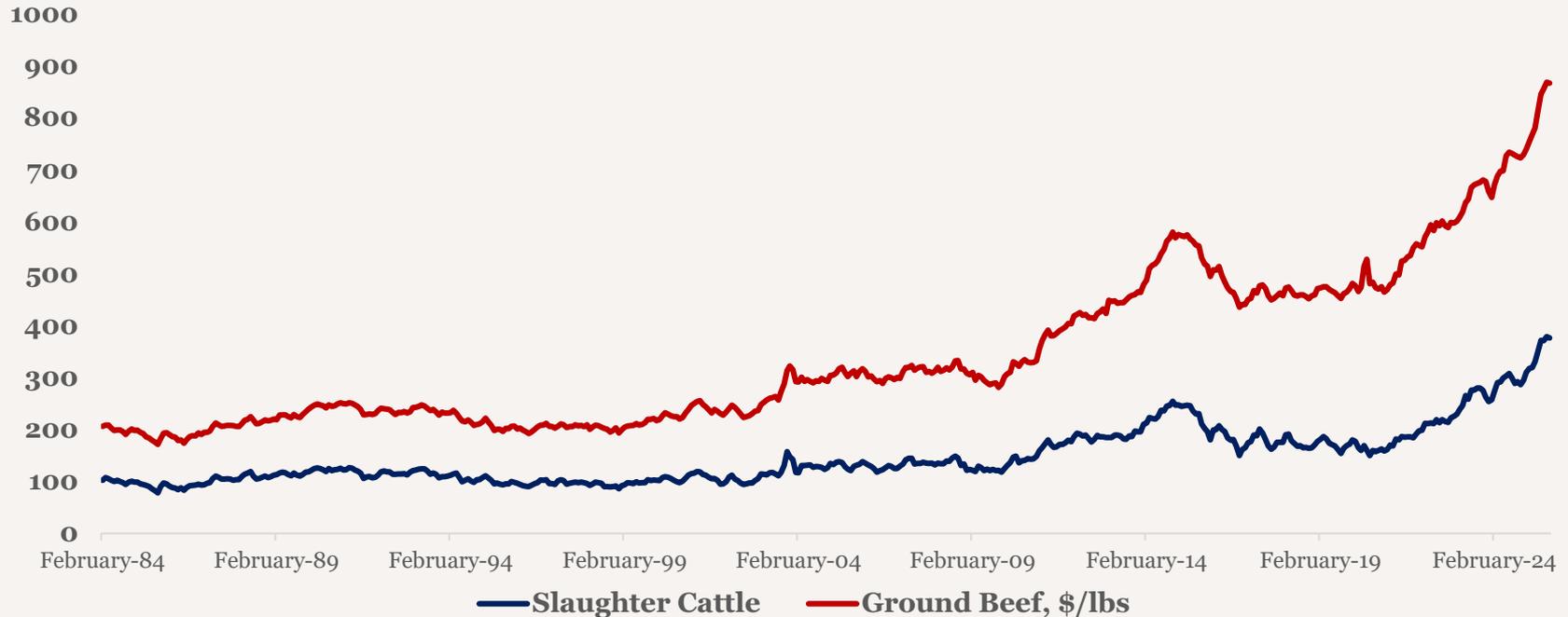
~14% in 2024. Or **18 million** American households.

The percentage of food insecure households **has barely changed in 25 years.**

More **stagnation.**

# Median household income to food costs.

This is ground beef prices indexed to 1984 dollars. Meat's an American staple, and ground beef is **5x** more expensive today than 40 years ago.



# General Welfare

Christian listed three major expenses; **Healthcare, Education and Housing**, that “break the trend”.

He lists excellent statistics proving that point.

But I want to add more data.

I’d argue that they are just behemoths on this fat tail.

**And a main driver of the rise of populism and disillusionment across the nation.**

# Additional shocking American healthcare costs.

530,000

Annual U.S. bankruptcies citing medical bills  
#1 Reason for Ch. 11

\$27,000

Annual family health insurance premium (2025)

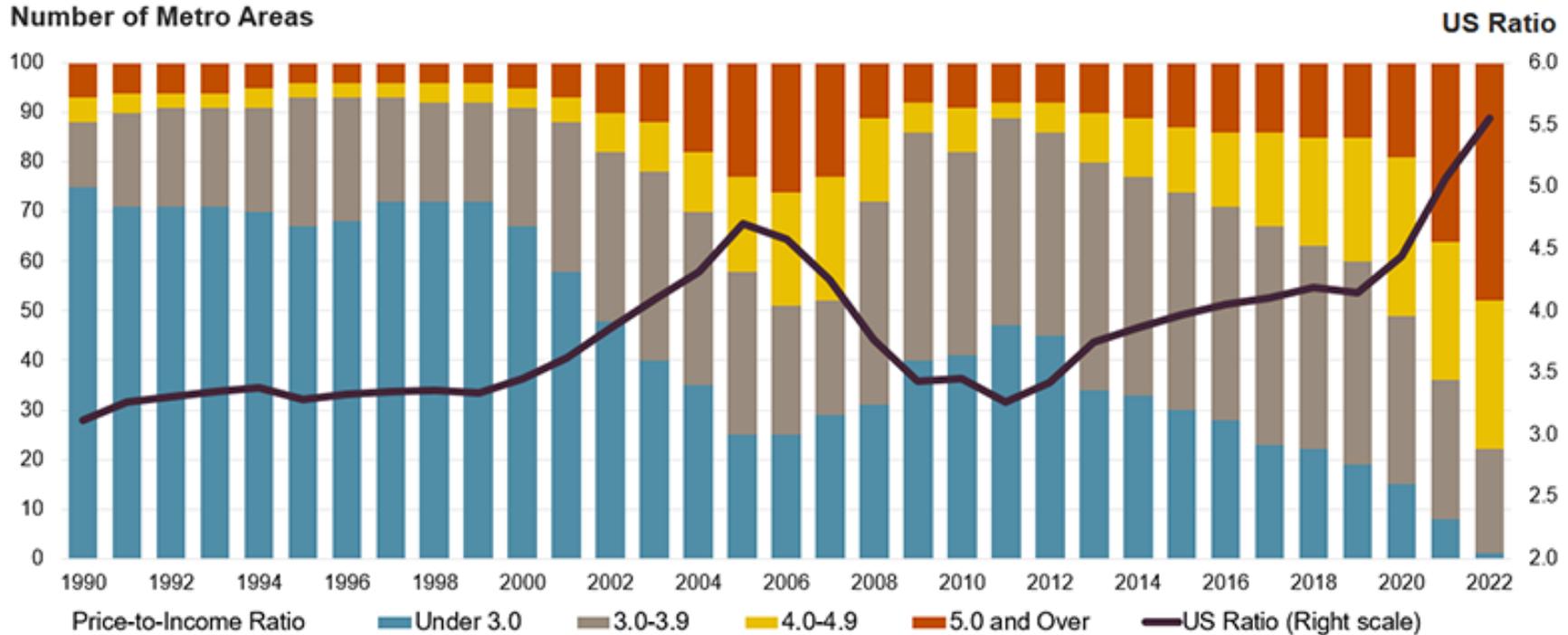
2.78x

U.S. Drug prices vs. OECD average

3x

U.S. Maternal Mortality Rate vs. OECD

# We're not just paying more for housing in real terms; it's a huge portion of after-tax income.

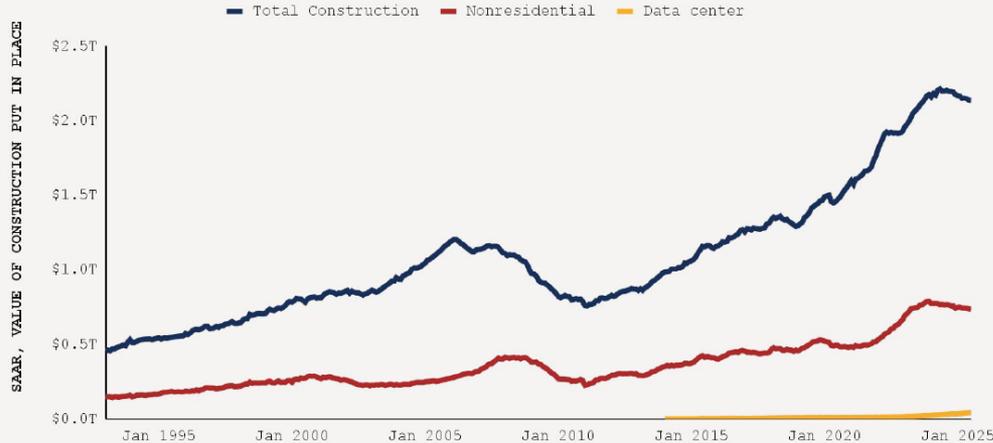


Rents increased **26%** between 2020 and 2022.

# Data misunderstanding, housing is down.

COMMON  
DEFENSE

We are building lots of new homes.



The mistake is thinking that  
Total – Nonresidential –  
Data center = Residential.

**That's incorrect. We're  
not spending >\$1.5tn on  
housing.**

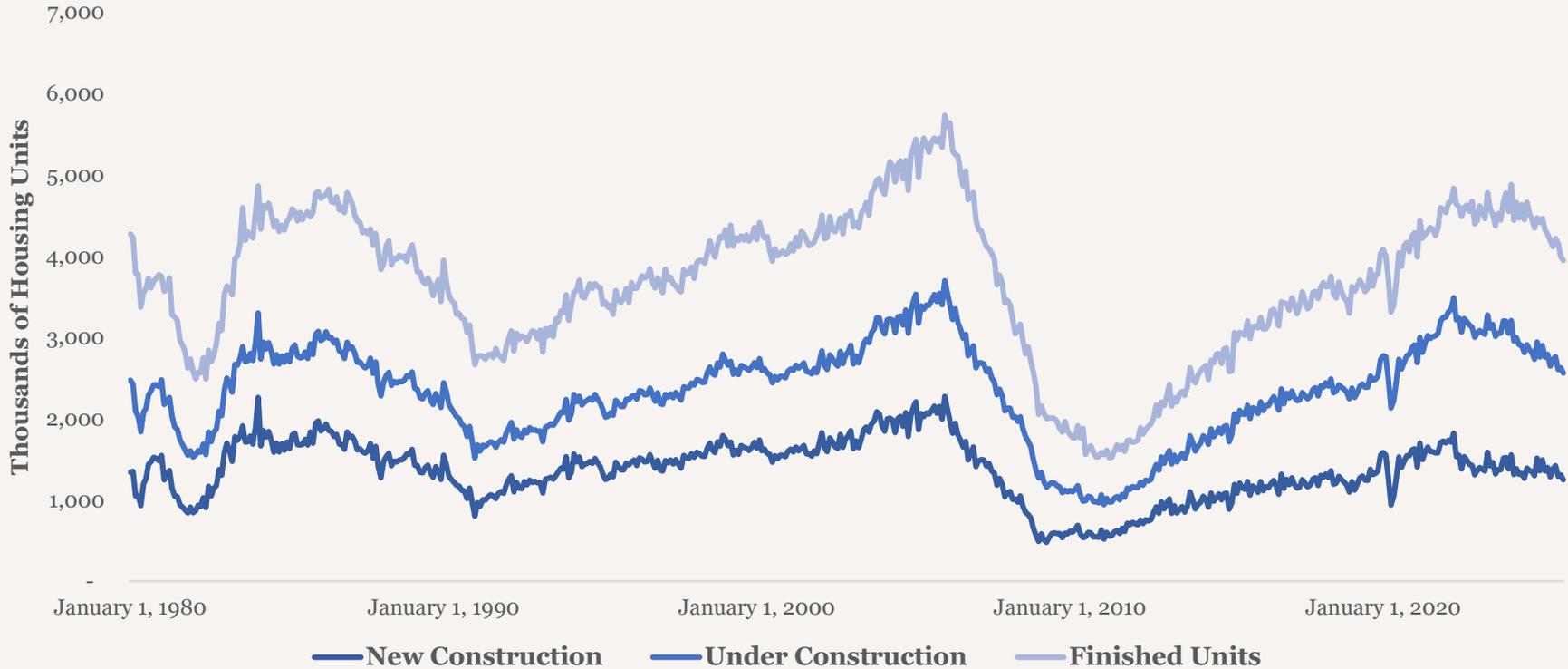
Total Construction includes  
Public Construction, Home  
Improvements/Renovation,  
new single and multifamily  
residences.

More Perfect.

US Census. Accessed 2025.

89

# We are not building lots of new homes. We are still below 2006 levels for new construction.



# Better educated? Or more people with a diploma? What's the “price to value”?

65%

*Grade Inflation Increase*  
% shift in “A’s” grades from “B’s” issued by  
Harvard from 1950 to 2021

45%

*Critical Thinking*  
% of sophomores showed **0** improvement  
compared to entering freshmen, 36% of four-  
year graduates made no gains at all.

6%

*Study Time Dedication*  
% of college students spend more than  
20 hours per week studying and doing  
homework.

40%

*Daily Reading Decrease in Adults*  
% decrease in the last 20 years

Translate into Latin

3. In the <sup>1</sup>first of the <sup>2</sup>spring the consul <sup>3</sup>came to Ephesus, and <sup>4</sup>having received the <sup>5</sup>troops <sup>6</sup>from Scipio he <sup>7</sup>held a <sup>8</sup>speech <sup>9</sup>in-presence-of the <sup>10</sup>soldiers, <sup>11</sup>in which, <sup>12</sup>after extolling their <sup>13</sup>bravery, he <sup>14</sup>exhorted them <sup>15</sup>to undertake a <sup>16</sup>new <sup>17</sup>war <sup>18</sup>with the Gauls, who <sup>19</sup>had [<sup>20</sup>as he said] helped Antiochus <sup>21</sup>with <sup>22</sup>auxiliaries.

History and Geography

- II. Name the chief rivers of Ancient Gaul and Modern France. Is France larger or smaller than Transalpine Gaul? What are the two principal rivers that rise in the Alps? Where is Mount Blanc?

IX. Pericles: — the Man and his Policy.

Arithmetic & Algebra

- \*3. Divide 33368949.63 by 0.007253. What is the quotient of 3336.894963 by 72530? What is the third power of 0.1? of 100? Write these answers in *words*.
4. Find the cube root of 0.0093 to five places of decimals.  
Find the square root of 531.5 to three places of decimals.

4. Reduce to one fraction, with the lowest possible denominator:

$$\frac{3a+2b}{a+b} - \frac{25a^2-b^2}{a^2-b^2} - \frac{a}{2b}.$$

I can't pass Harvard's 1869 Entrance Exam.

**I'd argue very few Americans can.**

It doesn't matter if these questions are still relevant today, e.g., use of a calculator, Latin is a "dead language", etc.

The point is that Americans aren't paying for education, we're paying for credentials. For a "check-in-the-box". And there's evidence suggesting that is exactly how a majority of American students have approached their higher education.

**And that credential doesn't come close to signifying what it once did.**

# Common Defense

# Common Defense

Existential Risk

National Security

American Soft & Hard Power

Economic Might

Critical Supply Chain Control

## Arms race is back on the menu, boys.

1

China has **doubled** its nuclear arsenal since 2020.

2

Each leg of the United States nuclear triad (subs, ICBMs, bombers) are **undergoing modernization efforts simultaneously**.

3

**New START will most likely expire.** The U.S. has terminated other arms control agreements, such as the Intermediate-Range Nuclear Forces (INF) and the Anti-Ballistic Missile (ABM).

4

**Golden Dome will force** Russia, China, North Korea, and other partners to upgrade their weaponry to ensure they can respond to an American attack.

We have launch supremacy and beat the previous record each year (thank you **Mssr. Musk**), **8,530 satellites** in space (more than any other nation), **2X** the number of military satellites as Russia and lead the world in commercial space.

But we also face **threats** and **vulnerabilities** we must address.

## Fragile Precision, Navigation and Timing Assets

- **20-year process** to modernize GPS but face continual delays.
- Over **300,000** DoW legacy GPS receivers needing significant upgrades to function properly.
- Interruption of GPS would cost “**tens, if not hundreds of billions of dollars, per day**”
- Our Space-Based Infrared System (SBIRS), which is crucial to U.S. missile warning, is decades old and **currently cannot track hypersonic missiles**

## On-Orbit “Dog Fighting”

- **China** has demonstrated **5** “objects in space maneuvering in and out and around each other in synchronicity and control” and can “kidnap” other satellites
- “There **used** to be a capability gap between us and our near peers...” – Gen. Michael Guetlein

## Ground-Based Anti-Satellite Weapons

- China **has at least one ground based** kinetic ASAT (SC-19) capable of destroying LEO satellites, and is developing the DN-2 and DN-3 to reach MEO/GEO.
- “The PRC has multiple ground-based **laser weapons** of varying power levels to disrupt, degrade, or damage satellites...” - 2025 Annual Report to Congress

## We have a warrior caste.

79%

Army recruits with a family member in service

82%

Navy recruits with a family member in service

77%

Marine recruits with a family member in service

86%

Air Force recruits with a family member in service

# American soft power = weaponization of the dollar.

American soft power (*ex-culture, ex-diplomacy*) is in the reserve status of the dollar and our control of SWIFT (the international secure financial messaging network), and our capital markets.

We have used economic sanctions as boxers use their jab. Constantly. Sometimes not even to hurt but to keep the opponent aware of our reach. **And the world is tired of it.**

We have **17,000 entities and individuals sanctioned** in 2025. Three times any other country. And all for a 13% success rate, e.g., we **only force our actors to comply 13 times of 100.**

For this undisciplined deployment, we have nations trading in local currencies, **seeking exits from the American financial systems, and trying to form blocs, like BRICs**, to escape our itchy trigger-finger of OFAC.

# Yes. The U.S. has long-standing relations. But how strong are they?

China has a larger diplomatic footprint in the United States than the United States does in Africa, East Asia, Pacific Island countries, and Central Asia, **combined**.

**Hard to build relationships if you're not in the room.**

Before DOGE, State suffered an average 13% staffing shortage.

The State Department's budget is 7% of DoDs. (Or was.)

**America has let her diplomatic muscles deteriorate since the end of the Cold War. Our geography allows us to dismiss diplomatic skill, in ways the land powers cannot afford.**

But as technology interconnects us, the human ability to forge bonds, negotiate, and compromise, becomes all the more important.

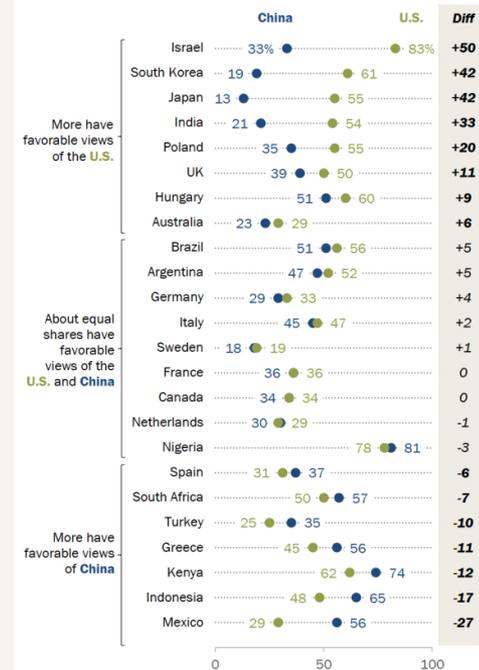
Christian's points are well made.

Our culture has spread. Many people around the world learn about the U.S. through storytelling, our national narrative through movies and music. It is a strong competitive advantage and marks the attractiveness of our society.

**But it's a fragile advantage.**

How people in 24 countries view the U.S. and China

% who have a favorable opinion of ...



We should be extremely clear-eyed in this section.

**Hard power is kinetic or potential violence applied to other actors to compel or deter them to our desired outcomes.**

It's about inducing pain through death, misery, and dread, or the threat of it, to secure American national interests.

This section refers to the points made in “More Perfect”, p. 66-76

# America isn't the largest military in the world, but it does spend the most money on defense.

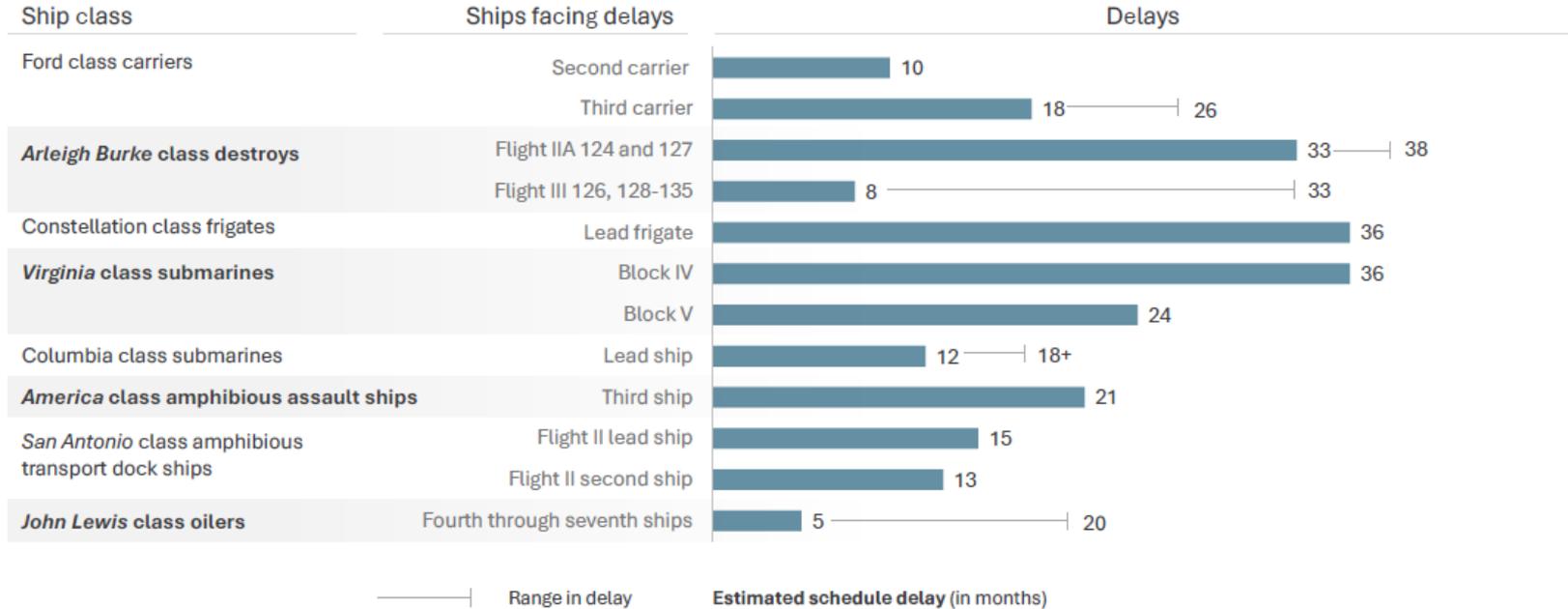
Rank	Country	Active Personnel	Defense Budget (2024 \$)
1	China	2,035,000	\$235B
2	India	1,476,000	\$74.4B
3	United States	1,316,000	\$968B
4	North Korea	1,280,000	N/A
5	Russia	1,134,000	\$120.3B
6	Ukraine	730,000	\$28.4B
7	Pakistan	660,000	\$8.4B
8	Iran	610,000	\$8B
9	Ethiopia	503,000	\$623M
10	South Korea	500,000	\$43.9B

# Supercarrier Update – Expensive, unreliable, late

- *Nimitz* carriers take **6 years** for mid-life refueling, but only slated for 4
- The first *Ford* class carrier was commissioned in 2017, but didn't deploy until **2021 due to qualification issues.**
- Due to **delays** in production, the U.S. Navy is projected to operate with **10 carriers, vice 11, for an entire year**, while they wait for the delivery of a *Ford*.
- “...costs of CVN-78, CVN-79, CVN-80 have grown **23.6%, 23.4%, and 17.6%**...since submission of 2008 budget”
- ***Ford*** has consistent issues, it was designed to handle 16,500 recoveries (AAG) and 4,166 launches (EMALS) before operational failure, but in practice, averages **48** and **181** tasks before failing.



# State of the U.S. Navy's Warship Deliveries



# 5<sup>th</sup> Gen Fighters: F-22 Raptor & F-35 Lightning II

## F-22 Raptor



- Readiness rate of **40%** in FY 24
- Drop of **nearly 33%** in readiness availability in two years
- **Congress blocked divestiture of 32 “least-capable” F-22s** requested by the Air Force – forced to carry dead weight.
- Total Program Cost: **\$67.3bn**
- Total F-22: **195**
- Unit Economics: **~\$345mm**
- Cost flight per hour: **~\$80,000**

## F-35 Lightning II

- Avg. Availability rate of **50%** in FY 24
- Block 4 Modernization: **Five-years** behind schedule
- Average Delay in Delivery: **238 days**
- Supply Chain: **4,000-part** shortages, **52 aircraft** stalled in final assembly
- Total Program Cost: **>\$1.5 tn**, 44% since a 2018 estimate
- Cost flight per hour: **\$42,000**

## Even the adults aren't adulting anymore.

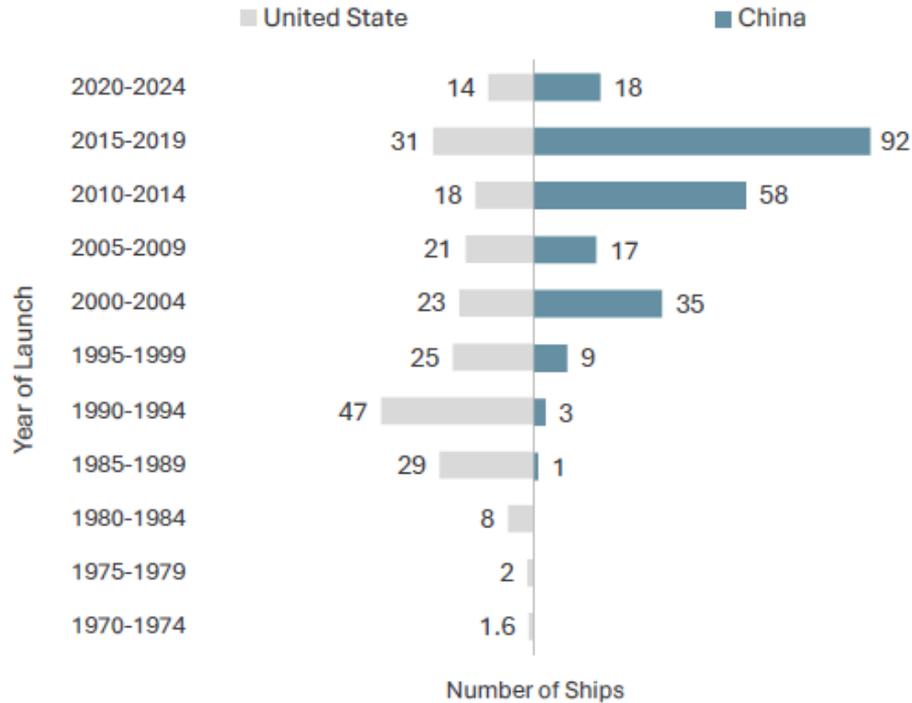
Ex. 1

“We stopped making **TNT in the U.S. in 1986**, and we were buying from the Russians. We were buying from the Ukrainians.”

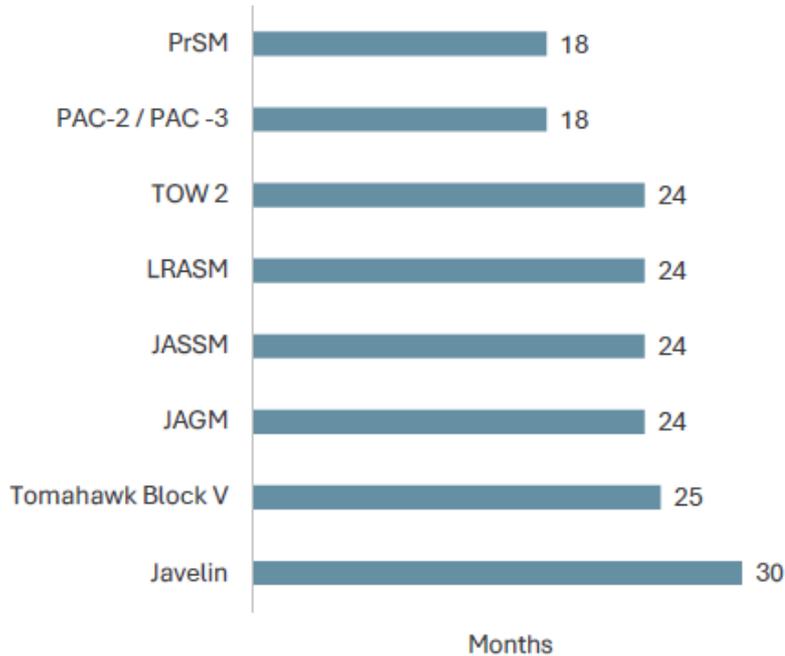
Ex. 2

General Dynamics hasn't been able to run three lines properly, and the problem became so acute, the **Army sent an official “show cause”** and would consider **“terminating”** the contract.

# Shipbuilding...always better to compare.



# Leadtime for Critical Missiles – making more, slowly.



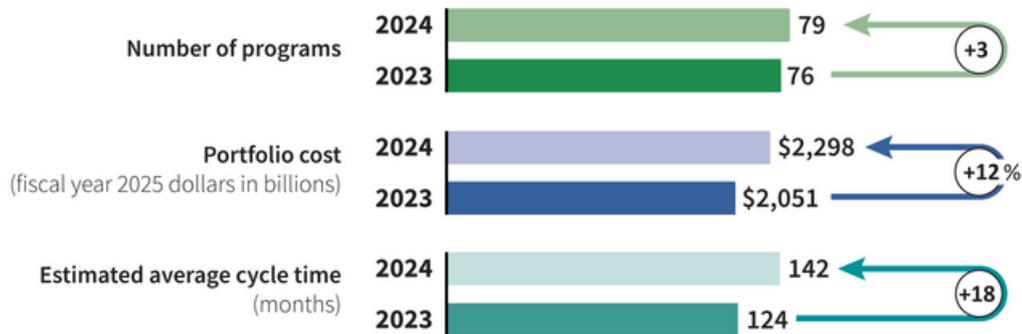
## 30 days

before U.S runs out of Air-to-Surface Missiles (JASSM) in a conflict with China

## 7 days

before U.S runs out of Long-Range Anti-Ship Missiles (LRASM) in a conflict with China

## Slower, more expensive, and not in the fight.

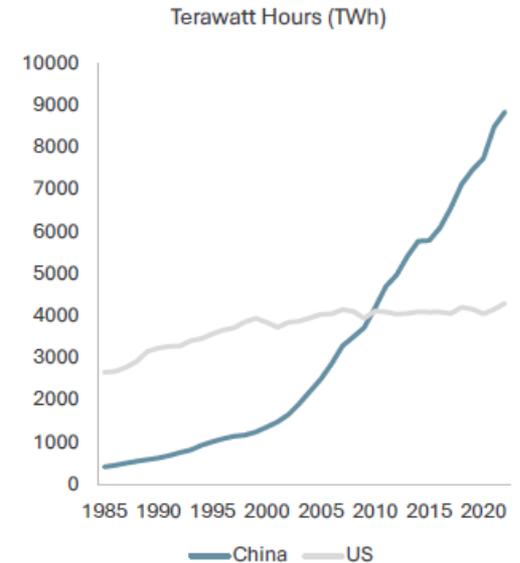
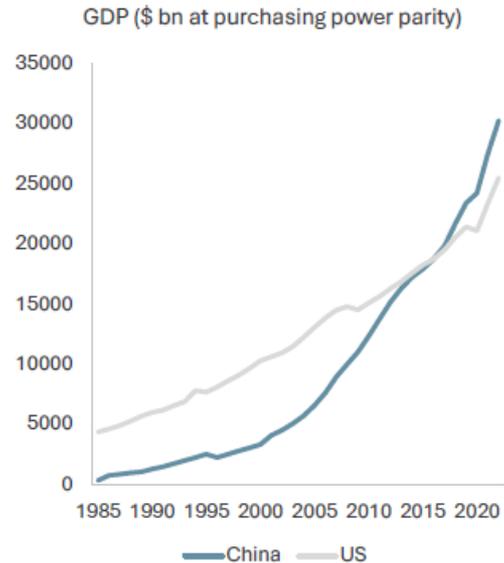
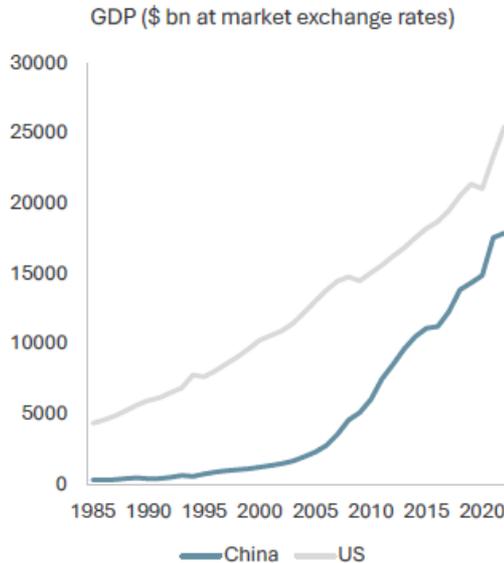


# 24

Total Nunn-McCurdy\* Breaches Since 2012

\*Nunn-McCurdy is legislation that requires DoD to report to congress if an MDAP experiences a cost overrun that exceed certain (and high) thresholds

Looking at China's electrical consumption and GDP at PPP, gives us an idea of where they are headed. And where we are too.

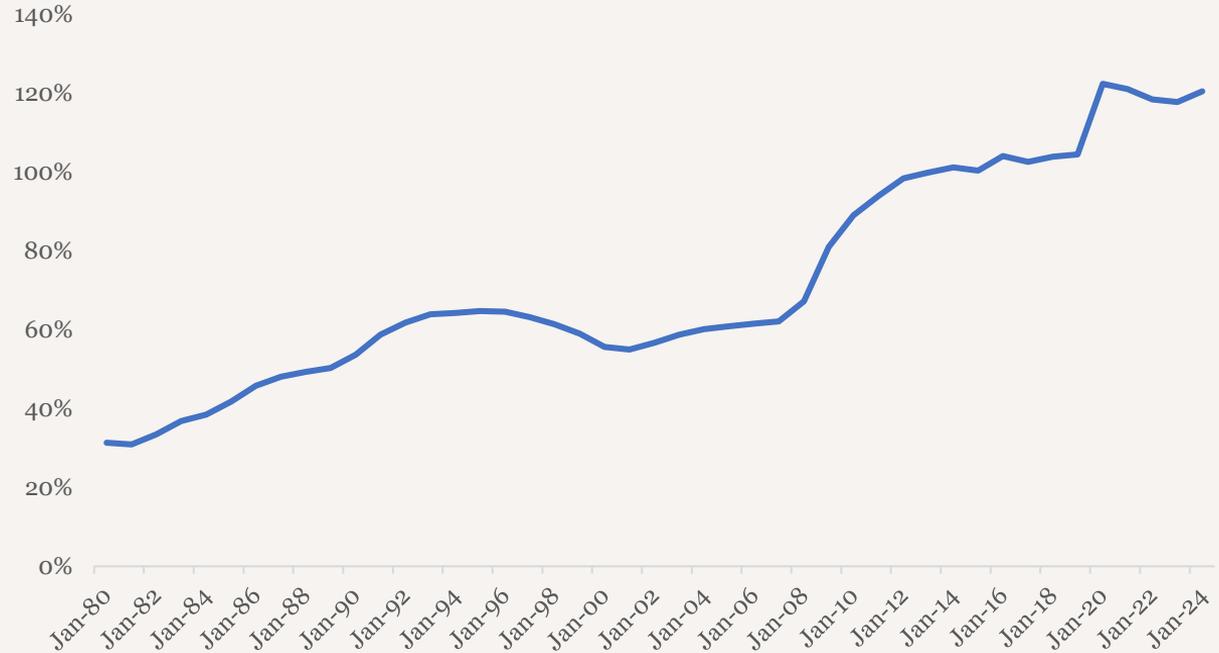


# “Check your leverage”. Federal Debt as a Percentage of GDP.

Yes. Our GDP and its growth since WWII have been incredible. **We should be proud.**

But we should also check in on our **leverage.**

**And how, eventually, one must kill the other.**



We do dominate with the largest market cap companies. And the disparity between those who benefit and don't, is higher than the Roman empire.

(Obviously, there are issues with trying to precisely and accurately measure Gini Index of Ancient civilizations but even being statistically close is an issue.)

Society	Gini Index	Time Period
Roman Empire	0.46	~165 CE
Han Empire (China)	0.48	~2 CE
Aztec Empire	0.50	1492
<b>United States</b>	<b>0.485</b>	<b>2023</b>
China	0.467	2022
South Africa	0.63+	Current

40%

Of wealth controlled by top 1% of U.S. population

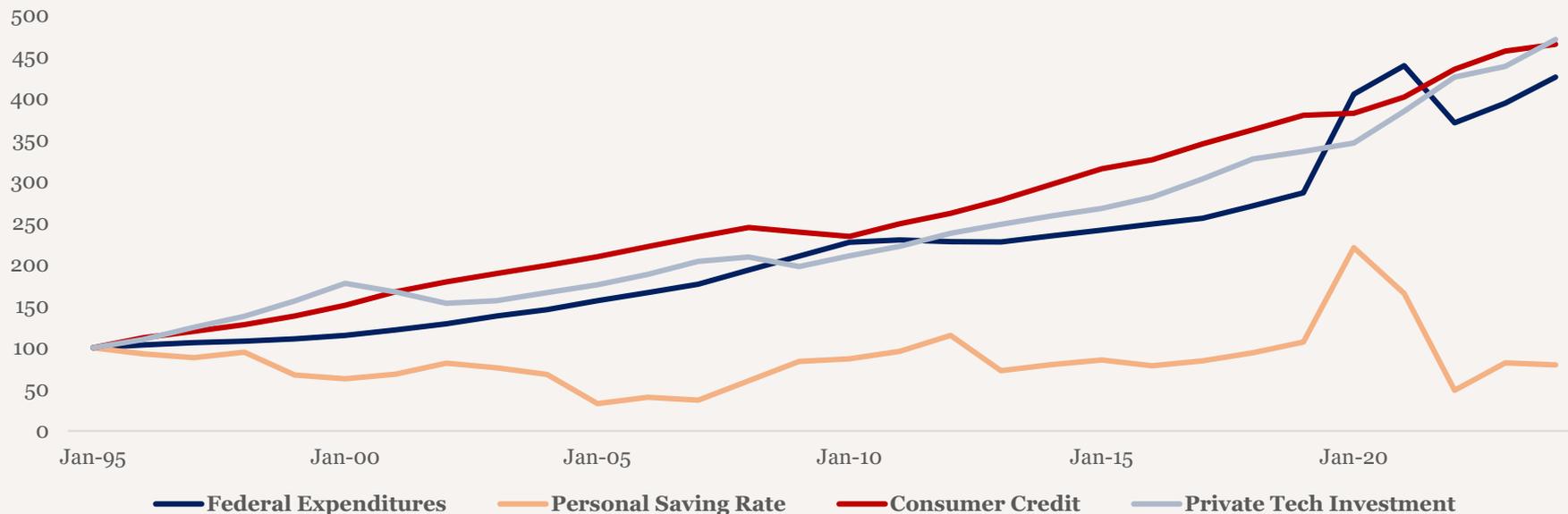
16%

Of wealth controlled by top 1% of Rome's population

Rank	Company	Country	Est. Total Revenue
1	<b>AVIC</b>	<b>China</b>	~\$110-120B
2	<b>CSSC</b>	<b>China</b>	~\$80-90B
3	Boeing	USA	~\$65-70B
4	<b>NORINCO</b>	<b>China</b>	~\$65-70B
5	Airbus	Europe	~\$60-65B
6	RTX	USA	~\$55-60B
7	General Electric	USA	~\$55-60B
8	Lockheed Martin	USA	~\$60-65B
9	<b>CETC</b>	<b>China</b>	~\$45-50B
10	<b>CSGC</b>	<b>China</b>	~\$40-45B

# Indexed to 1995, GDP growth by primary drivers.

Our GDP growth, is driven by consumer debt (that we can't afford), government expenditures, and AI CAPEX. **It's more fragile than we think.**



Reminder:  $GDP = C + I + G + (X - M)$

G = Government Consumption and Gross Investment: Federal, State, and Local goods/services  
 (X-M) = Export less imports

C = Personal Consumption: spending by households on goods  
 I = Gross Private Domestic Investment: Business spend

## A more nuanced examination of China's BRI. It may not be the foreign policy tool we think it is.

If you're not good at underwriting debt, you lose money.

China has **\$1tn** circling into a debt trap.

**80%** of China's loans have been issued to nations in financial distress.

Of the \$35bn in debt payments owed to China in 2025, \$22bn will be made by the **world's poorest 75 nations**.

**“Stand alone ports are essentially useless without accompanying roads and railways”**. – CFR

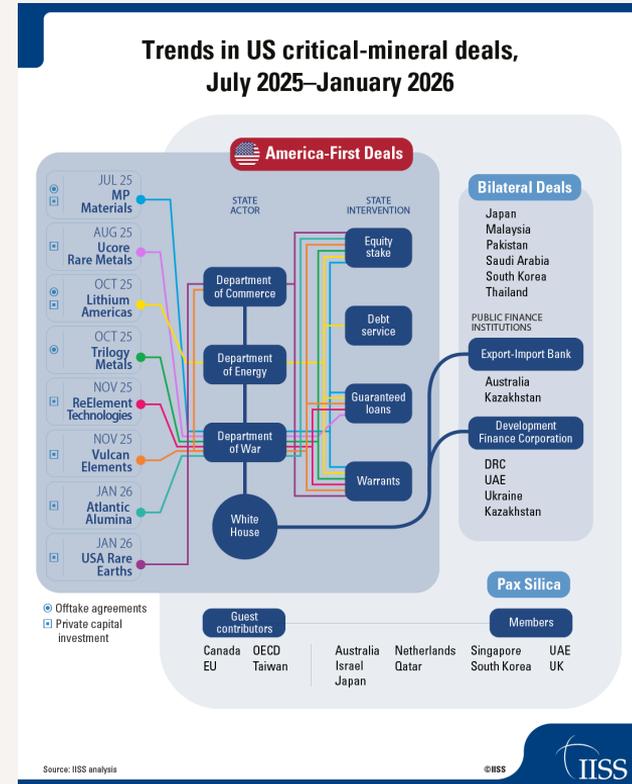
Debt-trap diplomacy will not work. Especially into projects that can't be utilized.

And restructurings sour relationships, they don't improve them. (Ask guys across the table from Apollo.) “Loan-to-own” only works when you want to own the asset.

Yes.

And thankfully, the U.S. government has taken strong action.

This journey will be **longer** and more **expensive** than we think. And we are **running out of time**.



Each topic highlighted requires a 100+ slide deck to cover. Conservatively.

But this topic, stands above the rest, and is treated as a cheap cocktail knowledge-buzzword for policy wonks, finance bros, and political leadership to drop at industry events.

**China Civil-Military Fusion program is the monster we should fear.**

It's our Manhattan project across multiple sectors, that are cross-pollinated and deployed into Chinese society.

**Without an equal response in true industrial policy, the Chinese will win.**

Christian rightfully shows the adoption of industrial robotics in China.

**But it's not just robots or installation.**

595,000

Industrial Robot Production (2025)

25%

U.S. supply of critical medicines made in  
China

70%

Chinese Global market-share of drones

685 GW

Worth of Solar Panel Output(2025)

31%

Global % of pharma in-licensed molecules  
from China

45%

Chinese control of copper smelting

Yes, engineers are in shortage. And so are:

Professions	Annual Shortage
Electricians	81,000
Pipefitters/Plumbers	44,000
Machinists	34,000

# 2.4x

Ratio of Chinese Undergrads with STEM degrees compared to U.S.

# 3x

The annual growth rate of STEM Ph.Ds in China vs. U.S.

Yes, we are building more factories.

But are we building **more capabilities**? And the **right ones**?

-70%

U.S. Machine Tool Production compared  
to rest of global average

120

Week wait time for a transformer, a  
50% increase from 2021

25%

Global market share of CNC Controllers

**Justice & Domestic  
Tranquility**

# Justice & Domestic Tranquility

Violent Crime

Recidivism

Rule of Law

Community

Trust & Confidence



**Justice**  
is not only about  
**Crime and Punishment.**

It is not a measurement of the *output of judicial machinery*. Justice is a *condition of legitimacy*.

*“The **administration of government**, like a guardianship, ought to be directed to the **good of those who confer**, not of those who receive the trust.”*

- **Cicero**,  
*De Officiis* (“On Duties”), Book III

*“Whensoever **the legislators** endeavor to take away and destroy the power of the people, or to reduce them to slavery **under arbitrary power**, they put themselves in a state of war with the people.”*

- **John Locke**,  
*Second Treatise of Government* (Chapter XIX)

## Some examples of Institutional Injustice.

### 1993 – NAFTA

Elites pitching the benefits of NAFTA, selectively chose to present it as a one sided issue.

“**We knew** that it wasn’t simply a story of Ricardian equivalence and comparative advantage. **We’ve always known that.**” – **Brad DeLong**, Clinton Treasury Official, admitted after the fact

### 1999 – Merck & Co and Vioxx

Between 1999 and 2004, an estimated **88,000 to 140,000** Americans suffered serious coronary heart disease linked to Vioxx, with an estimated **38,000 to 55,000 deaths**. The pharmaceutical company manipulated clinical data and silenced critics, the FDA suppressed its own safety scientist's findings, and leading medical journals published incomplete results. Merck eventually settled approximately **60,000 individual claims for \$4.85 billion** – while the tens of thousands of victims who never filed suit received nothing.

### 2009 – GFC Bailout

“It would have been **extremely unfair and** created problems down the road to **bail out homeowners who were irresponsible** and took on homes they couldn’t afford.”

- **Alan Krueger**

Former Assistant Secretary of Treasury for Economic Policy, Chairman of the Council of Economic Advisors under President Obama

# And just briefly listing other examples from the last 30 years.

Asia  
Currency  
Crisis

Long  
Term  
Capital  
Mgmt.

China &  
WTO

Enron

Iraq  
WMD

Snowden

Purdue  
Pharma  
&  
Opioid  
Crisis

Panama  
Papers

Silicon  
Valley  
Bank

1997

1998

2000

2001

2003

2013

2015

2016

2023

**“IMF Bailout of Wall Street”** – America is the largest funder of the International Monetary Fund (IMF). Big banks took speculative bets and lost, they were bailed out.

**“Committee to Save the World”** – Alan Greenspan, Larry Summers, and Robert Rubin, **bailed out genius elites** (Nobel prize winners) that created a highly-complex algorithm with massive amounts of leverage. When the machine broke, they orchestrated a bailout. **Many of whom were prior employers or friends.**

Former Speaker of the House Nancy Pelosi, Pat Buchanan and Bernie Sanders all agreed that allowing China to receive PNTR and enter WTO would lead to the decimation of America’s middle class and hallowing of industrial prowess. The elites understood that even in 2000, **“China has violated every trade agreement made with the U.S. over the last ten years.”**

**“The Smartest Men in the Room”** executives sold over \$1bn in personal stock while telling employees to continue buying in their retirement funds. SEC had initial complaints but **because Ken Lay, former CEO, was one of President Bush’s largest donors they didn’t follow through.**

Government concocted story about Saddam Hussein’s WMD program, all based on a **single unreliable human source**, “Curveball”, led to **the death of 4,500 Americans, 30,000 wounded, unknown suicides, and the deaths of hundreds of thousands of Iraqis**

Intelligence community was **conducting warrantless mass surveillance of American citizens’** communications, which multiple heads of agencies **denied under oath in Congressional hearings.**

Marketed lies, “less than 1% addiction rates” and good for “anything more painful than a hangnail”, FDA had doors of revolving elites who had ties to the company. **Over 500,000 Americans are estimated to have died from OxyContin overdoses. Sackler family personally extracted over \$10bn. To date, none of the Sacklers have been jailed, and have only paid \$6bn in fines. Or valuing each American life at \$12,000.**

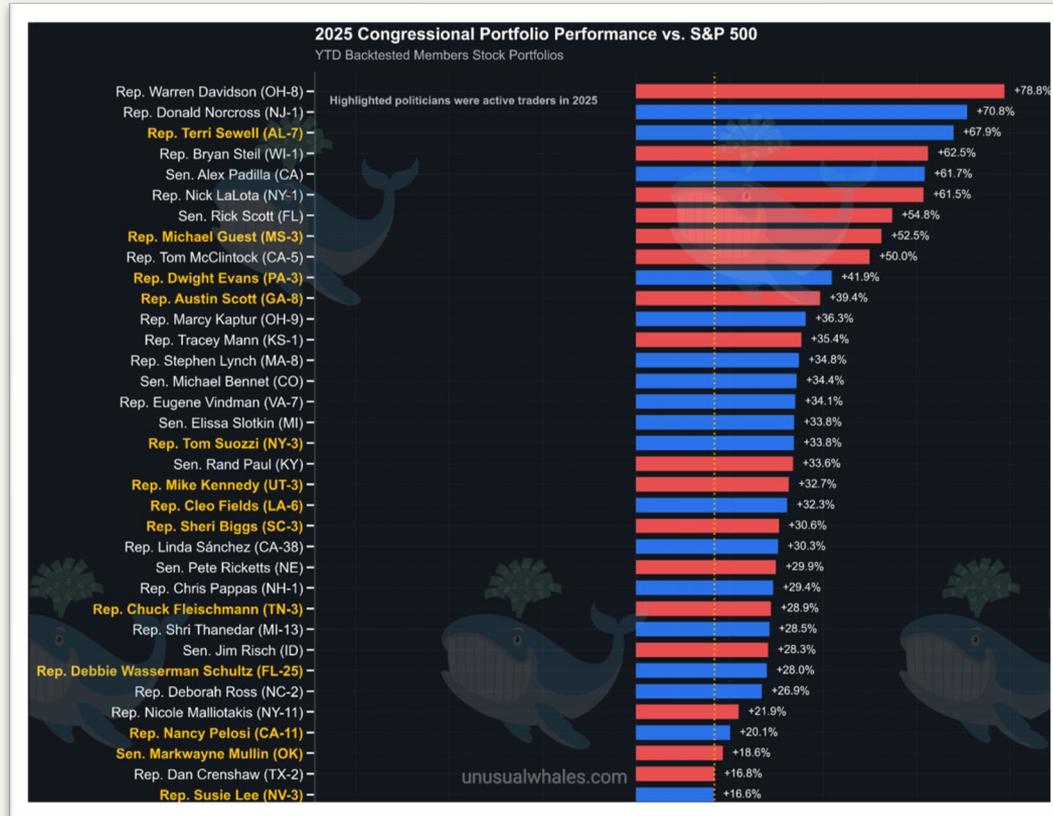
11.5 million leaked documents revealed how politicians, billionaires, et al, use offshore shell companies to hide wealth from taxation. **Normal Americans live under the fear of the IRS, the ultra-rich operate in a parallel legal structure.**

SVB didn’t manage their risk portfolio properly. Bonds were underwater, caused a digital bank run. FDIC insures that bank accounts of Sequoia “nearly \$1bn”, Roku \$450mm, and Kanzhun (A Chinese Company) with > \$900mm. Senator Lankford stated that Oklahoma banks (regional and community) “are about to pay a special fee to be able to bail out millionaires in San Francisco”

# And the fine is the price of doing business...

Company	Violation (YYYY)	Fine (\$mm)	% of Annual Revenue (in yr of violation)
Purdue Pharma	Opioid Crises (2015)	7,400	~150%( <a href="#">estimated</a> )
JP Morgan	Mortgage Fraud (2013)	13,000	~13%
J&J	Talc Cancer Claims (2025)	1,400	~1.5%
BP	Deep Water Horizon (2010)	36,000	~12%
Pfizer	Fraud (2005)	2,300	~5%
Walgreens	Opioid Crises (2015)	5,000	~5%

# 10% of Congress beat the S&P 500 in 2025. Better returns than 66% of active money managers.



Crystal clear American beliefs:

- 1. We don't trust the institutions of our nation.\***
- 2. We don't have faith in their ability to perform.**
- 3. We don't believe they can be reformed democratically.**

# Desire for Reform and Belief In System

75%

Of Americans believe we need major reforms to our political system

64%

Of Americans believe the system cannot overcome its deep divisions, an increase of over 50% in 5 years

**“America may have to resort to violence in order  
to get the country back on track.”**

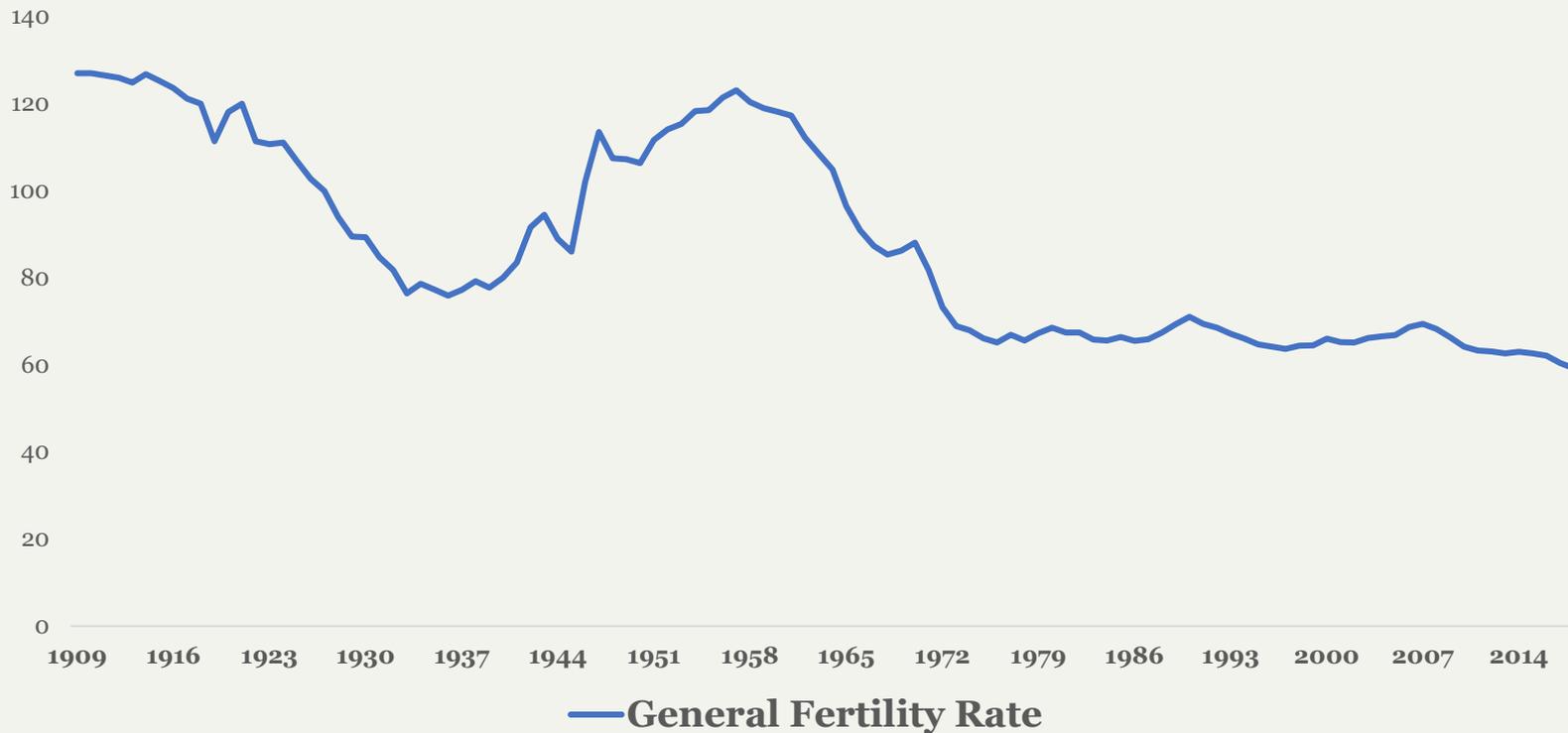
**30%**

Of Americans believe in this statement

**50%**

Increase in 18 months

# Maybe that's why we don't want to share our Republic with more children



# The Blessings of Liberty

# The Blessings of Liberty

Democratic Ideals

Happiness

The American Dream

# Suicide, Addiction, and Friendship

Christian rightly illuminates that the American suicide rate is **2x** the homicide rate. And that **drug overdoses** are the leading cause of death for Americans age 18-44.

But there's more:

Americans ages 15-29, spend **45%** more time alone than in 2010. They **have not rebounded** from COVID.

In 1990, the percentage of American men with six or more close friends was 55%.

**Today, it's 27%.**

And 15% of men, “report having no close friends at all”, a **5x increase** since 1990.

# Isolation, Pornography, and Gambling

**37%** of Americans report “moderate to severe loneliness” a **50% increase** since the turn of the century.

The **4<sup>th</sup> most visited** website in the United States is **PornHub**, after Google, Facebook, and YouTube.

More Americans are gambling than ever, **57% of U.S. adults** reported participating in some form of gambling over the last 12 months.

**In my opinion, these are symptoms of a deteriorating society that does not offer meaning, community, or opportunity.**

I’ll leave the end of the section with this comparison:

1,100,000

American men that died between **1999 and 2022** from  
Drug overdoses, alcohol-related diseases, and suicide

529,204

Americans killed in combat since the Revolutionary War\*

894,610

Americans killed in all American Wars\*

\*does not include Confederate deaths due to data

## The Takeaway.

There are many, simultaneous, deeply embedded **crises** in our society.

To solve these problems, we must **properly identify**, and measure, our **stagnation, disillusionment, and fracture**.

I hope that this report inspired our **entrepreneurs, industrialists, technologists, policy makers, leaders, and capital providers** to help solve these problems.

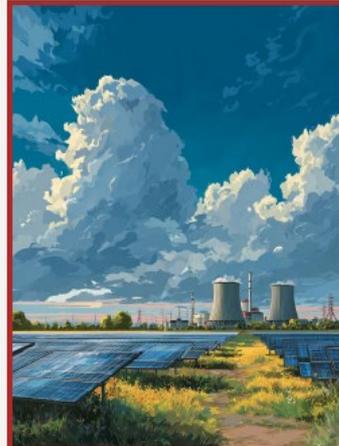
This isn't the time to play the "blame-game".

It's time to build and fix.

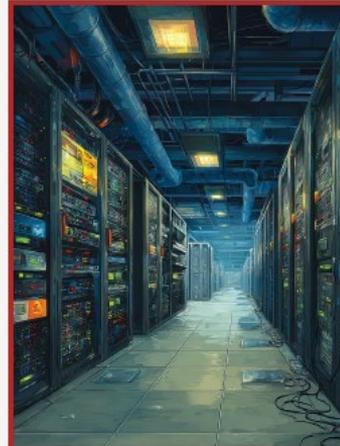
FUTURE  
TECHNOLOGY

The year 2276, if Christian Keil has his way:

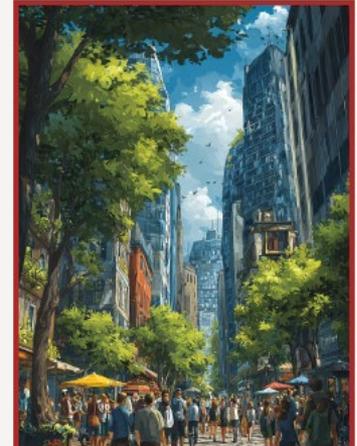
It's a beautiful  
vision.



Unlimited, clean energy



Ubiquitous intelligence



High social trust

More Perfect.

165

Within the next 25 years, I believe there will be a reckoning with a likely binary outcome.

**Western Civilization wins.**

Or it will be **replaced by the Chinese Techno-Authoritarian model.**

If our American experiment fails, from without or within, the world will look to emulate the new heir – the Chinese.

Just as nations adopted the Republic after the Revolutionary War, World War II, and the Fall of the Berlin Wall.

So other nations will adopt this new model and improve it.

Especially once we have ubiquitous artificial intelligence.

# What I do know (II/II)

The promise of **abundance** from ubiquitous AI comes with **an equal and opposite promise**.

The promise of **permanent digital slavery**.

It will be *1984* meets *Minority Report*.

(Inescapable surveillance married to high AUC predictive machine learning algos.)

The Chinese have already put the structures and practices in place; they just don't have the capacity to enforce it.

**And that's the race.**

**America** unlocks AGI first, trending towards **the abundance promise**.

Or **China** does, unlocking centralized economic planning, digital surveillance, predictions of “subversive” behavior, and machine learning algos that will **know you're going to rebel** from the “Great Leader” **before you do**.

We each choose, every day, how we honor our ancestors and provide for our progeny.

**And time is running out.**

# Conclusion

**Victory** requires all of us to work towards a more perfect Union.

But we shouldn't look at the mountain of problems facing us and **wish away** its contours and size.

**Only by respecting** the mountain can we formulate a plan that allows us to conquer it.

**Thank you for reading!**



# Michael Bruno

**Citizen, United States of America**

- DM me on X, @brubarian
- Let me know how you're building solutions to fix these problems.
- I give hot takes on finance/nat sec/geopolitics.
- Stand by for Part II
- Read "[\*More Perfect\*](#)" by Christian Keil!