



Techtonics

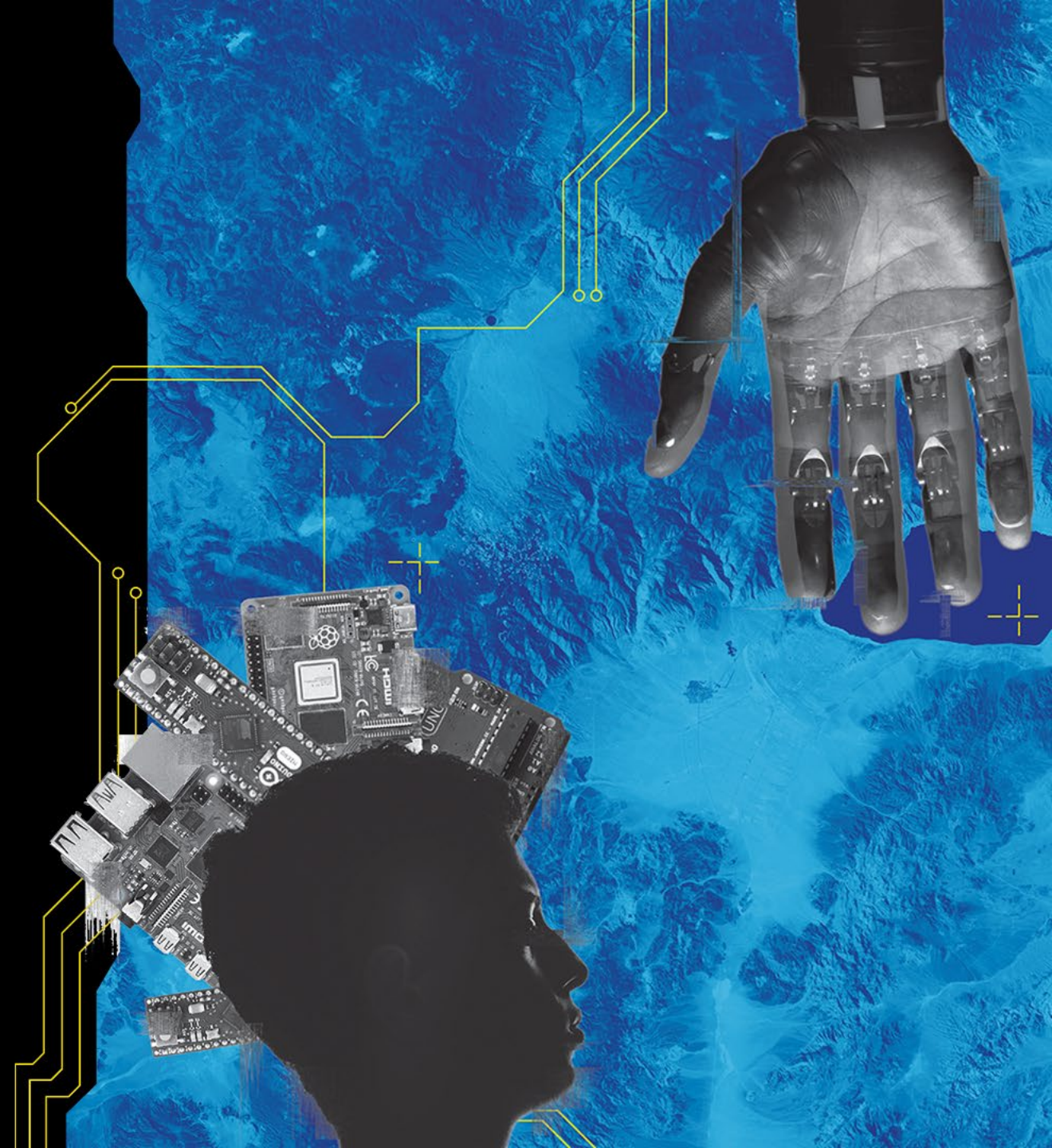
Technology, markets and regime change

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The Great Acceleration

Optimists versus pessimists

Regime change

Risk and reward

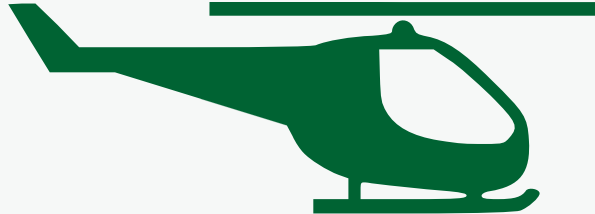
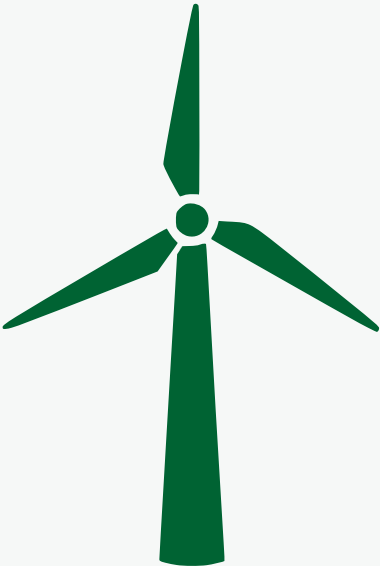
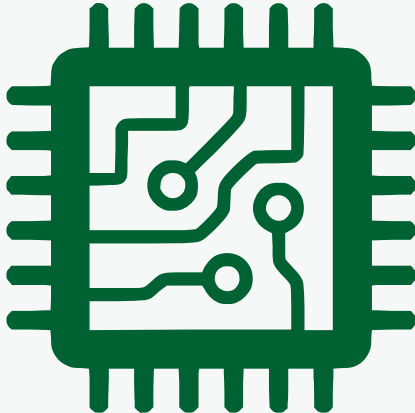
“ Technology is anything
that wasn't around
when you were born ”

Alan Kay

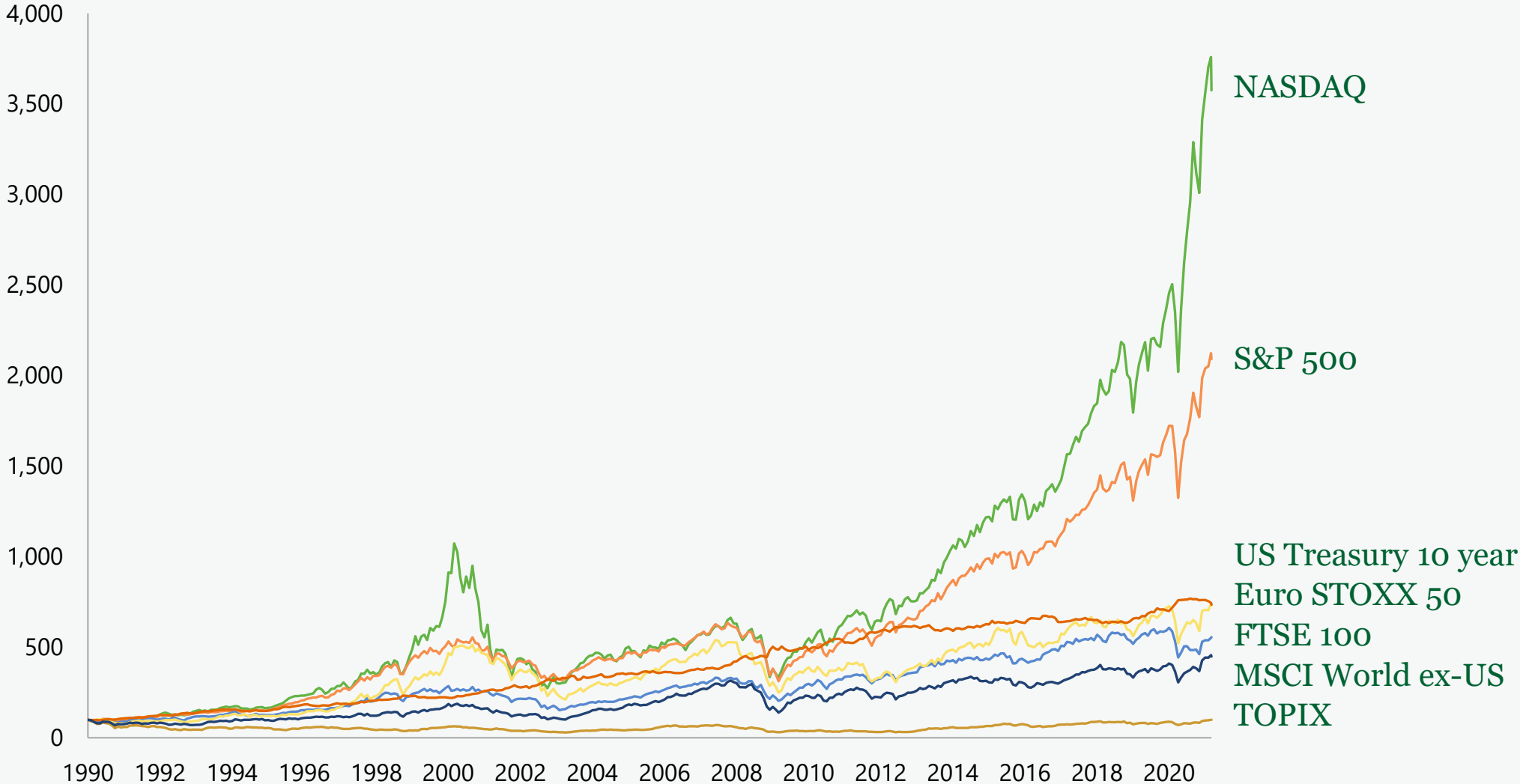
Computer Scientist

The Great Acceleration

01100
10110
11110

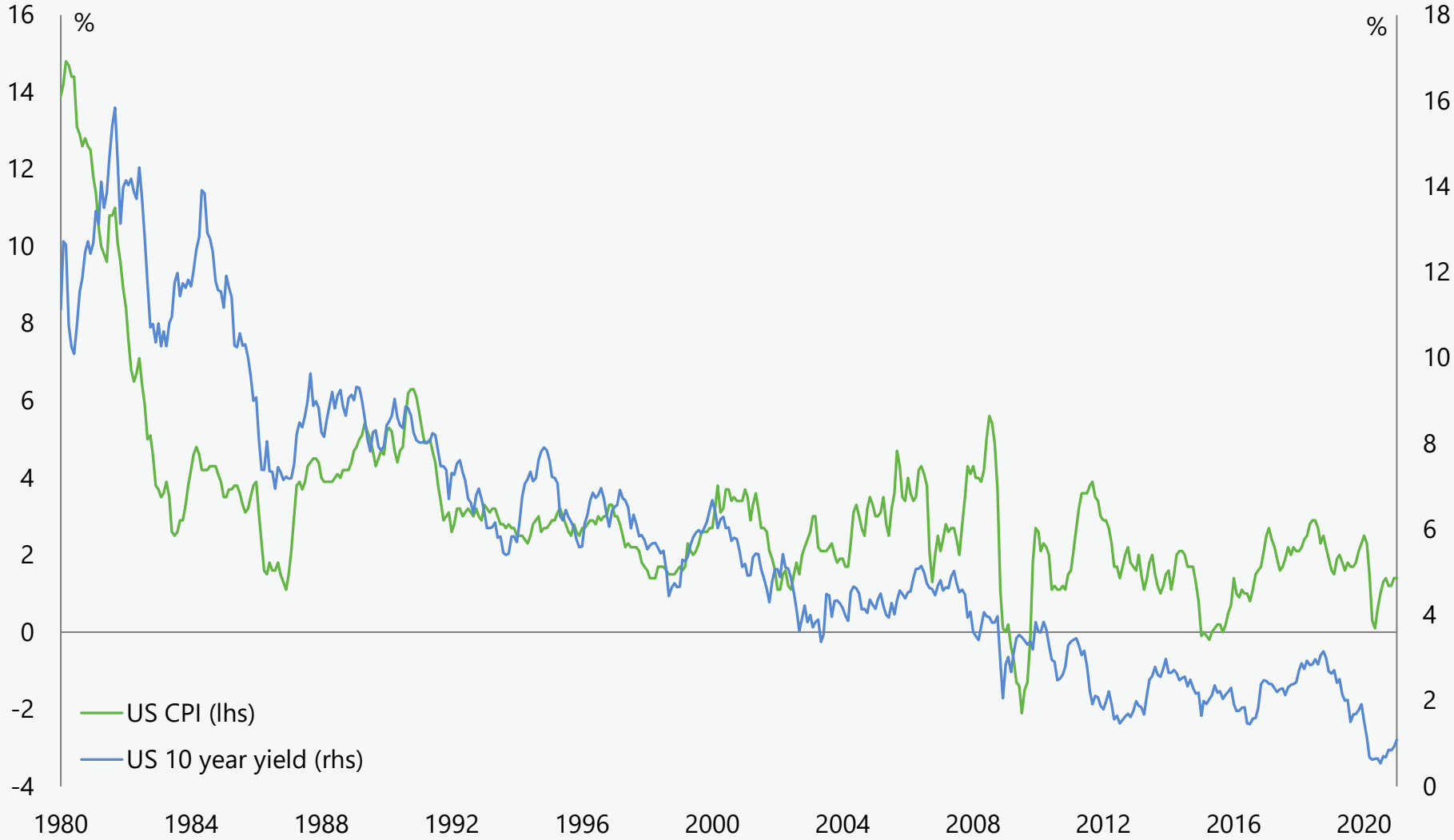


Capital's Golden Age...



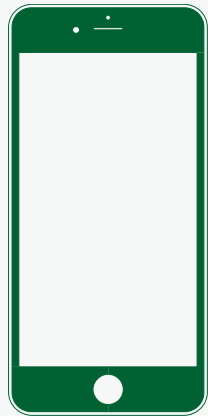
Source: Bloomberg. All indices total return, data to 5 March 2021

40 years of disinflation... it's not a coincidence



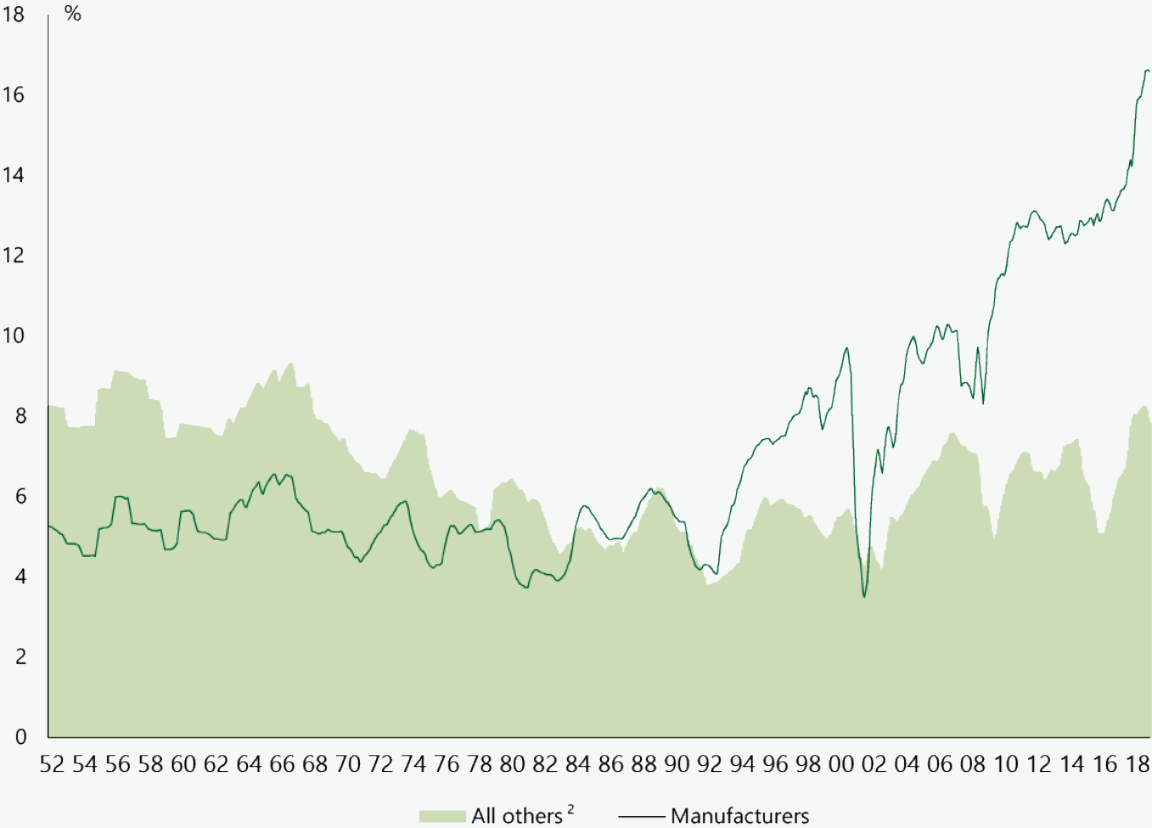
Source: Ruffer LLP, Datastream. Data to January 2021

Tailwinds



Margins & the Golden Age: not just globalization

S&P 500: manufacturers and all others
 Net profit margins¹ 1952 – Q2 2019E



S&P 500: manufacturers
 Margin expansion dynamic 2018 versus 2000

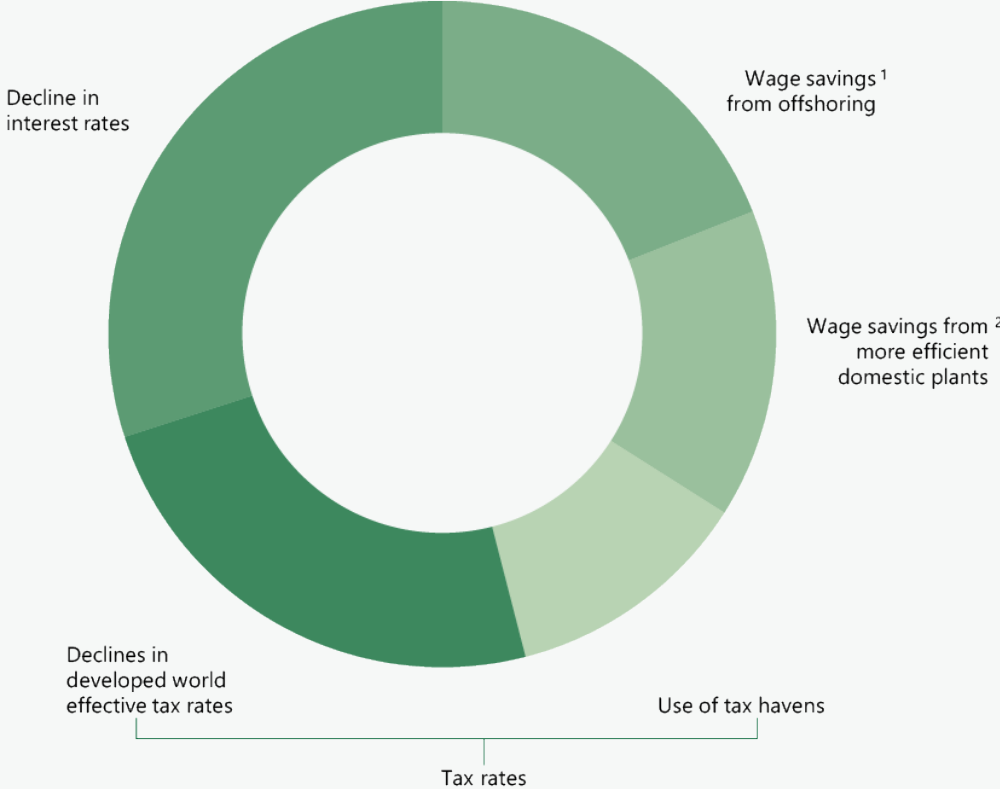
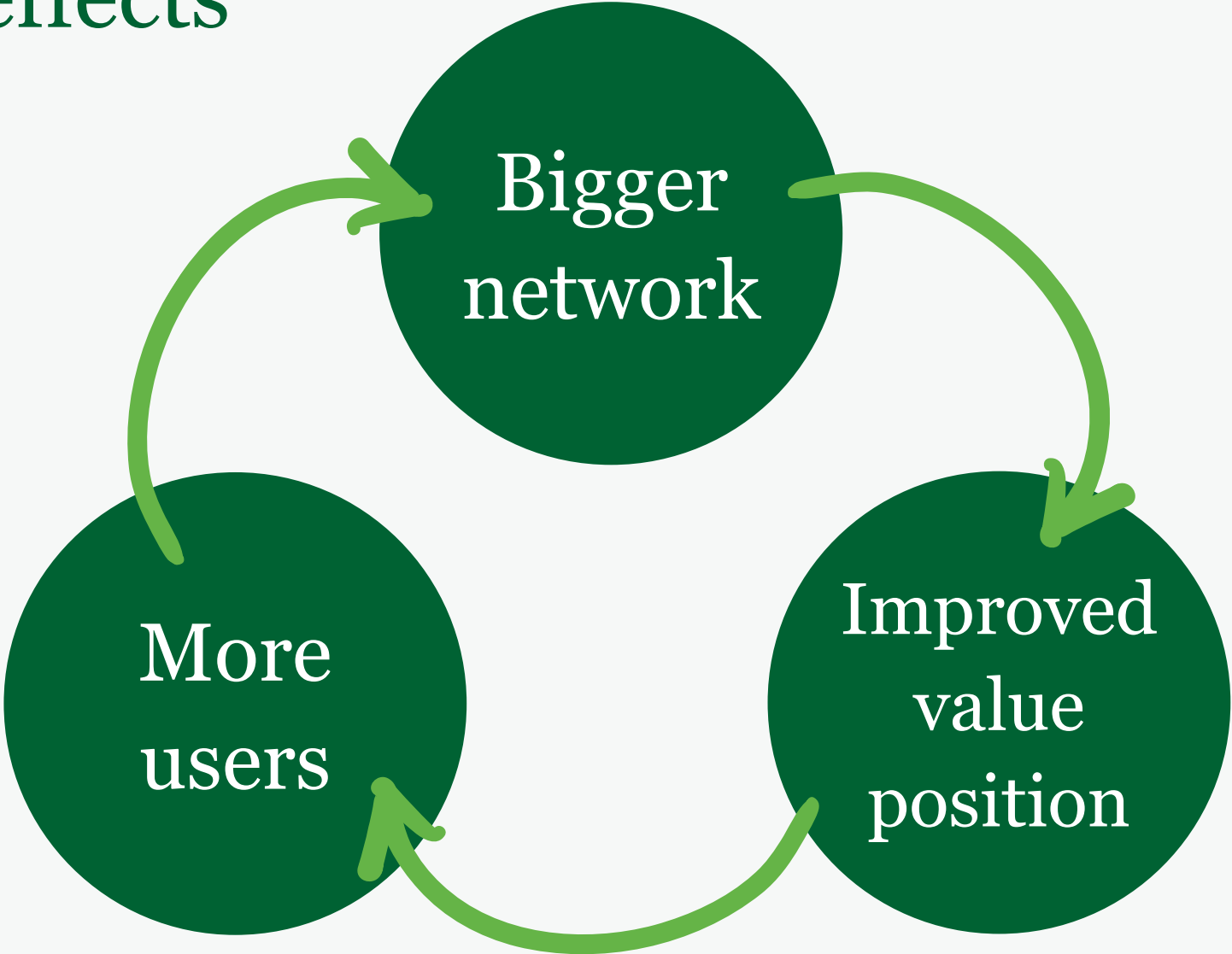


Chart 1: Corporate Reports, Empirical Research Partners Analysis 1 Based on trailing four-quarter data smoothed on a trailing three-month basis. 2 Excludes financials and REITs Chart 2: US Bureau of Labor Statistics, US Census Bureau, Corporate Reports, Empirical Research Partners Analysis 1 Assumes that the lost US jobs were replaced by one-for-one by jobs in China at lower rates of compensation 2 Assumes the decline in the labor intensity of these plants matches that for the entire US manufacturing system

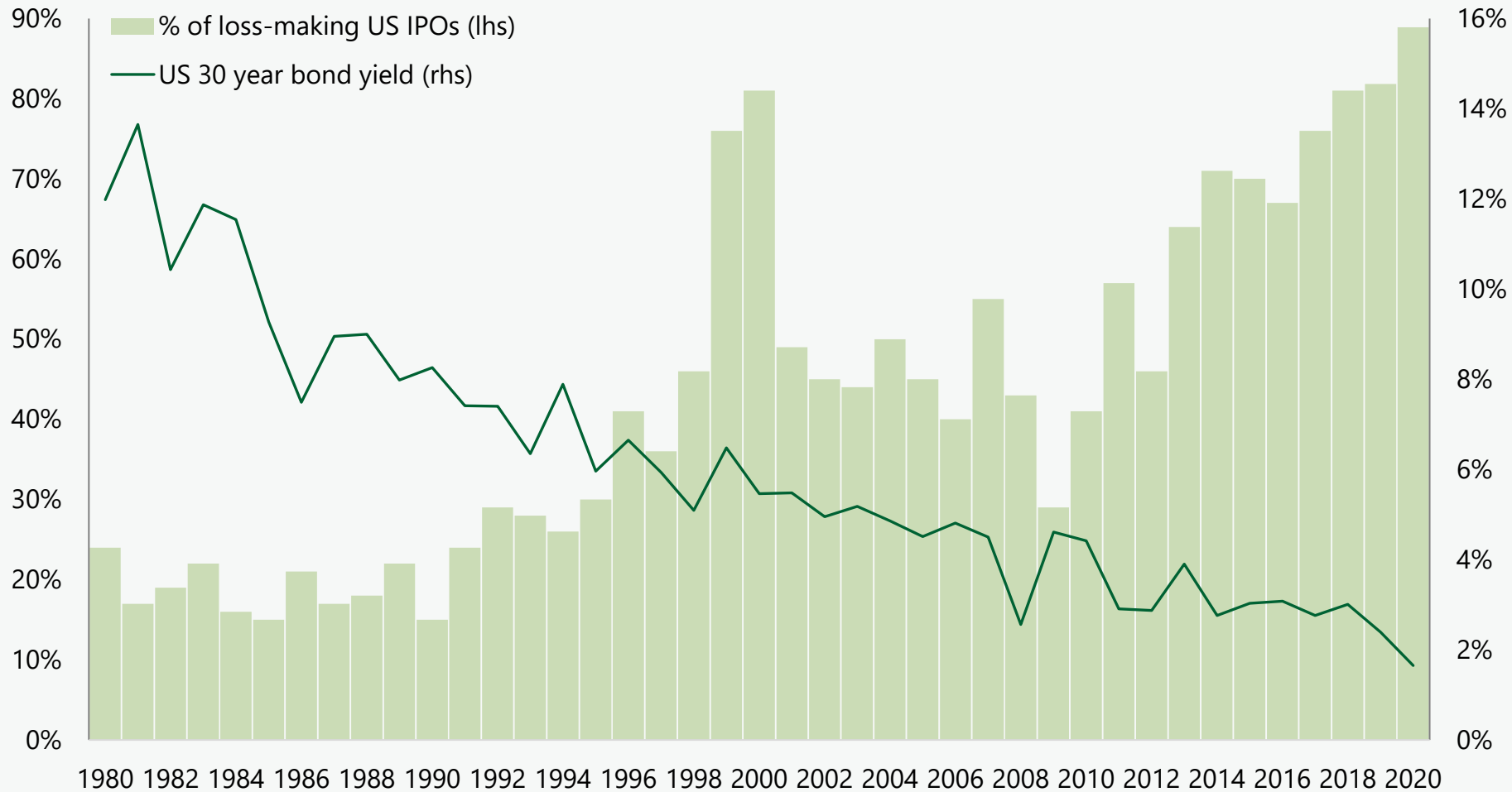
Network effects



S&P 500 concentration; top five firms %



Falling rates = greater appetite for profitless growth



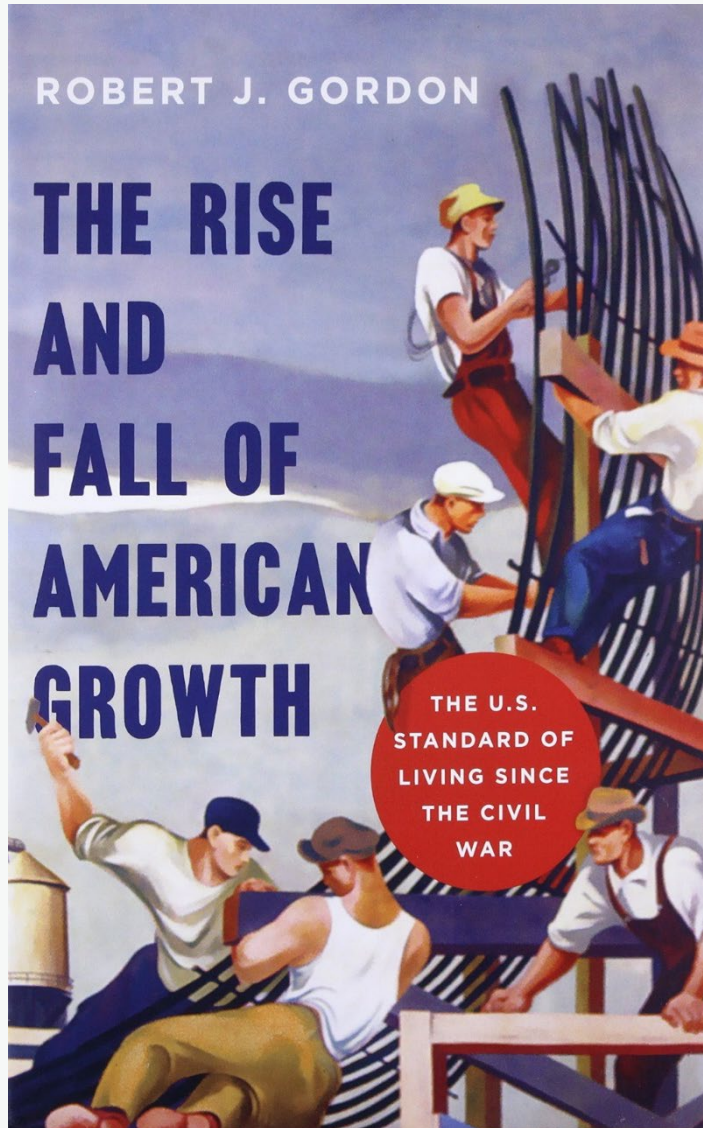
The Great Acceleration

Optimists versus pessimists

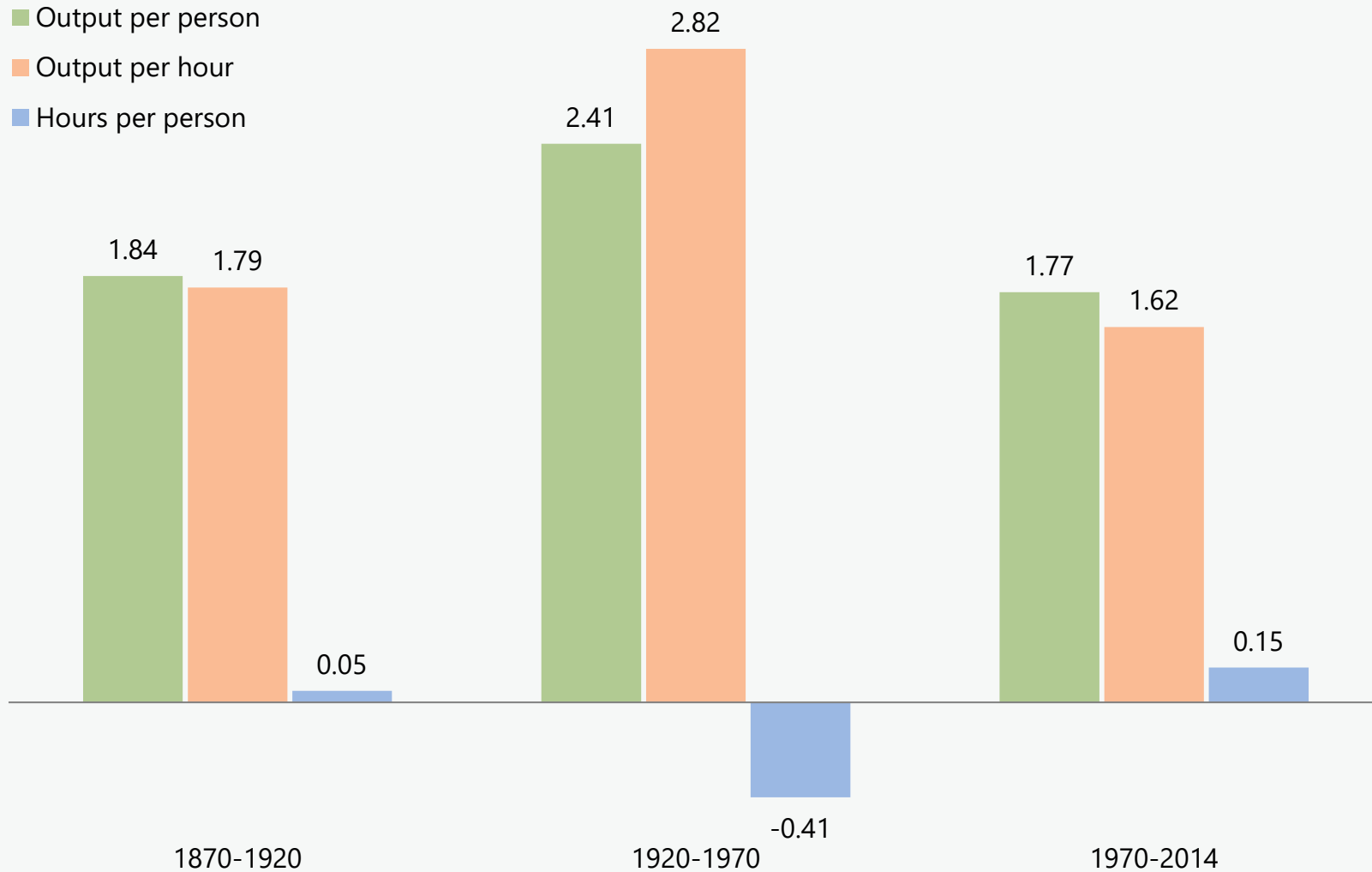
Regime change

Risk and reward

Is the Golden Age ahead of us? Or behind us?

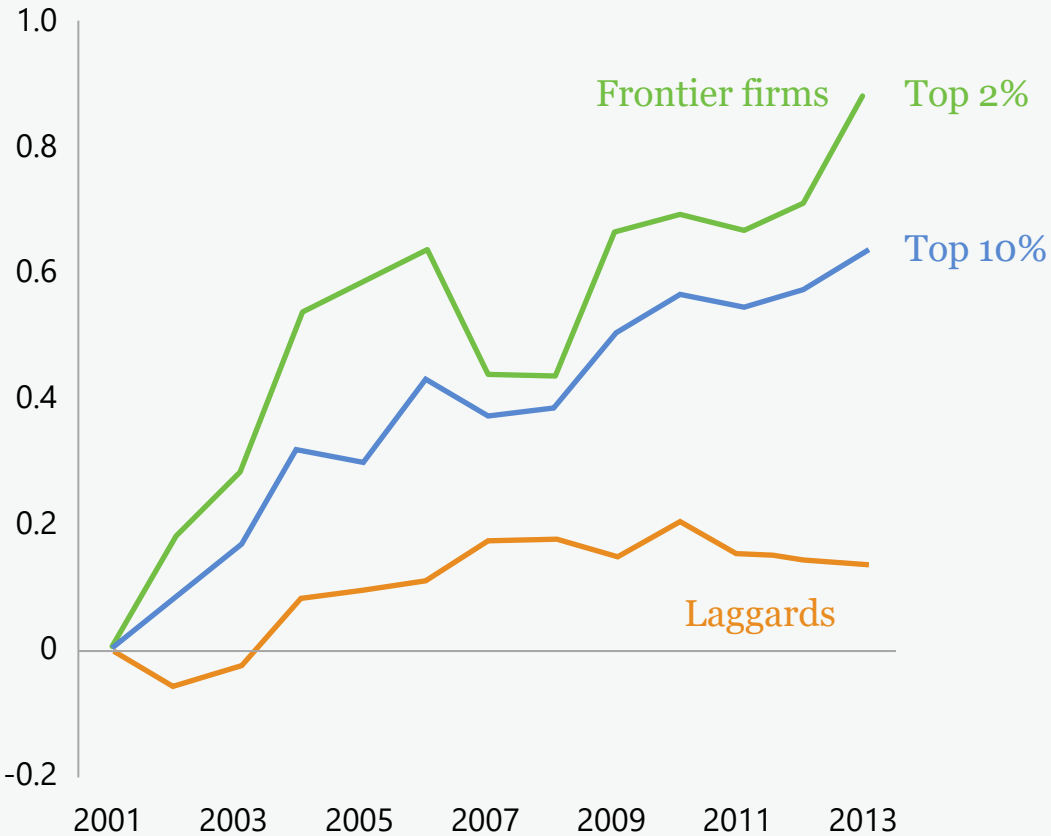


US annualised growth rate, 1870-2014

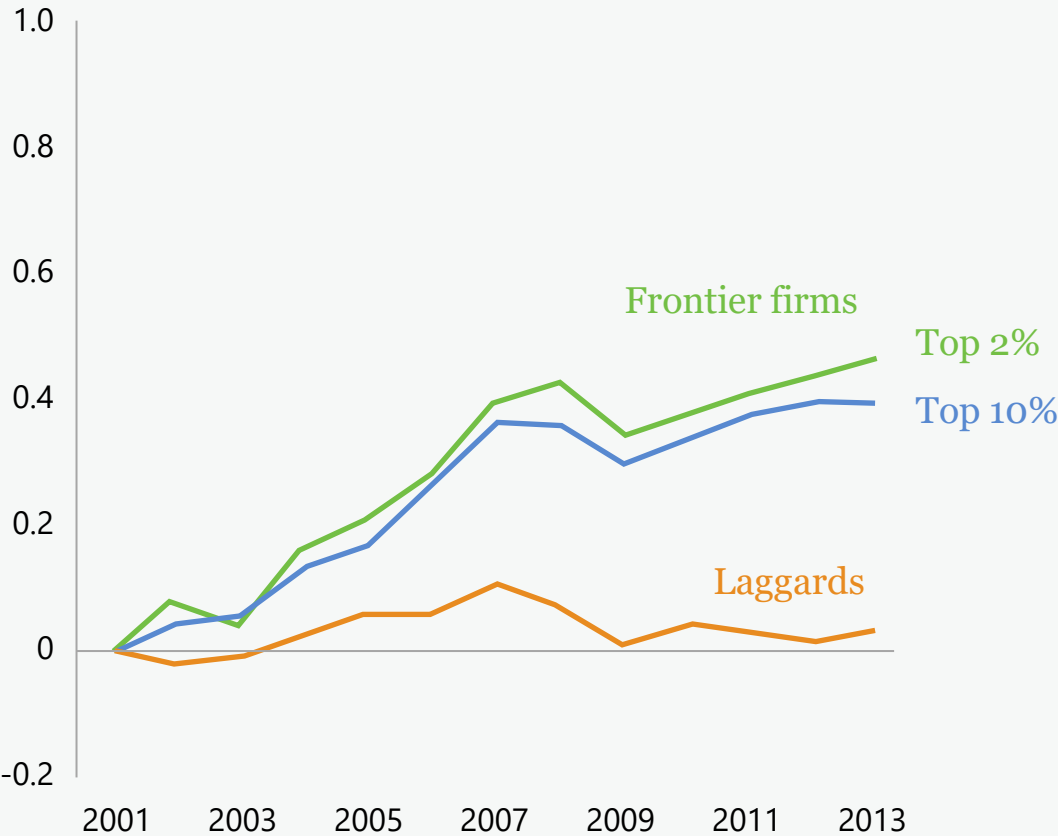


The growing gap between leading and laggard

ICT services

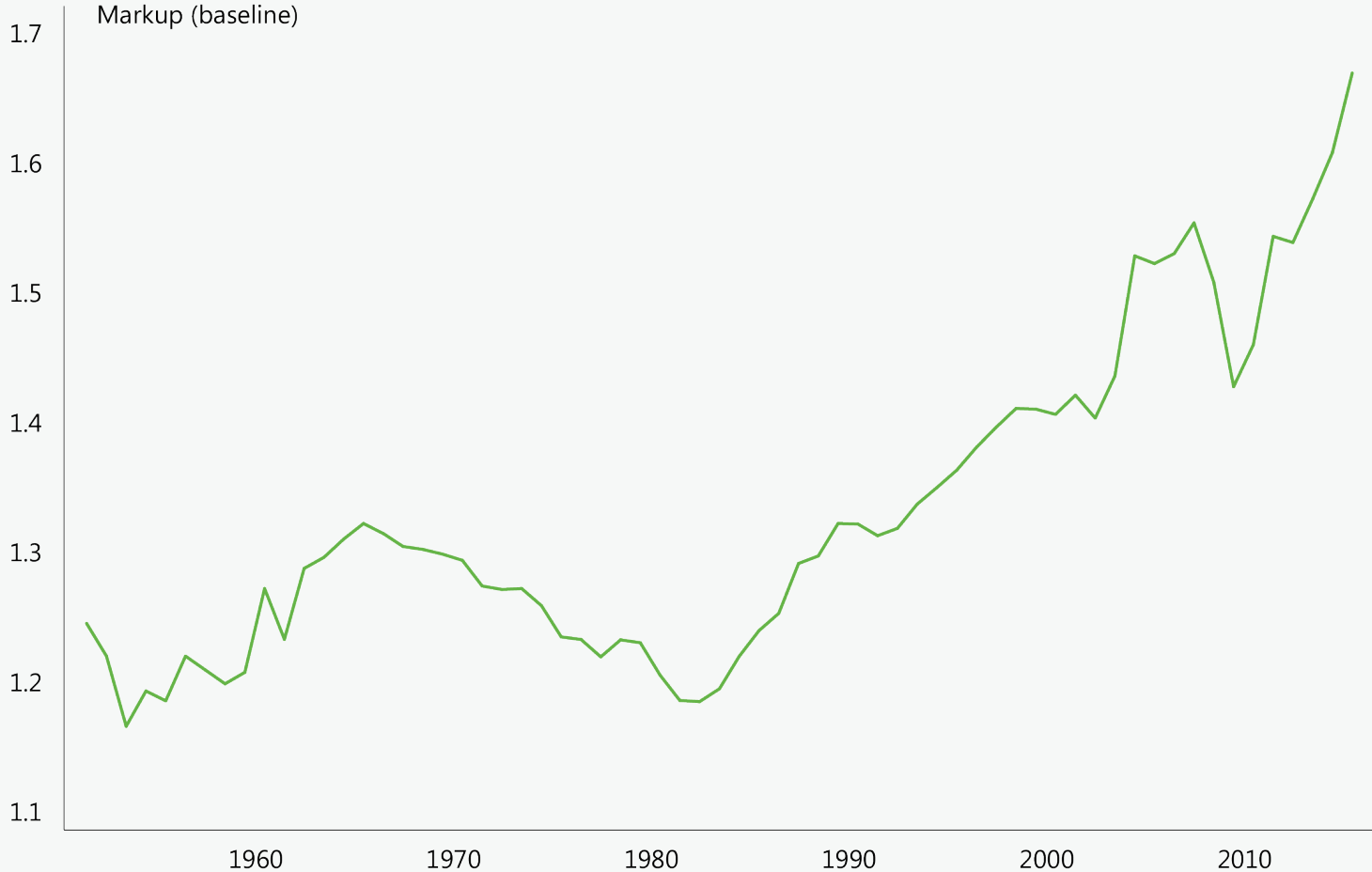


Non-ICT services



Source: Andrews and Gal (2016), 'The Best versus the Rest: The Global Productivity Slowdown, Divergence across Firms and the Role of Public Policy'

Market power is increasing (and underpins margins)

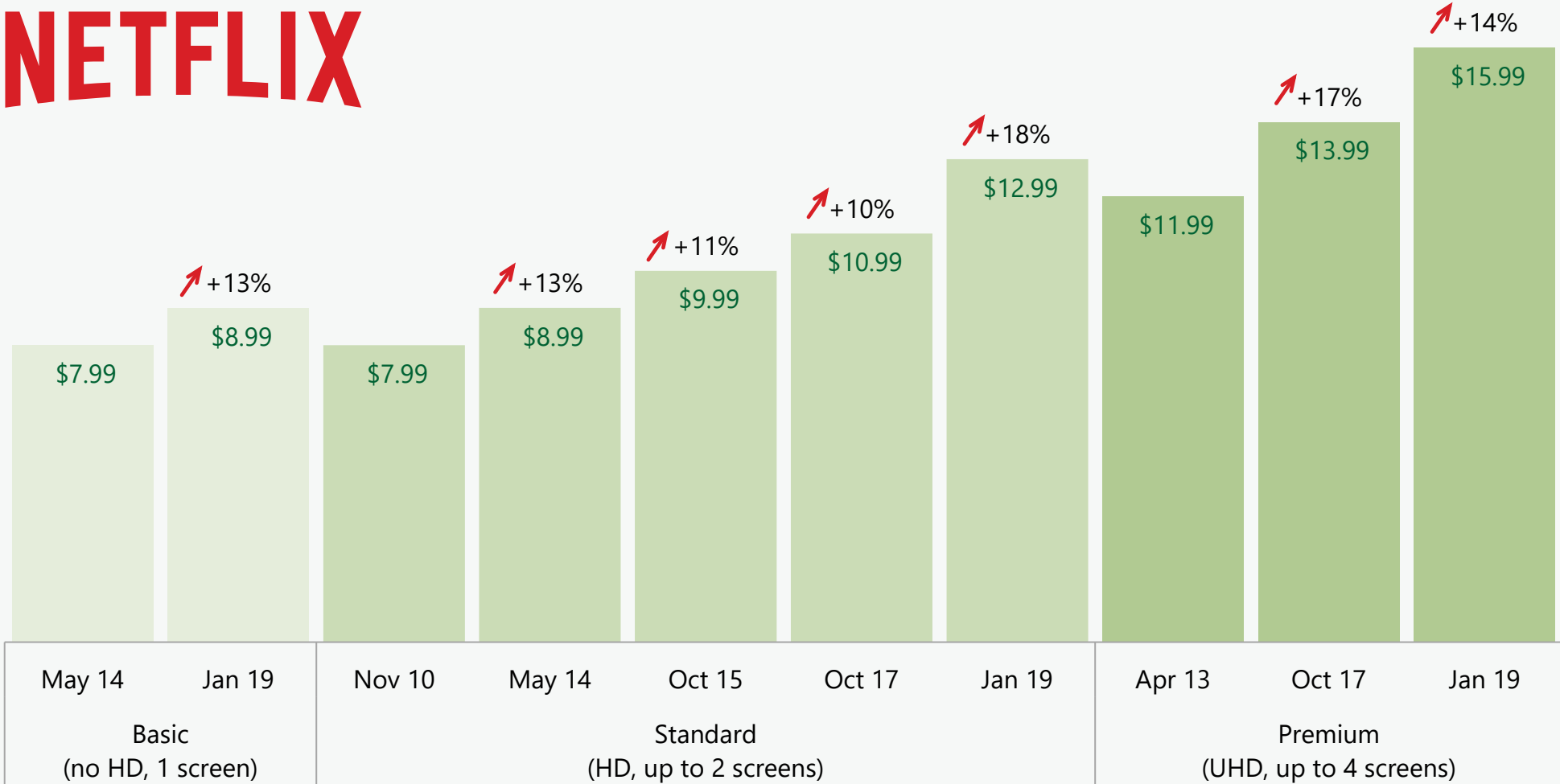


Evolution of average US markups (1960-2014), weighted by market share

Source: De Loecker and Eeckhout – The Rise of Market Power, 2017

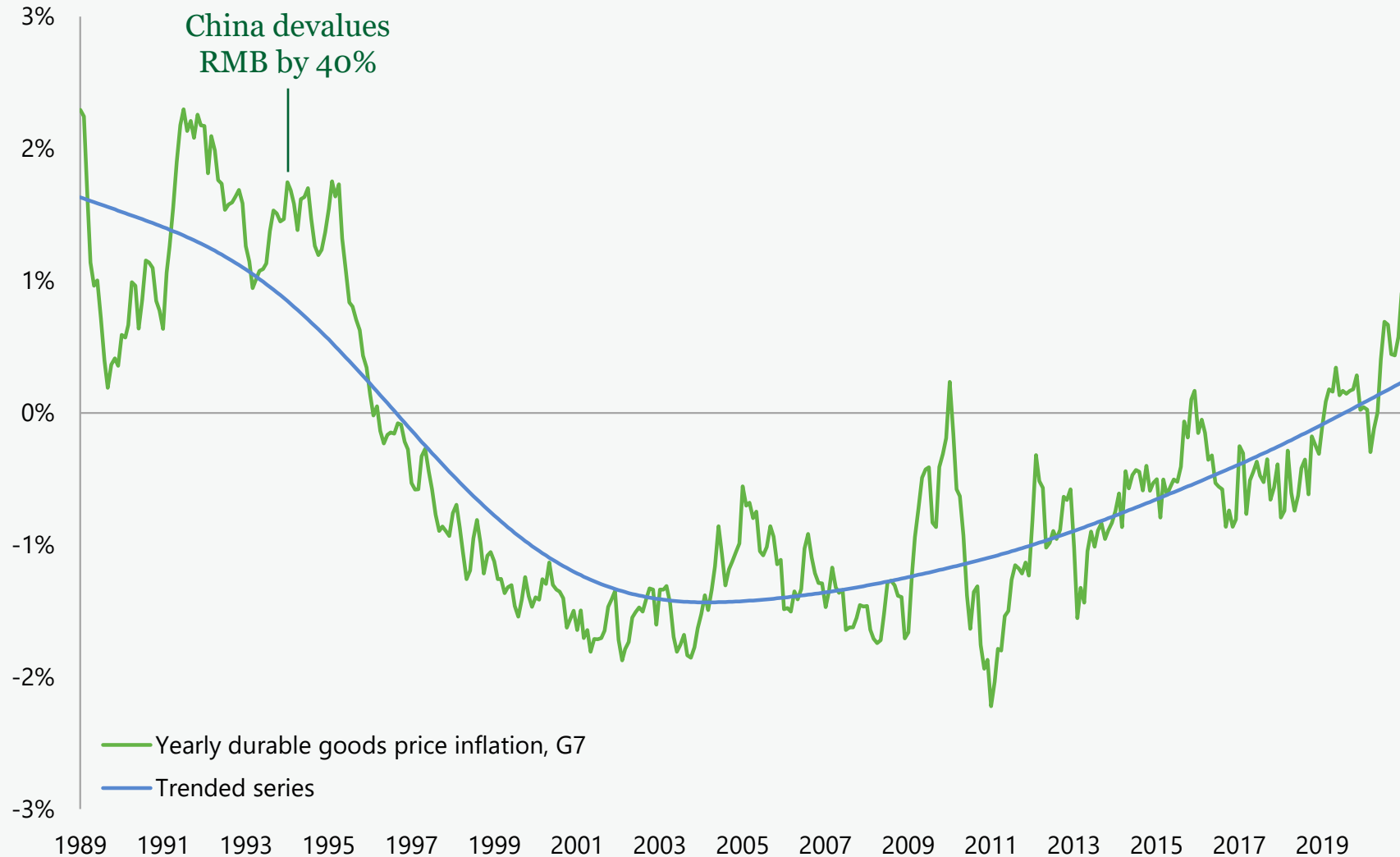
Networks intend to use their pricing power...

NETFLIX



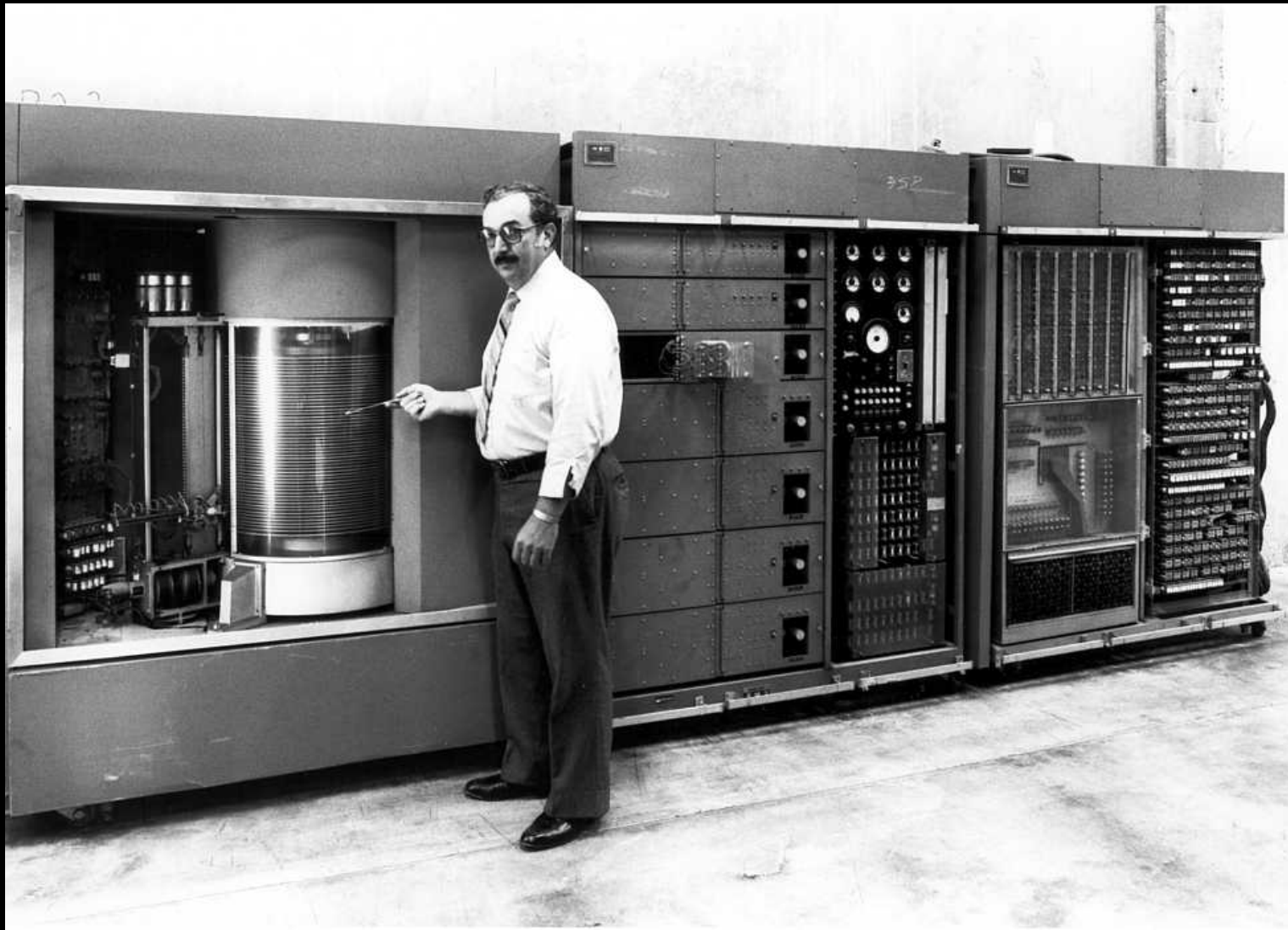
Source: Company announcements, Statista

Disinflationary forces may already have peaked



“ Tech/the internet
has killed inflation
forever ”

Many people



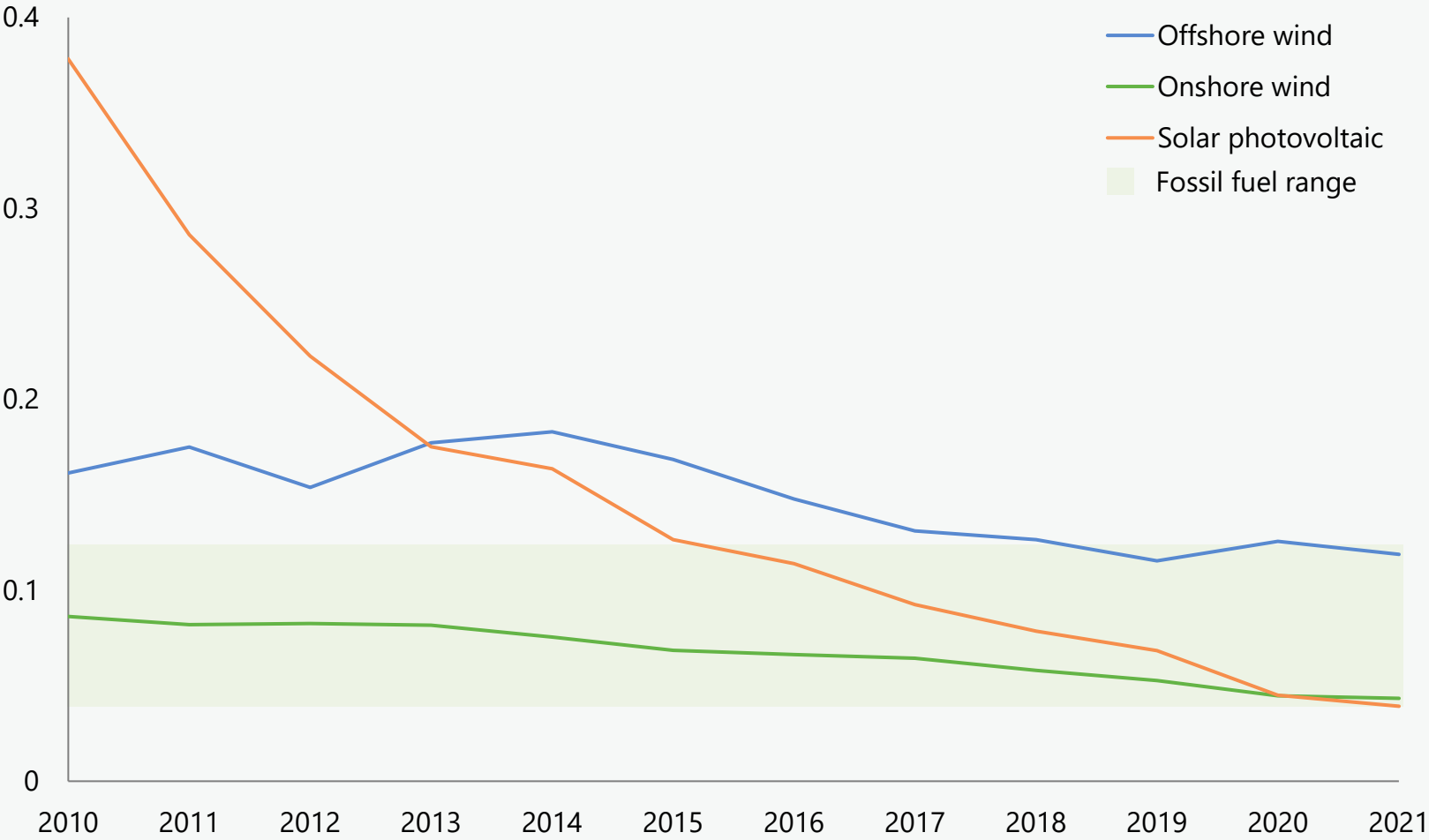
IBM 305 RAMAC, 1956
5 megabytes



SanDisk SDXC card, 2020
1 terabyte

Markets are powering change

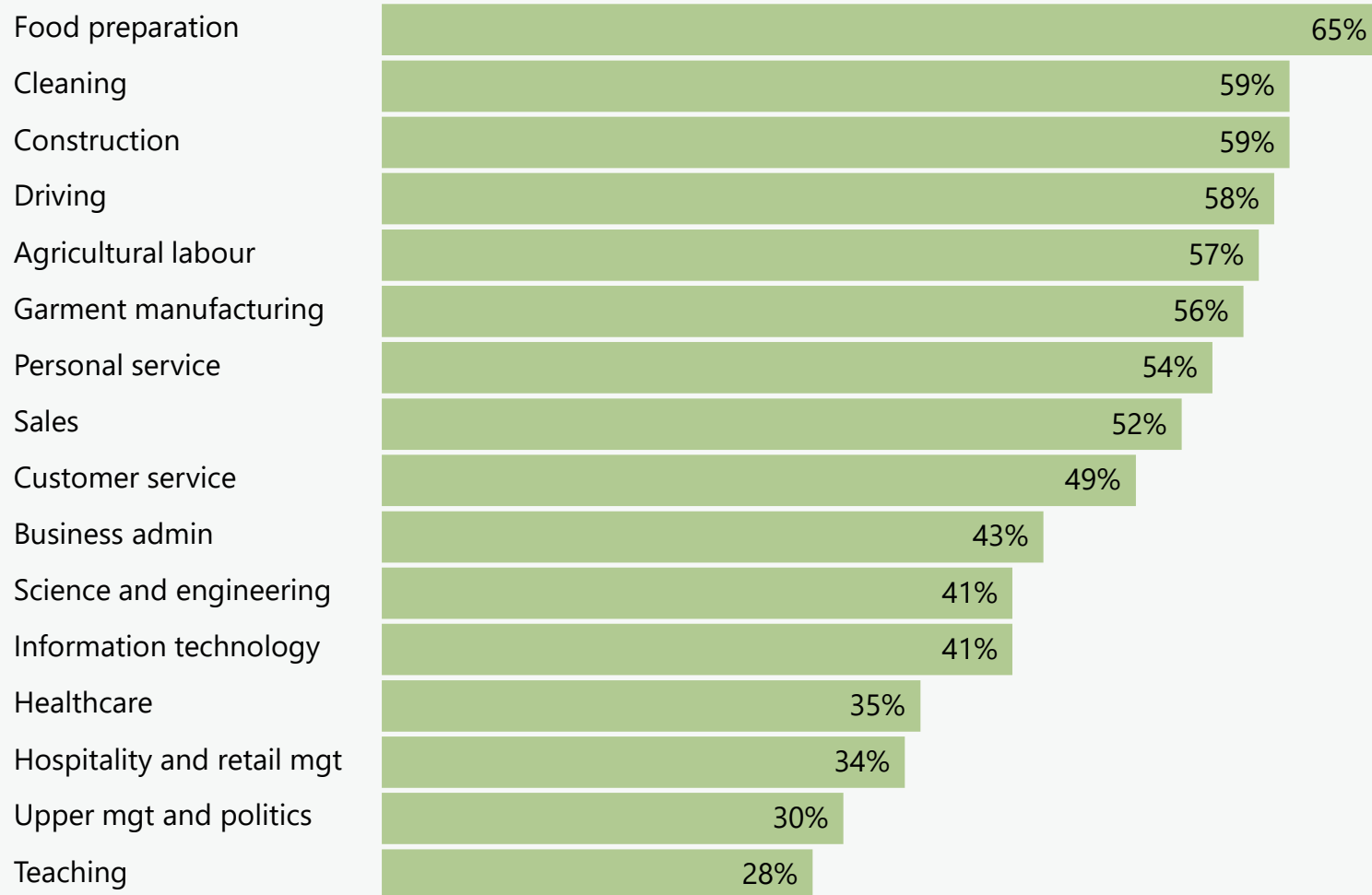
Energy cost (LCOE, 2019 US/kWh)



Fossil fuel-fired power generation cost range uses data between 2010 and 2021, in real 2019 USD. Source: IRENA, 2021

Are robots coming for your job?

Automation risk by job type, %

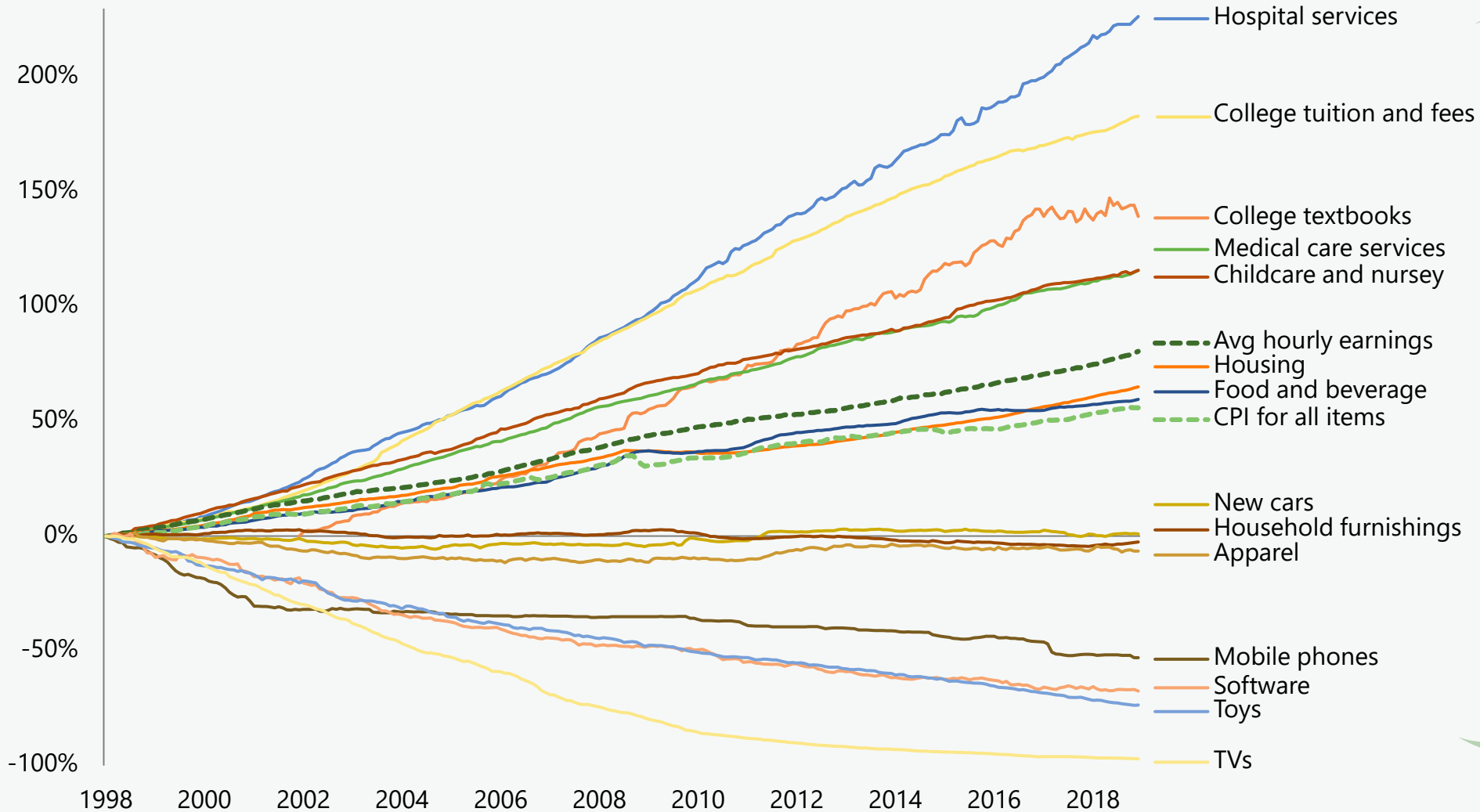


Digitisation

A silhouette of a Trojan horse, constructed from dark, textured material, stands against a vibrant sunset sky. The sky transitions from deep orange at the bottom to a soft pink and purple at the top. The horse is positioned on the left side of the frame, facing right.

“Beware the ~~Geeks~~ even
when bearing gifts”

Inflation. Plenty, but not evenly spread...



The Great Acceleration

Optimists versus pessimists

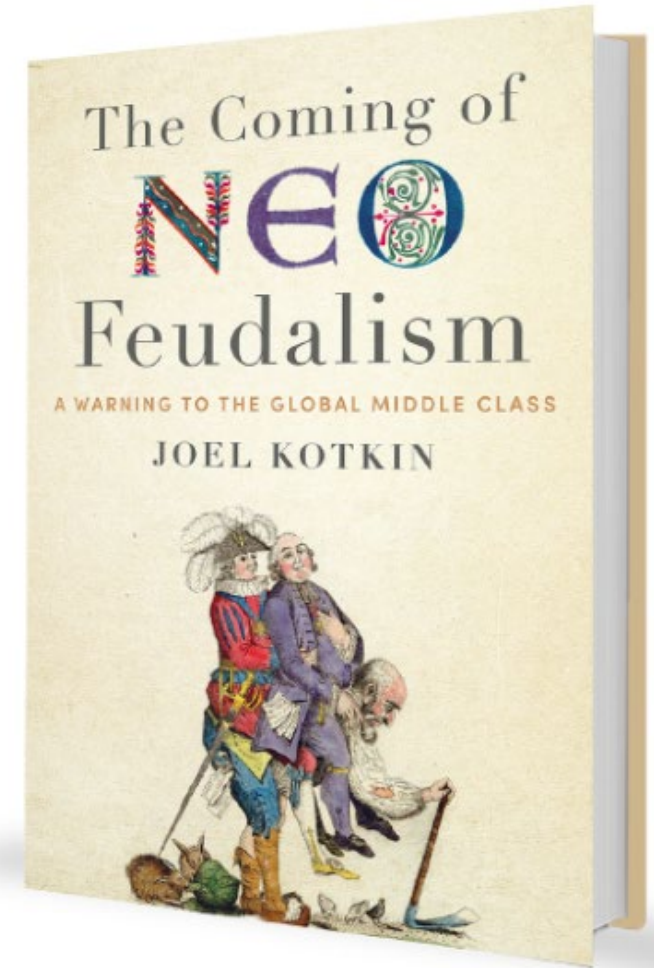
Regime change

— Part I: Politics

Risk and reward

Back to the future?

Tech barons and gig economy serfs?



Toward universal
basic income?

Andrew Yang's
'freedom dividend'
has gone nowhere.

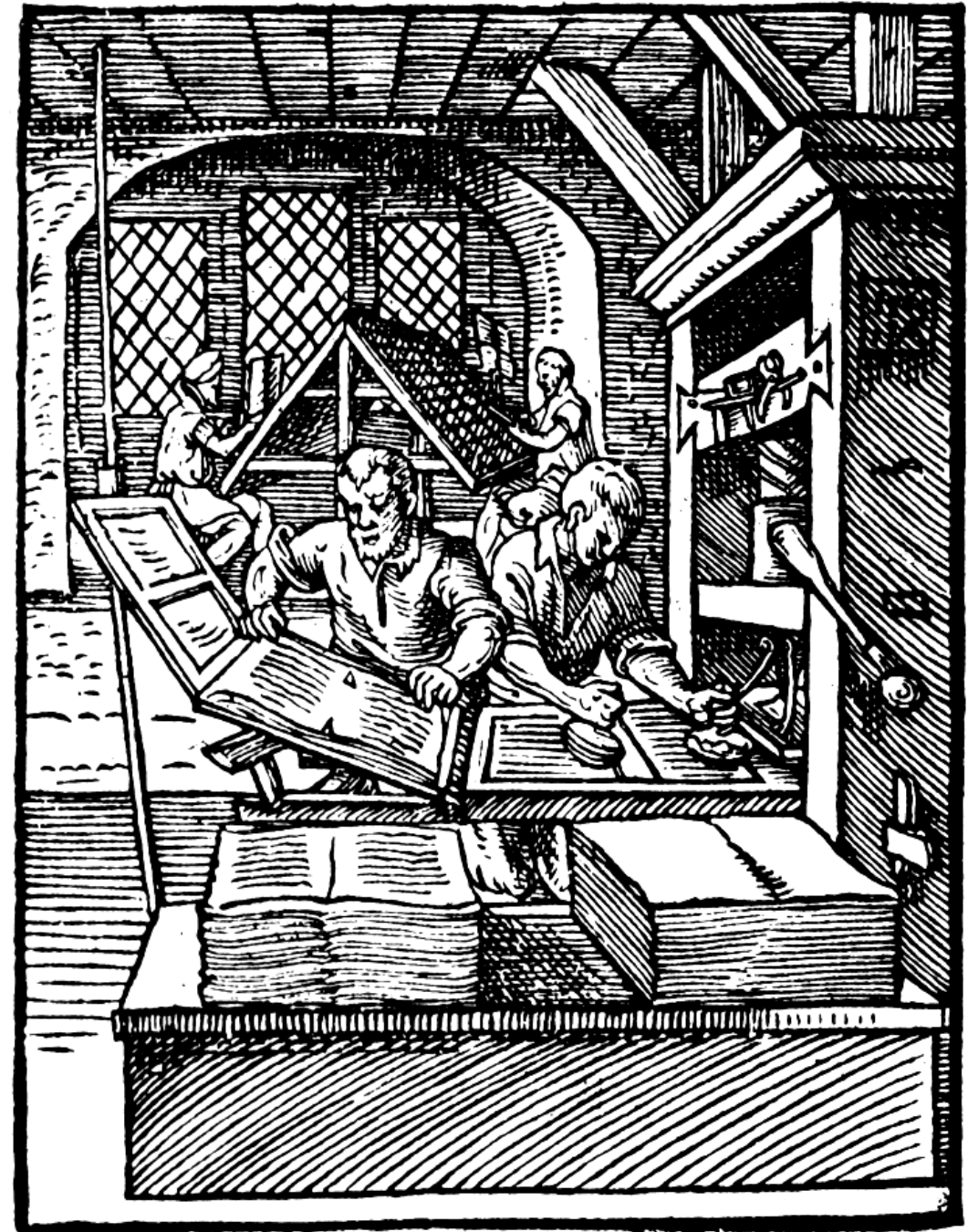
Yet.



Hierarchies versus networks

Printing press and
Reformation

Internet and ...?



First they came for the political system, then they came for the market



Big Tech's bad news feed

Twitter permanently suspends President Donald Trump

Facebook blocks Australian users from viewing or sharing news

Facebook 'behaving like North Korea' as Australia wakes up to news ban

Big Tech faces additional pressure from private antitrust lawsuits.

Google faces two fresh antitrust lawsuits in the EU over its data gathering and advertising practices

UK competition watchdog warns Big Tech of coming antitrust probes

The strange case of Alibaba's Jack Ma and his three-month vanishing act

China joins global efforts to tame Big Tech

The Great Acceleration

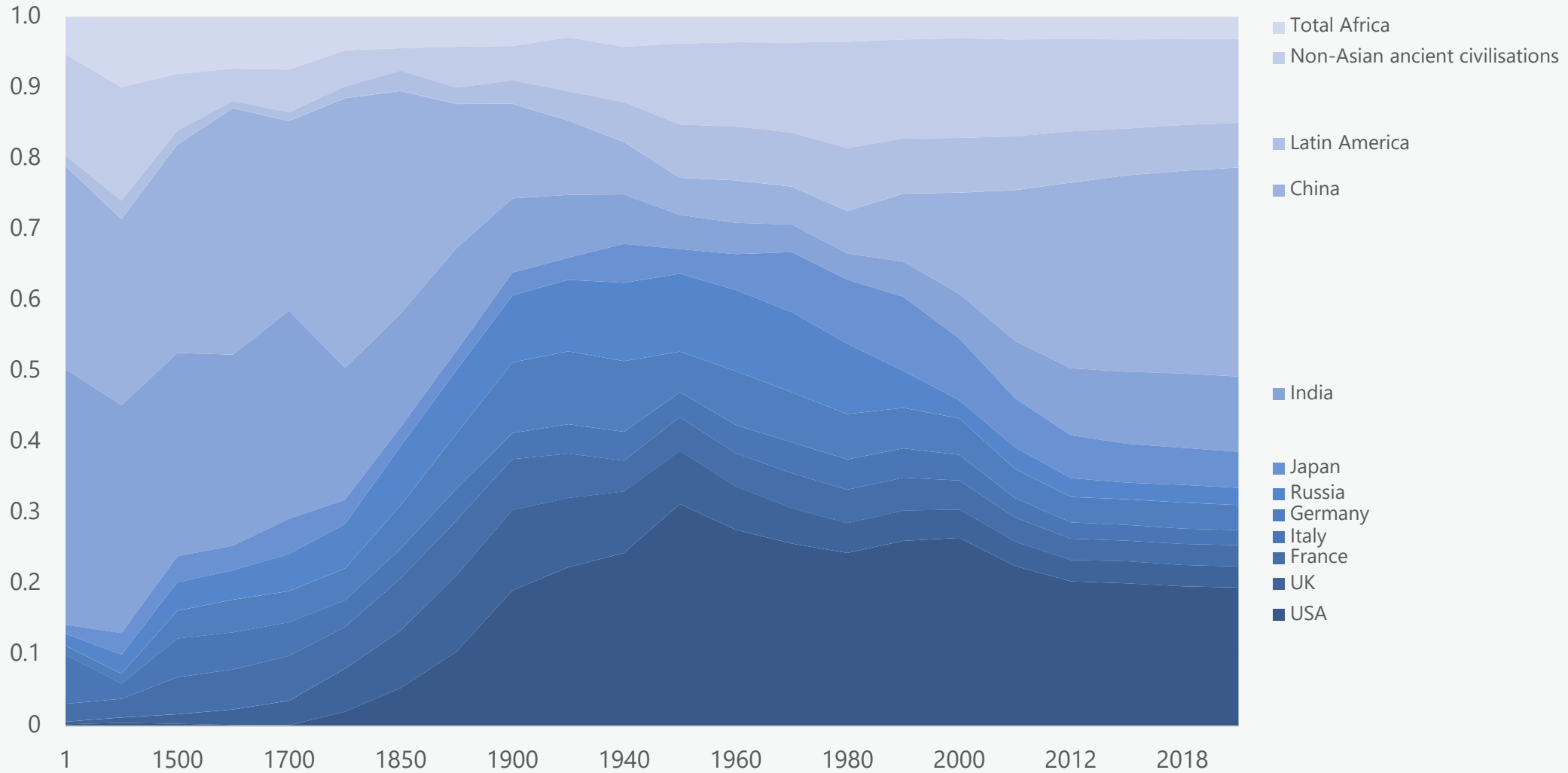
Optimists versus pessimists

Regime change

— Part II: World order

Risk and reward

Industrialisation made history



2020-2021

Digital
Yuan trials

2025

Made
in China

2035

Dominate
all future
industries



March 2021
Five year plan

2027

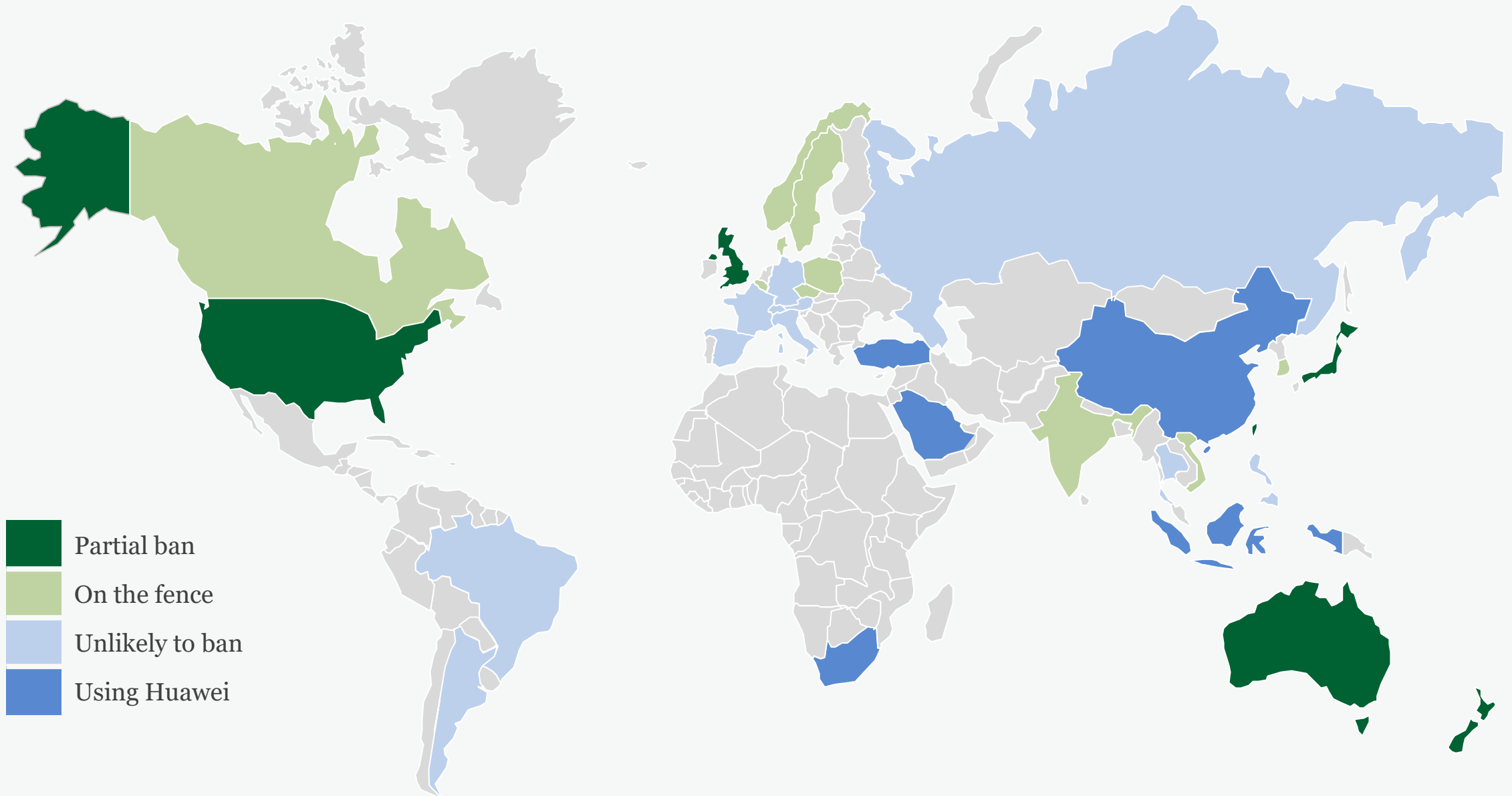
Military
modernisation

Tech war = market battlefield

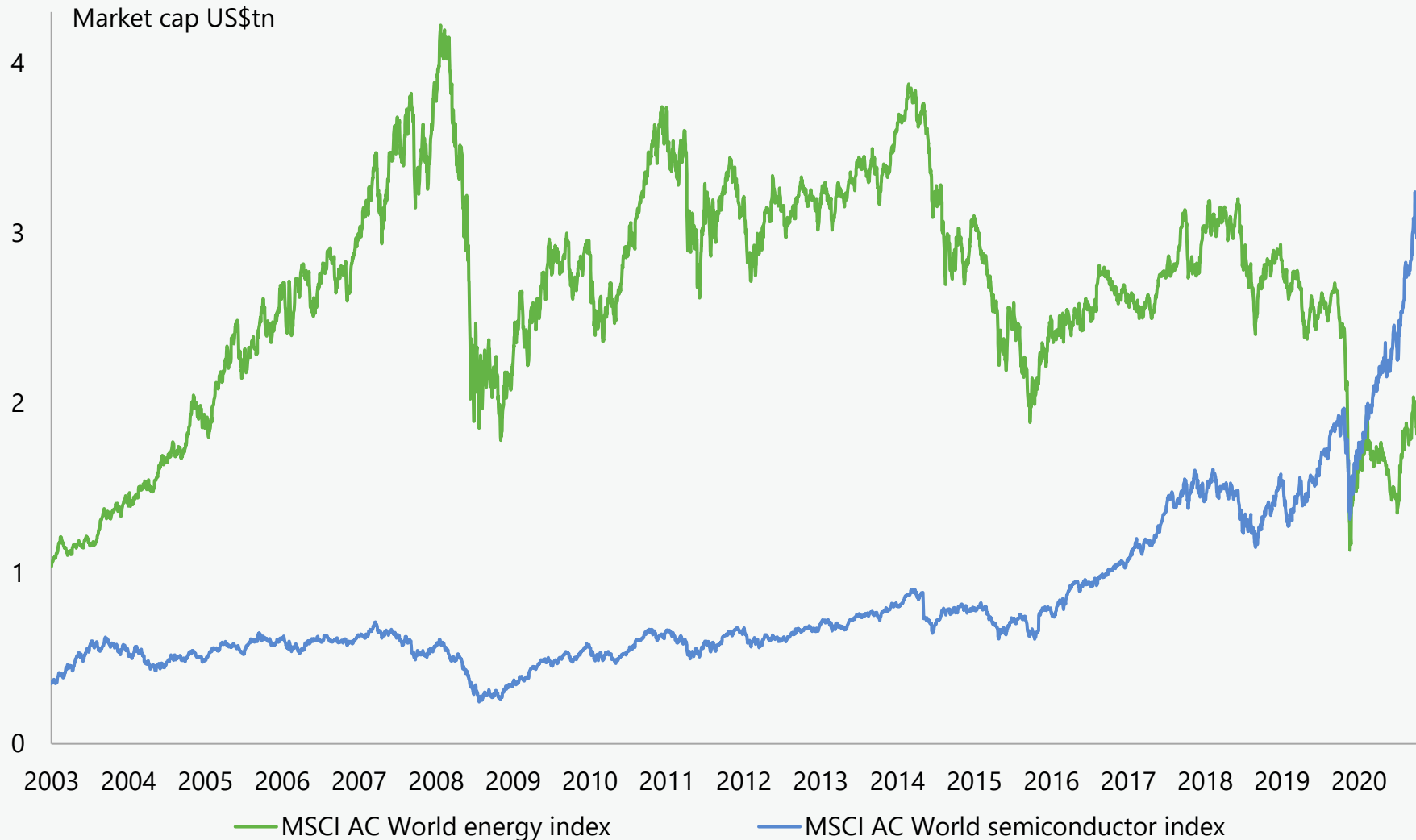


Source: Bloomberg

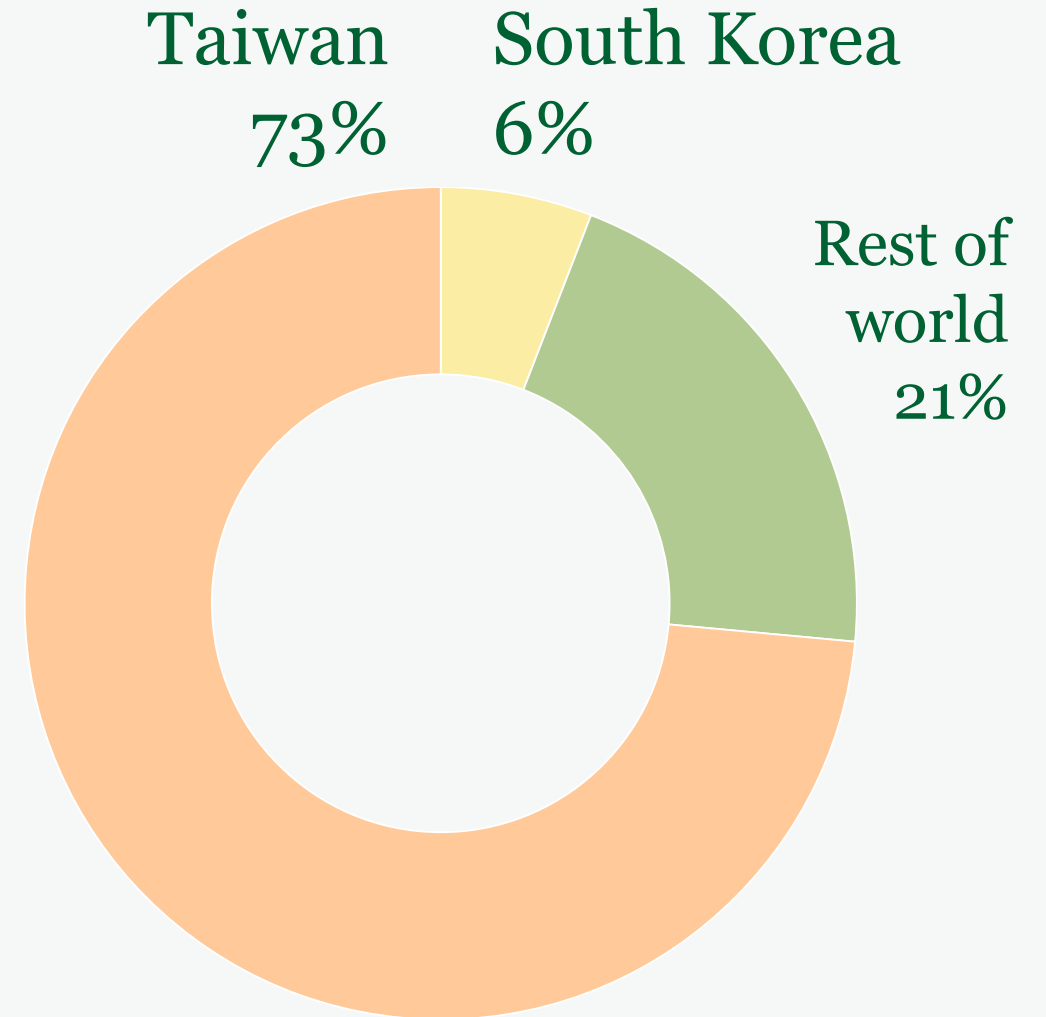
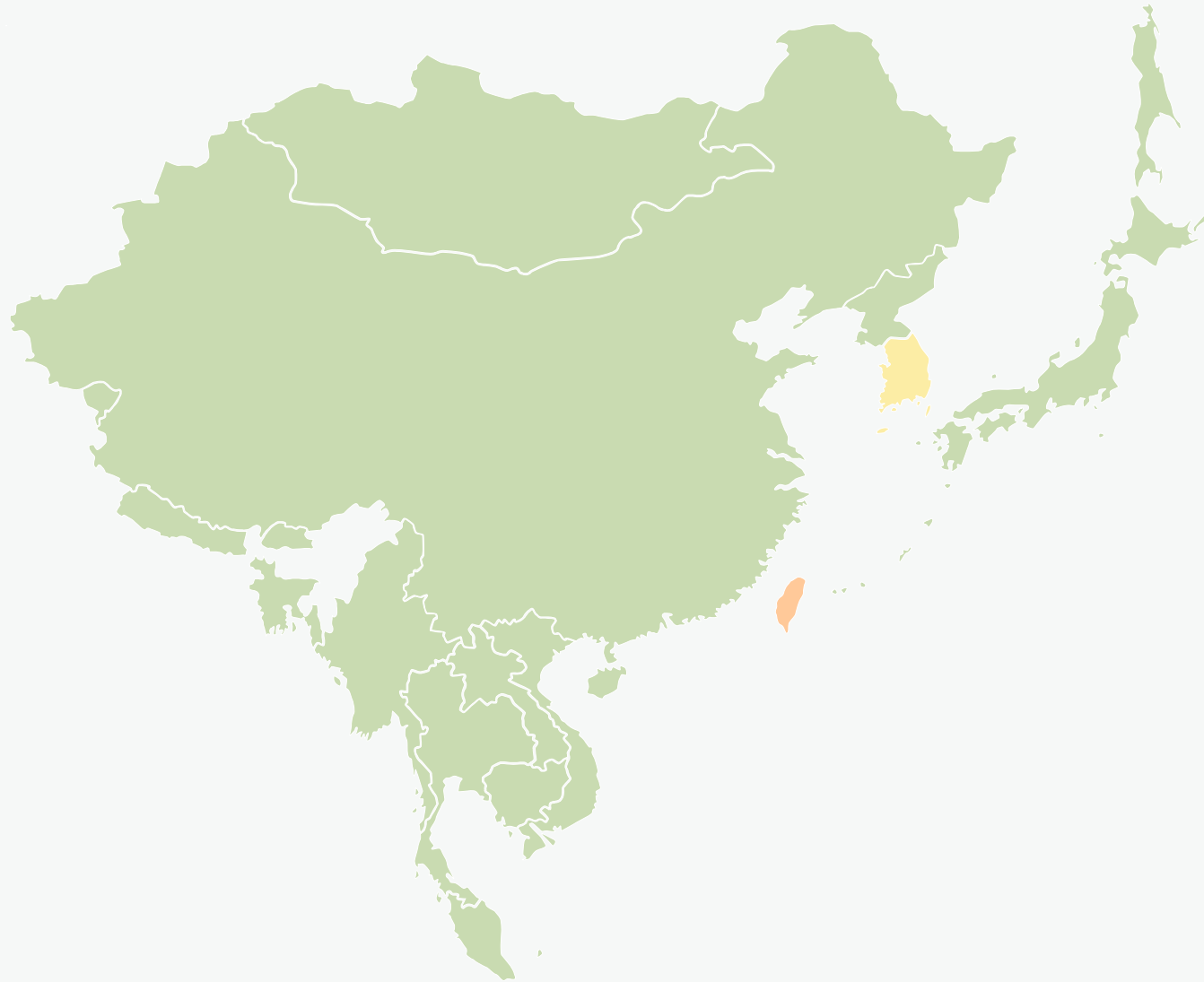
Huawei restrictions



Chips all round: the 21st century's commodity



Global high-end semiconductor revenue





Viral disorder

The Great Acceleration

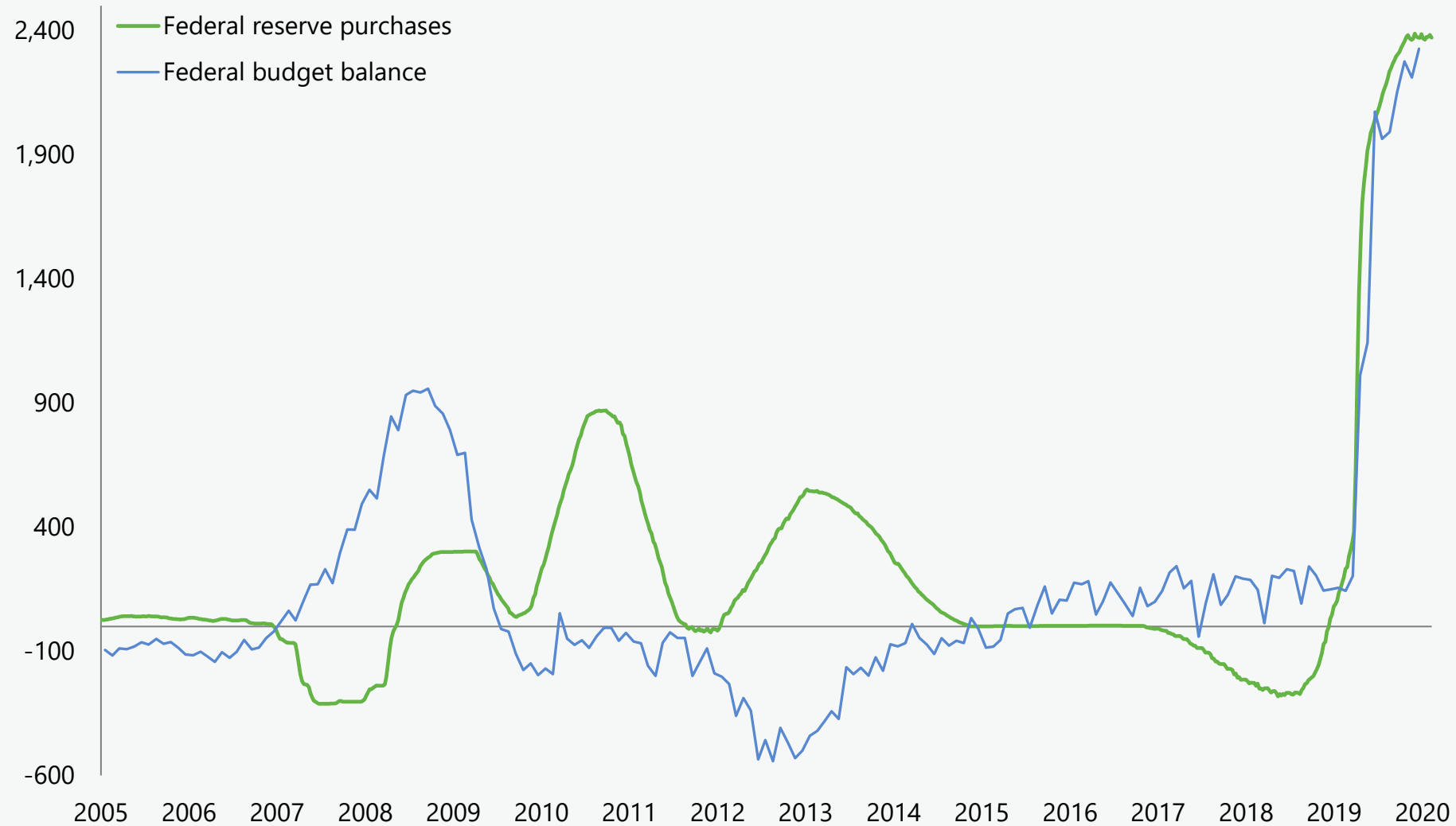
Optimists versus pessimists

Regime change

— Part III: Fiscal returns

Risk and reward

Stimulus in historic perspective



Big Government is back



Text UNITED to 30330

**BUILD BACK
BETTER**

BIDEN

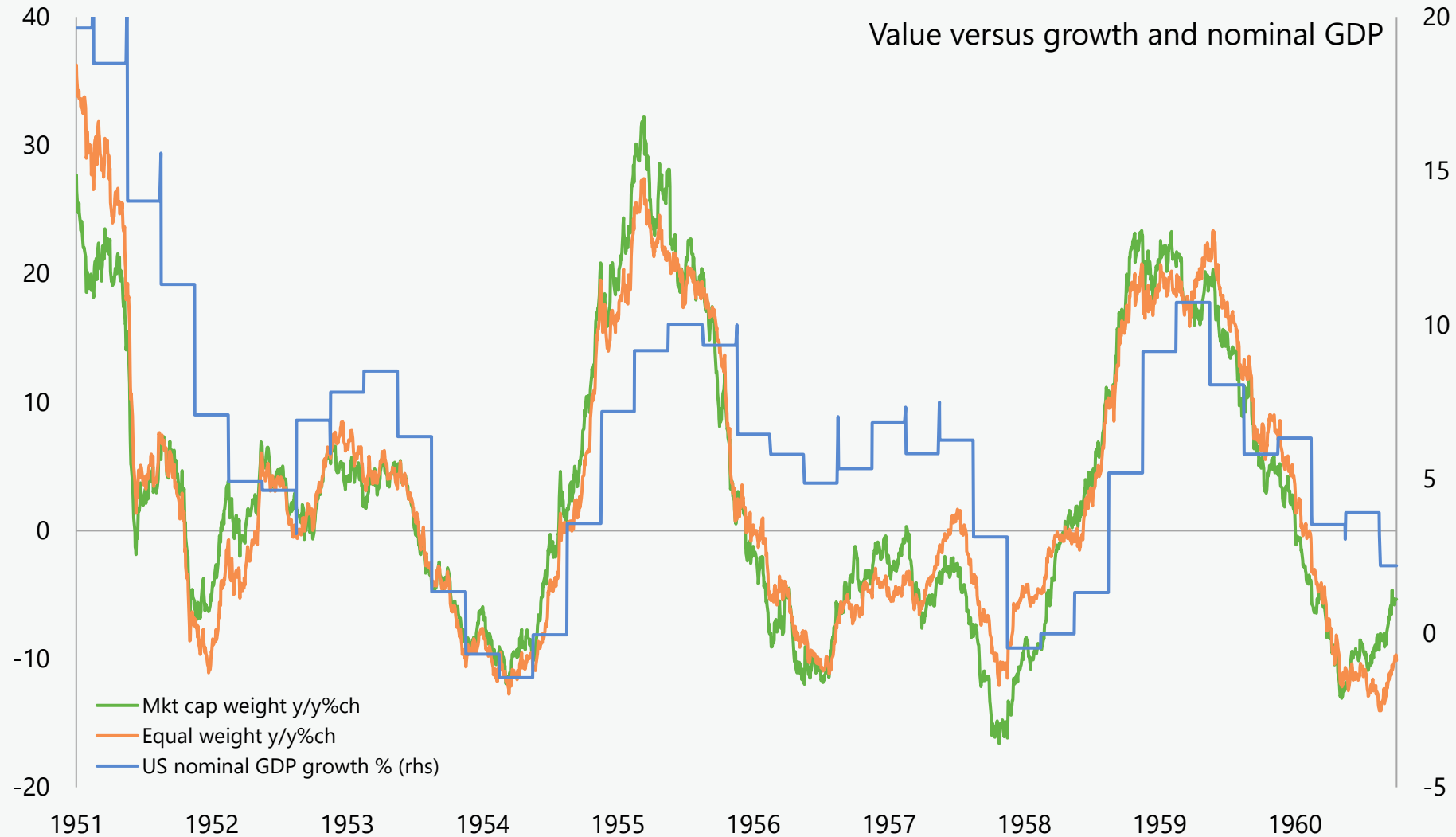
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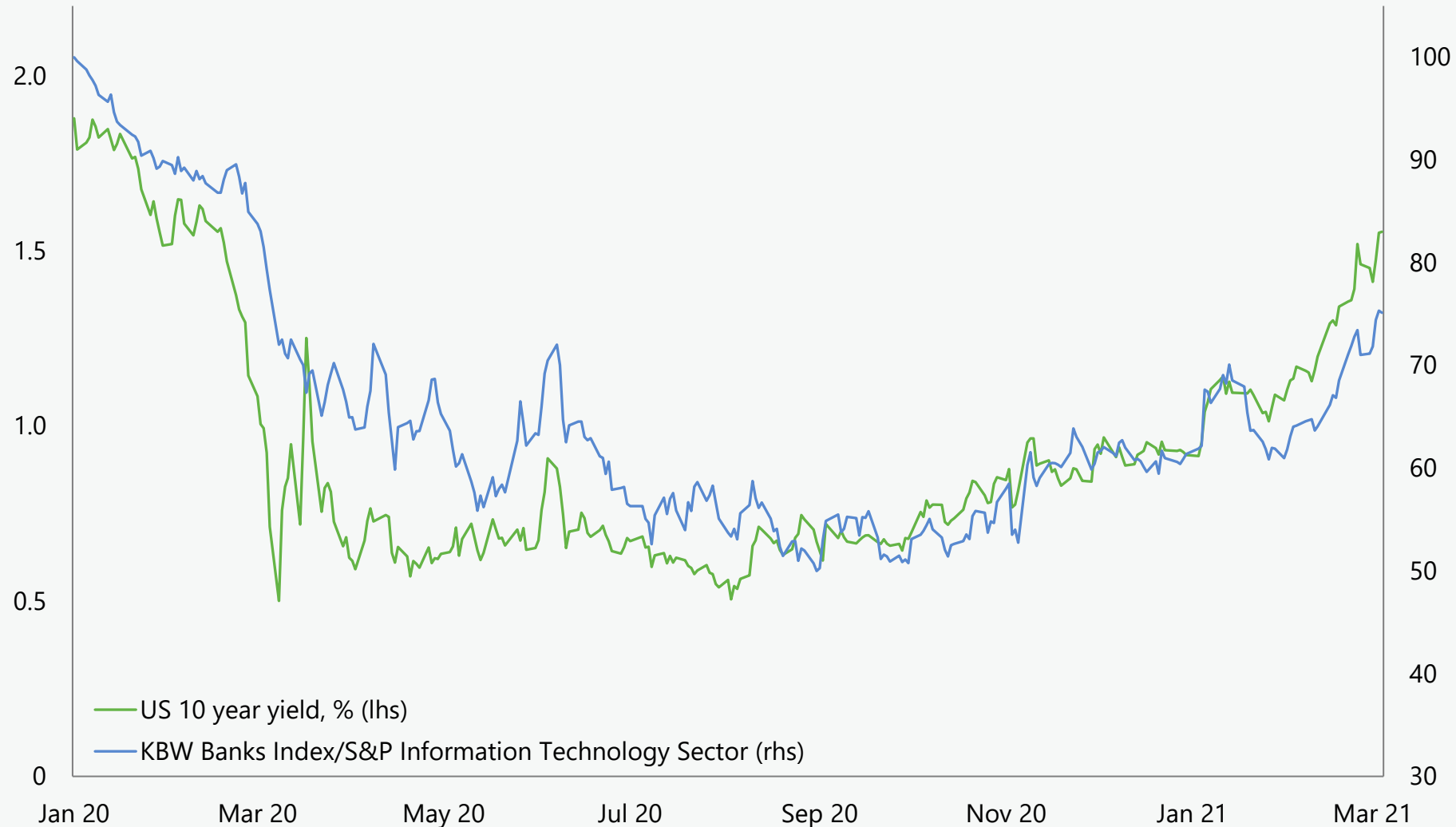
Regime change

Risk and reward

1950s US value versus growth



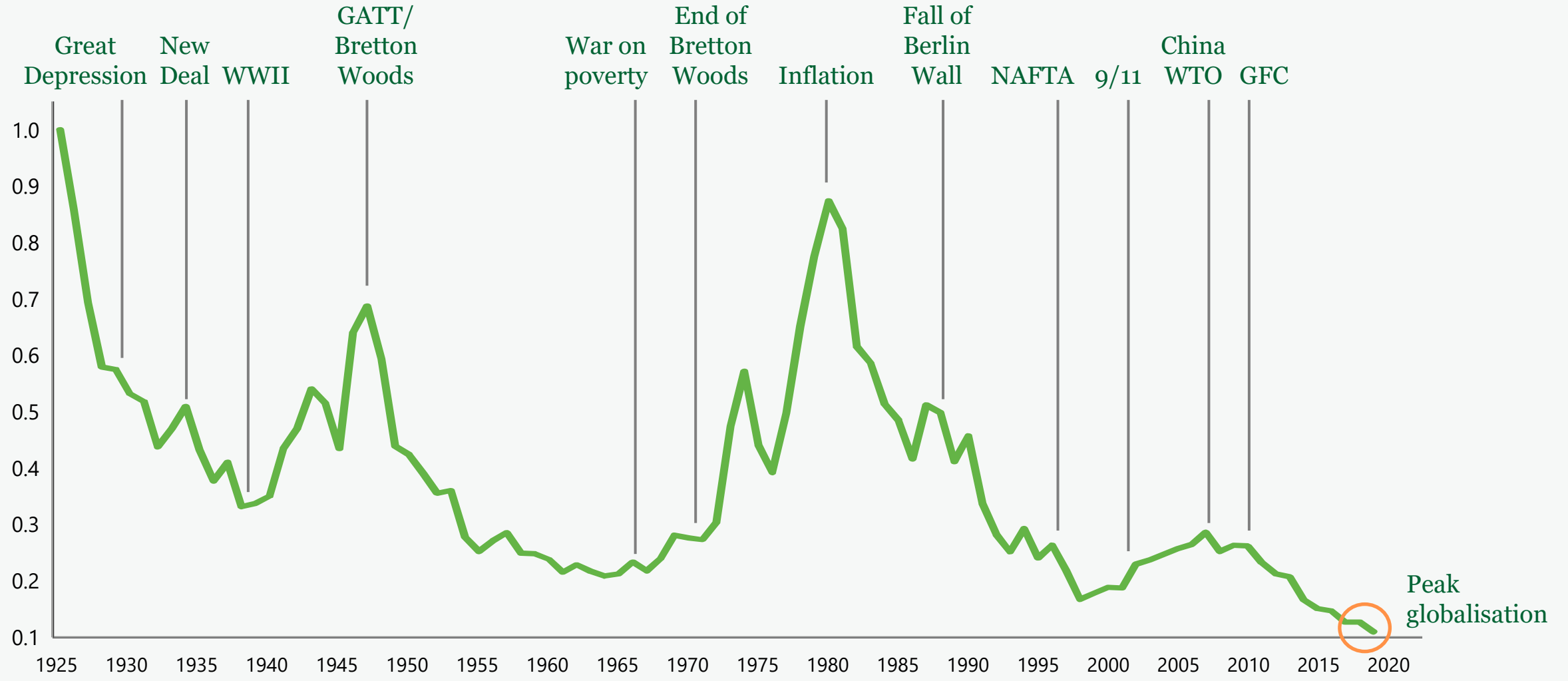
Rising rates are weighing on tech



Value stocks: time to shine?

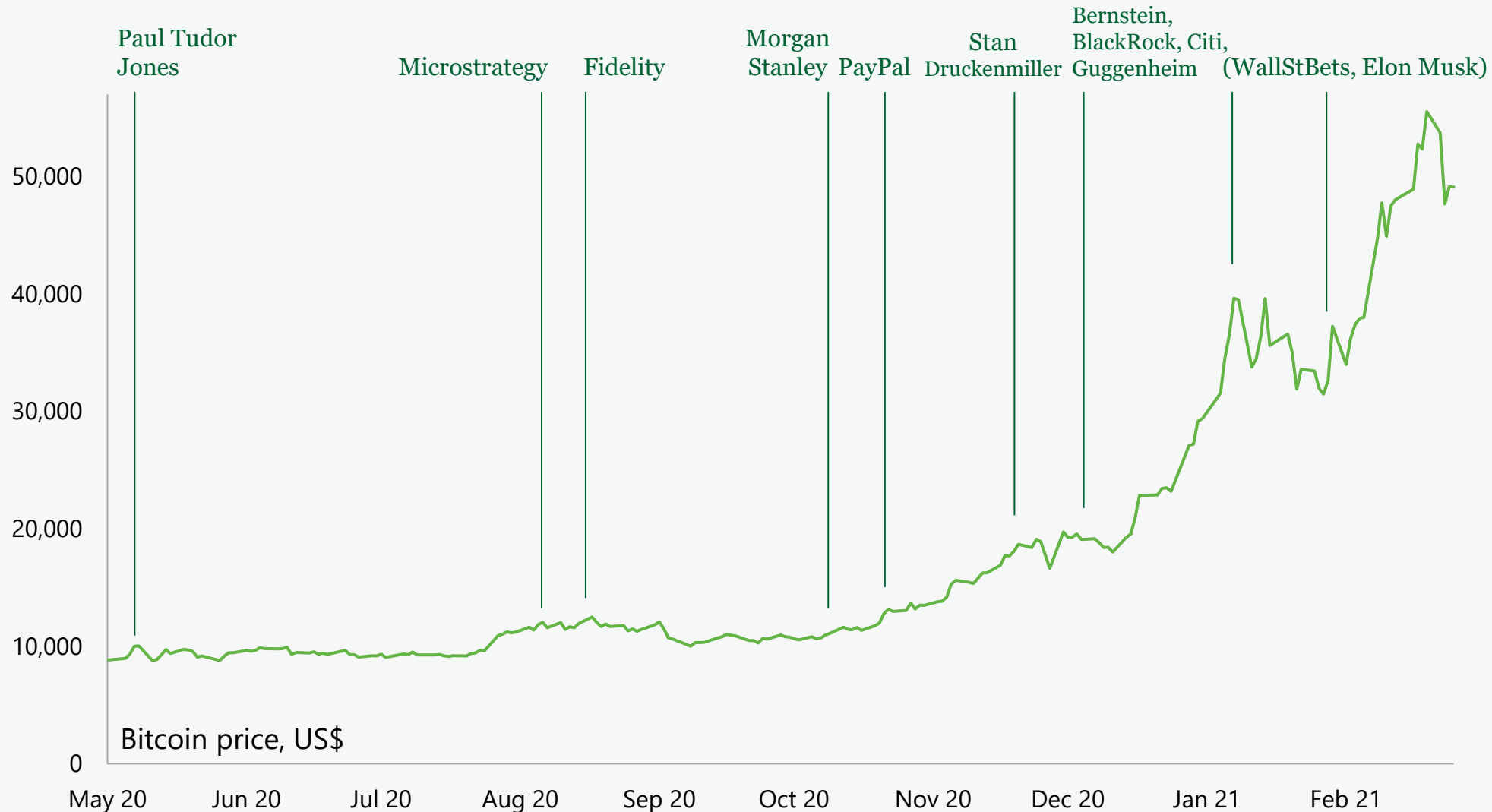


Real assets at all-time lows versus financial assets



Source: BofA Global Investment Strategy, Global Financial Data, Bloomberg, USDA, Savills, Shiller, ONS, Spaenjers, Historic Auto Group. Real assets (commodities, real estate, collectibles) versus financial (large cap stocks, long-term govt bonds)

Bitcoin – a rising tide of institutional adoption



Output

Technology
unlikely to
prevent
inflation

New risks and
opportunities

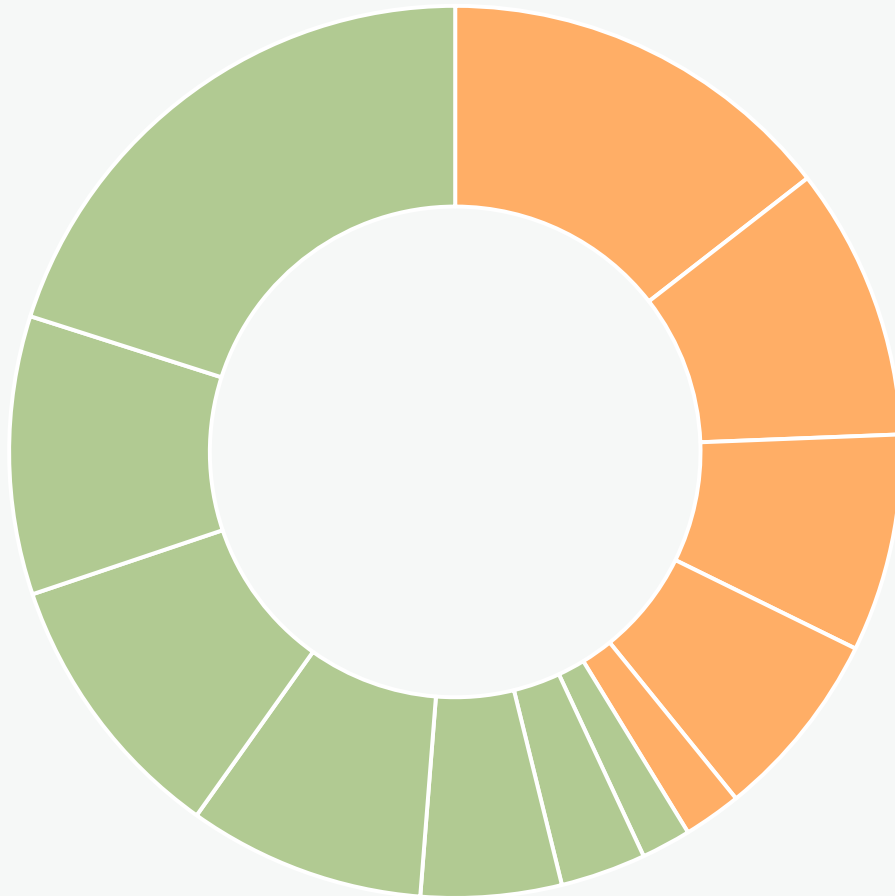
Biggest
disruption is to
market regime

Cold War II,
tech-lash,
Big State, fiscal

Politics over
profits

Regime change
= market
leadership
change

Asset allocation



Financial repression

%

US inflation-linked bonds 20

UK index-linked gilts 12

Gold and gold equities 9

Deflation and crash protections

Credit strategies and options 10

Short-dated bonds 3

Cash 5

Recovery

%

UK equities 15

North America equities 10

Japan equities 8

Europe equities 7

Asia ex-Japan equities 2

R U F F E R