

Principles for Dealing with

THE CHANGING

WORLD ORDER

RAY DALIO

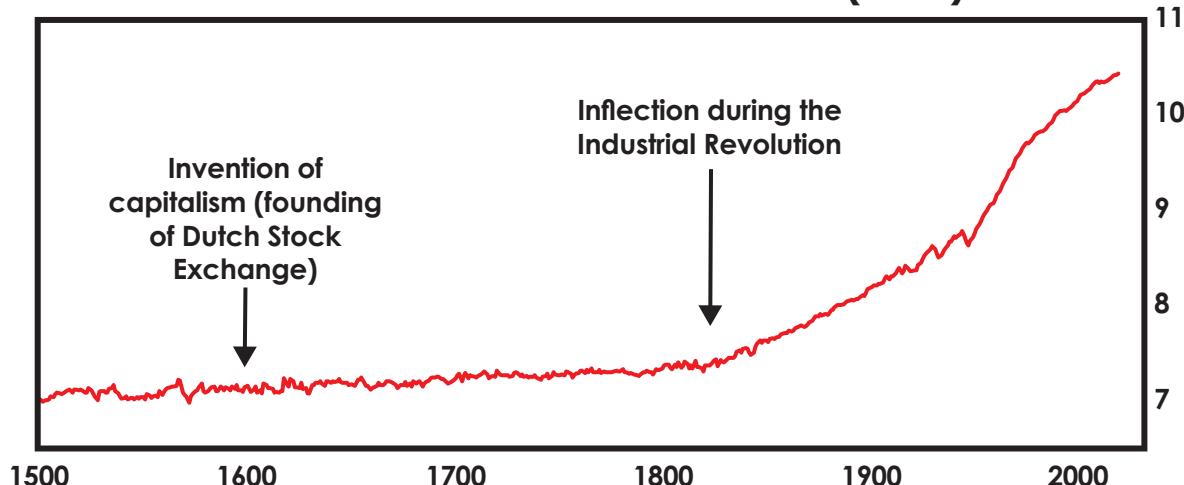
This PDF contains the charts and tables from the book for printing and easy reference.

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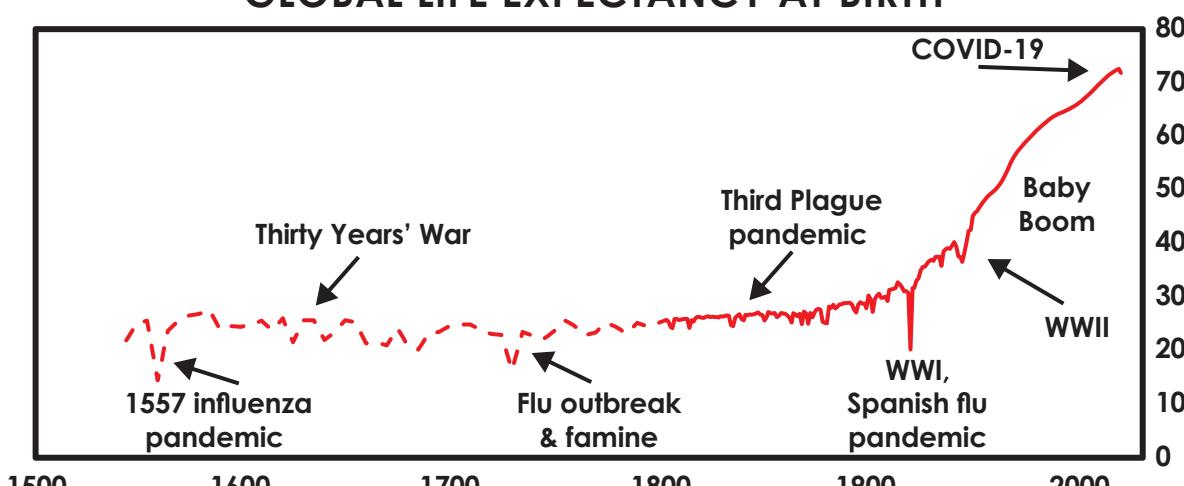
CHAPTER 1

THE BIG CYCLE IN A TINY NUTSHELL

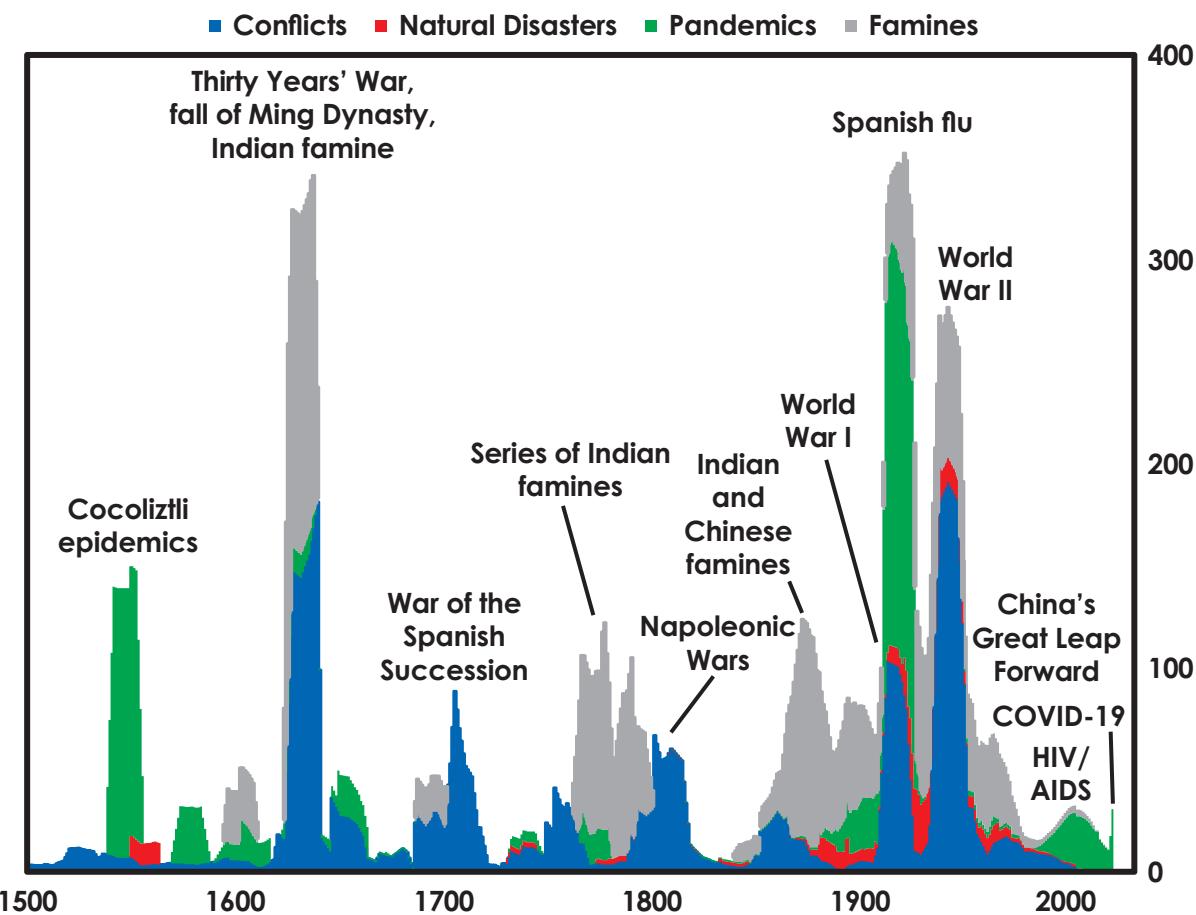
GLOBAL REAL GDP PER CAPITA (LOG)



GLOBAL LIFE EXPECTANCY AT BIRTH

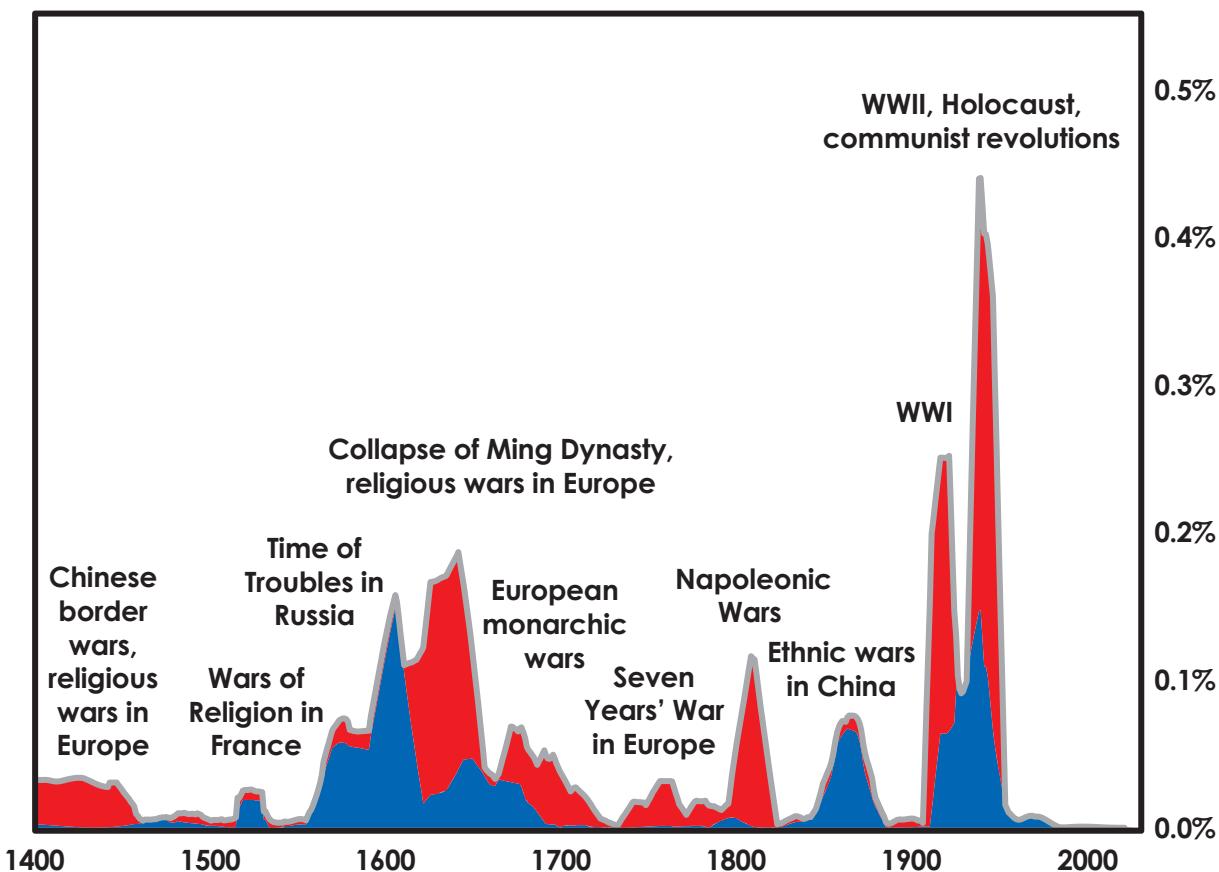


GLOBAL DEATHS BY CATEGORY (RATE PER 100K PEOPLE, 15YMA)

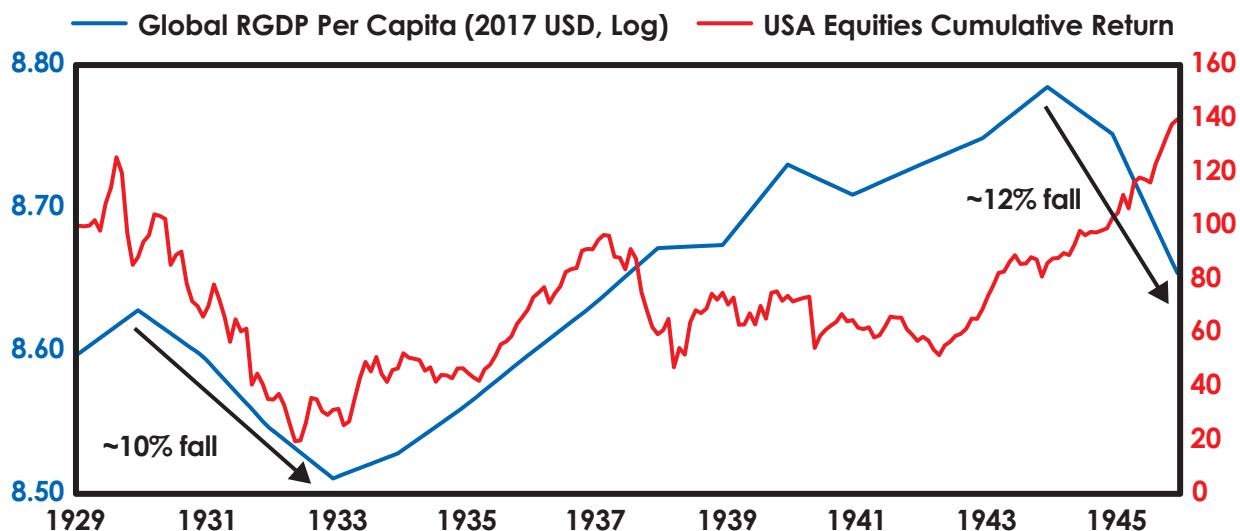


ESTIMATED DEATHS FROM CONFLICT (MAJOR POWERS, %POPULATION, 15YMA)

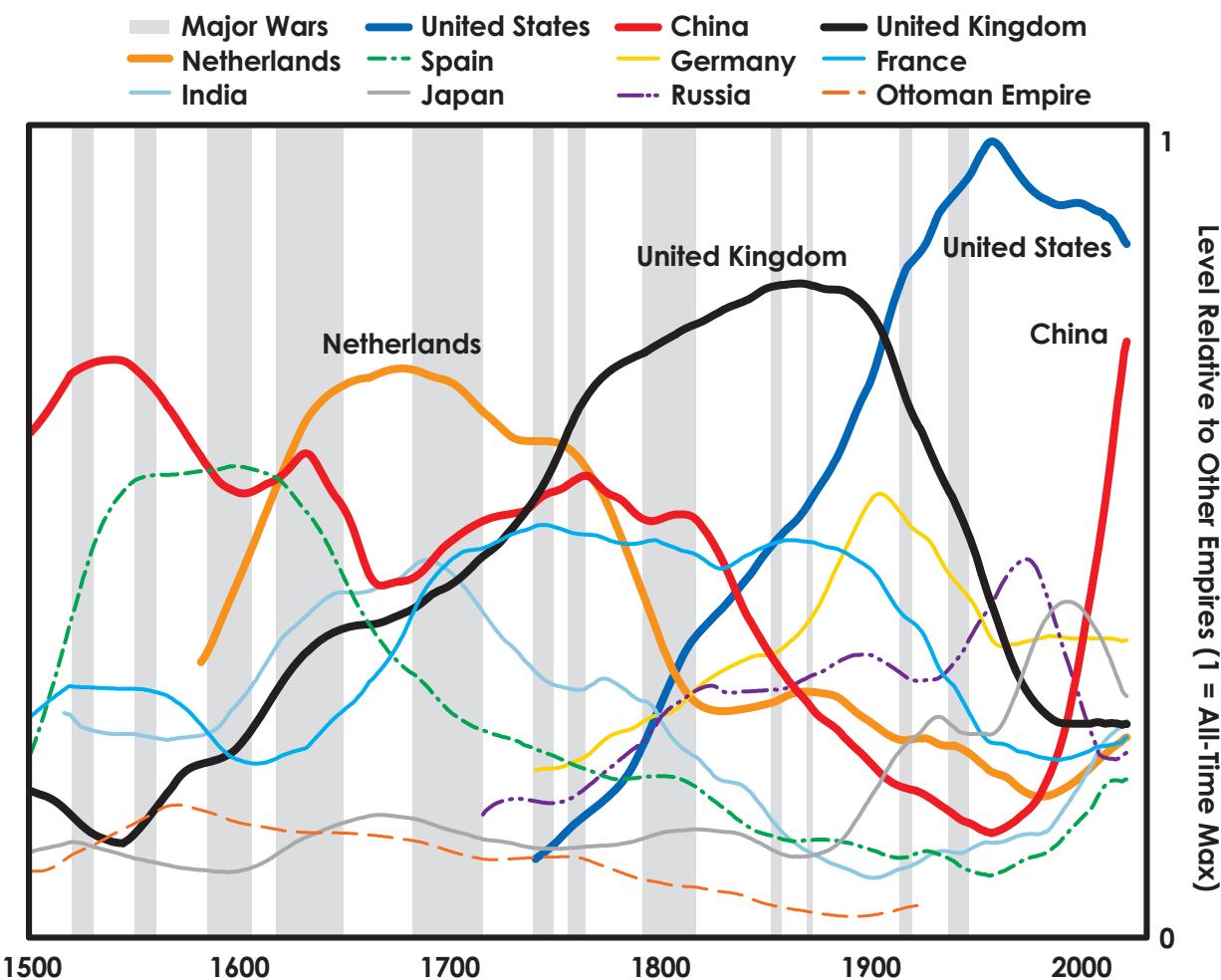
■ Internal Conflict ■ External Conflict ■ Total



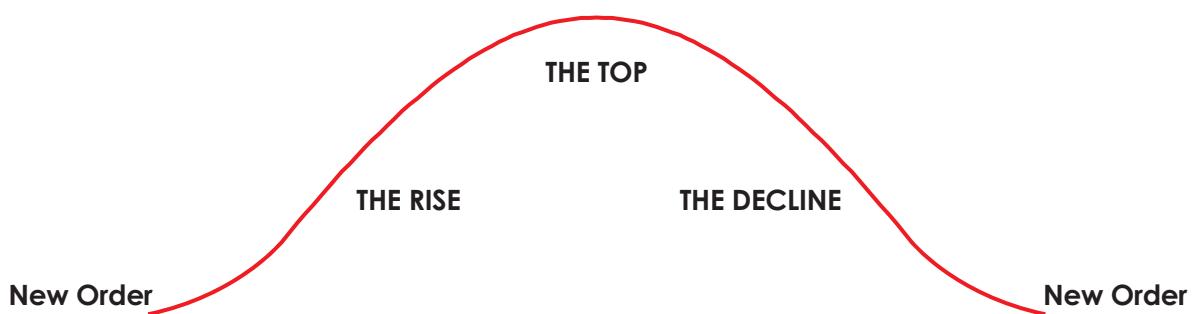
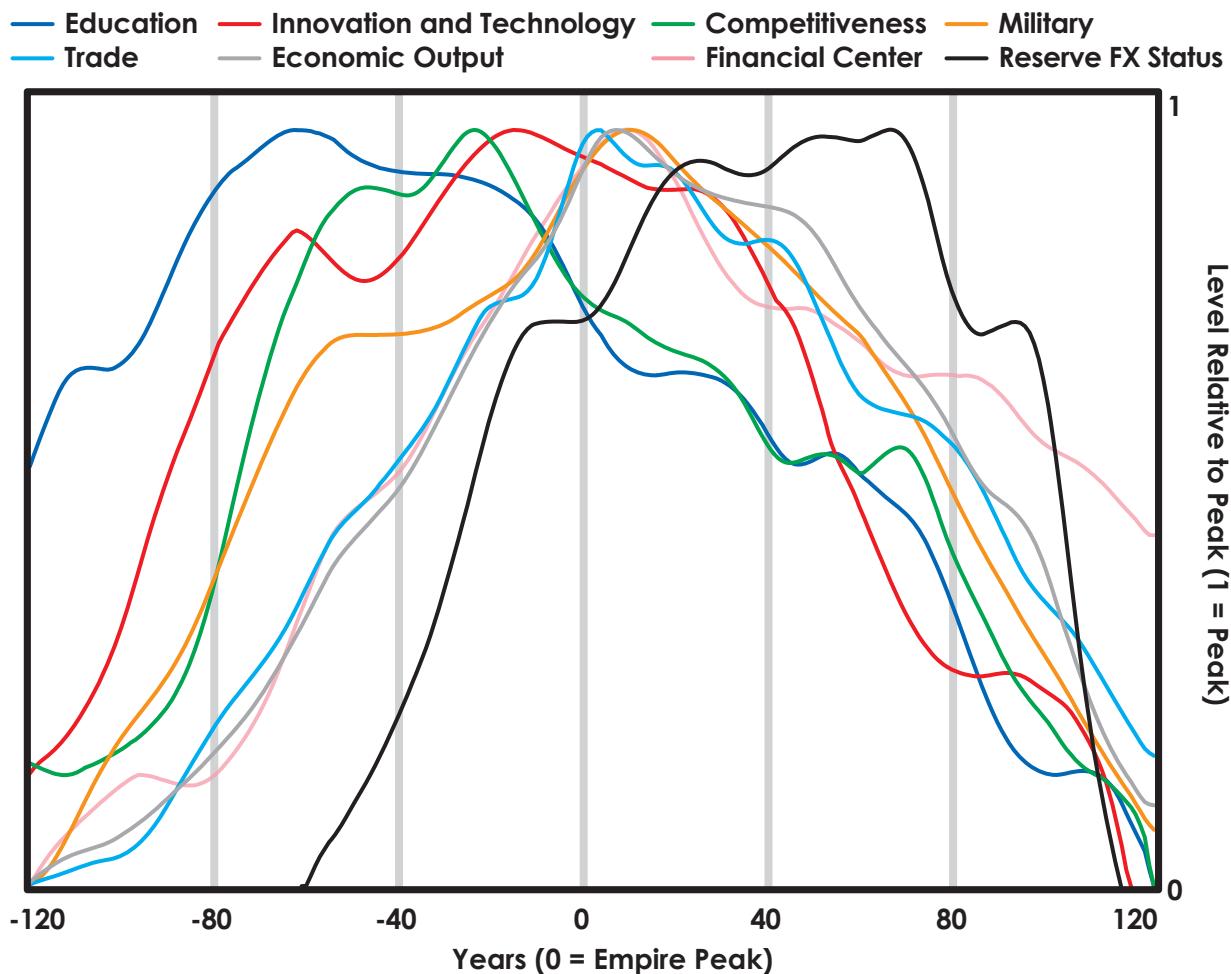
Based on deaths as a share of the population for the major powers and thus will differ from the estimate of global conflict deaths shown in the prior chart



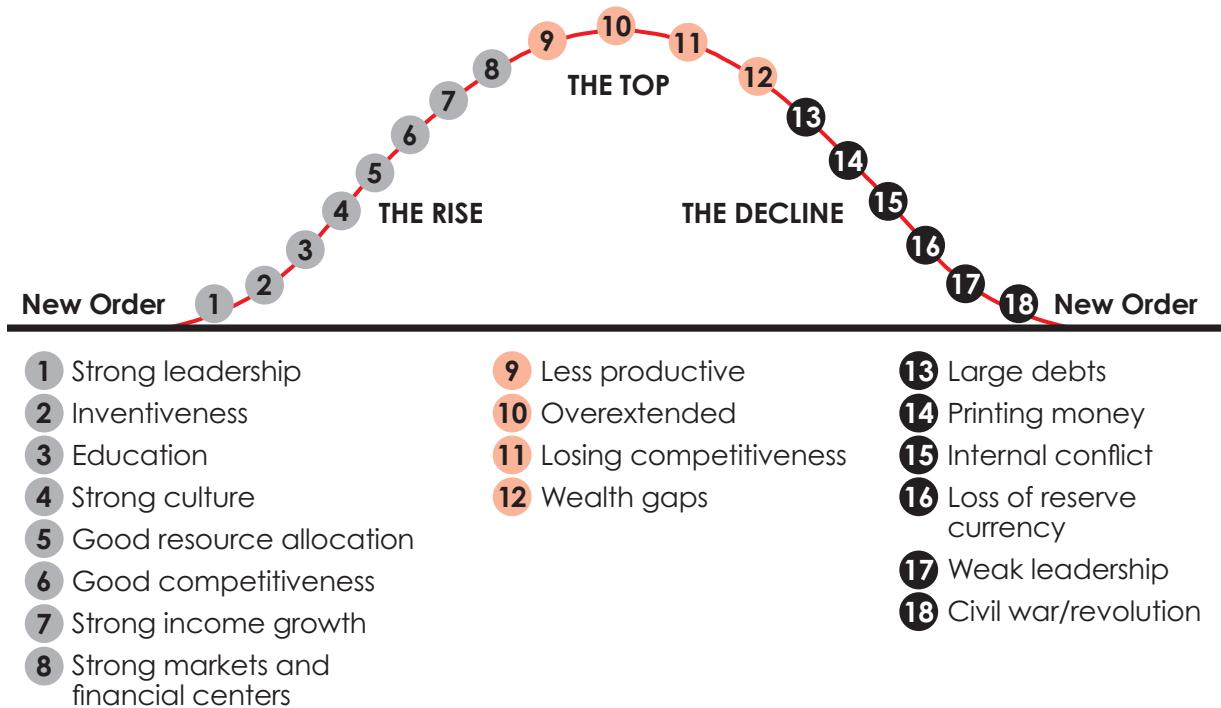
RELATIVE STANDING OF GREAT EMPIRES



THE ARCHETYPICAL RISE AND DECLINE BY DETERMINANT



THE CHANGING WORLD ORDER



ROUGH QUANTITATIVE SCORING OF MEASURES BY STAGE IN CYCLE

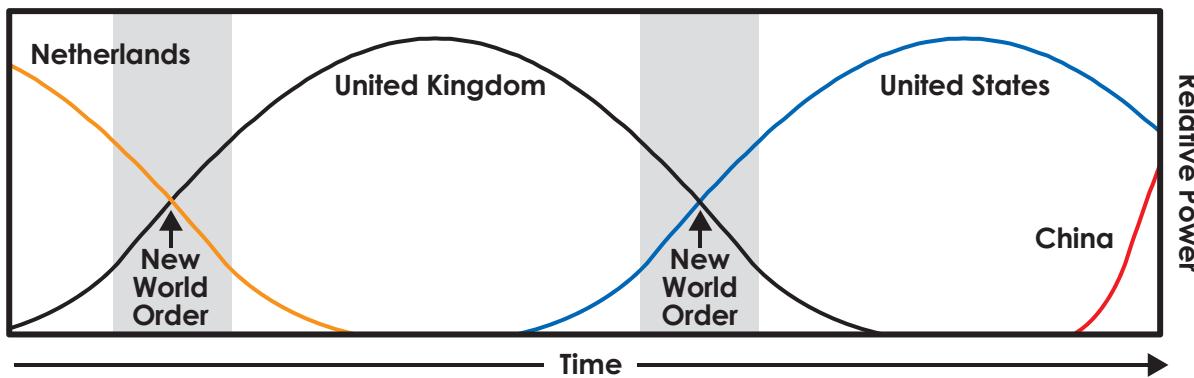
	THE RISE	THE TOP	THE DECLINE
Debt Burden (Big Economic Cycle)			
Internal Conflict (Internal Order Cycle)			
Education			
Innovation & Technology			
Cost Competitiveness			
Military Strength			
Trade			
Economic Output			
Markets & Financial Center			
Reserve Currency Status			
Resource-Allocation Efficiency			
Infrastructure & Investment			
Character/Civility/ Determination			
Governance/Rule of Law			
Gaps in Wealth, Opportunity & Values			

Dark green = gauge is strong/good
Dark red = gauge is weak/bad

1

¹ Acts of nature, external order, and geology are not included in cycle analysis. Readings use proxies for determinants with limited history.

CHANGES TO THE WORLD ORDER (CONCEPTUAL EXAMPLE)



End of the Old, Beginning of the New (e.g., Dutch to British)

- Debt restructuring and debt crisis
- Internal revolution (peaceful or violent) that leads to large transfers of wealth from the “haves” to the “have-nots”
- External war
- Big currency breakdown
- New domestic and world order

End of the Old, Beginning of the New (e.g., British to US)

- Debt restructuring and debt crisis
- Internal revolution (peaceful or violent) that leads to large transfers of wealth from the “haves” to the “have-nots”
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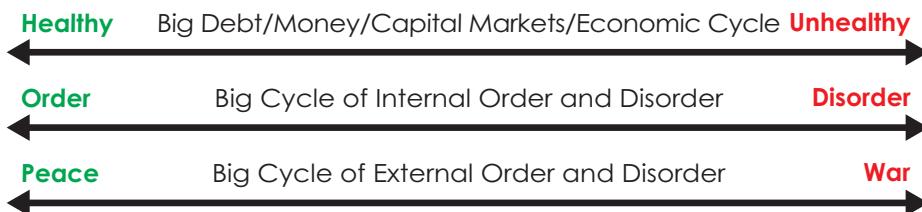
CHAPTER 2

THE DETERMINANTS

How the Machine Works = (f)...

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6	Case 7	Case 8	Case 9	Case 10, Etc
Determinant 1	Effect									
Determinant 2	Effect									
Determinant 3	Effect									
Determinant 4	Effect									
Determinant 5	Effect									
Determinant 6	Effect									
Determinant 7	Effect									
Determinant 8	Effect									
Determinant 9	Effect									
Determinant 10	Effect									
Etc										

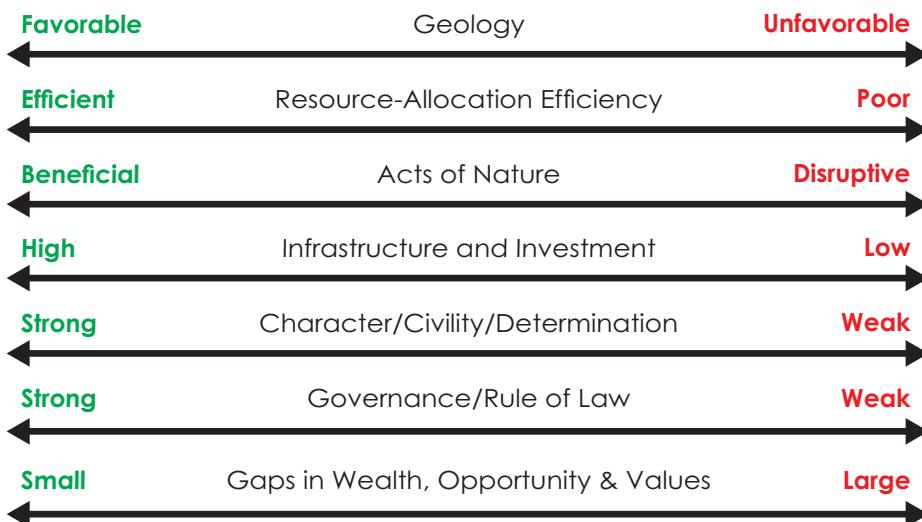
THE THREE BIG CYCLES



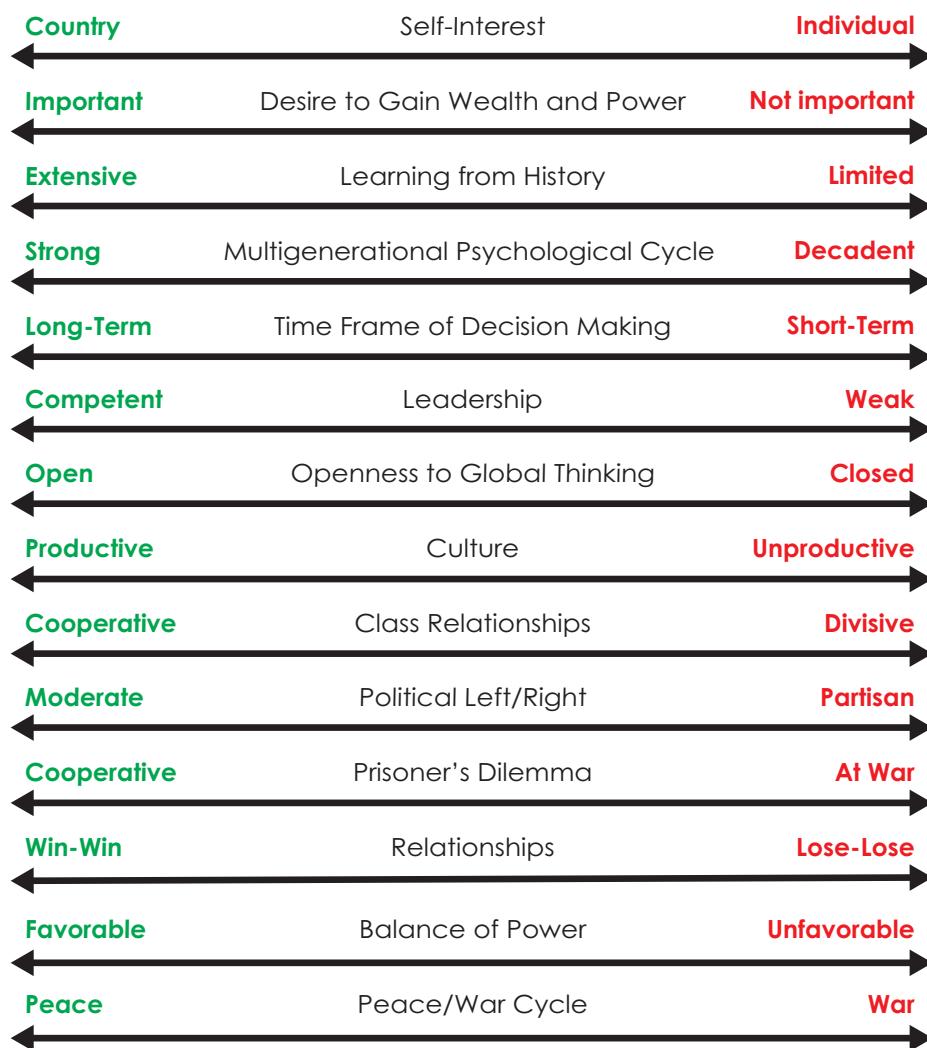
OTHER KEY DETERMINANTS (EIGHT KEY MEASURES OF POWER)



ADDITIONAL DETERMINANTS

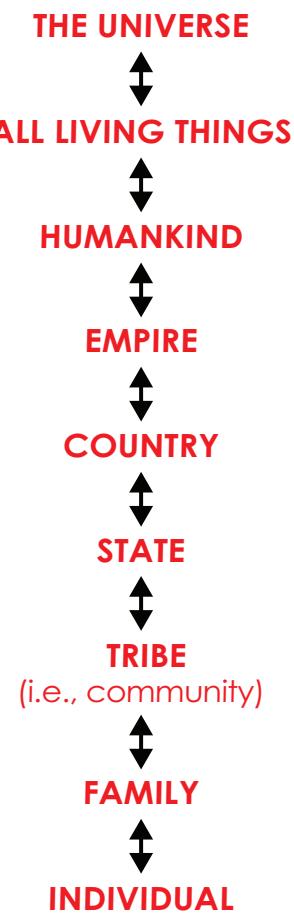


DYNAMICS TO PAY ATTENTION TO



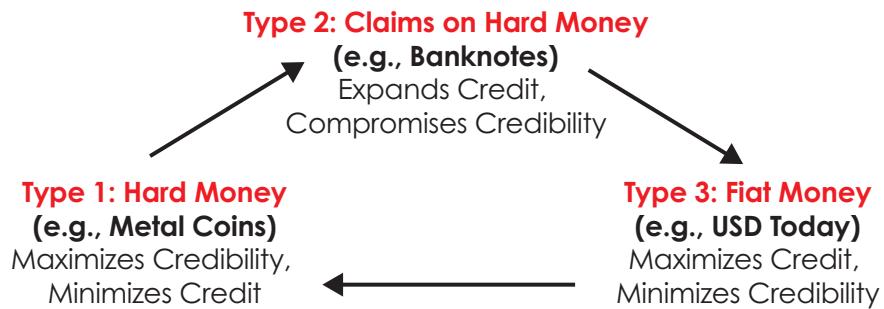
CHAPTER 2

DETERMINANTS ADDENDUM



CHAPTER 3

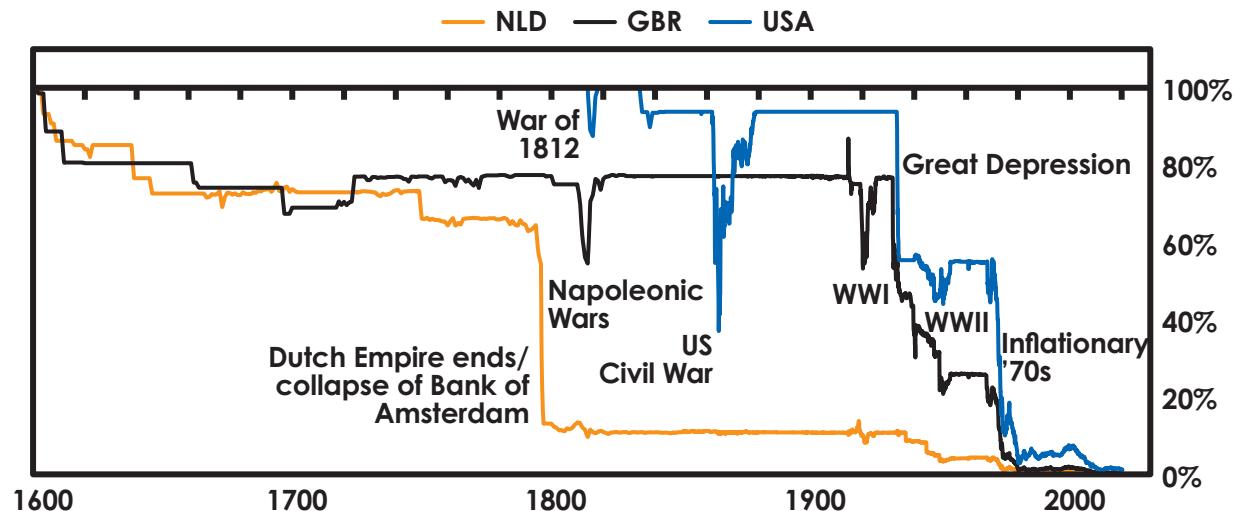
THE BIG CYCLE OF MONEY, CREDIT, DEBT, AND ECONOMIC ACTIVITY



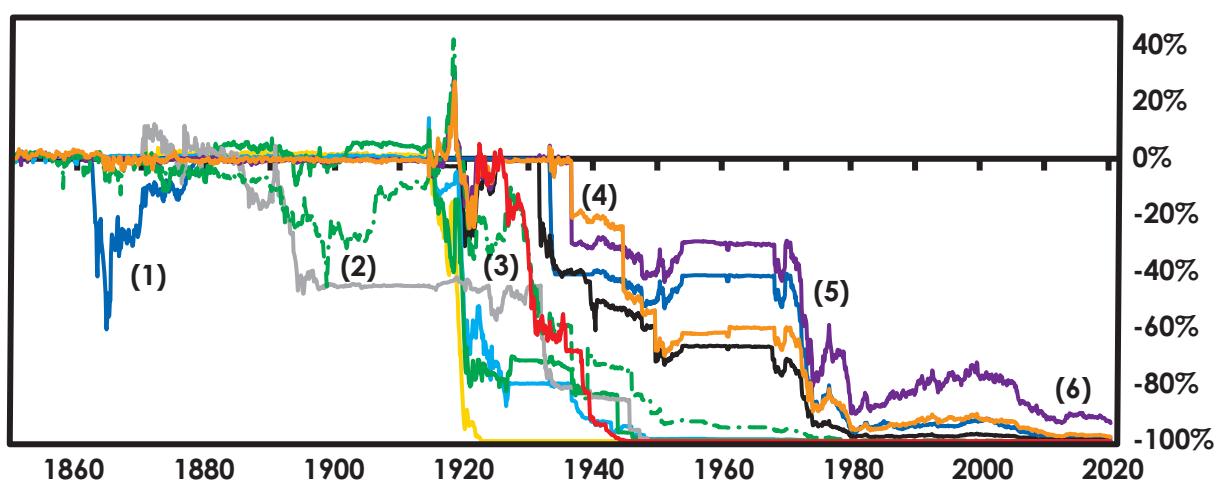
CHAPTER 4

THE CHANGING VALUE OF MONEY

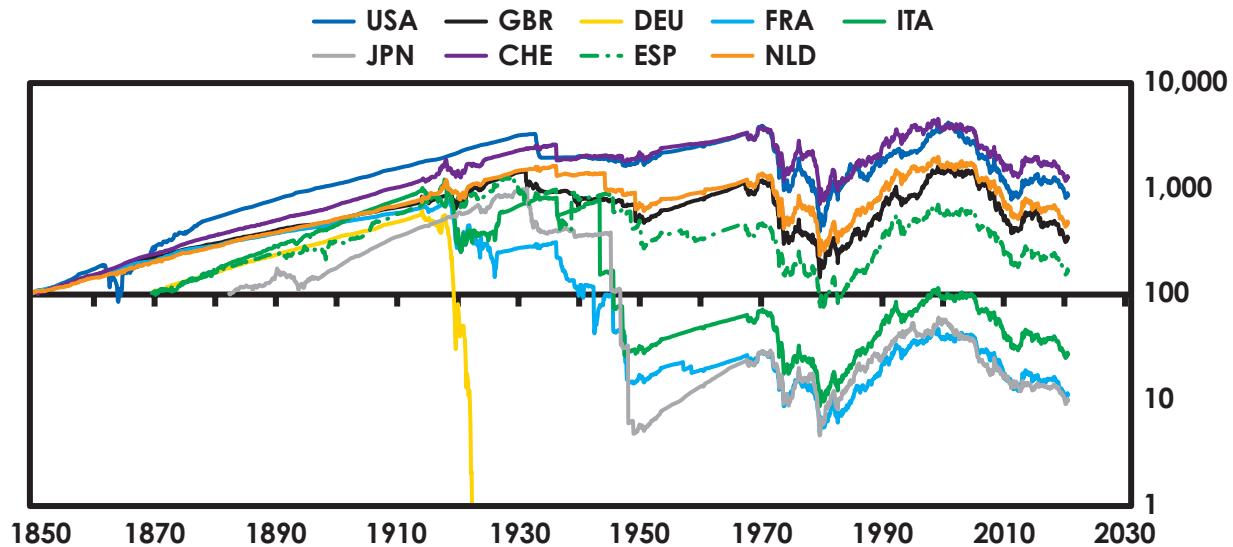
RESERVE CURRENCIES VS GOLD (SPOT FX)



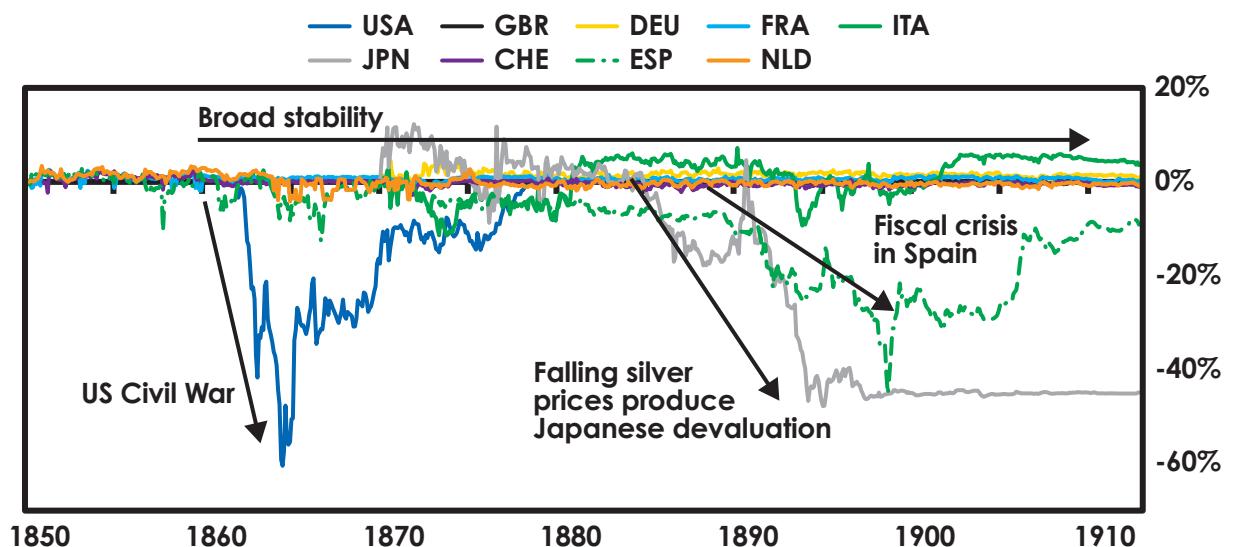
SPOT FX VS GOLD



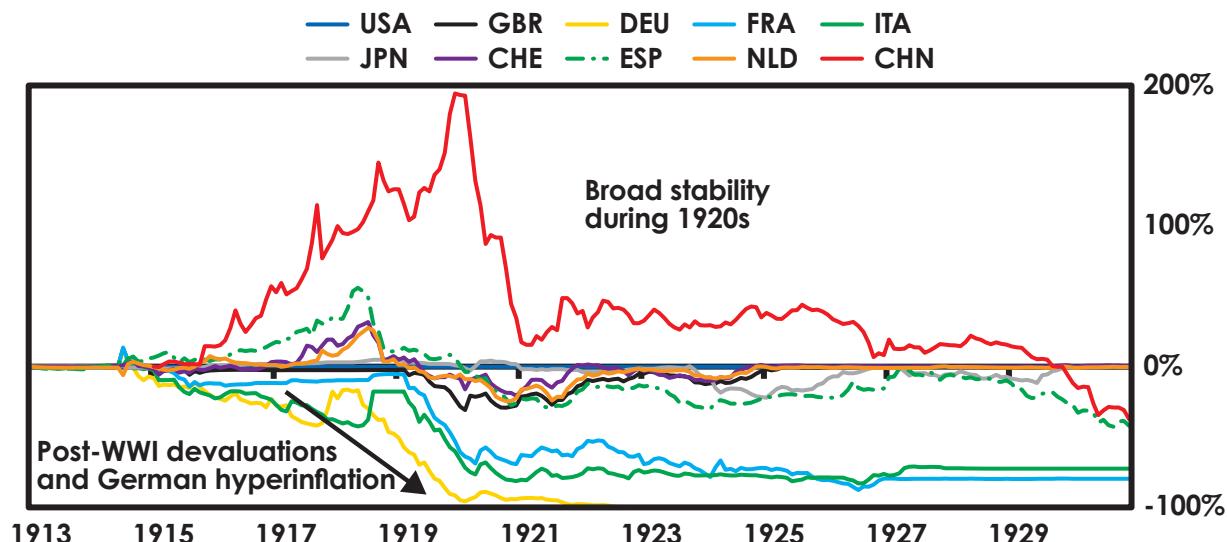
FX TOTAL RETURN VS GOLD (LOG)

²

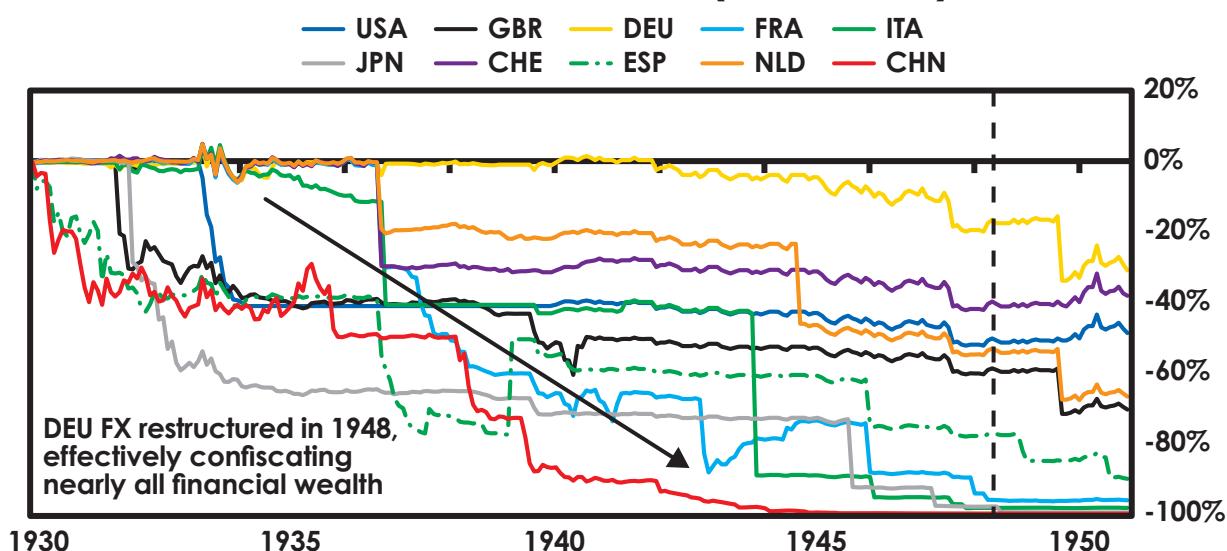
SPOT FX VS GOLD (1850–1913)

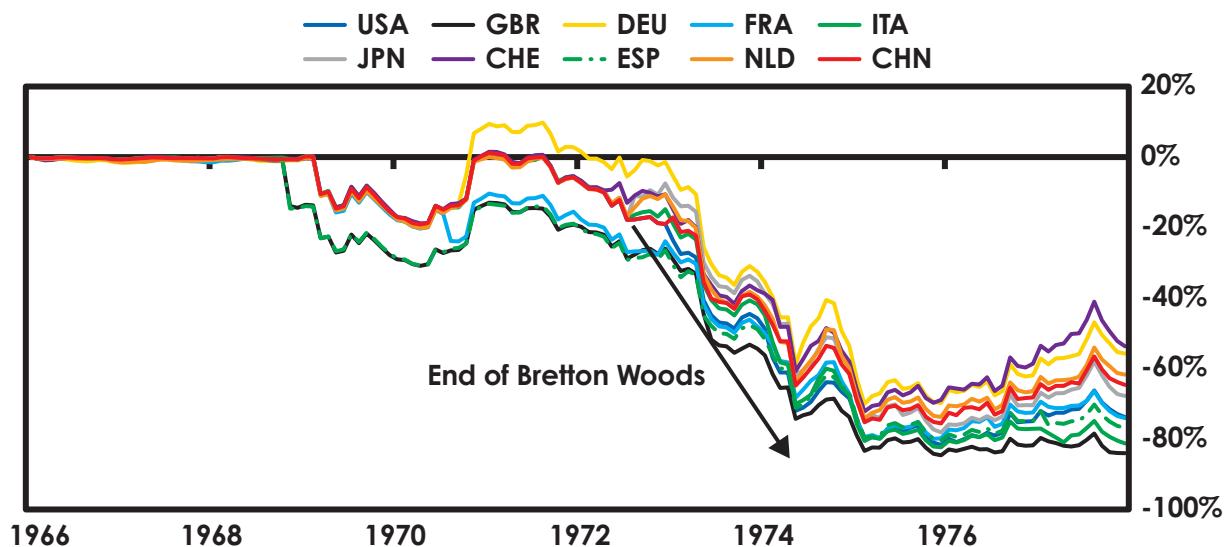
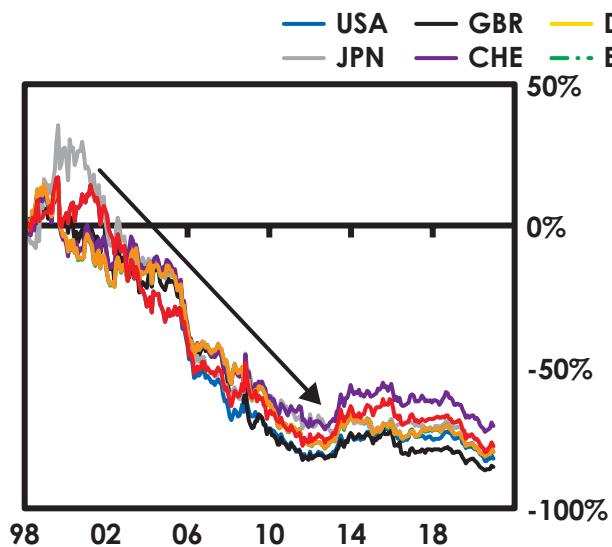
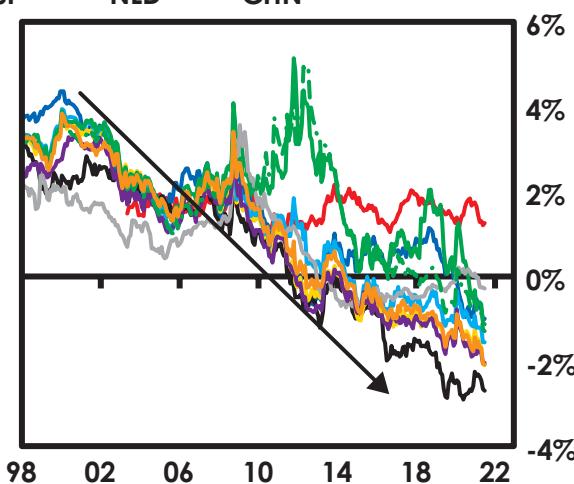
² Due to a lack of data, several charts in this chapter do not show China.

SPOT FX VS GOLD (1913–1930)



SPOT FX VS GOLD (1930–1950)



SPOT FX VS GOLD (1966–1977)**SPOT FX VS GOLD
(1998–PRESENT)****REAL LONG RATES
(1998–PRESENT)**

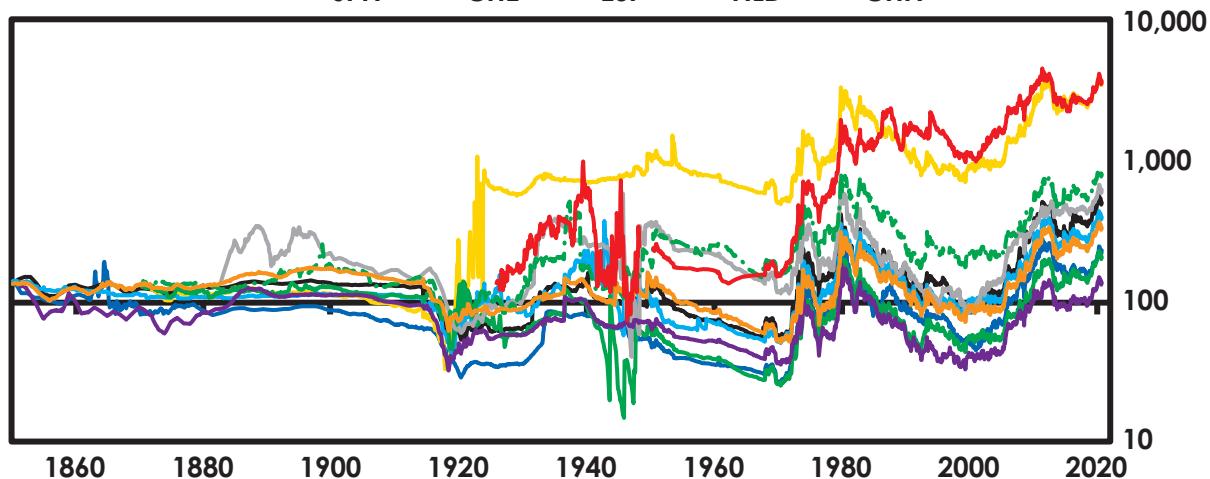
CURRENCY AND GOLD REAL RETURNS OF MAJOR COUNTRIES SINCE 1850 (VS CPI, ANN)

Country	Real Returns (vs CPI), Ann					
	1850–Present		1850–1912		1912–Present	
	Continuous Govt Bill Investment	Gold	Continuous Govt Bill Investment	Gold	Continuous Govt Bill Investment	Gold
United Kingdom	1.4%	0.7%	3.1%	-0.1%	0.5%	1.1%
United States	1.6%	0.3%	3.6%	-1.0%	0.4%	1.0%
Germany	-12.9%	2.0%	3.0%	-0.9%	-18.2%	3.1%
France	-0.7%	0.6%	2.6%	-0.3%	-2.6%	1.1%
Italy	-0.6%	0.3%	4.7%	-0.5%	-2.6%	0.5%
Japan	-0.7%	1.0%	5.0%	0.4%	-2.2%	1.2%
Switzerland	1.5%	0.0%	3.4%	-0.5%	0.5%	0.3%
Spain	1.4%	1.1%	4.5%	0.1%	0.3%	1.5%
Netherlands	1.4%	0.5%	3.3%	0.0%	0.4%	0.7%
China	—	3.3%	—	—	—	3.3%
Average	1.2%	0.9%	3.6%	-0.3%	-0.1%	1.6%

Data for Switzerland is since 1851; data for Germany, Spain, and Italy is since 1870; data for Japan is since 1882; data for China is since 1926 (excluding 1948–50). Average return is un-rebalanced and doesn't include China.

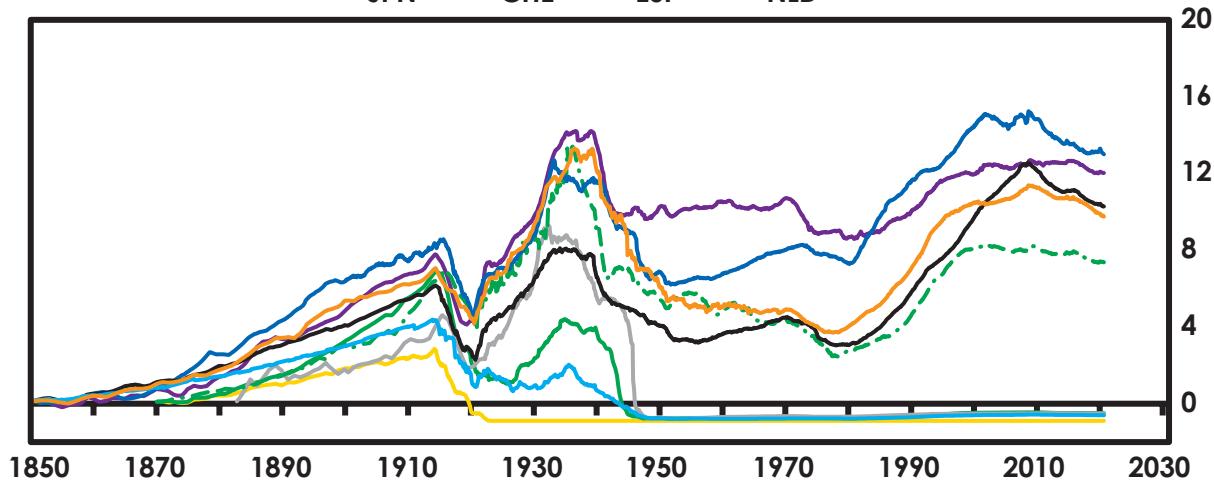
REAL RETURN OF GOLD (VS CPI, LOG)

— USA — GBR — DEU — FRA — ITA
 — JPN — CHE — ESP — NLD — CHN



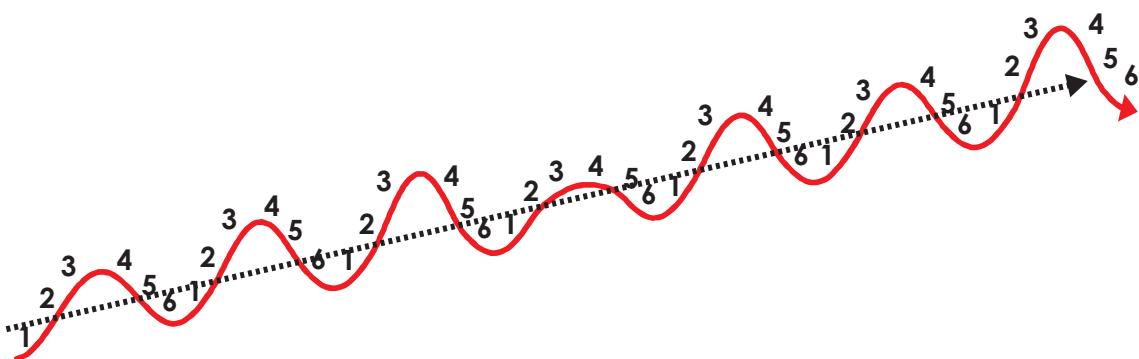
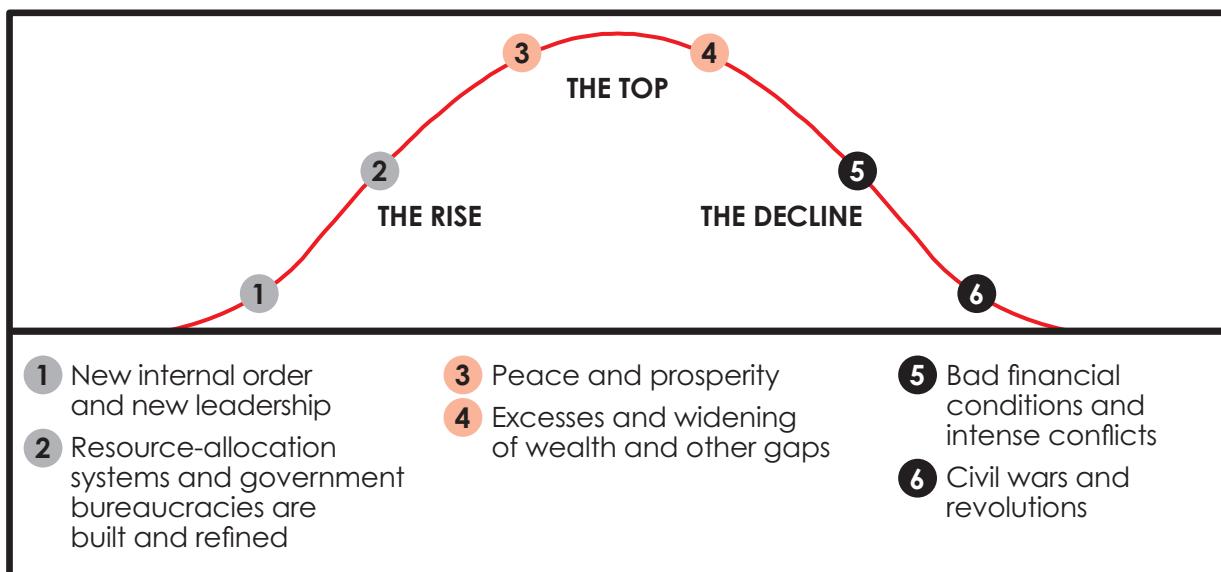
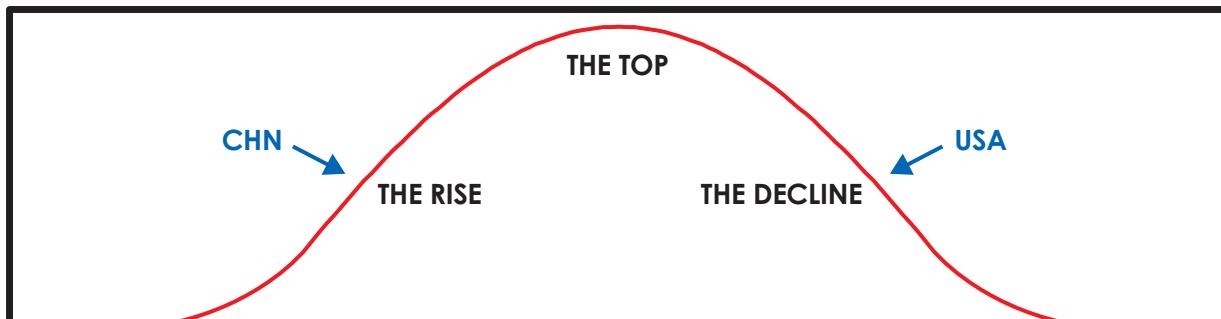
REAL RETURN OF BILLS (VS CPI)

— USA — GBR — DEU — FRA — ITA
— JPN — CHE — ESP — NLD

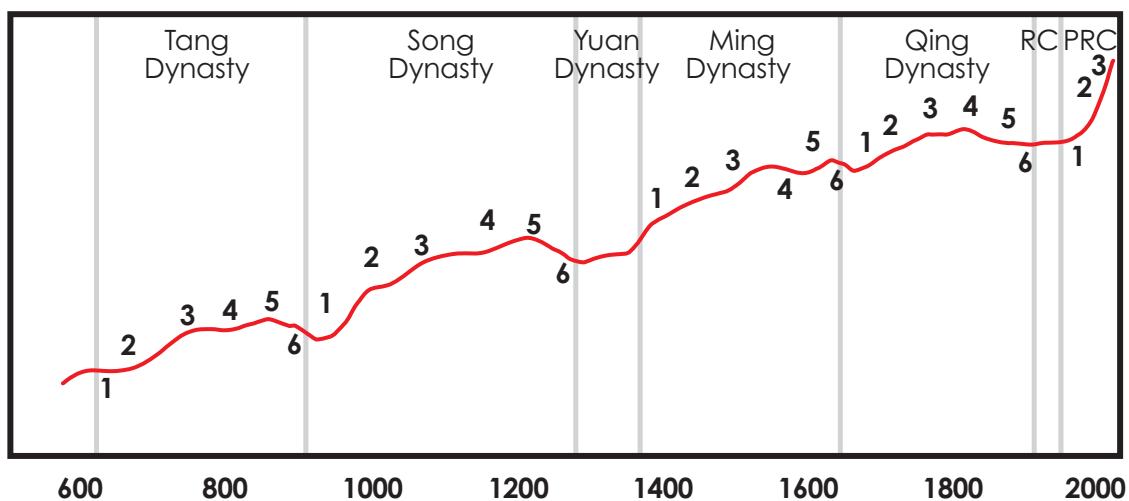


CHAPTER 5

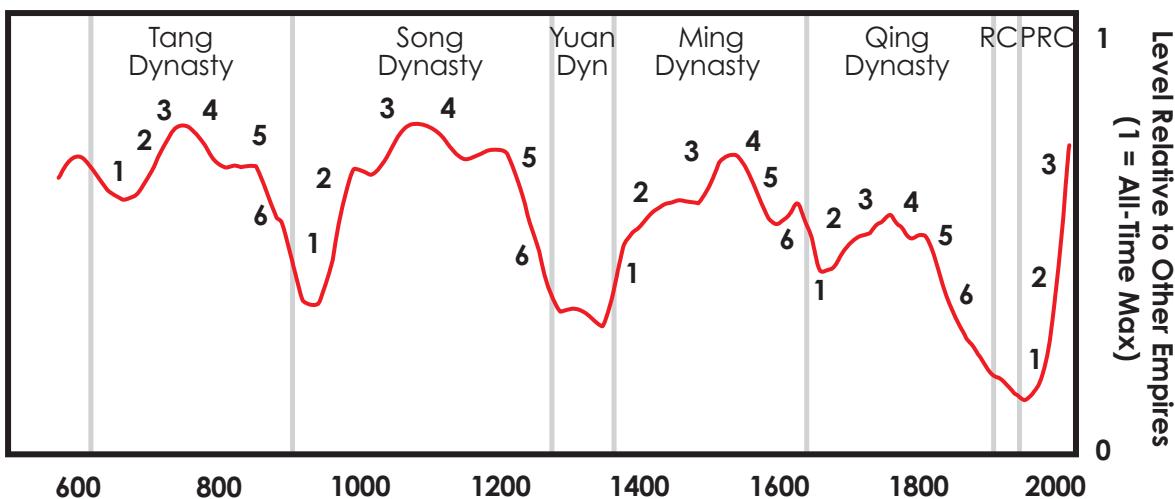
THE BIG CYCLE OF INTERNAL ORDER AND DISORDER



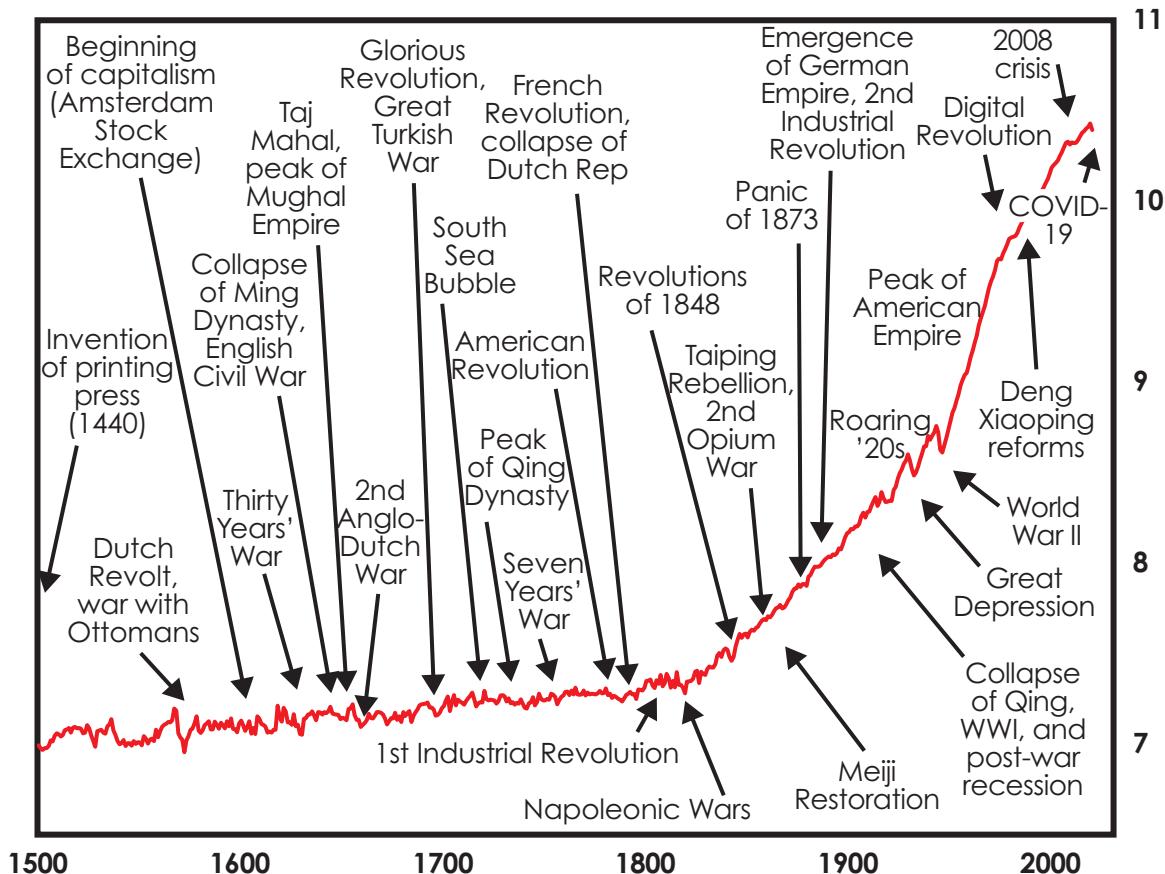
MAJOR CHINESE DYNASTIES AND THEIR STAGES (WITH INDICATIVE UPWARD EVOLUTION)



MAJOR CHINESE DYNASTIES AND THEIR STAGES

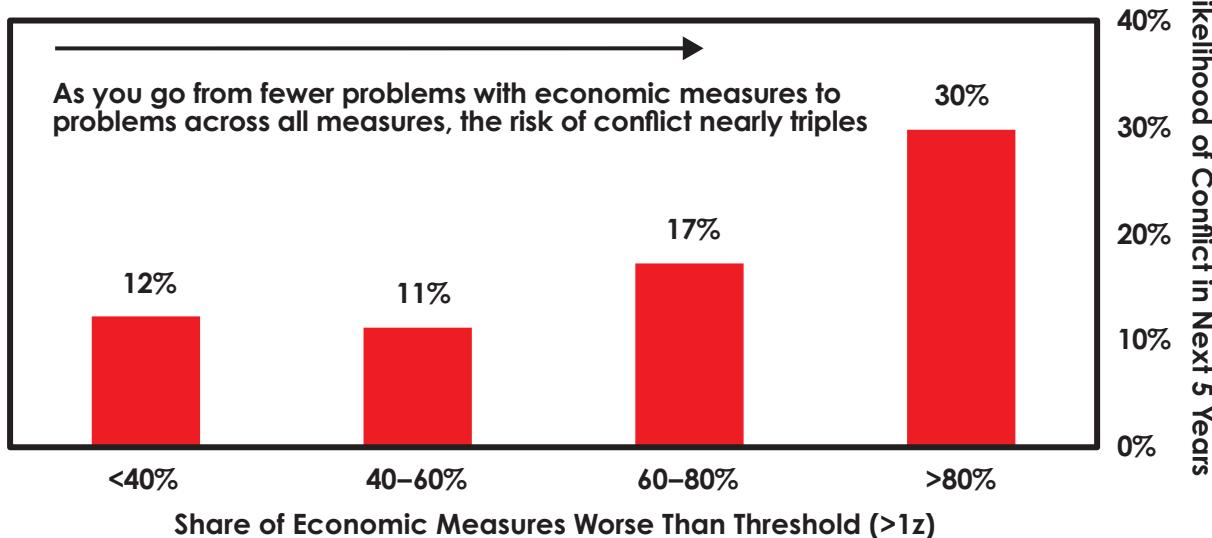


GLOBAL RGDP PER CAPITA (2017 USD, LOG)



Global RGDP is primarily a mix of European countries before 1870 due to limited reliable data coverage across other countries before that point.

HISTORICAL LIKELIHOOD OF INTERNAL CONFLICT BASED ON SHARE OF ECONOMIC MEASURES WORSE THAN THRESHOLD (>1z)



3

³ This chart is based on historical analysis of nine great powers (covering about 2,200 years of history in total). The likelihood of conflict is based on major cases of civil war, rebellion, and revolution but excludes peaceful revolutions that did not change the existing system. The analysis does not count the probability of conflict arising in a period when a country is already in the midst of internal conflict (and the five years following) to avoid counting periods in which economic conditions were bad because of the conflict itself.

CONFLICT	COUNTRY	BEGAN IN...
Dutch Revolt	NLD	1566
English Civil War	GBR	1642
Glorious Revolution	GBR	1688
American Revolution	USA	1775
French Revolution	FRA	1789
Trienio Liberal	ESP	1820
French Revolution of 1848	FRA	1848
Meiji Restoration	JPN	1868
Xinhai Revolution	CHN	1911
Russian Revolution and Civil War	RUS	1917
German Revolution/End of Monarchy	DEU	1918
Rise of Hitler/Political Violence	DEU	1929
Rise of Japanese Militarists	JPN	1932
Spanish Civil War	ESP	1936
Chinese Civil War	CHN	1945
Jacobite Risings	GBR	1745
Pugachev's Rebellion	RUS	1773
Dutch Patriot Revolt	NLD	1781
White Lotus Rebellion	CHN	1794
German Revolutions of 1848	DEU	1848
Taiping Rebellion	CHN	1851
Panthay Rebellion	CHN	1856
US Civil War	USA	1861
Muslim Rebellion	CHN	1862
Paris Commune	FRA	1871
Boxer Rebellion	CHN	1899
1905 Russian Revolution	RUS	1905
National Protection War	CHN	1915
6 February 1934 Crisis	FRA	1934

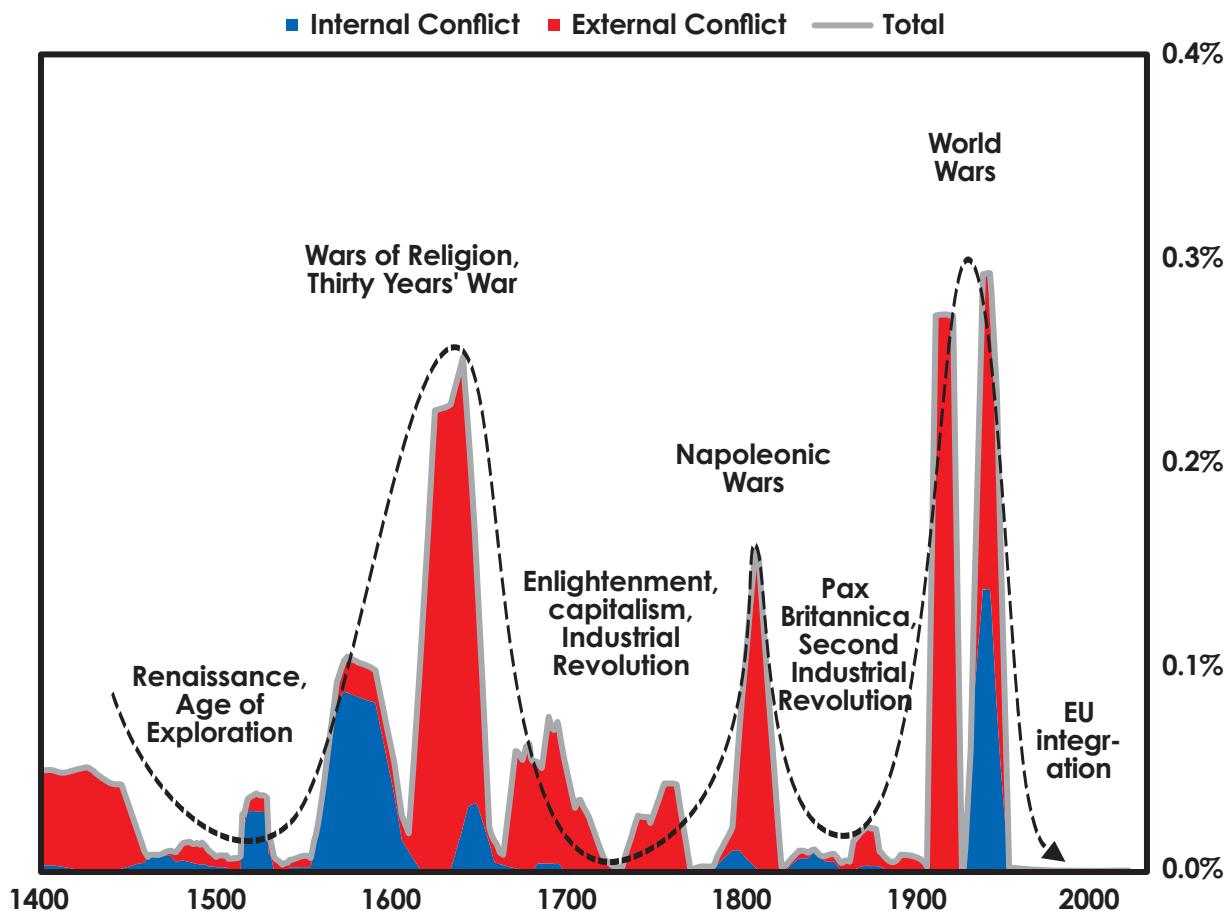
Cases that created changes to the system or regime

Cases that didn't create changes to the system or regime

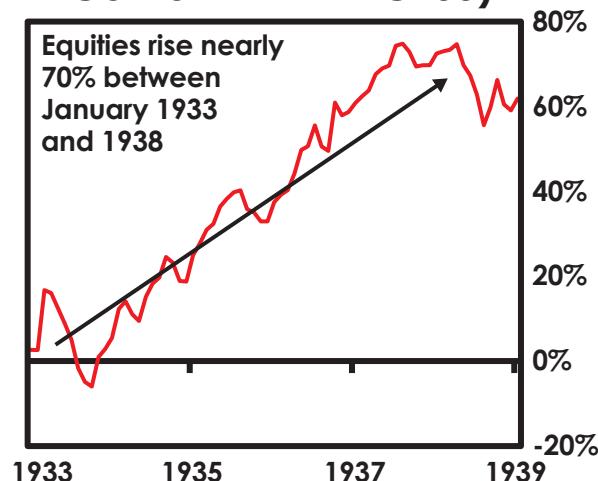
CHAPTER 6

THE BIG CYCLE OF EXTERNAL ORDER AND DISORDER

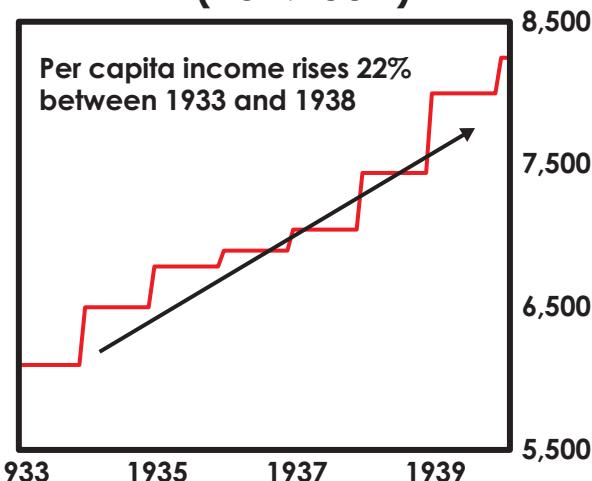
EST EUROPEAN DEATHS FROM CONFLICT (%POP, 15YR MOVING AVG)



DEU EQUITY RETURNS (LOCAL FX, CUMULATIVE EXCESS)



DEU PER CAPITA INCOME (2017 USD)



WARTIME ECONOMIC CONTROLS

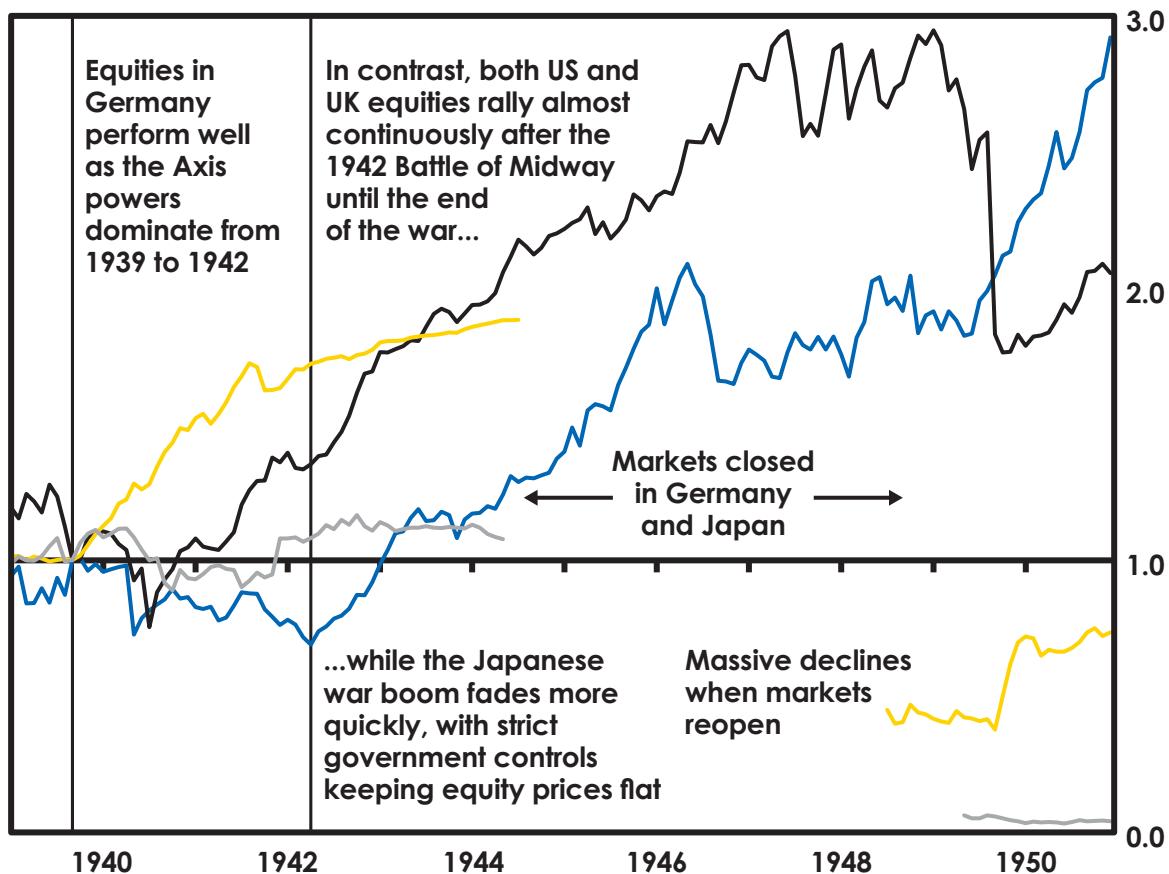
	Rationing	Production Controls	Price/Wage Controls	Import or Export Restrictions	Takeover of Central Bank
Allies					
United States	Yes	Yes	Yes	Yes	Yes
United Kingdom	Yes	Yes	Yes	Yes	Partial
Axis					
Germany	Yes	Yes	Yes	Yes	Yes
Japan	Yes	Yes	Yes	Yes	Yes

REGULATIONS IMPACTING ASSETS

	Market Closures	Asset Price Controls	Asset Ownership Restrictions	FX Controls	Top Marginal Tax Rate	Limits on New Issuance	Limits on Corp Profits
Allies							
United States	No	Yes	Yes	Yes	94%	—	Yes
United Kingdom	Yes	Yes	Yes	Yes	98%	Yes	Yes
Axis							
Germany	Yes	Yes	Yes	Yes	60%	Yes	Yes
Japan	Yes	Yes	Yes	Yes	74%	Yes	Yes

EQUITY RETURN INDEX (USD)

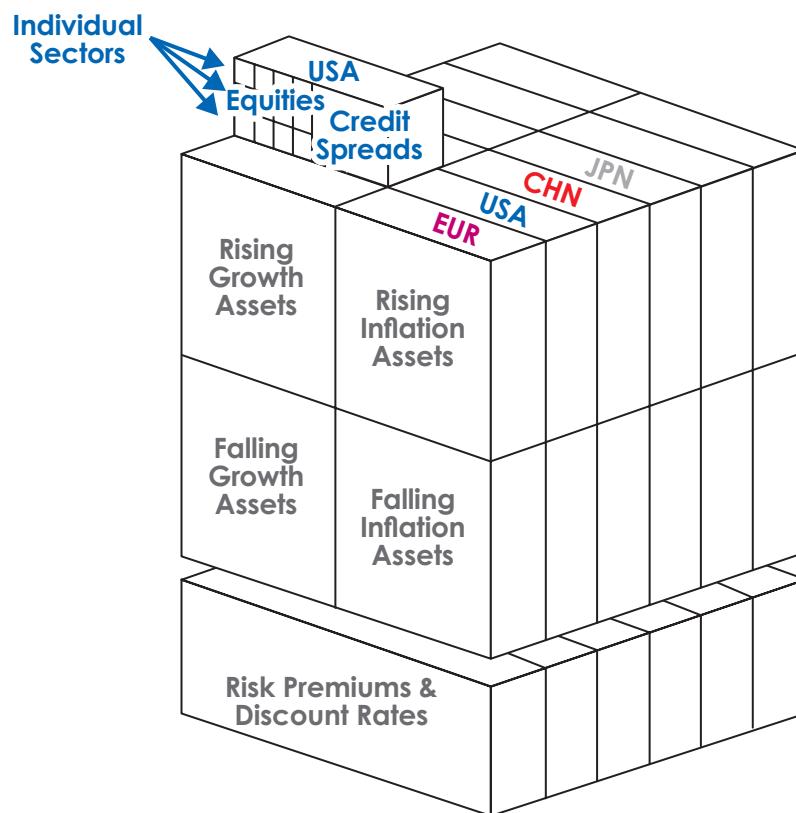
— USA — GBR — DEU — JPN



CHAPTER 7

INVESTING IN LIGHT OF THE BIG CYCLE

THE BUILDING BLOCKS OF A WELL-DIVERSIFIED PORTFOLIO



A LOOK AT ASSET RETURNS ACROSS THE GREAT POWERS

(Real Returns, 10-Year Window, Ann)

	UNITED STATES			GREAT BRITAIN			JAPAN			GERMANY		
	Equity	Bond	Cash	Equity	Bond	Cash	Equity	Bond	Cash	Equity	Bond	Cash
1900–10	9%	0%	1%	3%	2%	2%	4%	1%	4%	3%		2%
1910–20	-2%	-4%	-3%	-6%	-7%	-5%	1%	-5%	-4%	-14%	-10%	-14%
1920–30	16%	7%	5%	10%	8%	7%	-3%	12%	10%	-24%	-95%	-86%
1930–40	0%	7%	3%	1%	5%	1%	6%	4%	-1%	7%	11%	6%
1940–50	3%	-2%	-5%	3%	-1%	-4%	-28%	-34%	-33%	-4%	-16%	-19%
1950–60	16%	-1%	0%	13%	-1%	-1%	27%	-1%	5%	26%	5%	2%
1960–70	5%	-1%	2%	4%	0%	2%	8%	8%	2%	3%	5%	1%
1970–80	-2%	-1%	-1%	-4%	-3%	-3%	3%	-2%	-1%	-7%	4%	0%
1980–90	13%	9%	4%	16%	8%	5%	19%	9%	4%	10%	6%	3%
1990–00	14%	6%	2%	12%	8%	5%	-7%	9%	2%	13%	7%	3%
2000–10	-3%	8%	0%	0%	4%	2%	-3%	4%	1%	-2%	6%	2%
2010–20	11%	4%	-1%	5%	5%	-1%	10%	2%	0%	7%	5%	-1%

A LOOK AT ASSET RETURNS ACROSS THE GREAT POWERS

(Real Returns, 10-Year Window, Ann)

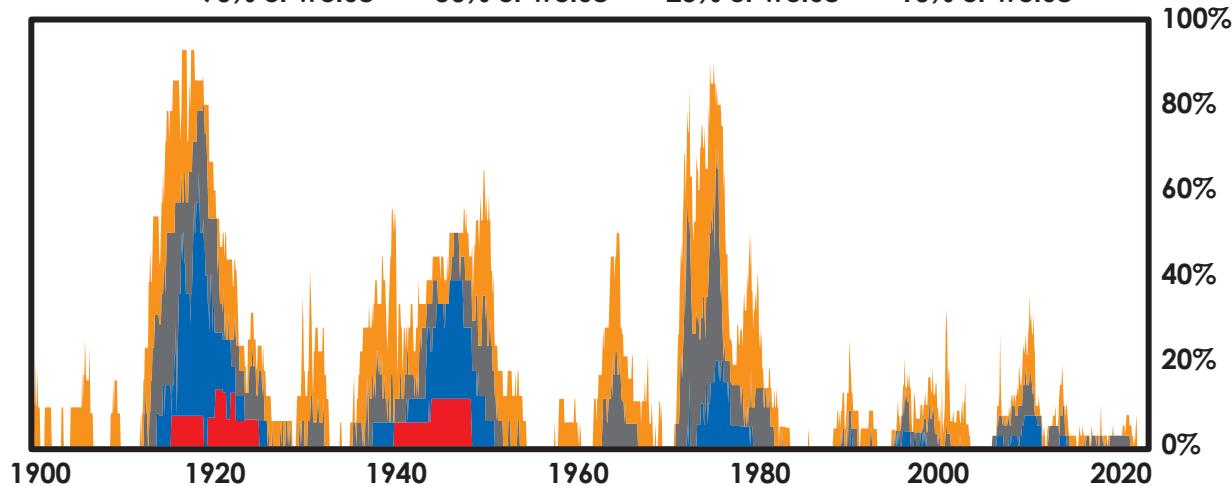
	FRANCE			NETHERLANDS			ITALY		
	Equity	Bond	Cash	Equity	Bond	Cash	Equity	Bond	Cash
1900–10	1%	3%	2%	5%	1%	1%		3%	4%
1910–20	-7%	-8%	-6%	1%	-6%	-3%	-9%	-8%	-6%
1920–30	-2%	-1%	-4%	1%	11%	6%	-6%	-5%	-1%
1930–40	-10%	2%	0%	2%	6%	3%	4%	5%	5%
1940–50	-20%	-22%	-23%	2%	-3%	-6%	-13%	-30%	-30%
1950–60	17%	0%	-2%	14%	0%	-2%	20%	2%	1%
1960–70	0%	2%	1%	2%	0%	0%	0%	2%	0%
1970–80	-2%	-3%	0%	-3%	2%	-2%	-13%	-8%	-1%
1980–90	16%	9%	5%	16%	7%	5%	15%	4%	6%
1990–00	13%	10%	5%	20%	7%	4%	9%	15%	6%
2000–10	-2%	5%	1%	-6%	5%	1%	-4%	5%	1%
2010–20	7%	6%	-1%	8%	5%	-1%	3%	8%	-1%

	RUSSIA			CHINA			AUSTRIA-HUNGARY		
	Equity	Bond	Cash	Equity	Bond	Cash	Equity	Bond	Cash
1900–10	-2%	3%	4%	7%	6%	3%	4%	3%	2%
1910–20	-100%	-100%	-36%	3%	1%	4%	-9%	-10%	-8%
1920–30				9%	6%	1%	-6%	-44%	-44%
1930–40				2%	-7%	-6%			
1940–50				-100%	-100%	-73%			
1950–60									
1960–70									
1970–80									
1980–90									
1990–00									
2000–10	15%		-2%	4%		1%			
2010–20	7%	4%	1%	2%	2%	0%			

4

SHARE OF PORTFOLIOS LOSING X% OVER 5 YEARS BY COUNTRY (60/40 PORTFOLIO, REAL RETURNS)

■ -90% or worse ■ -50% or worse ■ -25% or worse ■ -10% or worse



⁴ For China and Russia, bond data pre-1950 is modeled using hard currency bond returns held as though hedged back to local currency by a domestic investor; stocks and bonds modeled as full default at time of revolution. Annualized returns assume a full 10-year period even if markets closed during the decade.

WORST INVESTOR EXPERIENCES (ACROSS MAJOR COUNTRIES)

Major Cases of 60/40 Real Returns Below -40% over a 20-Year Window

Country	20yr Window	Worst 20yr Return (Real, Cumul)	Detail
Russia	1900–1918	-100%	The Russian Civil War ended with communist rule, debt repudiation, and the destruction of financial markets.
China	1930–1950	-100%	Asset markets closed during WWII and were destroyed when communist rule took hold in the late 1940s.
Germany	1903–1923	-100%	Weimar Republic hyperinflation led to a collapse in assets following WWI.
Japan	1928–1948	-96%	Japanese markets and currency collapsed as markets reopened post-WWII and inflation soared.
Austria	1903–1923	-95%	Similar to Weimar Germany (though less infamous); hyperinflation led to poor asset returns post-WWI.
France	1930–1950	-93%	The Great Depression, followed by WWII and German occupation, led to poor returns and high inflation.
Italy	1928–1948	-87%	Similar to those of other Axis powers, Italian markets collapsed as WWII concluded.
Italy	1907–1927	-84%	Post-WWI, Italy suffered from economic depression and high inflation, helping lead to Mussolini's rise.
France	1906–1926	-75%	The early 20th century saw WWI, followed by France's inflationary currency crisis in the early 1920s.
Italy	1960–1980	-72%	Italy endured a series of recessions, high unemployment rate and inflation, and currency declines in the 1960–70s.
India	1955–1975	-66%	Post-independence, a series of major droughts caused weak Indian economic growth and high inflation.
Spain	1962–1982	-59%	The post-Franco transition to democracy coupled with the inflationary 1970s strained Spain's economy.
Germany	1929–1949	-50%	The Great Depression followed by the devastation of WWII led to a terrible period for German assets.
France	1961–1981	-48%	Like other European nations, the 1960–70s saw weaker growth, currency declines, and high inflation.
UK	1901–1921	-46%	The early 20th century saw World War I, followed by the depression of 1920–21.

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⁵ Cases of poor asset returns in smaller countries such as Belgium, Greece, New Zealand, Norway, Sweden, Switzerland, and across the emerging world are excluded from this table. Note that for conciseness the worst 20-year window is shown for each country/time period (i.e., including Germany in 1903–23 precludes including Germany from 1915–35). For our 60/40 portfolios, we assumed monthly rebalancing across the 20-year window.

PERIODS OF WEALTH CONFISCATION

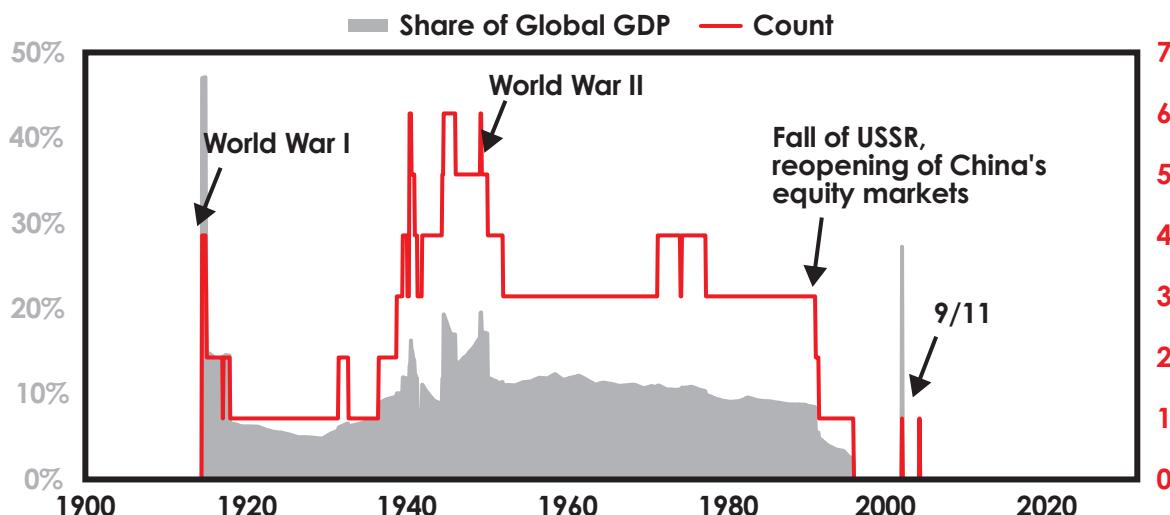
	1900	1920	1940	1960	1980	2000
UK						
USA	Yes	Yes				
China			Yes	Yes		
Germany		Yes				
France						
Russia	Yes	Yes	Yes	Yes		
Austria-Hungary						
Italy		Yes				
Netherlands						
Japan			Yes			

PERIODS OF STRICT/RISING CAPITAL CONTROLS

	1900	1920	1940	1960	1980	2000
UK	Yes	Yes	Yes	Yes		
USA	Yes	Yes				
China			Yes	Yes	Yes	
Germany	Yes	Yes	Yes	Yes		
France	Yes			Yes		
Russia	Yes	Yes	Yes	Yes	Yes	Yes
Austria-Hungary	Yes					
Italy		Yes				
Netherlands				Yes		
Japan		Yes		Yes		

⁶ While this diagram is not exhaustive, I include instances where I could find clear evidence of each occurring in the 20-year period. For this analysis, wealth confiscation was defined as extensive seizure of private assets, including large-scale forced, non-economic sales by a government (or revolutionaries in the case of revolution). Relevant capital controls were defined as meaningful restrictions on investors moving their money to and from other countries and assets (although this does not include targeted measures directed only at single countries, such as sanctions).

STOCK MARKET CLOSURES ACROSS MAJOR ECONOMIES



DEATHS IN MAJOR VIOLENT CONFLICTS (%POPULATION) INTERNAL AND EXTERNAL

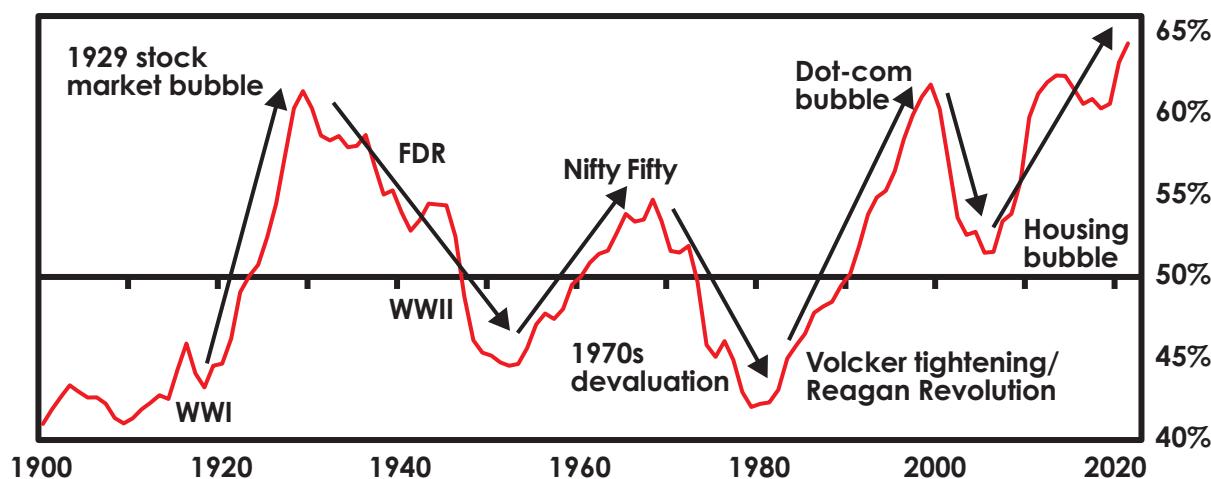
	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
UK	0%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
USA	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
China	0%	0%	1%	2%	3%	1%	1%	1%	0%	0%	0%	0%
Germany	0%	3%	0%	9%	15%	0%	0%	0%	0%	0%	0%	0%
France	0%	4%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Russia	0%	4%	5%	10%	13%	0%	0%	0%	0%	0%	0%	0%
Austria-Hungary	0%	2%										
Italy	0%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Netherlands	0%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%
Japan	0%	0%	0%	1%	4%	0%	0%	0%	0%	0%	0%	0%

IMPACT OF TAXES ON ROLLING 20-YEAR S&P TOTAL RETURNS

	Pre-Tax	Post-Tax (401[k])	Post-Tax (Brokerage)
Avg Ann Total Return	9.5%	8.2%	7.9%
Avg Drag from Taxes (Ann Total Return)		-1.3%	-1.6%
Avg Drag from Taxes (% of Total Returns)		-14%	-17%
Avg Ann Real Return	6.2%	4.9%	4.6%
Avg Drag from Taxes (Ann Real Return)		-1.2%	-1.6%
Avg Drag from Taxes (% of Real Returns)		-20%	-26%

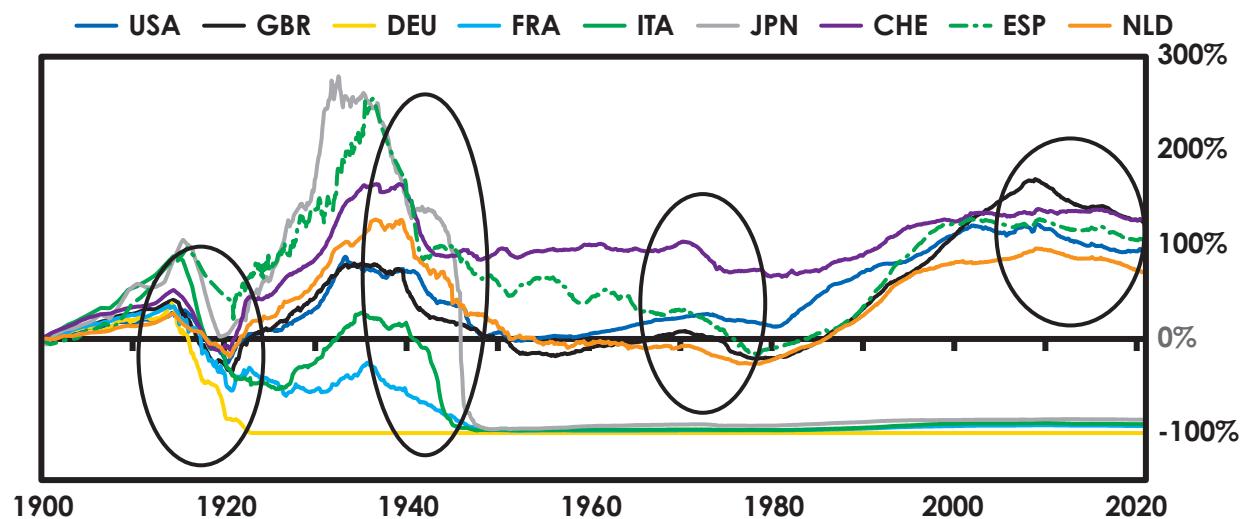
7

USA FINANCIAL ASSETS SHARE OF TOTAL ASSETS

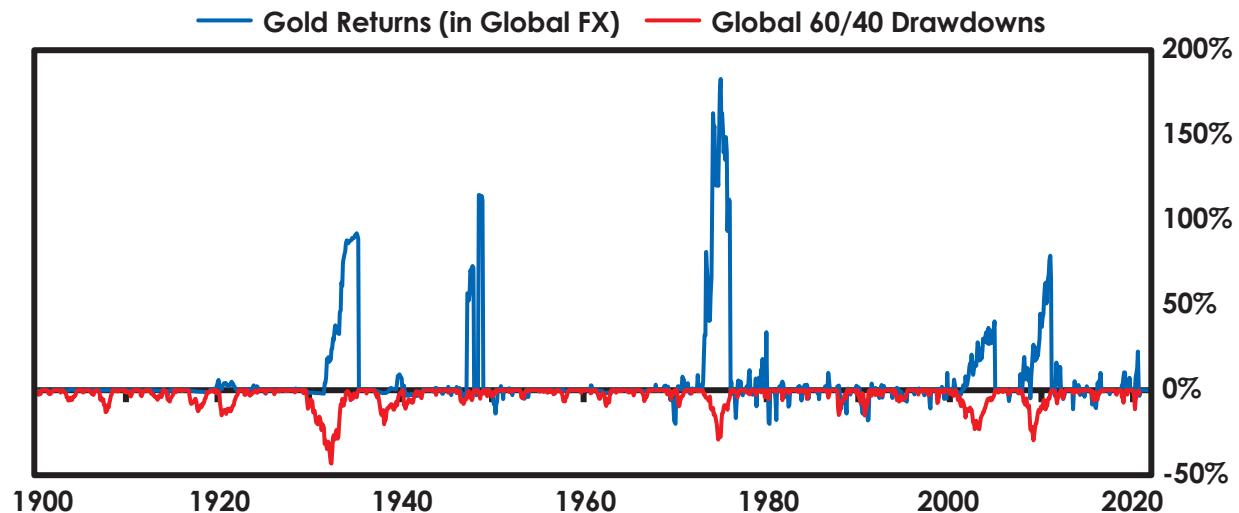


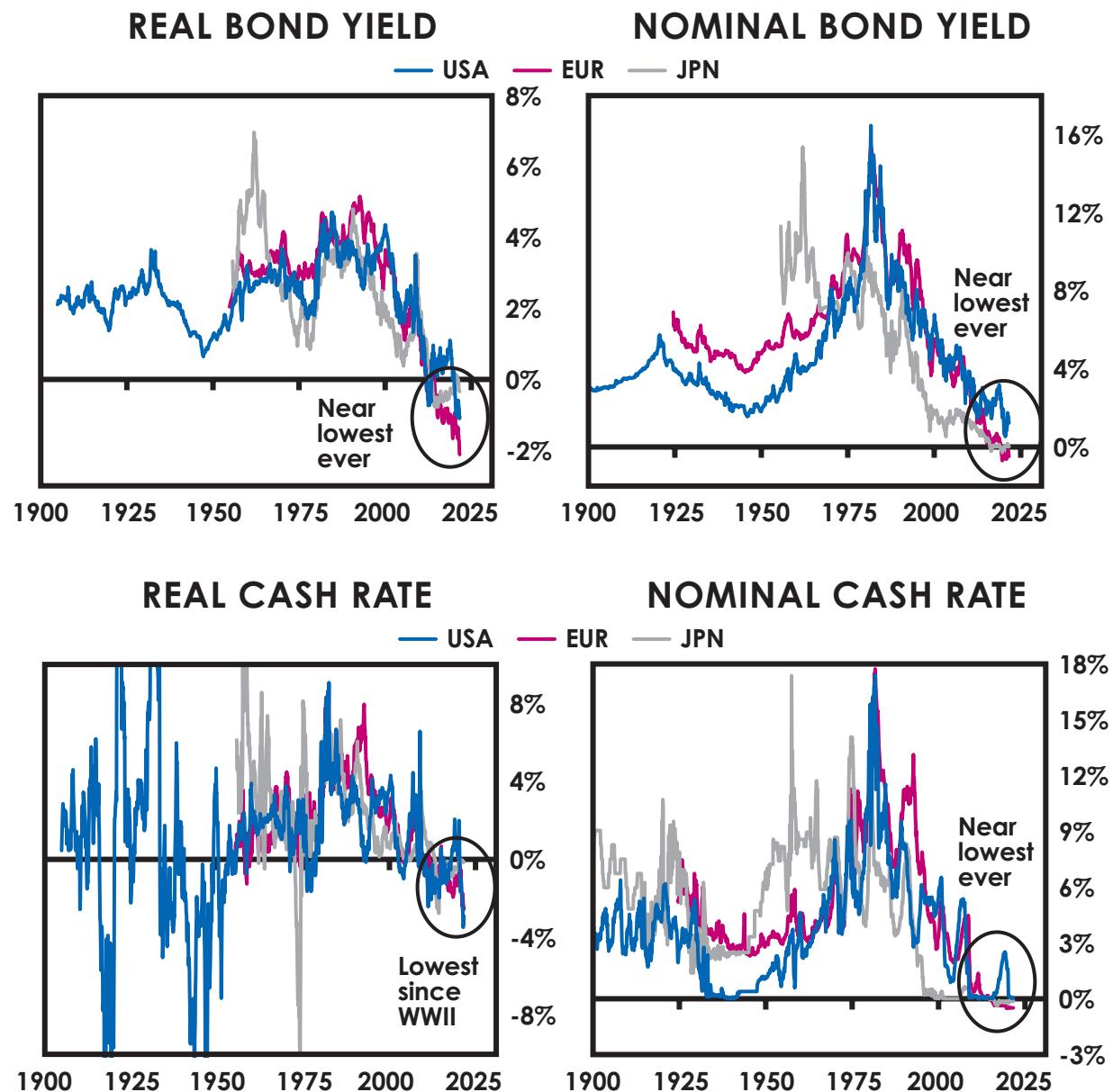
⁷ Tax impact for 401(k) method applies a 26 percent income tax rate (effective average federal tax rate for top quintile from the Congressional Budget Office as of 2017) at the conclusion of each 20-year investment period (i.e., tax-free investment growth). Tax impact for brokerage method separately taxes dividends (at the same 26 percent income tax rate) and capital gains, paying taxes on all capital gains (at a 20 percent rate) from both principal and dividend reinvestment at the conclusion of each 20-year investment period and netting losses against any gains.

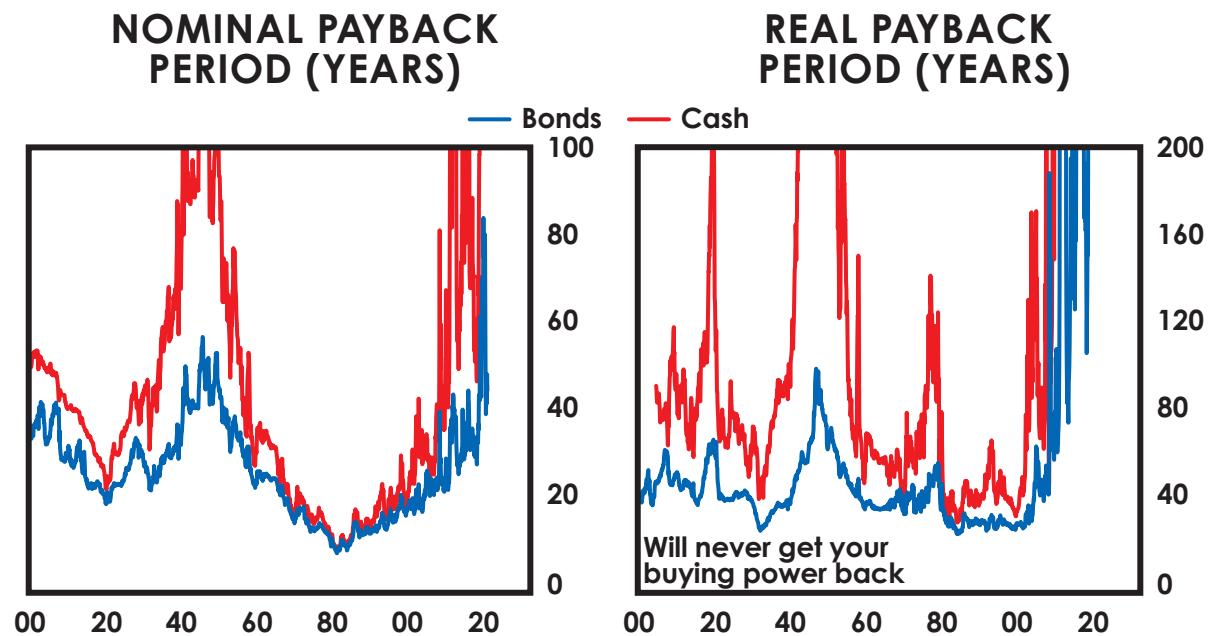
REAL RETURN OF BILLS (VS CPI)



GOLD RETURNS DURING 60/40 DRAWDOWNS

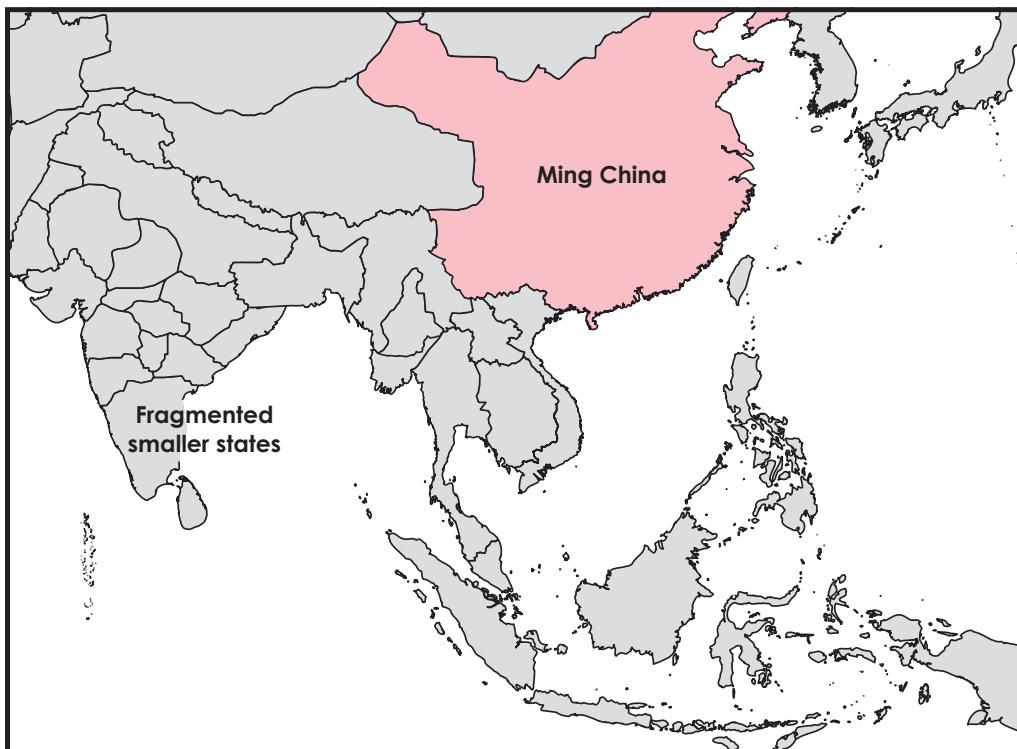
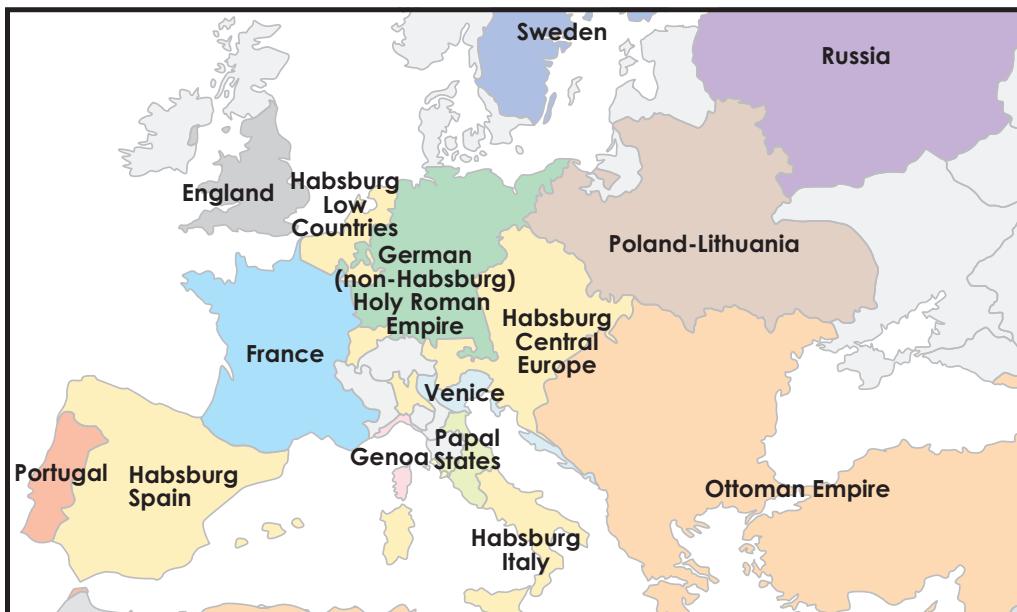




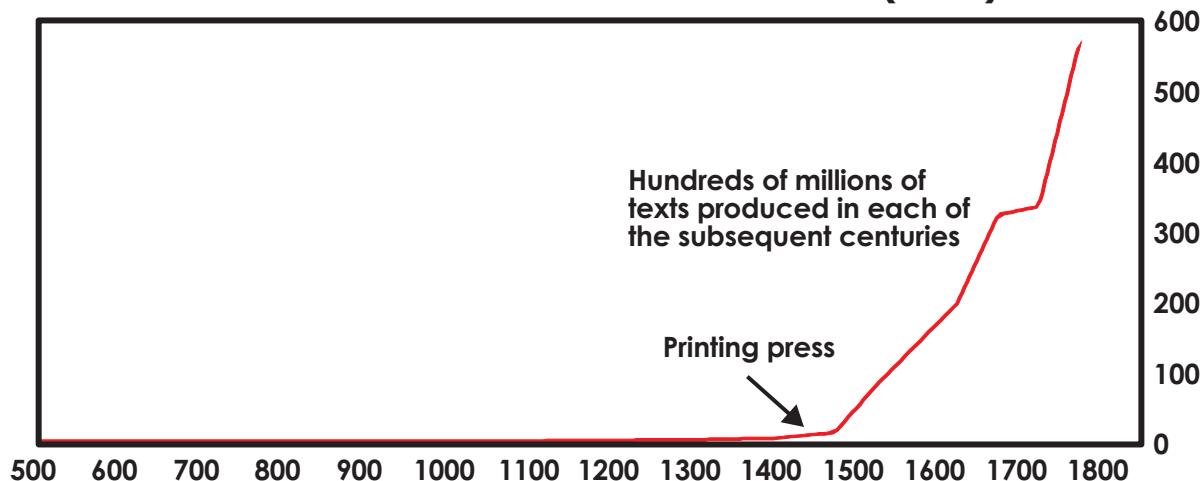


CHAPTER 8

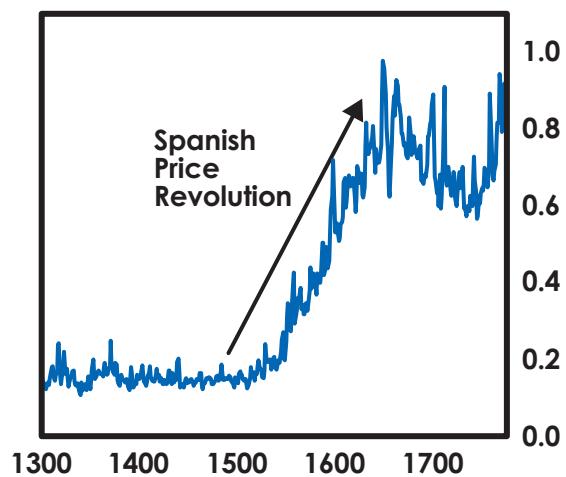
THE LAST 500 YEARS IN A TINY NUTSHELL



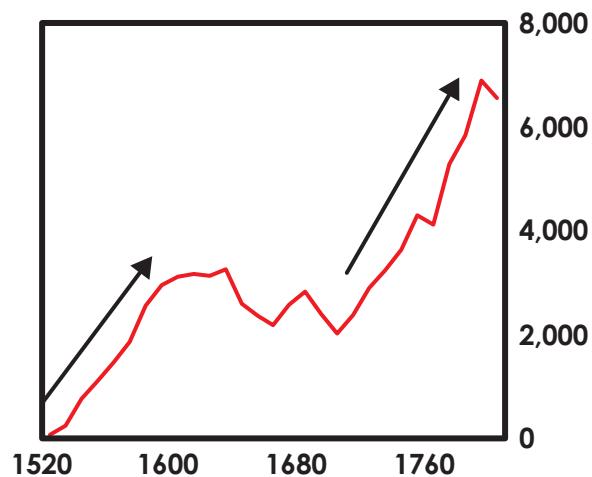
BOOK/MANUSCRIPT PRODUCTION IN MAJOR EUROPEAN COUNTRIES (MLN)



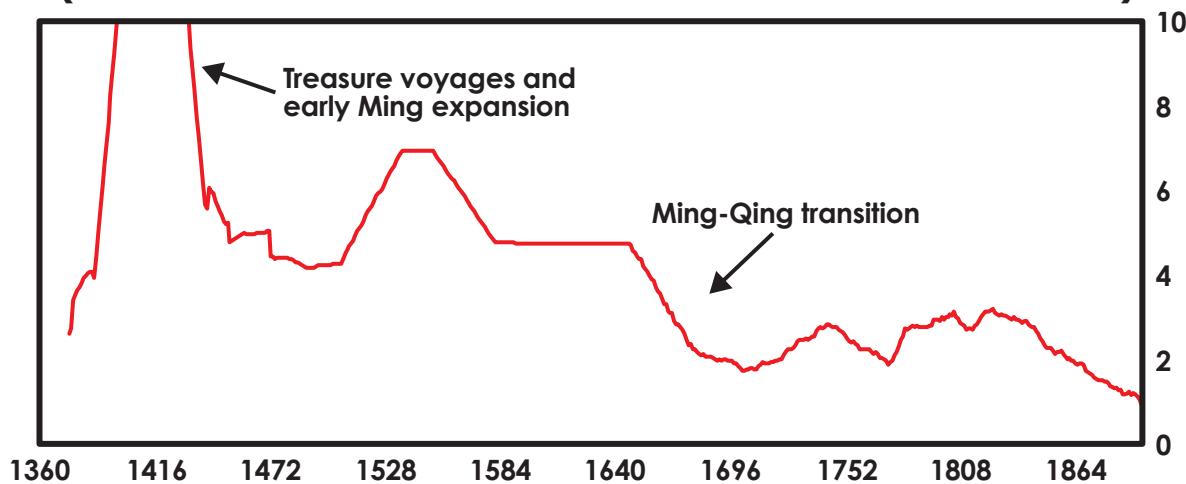
UK CONSUMER PRICE INDEX



SILVER PRODUCTION FROM MEXICO AND PERU (METRIC TON)



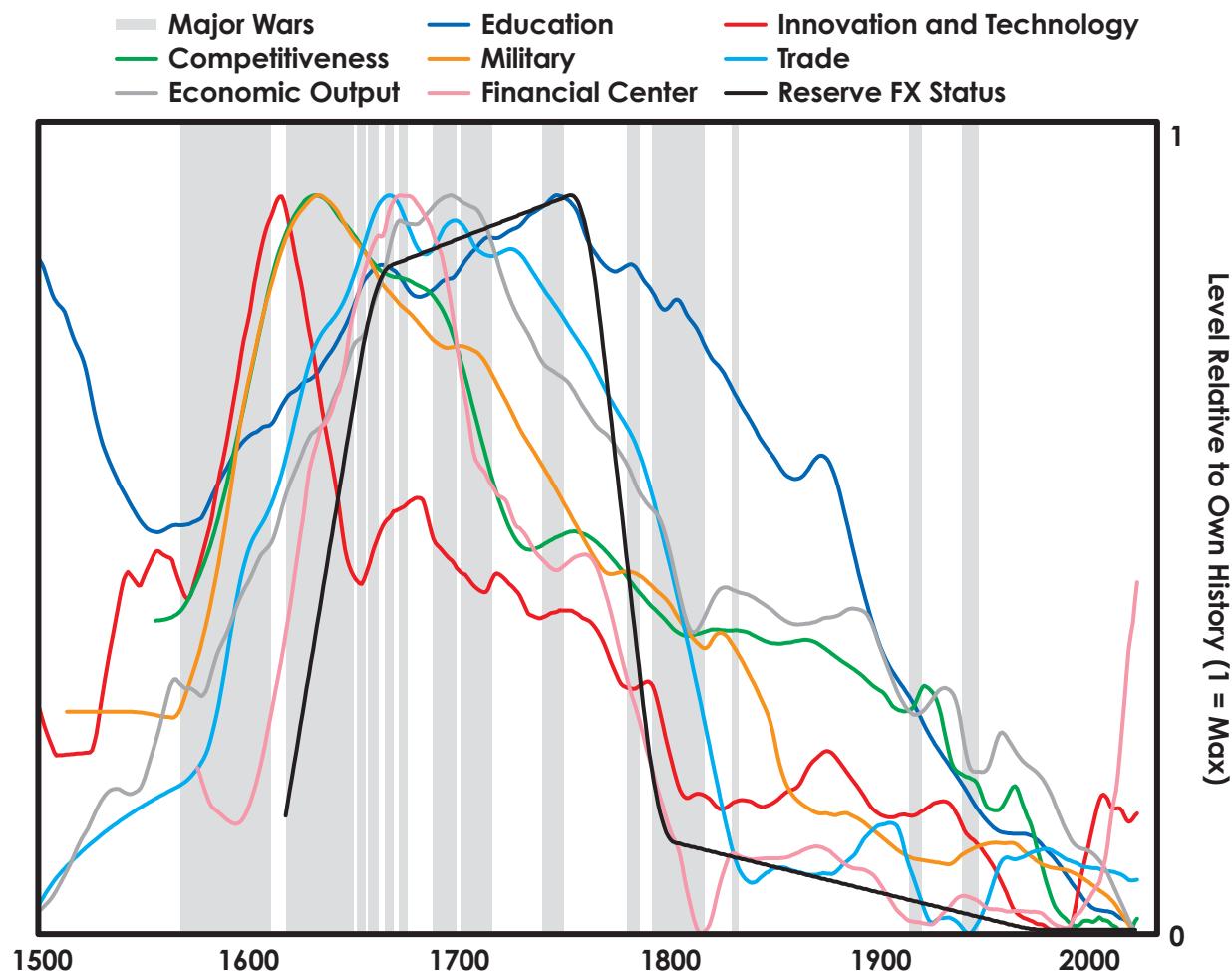
ROUGH COUNT OF TRIBUTARY AREAS (BASED ON TRIBUTARY VOYAGES OVER 30YR WINDOW)



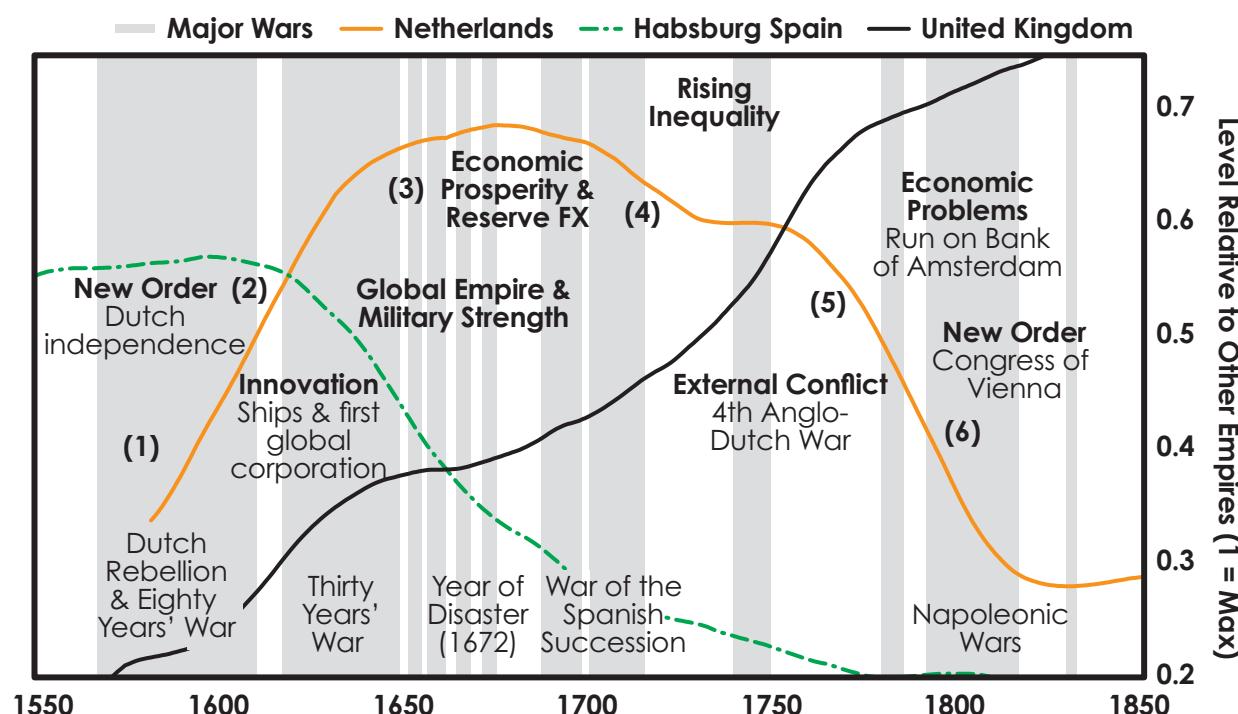
CHAPTER 9

THE BIG CYCLE RISE AND DECLINE OF THE DUTCH EMPIRE AND THE GILDER

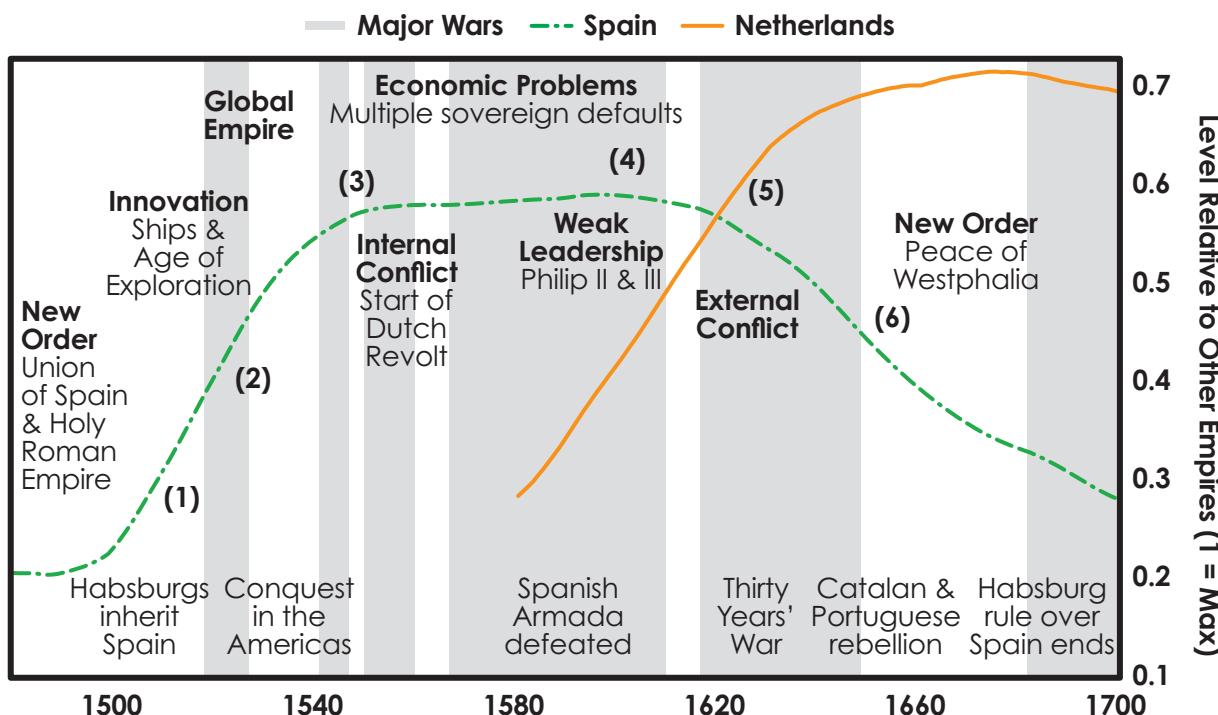
THE NETHERLANDS: INDEX OF KEY DETERMINANTS



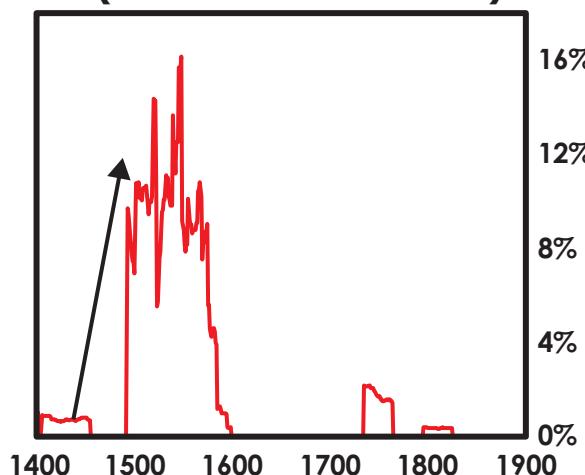
DUTCH ARC 1550–1850



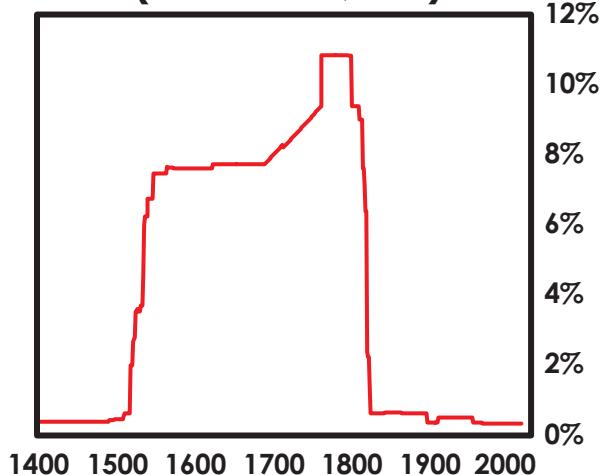
HABSBURG SPAIN'S ARC IN THE 1500S AND 1600S



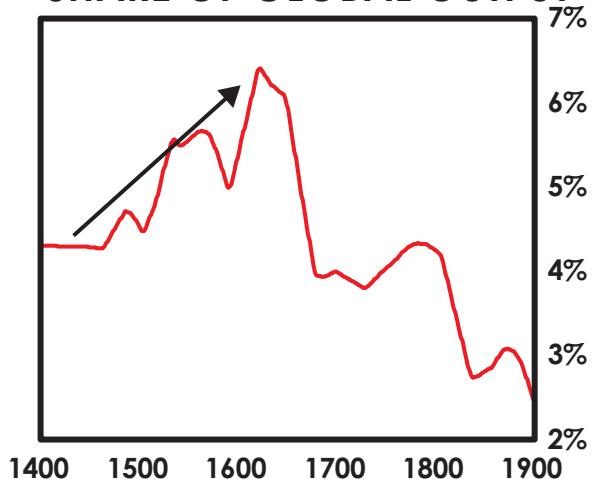
SHARE OF MAJOR INVENTIONS (TRAILING 30 YEARS)



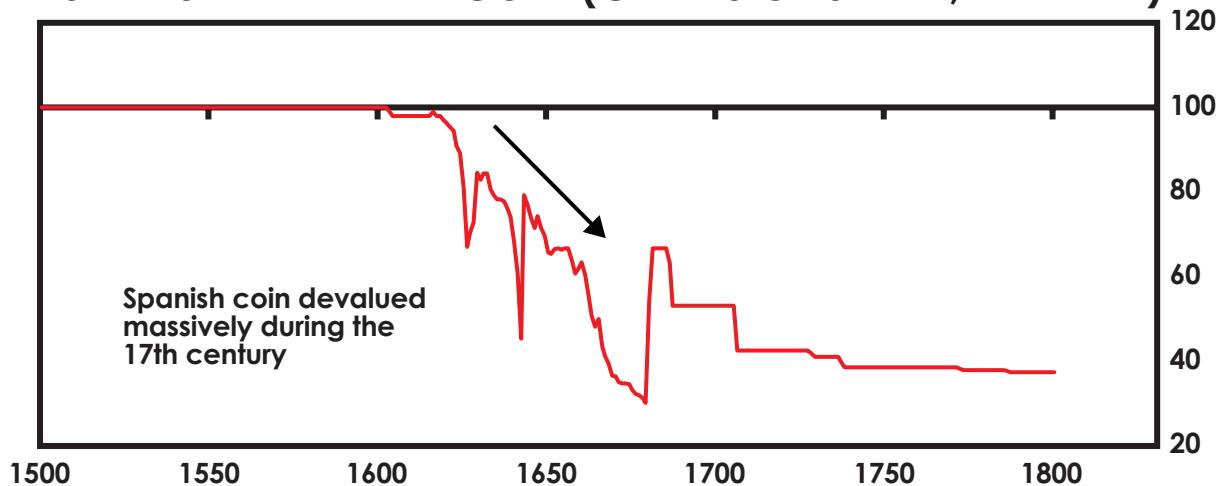
EMPIRE SIZE (% WORLD, EST)



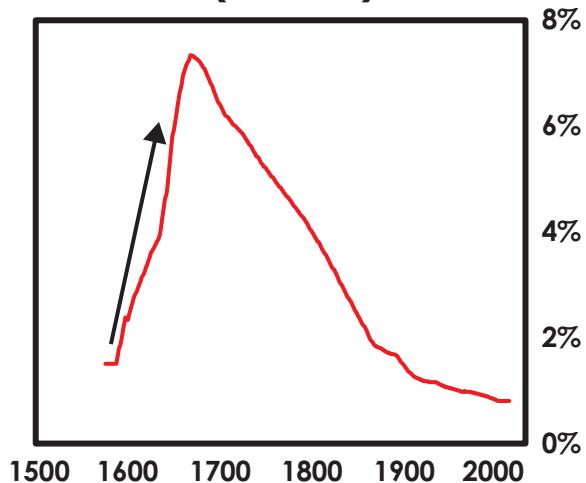
SHARE OF GLOBAL OUTPUT



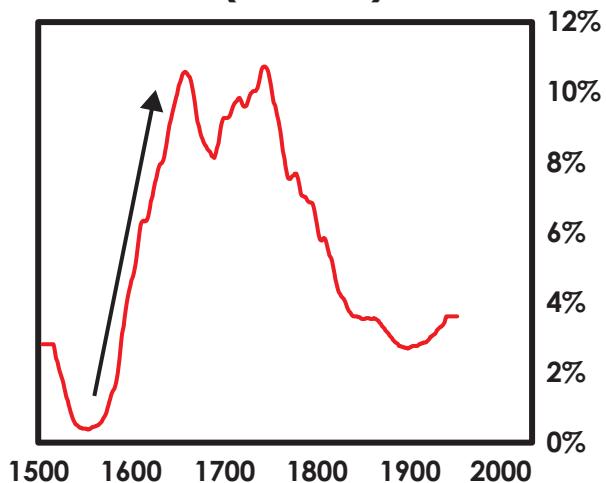
SPANISH MARAVEDI COIN (GRAMS OF SILVER, INDEXED)



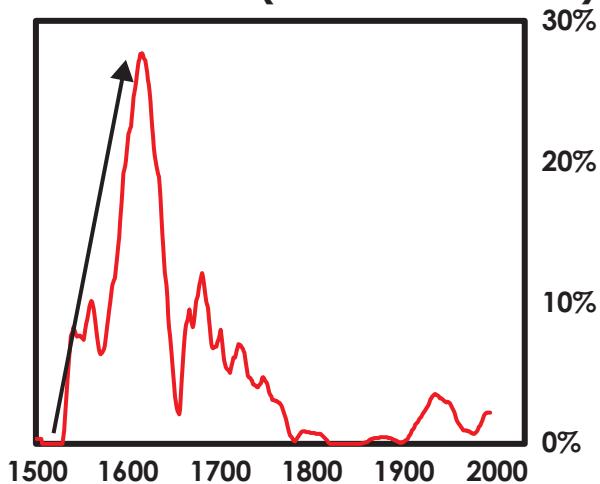
**NLD UNIVERSITIES FOUNDED
(% WLD)**



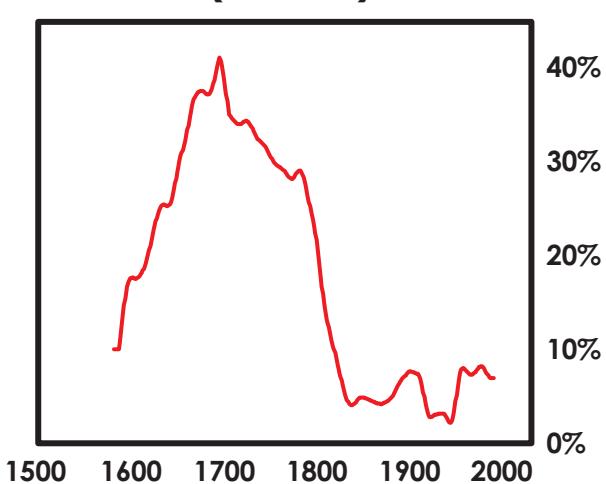
**NLD BOOKS PUBLISHED
(% WLD)**



**NLD SHARE OF MAJOR
INVENTIONS (OVER 30 YEARS)**

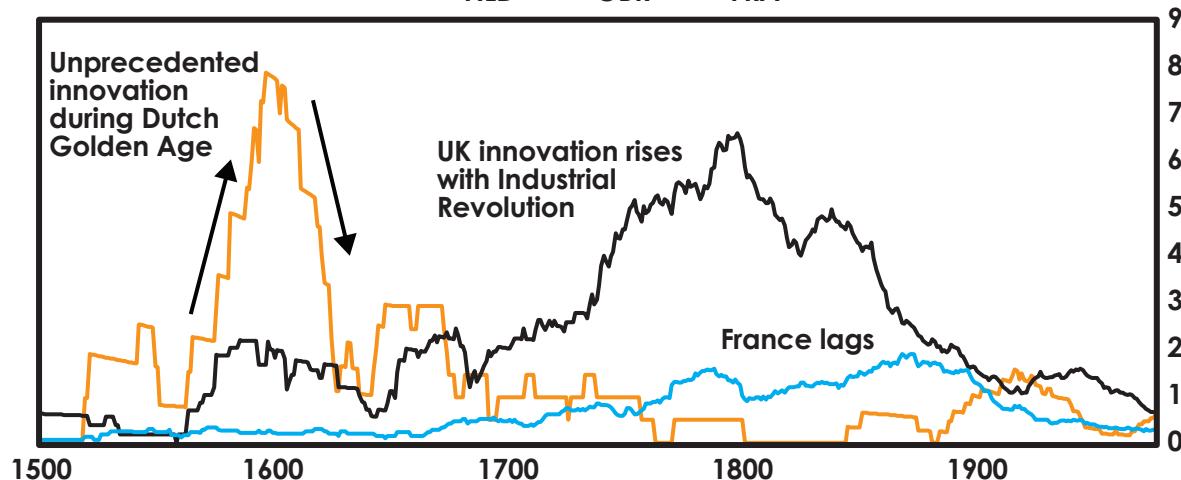


**NLD EXPORTS
(% WLD)**



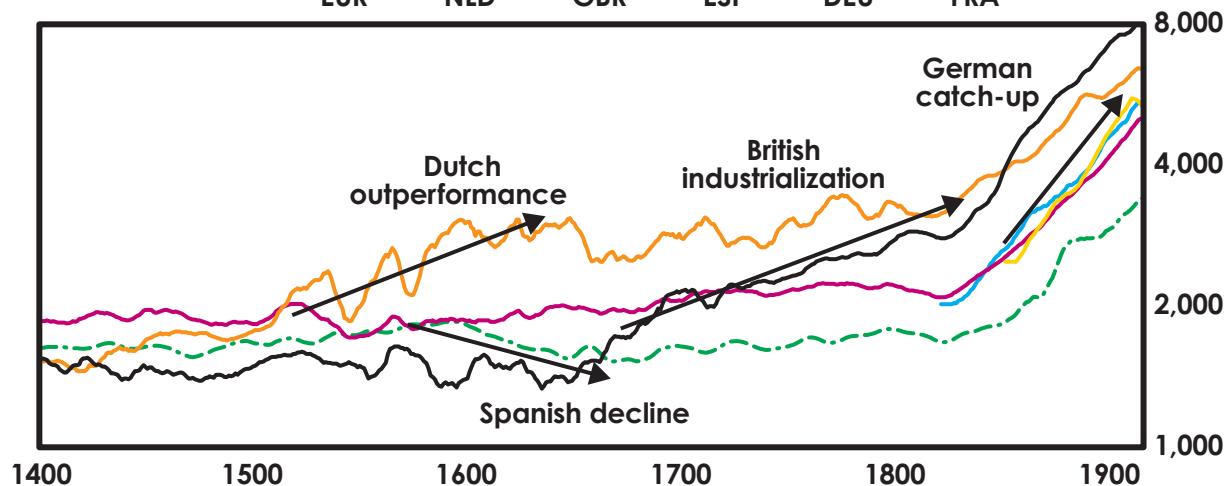
MAJOR INVENTIONS (PER MLN POPULATION)

NLD — GBR — FRA

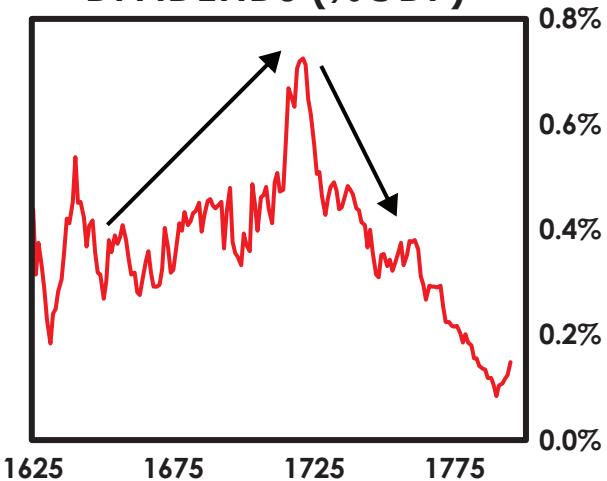


REAL GDP PER CAPITA (2017 USD)

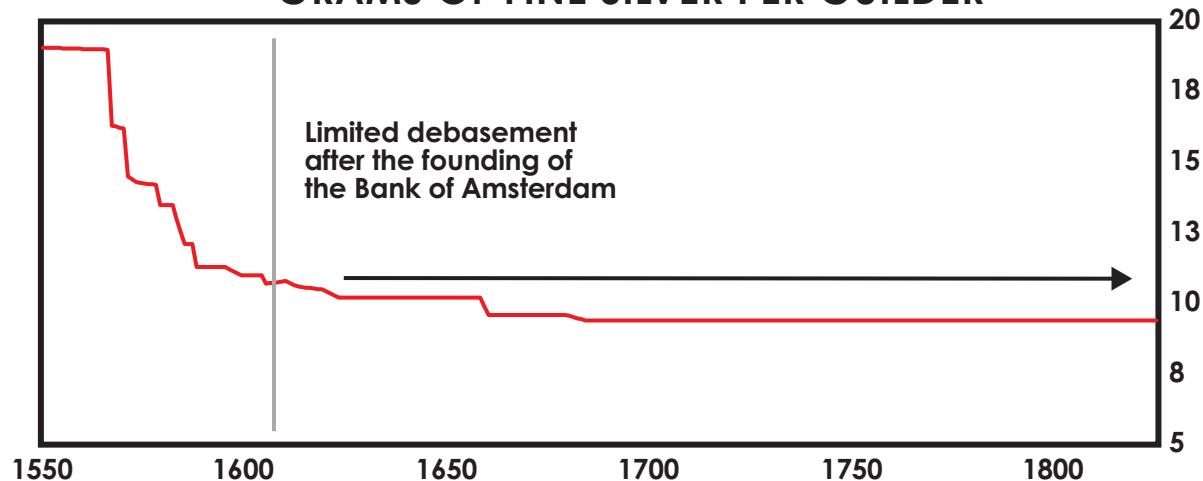
EUR — NLD — GBR — ESP — DEU — FRA



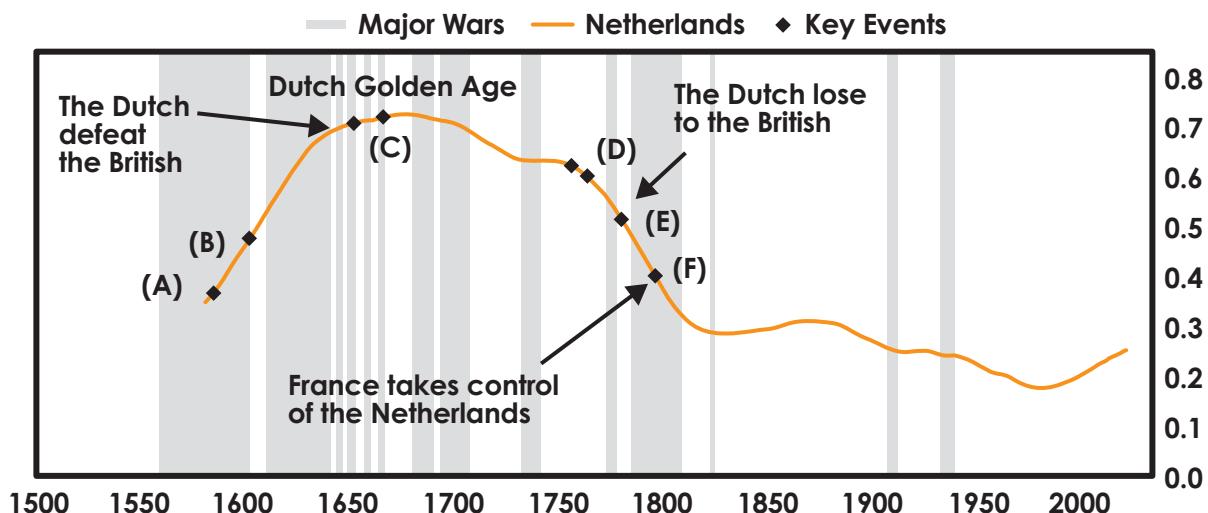
DUTCH EAST INDIA CO DIVIDENDS (%GDP)



GRAMS OF FINE SILVER PER GUILDER

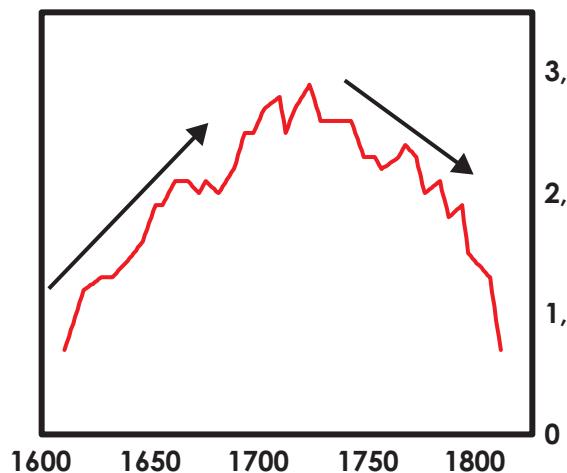


DUTCH STANDING RELATIVE TO OTHER GREAT POWERS (EST)

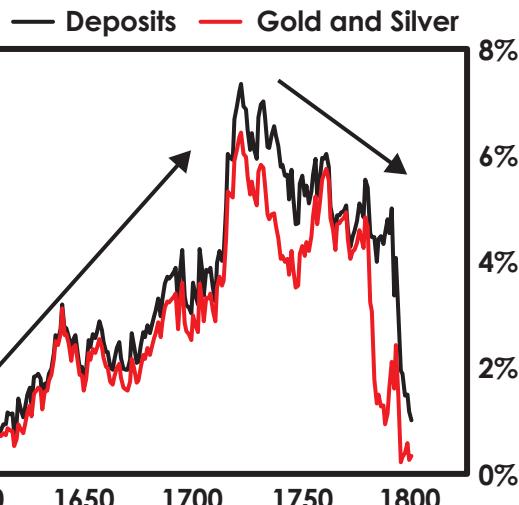


- (A) The Dutch declare independence from Spain
- (B) Dutch East India Co, Bank of Amsterdam, and stock exchange founded
- (C) First and Second Anglo-Dutch Wars
- (D) Seven Years' War and Shadow Banking Crisis of 1763
- (E) Fourth Anglo-Dutch War, run on the Bank of Amsterdam
- (F) Dutch East India Co nationalized, downfall of the Dutch Empire

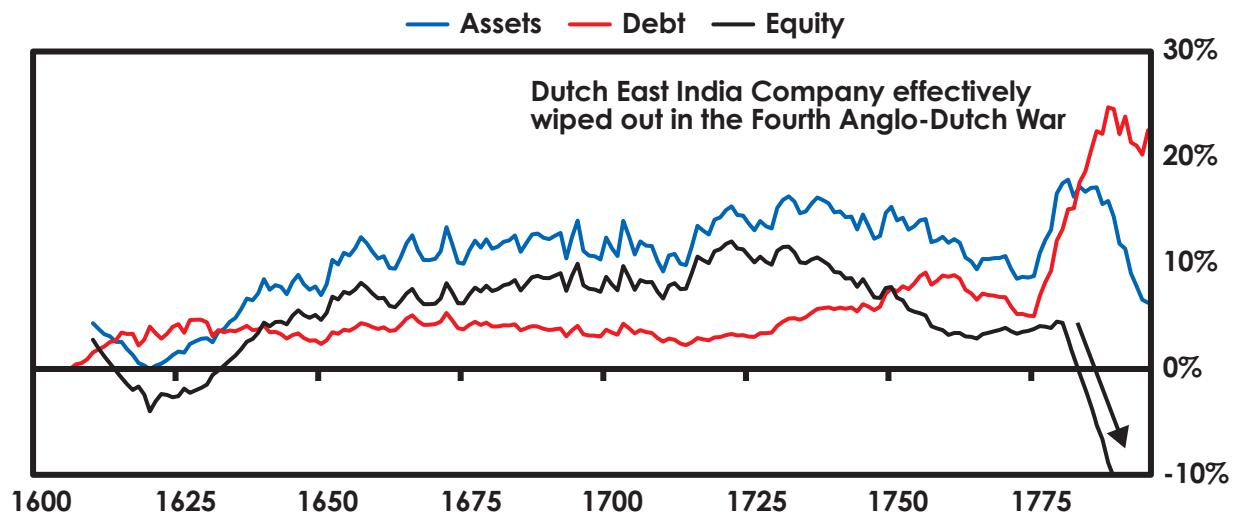
ACCOUNTS AT BANK OF AMSTERDAM



BANK OF AMSTERDAM HOLDINGS (%GDP)

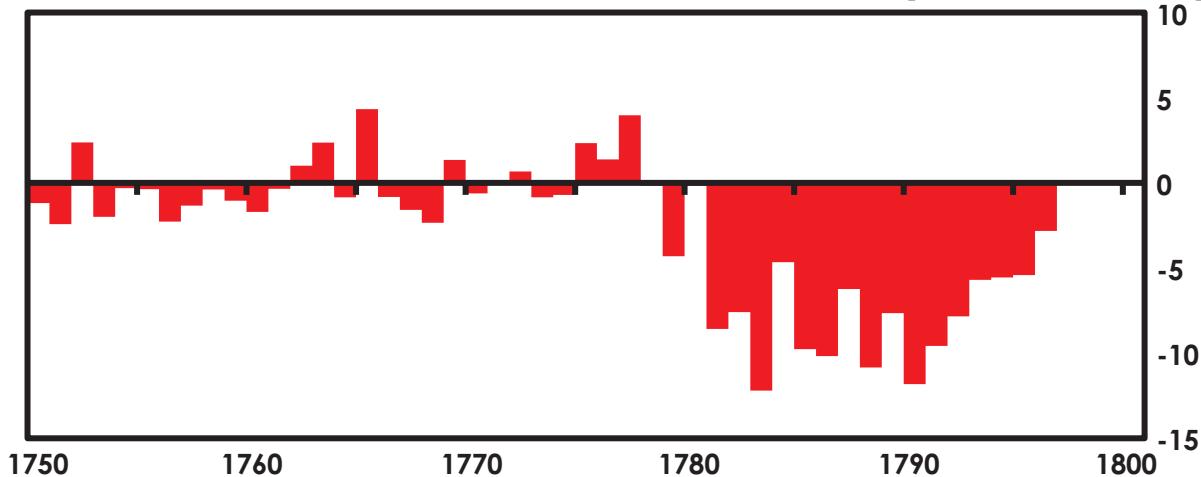


DUTCH EAST INDIA COMPANY BALANCE SHEET (%GDP)



8

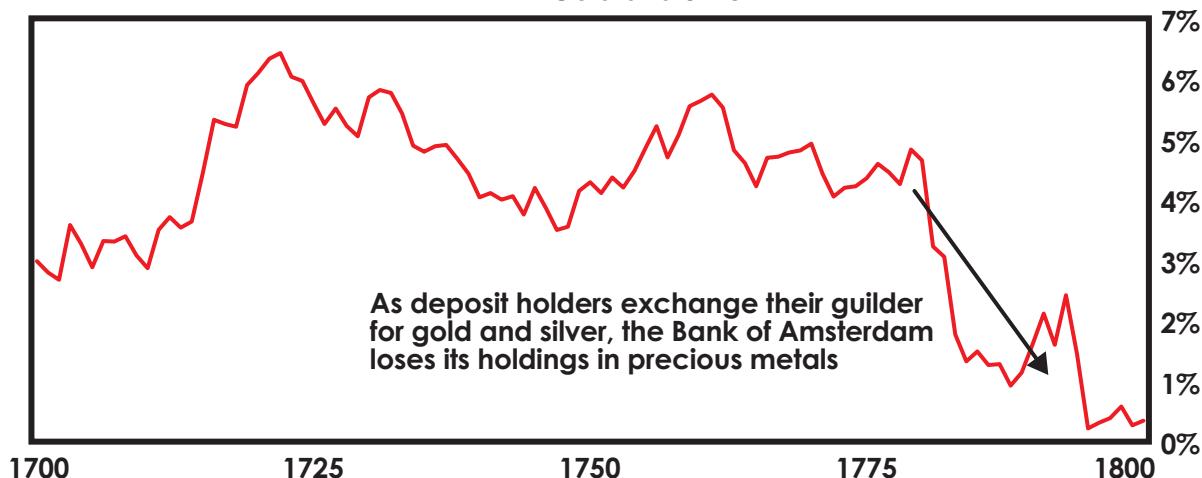
DUTCH EAST INDIA COMPANY PROFIT & LOSS (GUILDER, MLN)



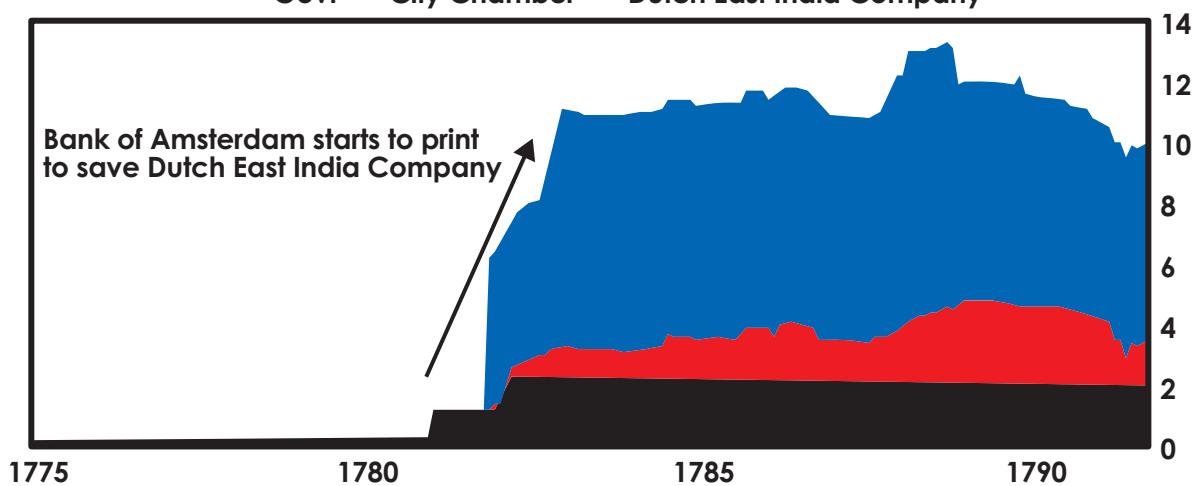
⁸This chart only shows the financial results from the Dutch East India Company reported *in patria*, i.e., the Netherlands. It does not include the parts of the revenue and debt from its operations in Asia but does include its revenue from goods it sourced in Asia and sold in Europe.

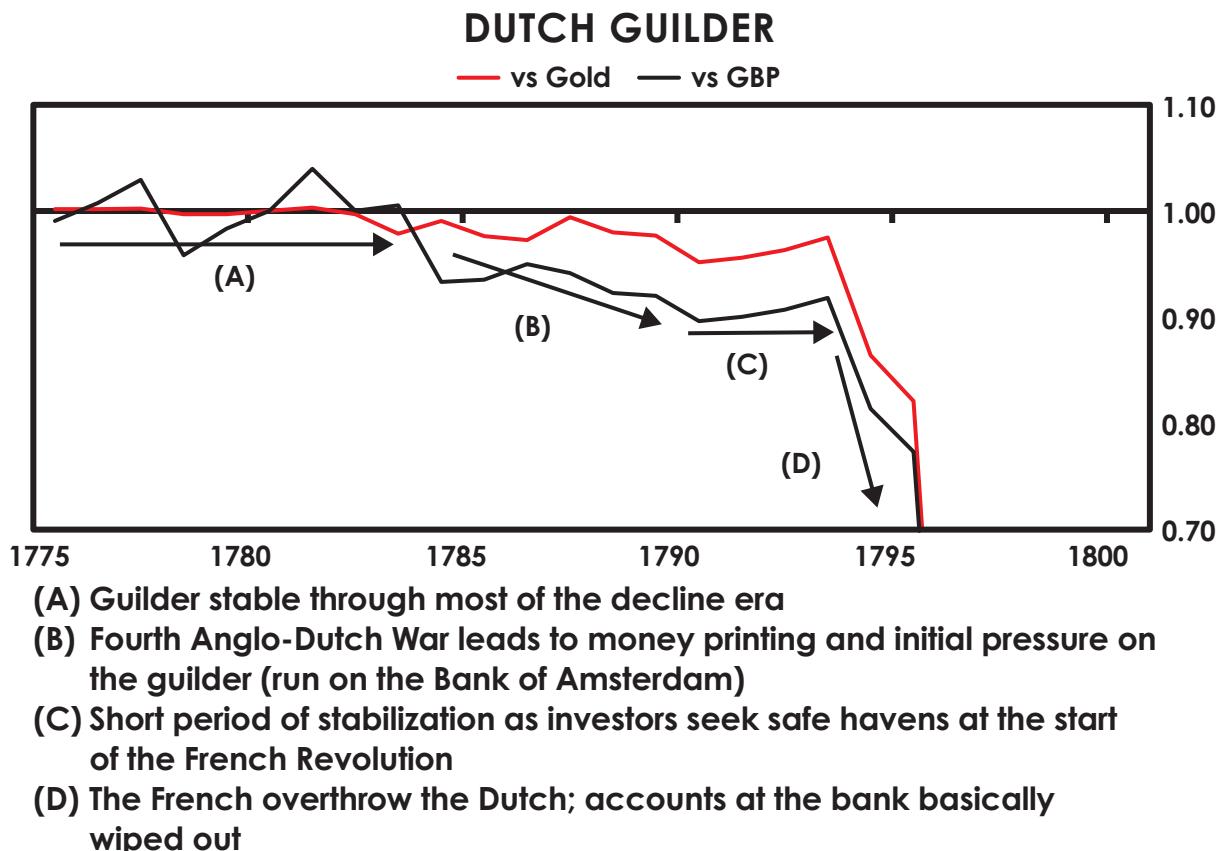
BANK OF AMSTERDAM HOLDINGS (%GDP)

— Gold and Silver

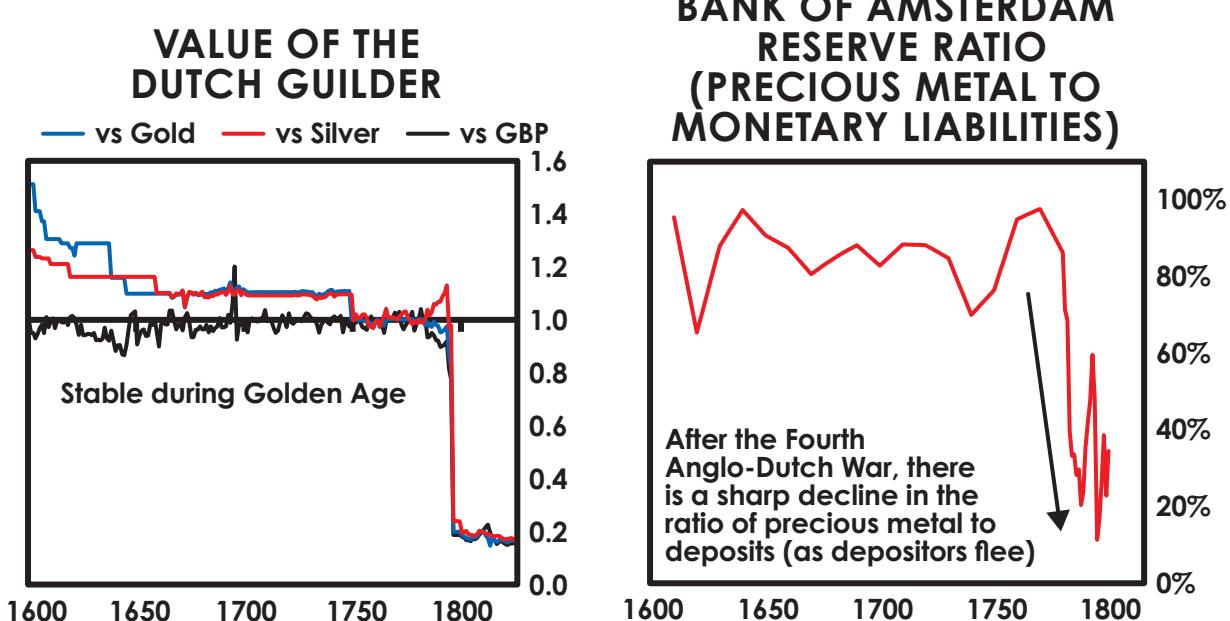
**BANK OF AMSTERDAM LOANS OUTSTANDING (GUILDER, MLN)**

■ Govt ■ City Chamber ■ Dutch East India Company



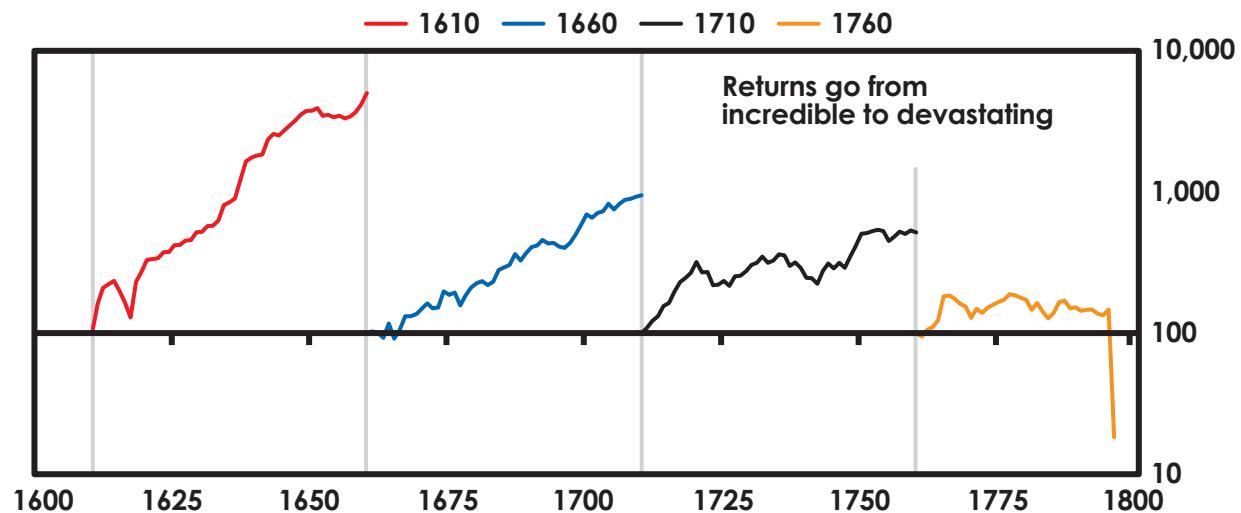


9

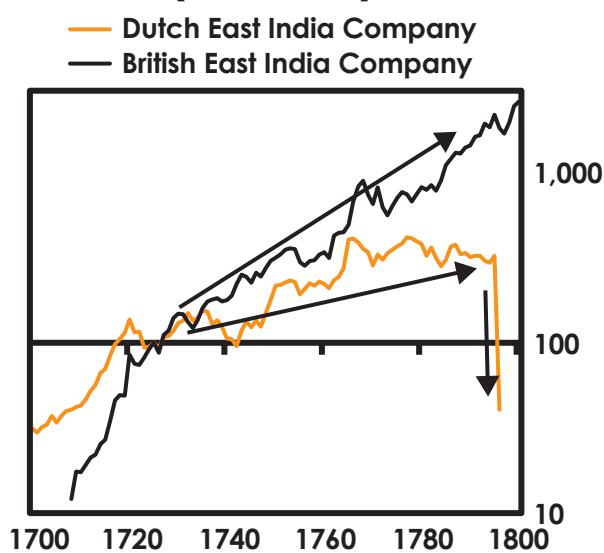


⁹ To fully represent the likely economics of a deposit holder at the Bank of Amsterdam, we assumed depositors each received their pro-rated share of precious metal still in the bank's vaults when it closed (that was roughly 20 percent of the fully backed amount, thus the approximately 80 percent total devaluation).

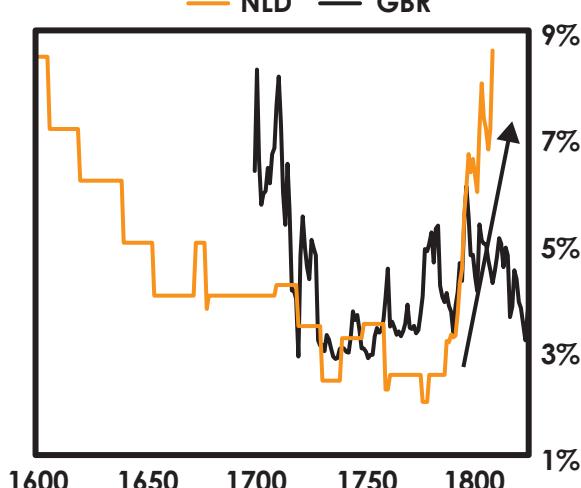
DUTCH EIC TOTAL RETURNS BY YEAR OF INITIAL INVESTMENT (100 = STARTING WEALTH, 50YR INTERVALS, LOG)



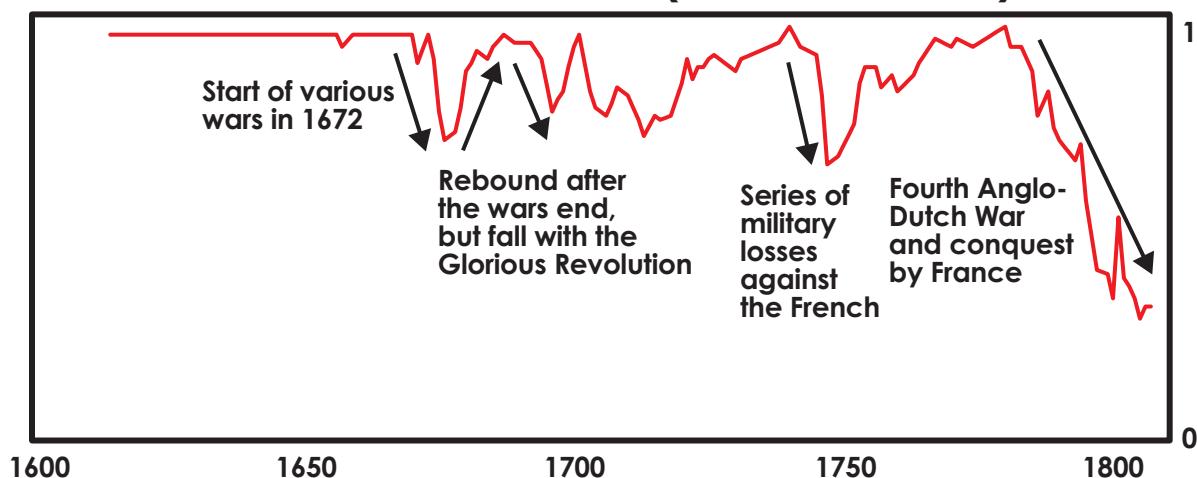
TOTAL EQUITY RETURNS (INDEXED)



GOVERNMENT BOND YIELDS

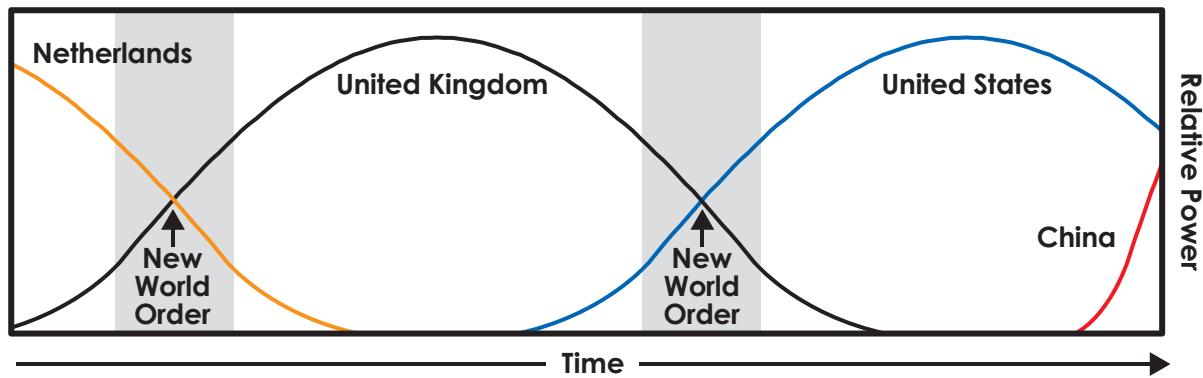


DUTCH BOND PRICES (TERM ANNUITIES)

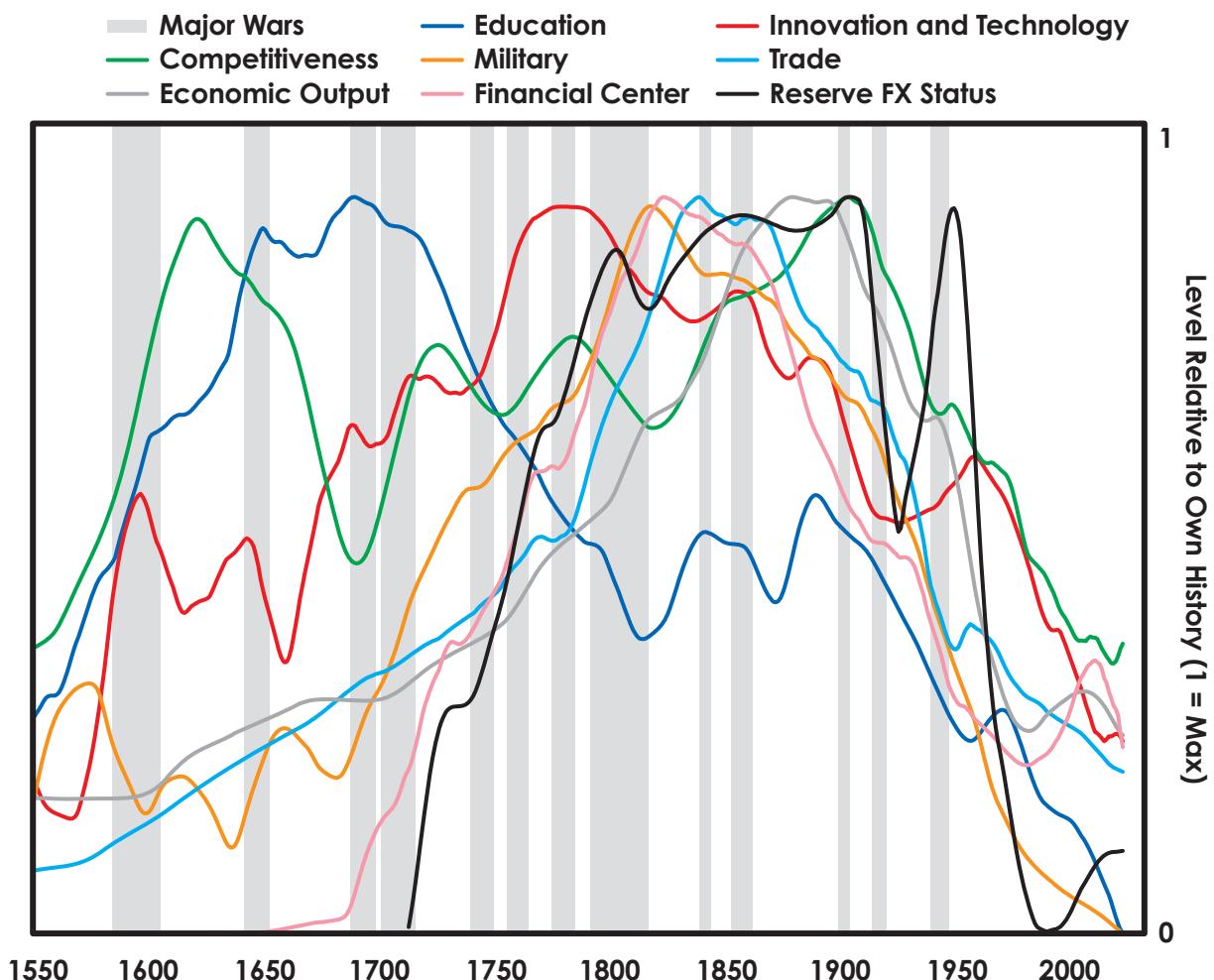


THE BIG CYCLE RISE AND DECLINE OF THE BRITISH EMPIRE AND THE POUND

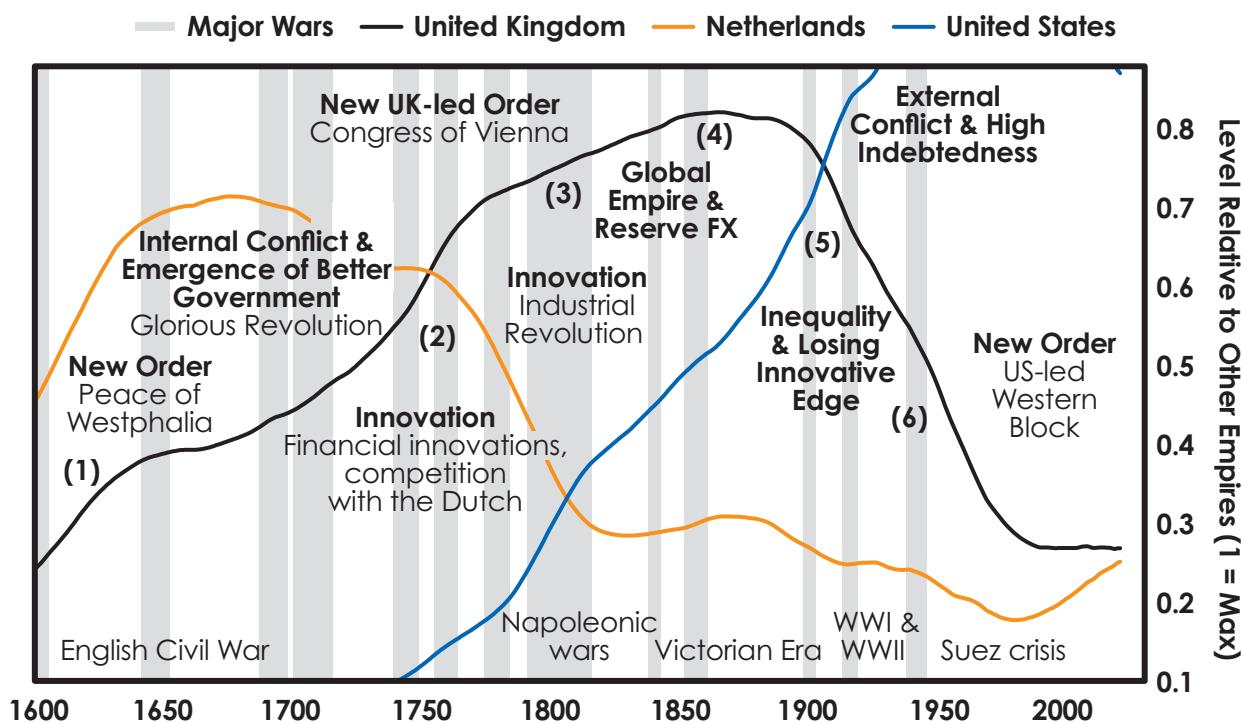
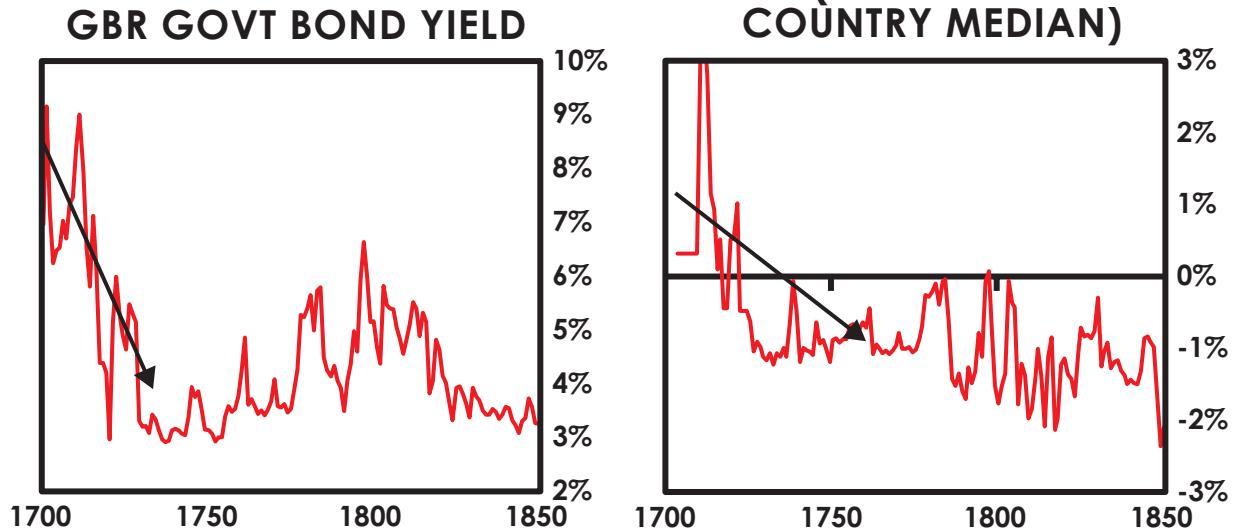
CHANGES TO THE WORLD ORDER (CONCEPTUAL EXAMPLE)



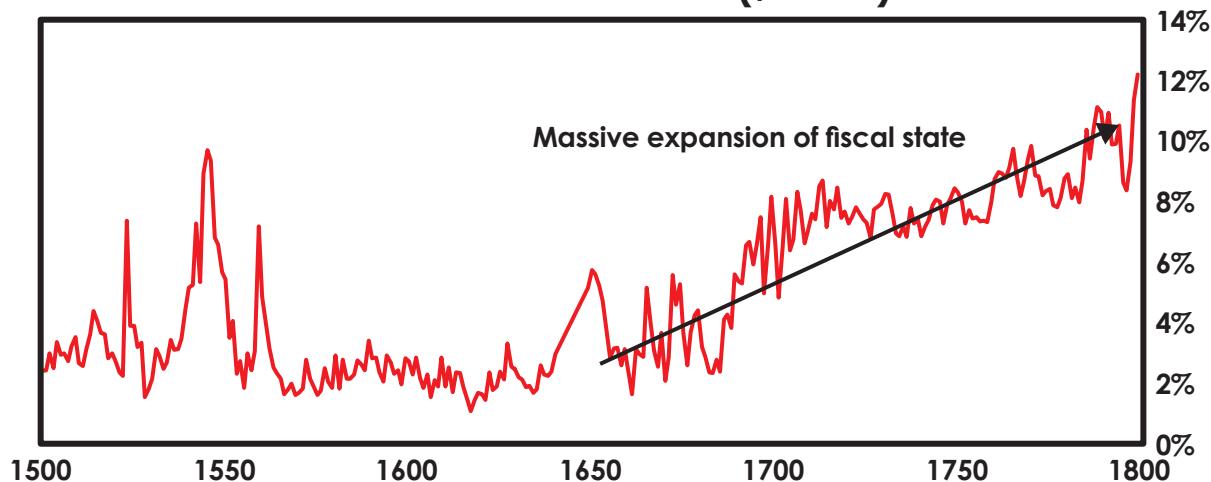
UNITED KINGDOM: INDEX OF KEY DETERMINANTS



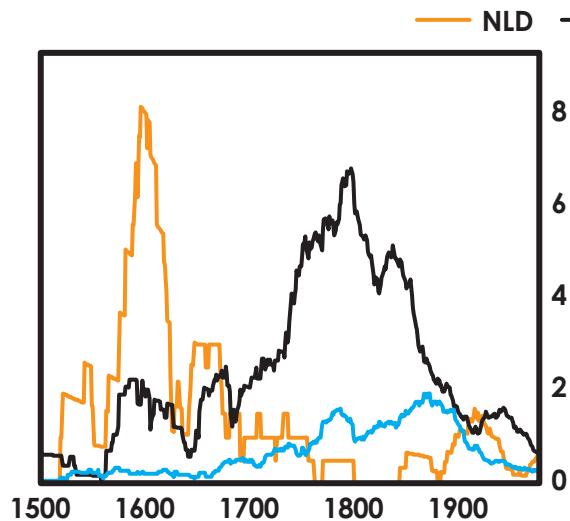
UK ARC 1600–PRESENT

GBR GOVT BOND YIELD
(VS MAJOR COUNTRY MEDIAN)

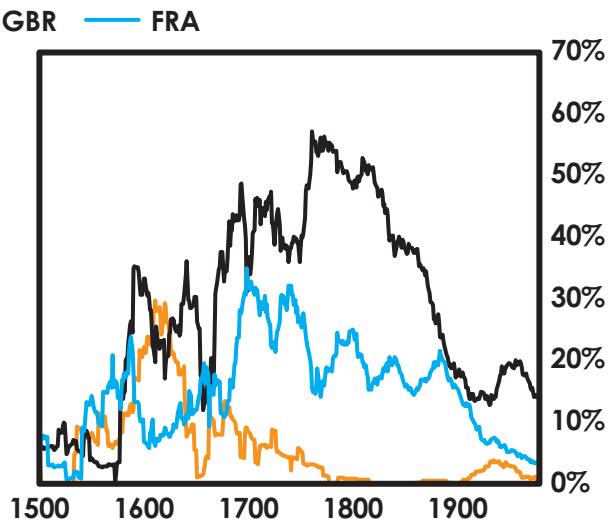
GBR GOVT REVENUE (%GDP)



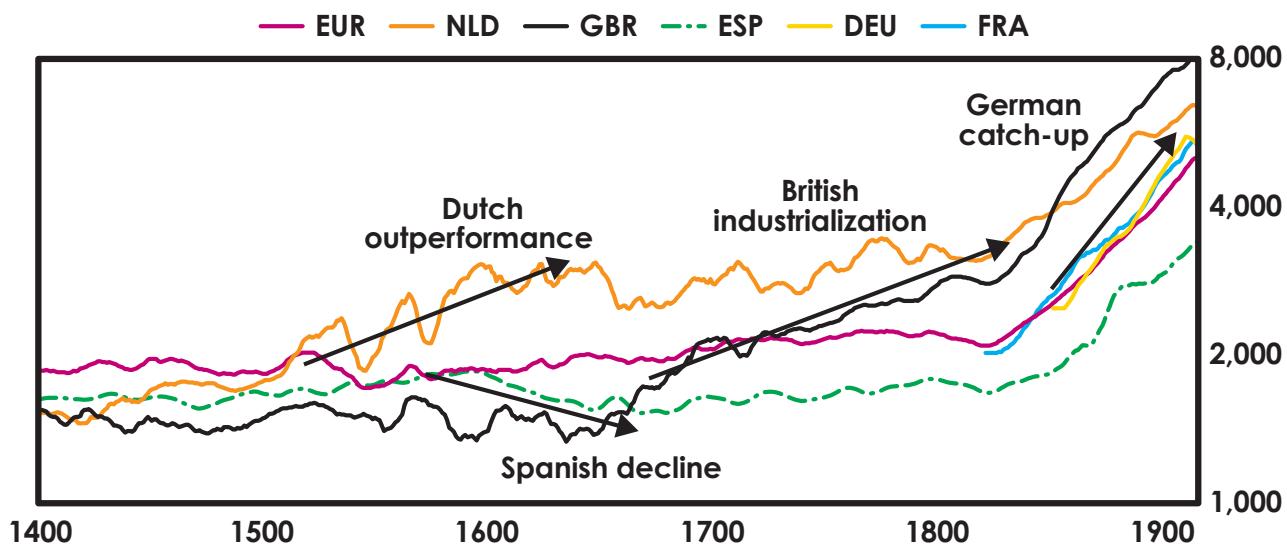
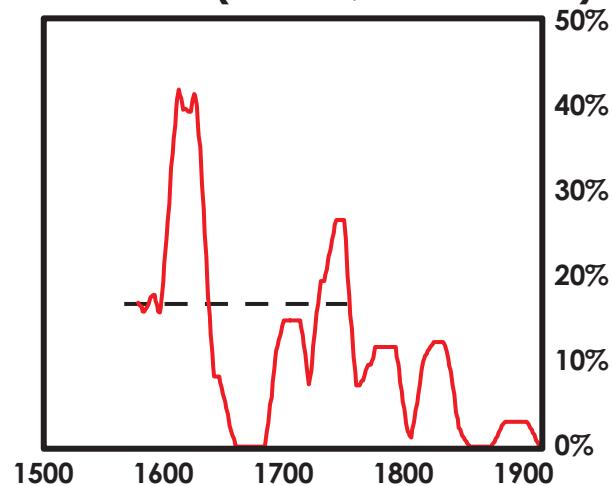
MAJOR INVENTIONS (PER MLN POPULATION)



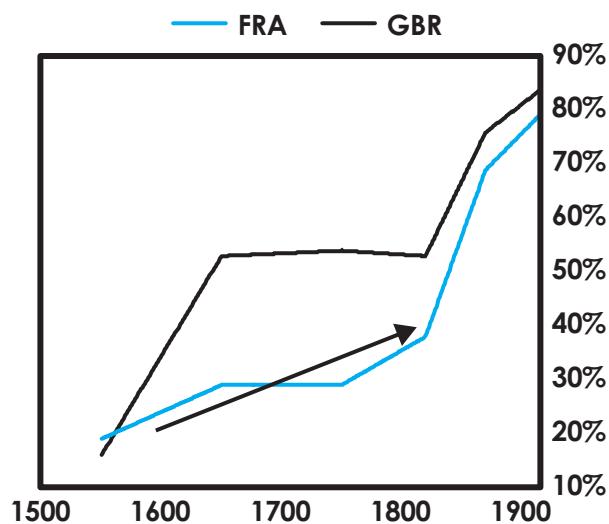
SHARE OF MAJOR INVENTIONS



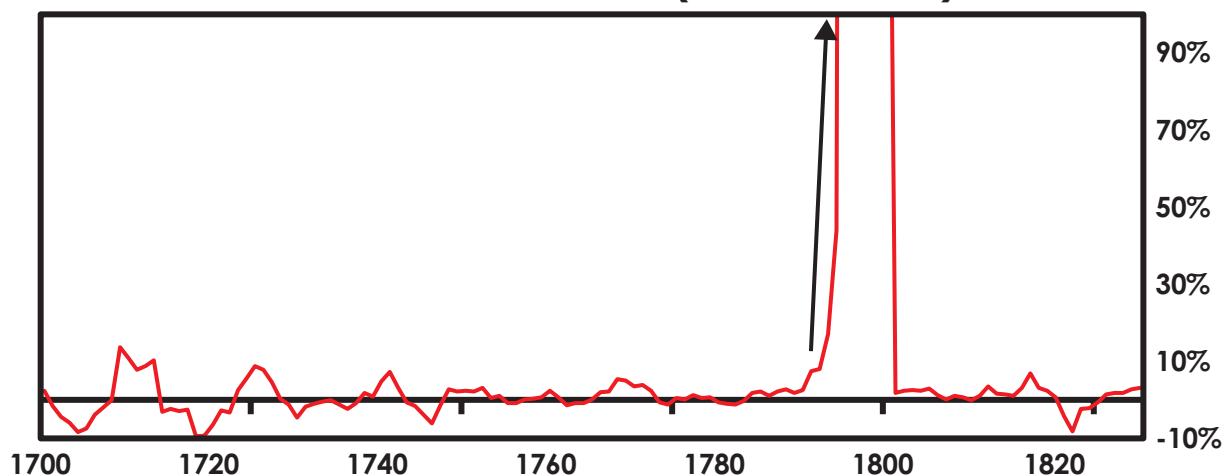
REAL GDP PER CAPITA (2017 USD)

FRENCH UNIVERSITIES
FOUNDED (%WLD, 30YR AVG)

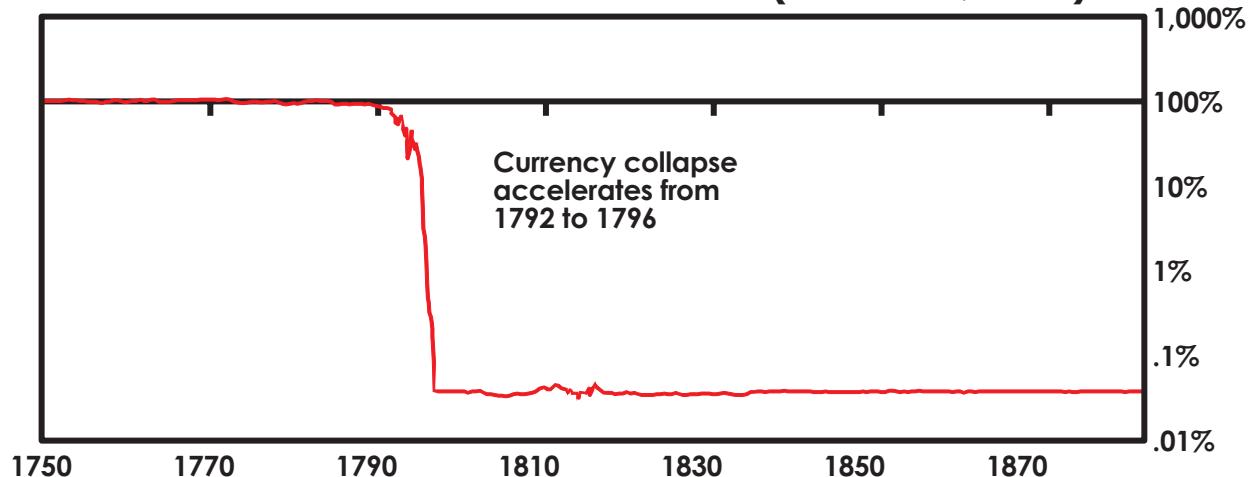
LITERACY RATE (% POP)



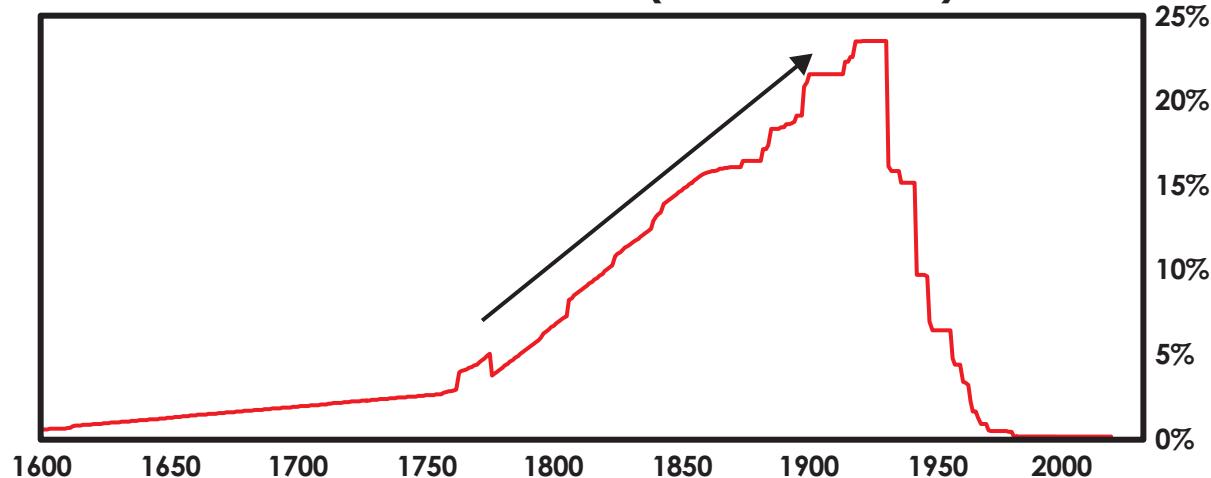
FRENCH INFLATION (5-YEAR AVG)



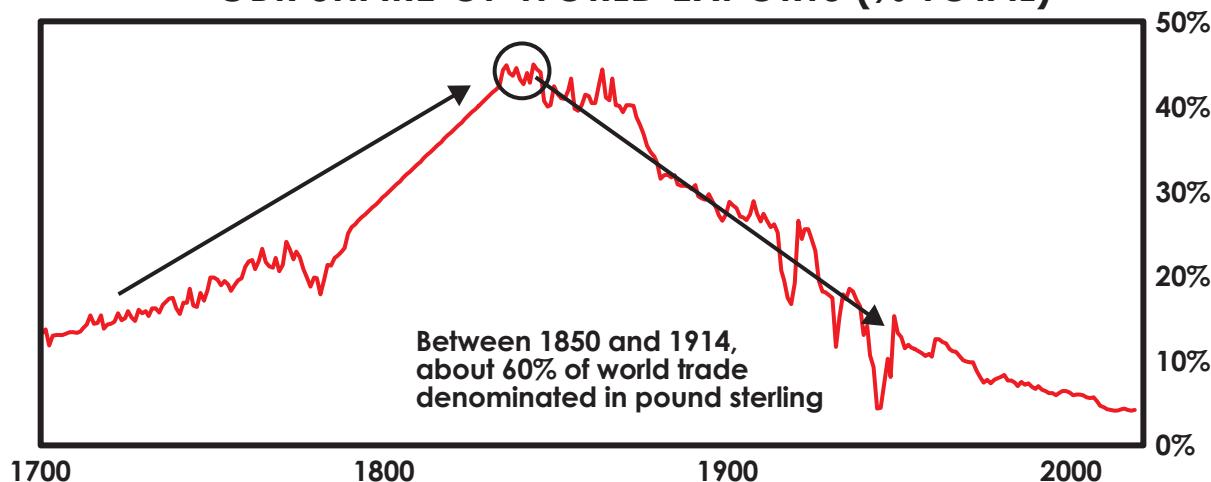
FRENCH CURRENCY VS GOLD (INDEXED, LOG)



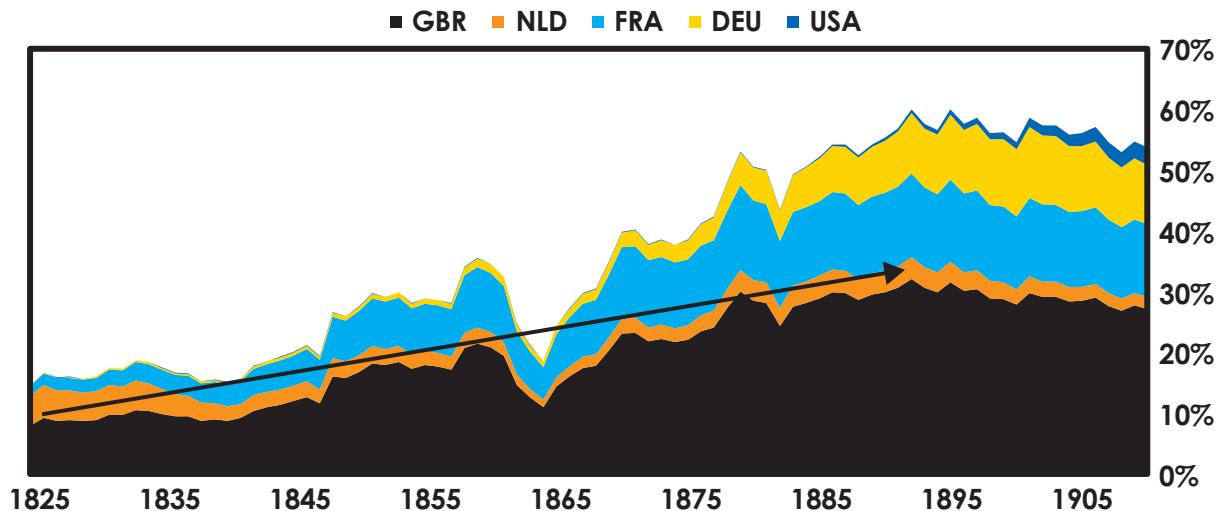
GBR EMPIRE SIZE (% WORLD, EST)

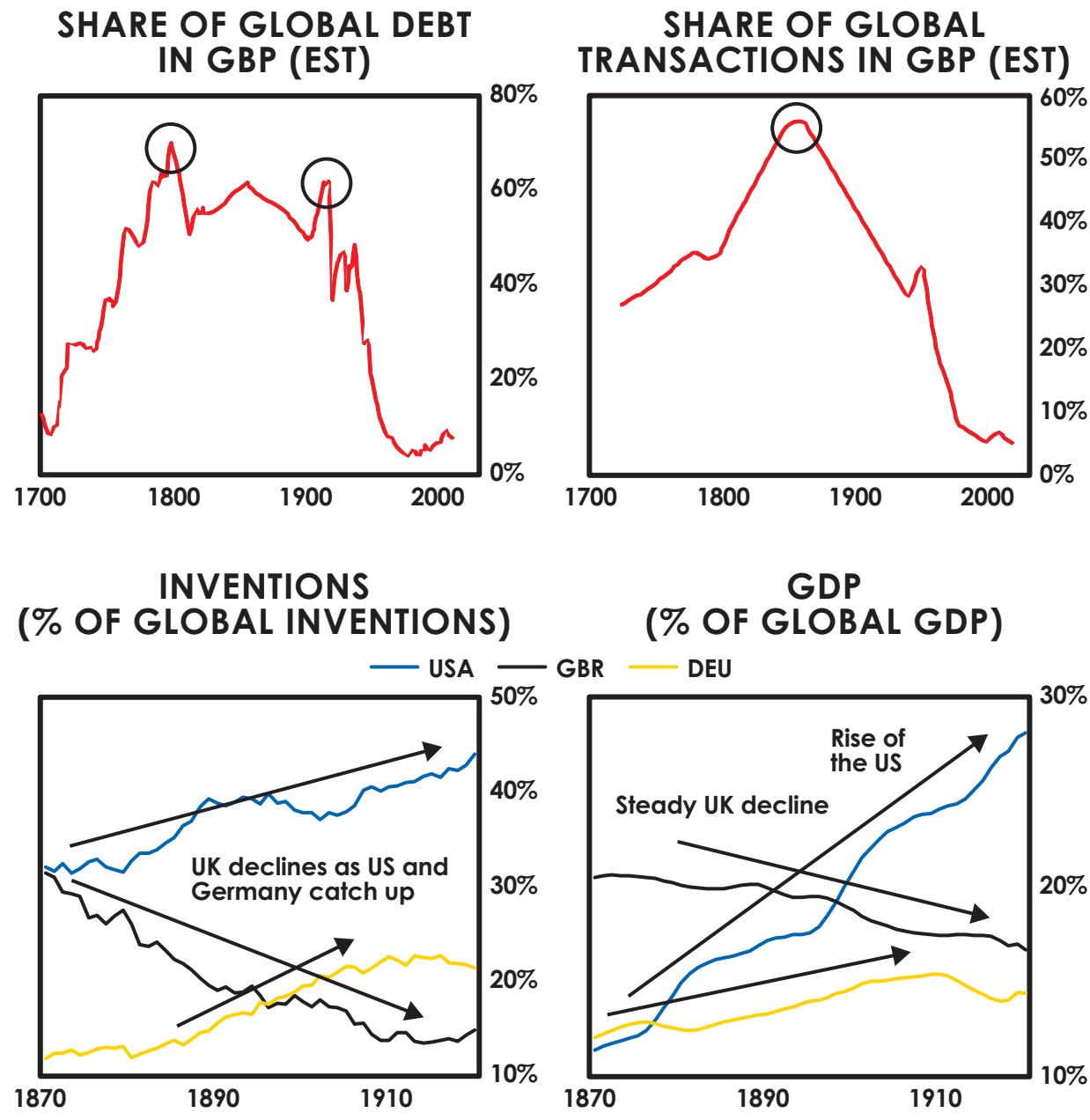


GBR SHARE OF WORLD EXPORTS (% TOTAL)



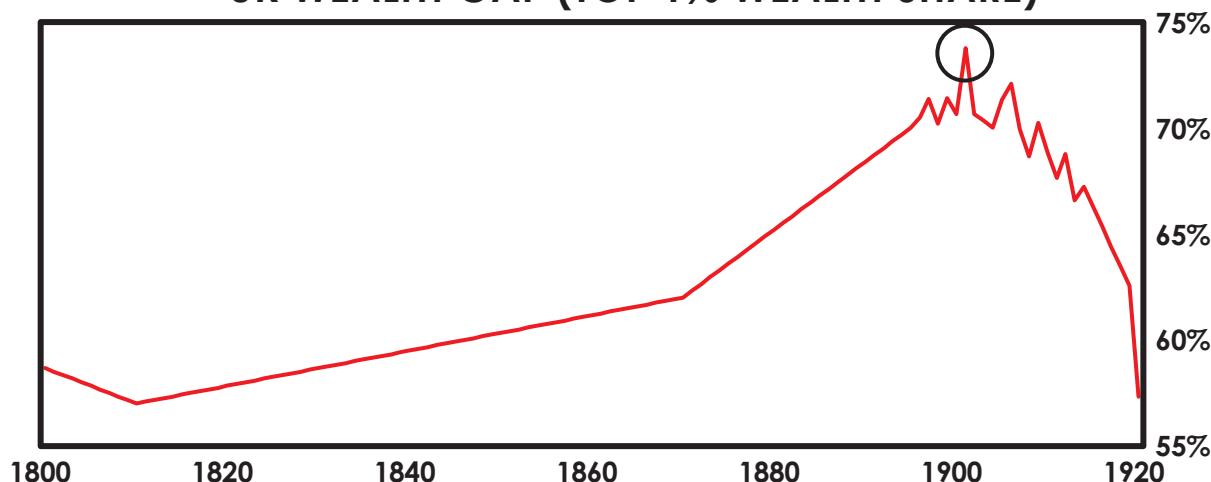
INTERNATIONAL INVESTMENTS (% DEV WLD GDP)





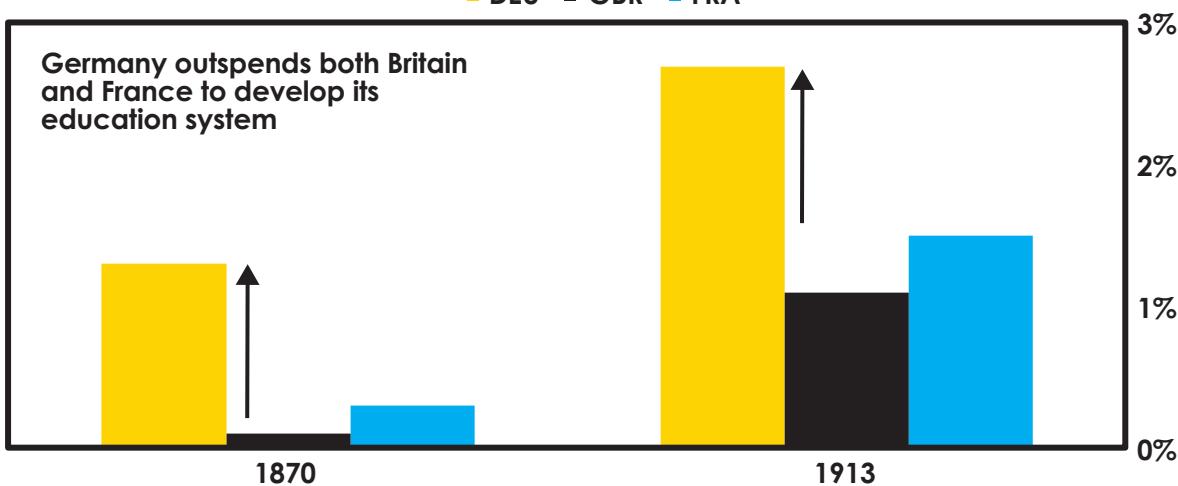
¹⁰ GBR GDP share includes income of countries controlled by the British Empire.

UK WEALTH GAP (TOP 1% WEALTH SHARE)



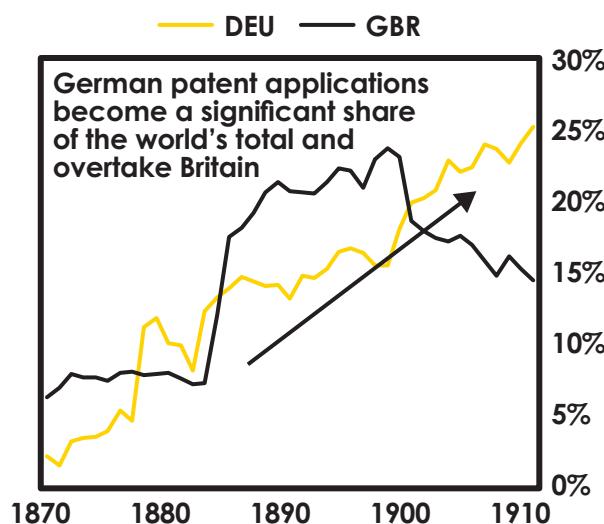
PUBLIC EDUCATION EXPENDITURE (%GDP)

■ DEU ■ GBR ■ FRA

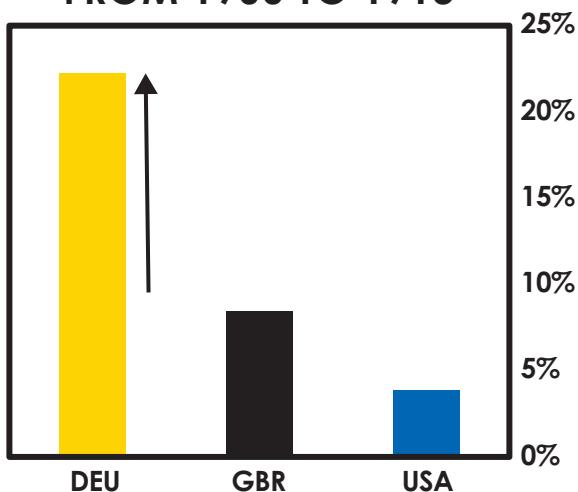


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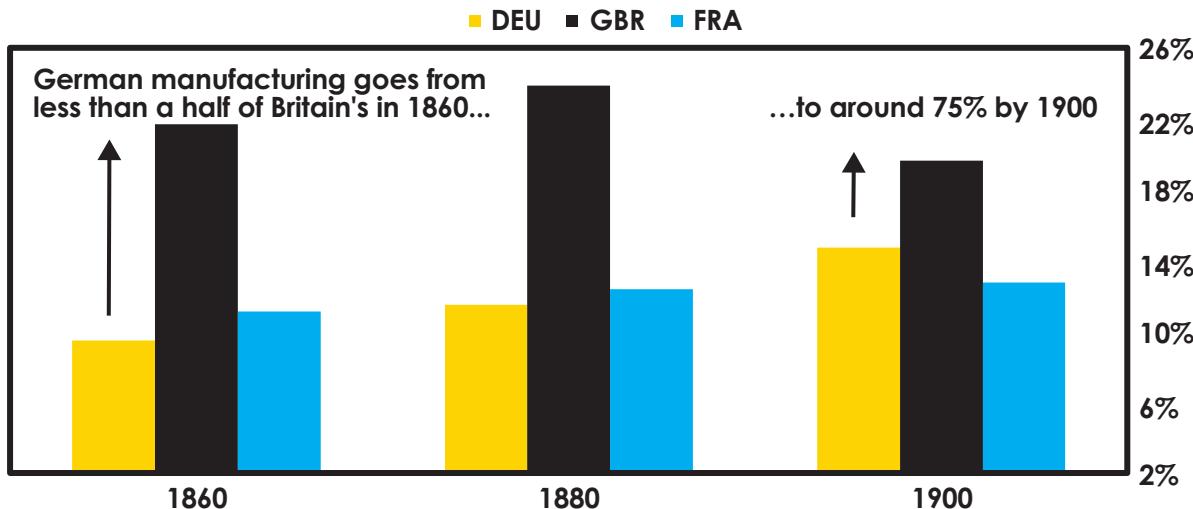
SHARE OF WORLD PATENT APPLICATIONS



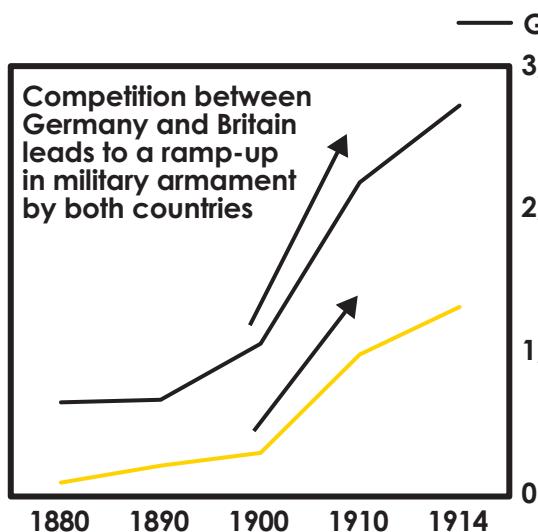
% OF NOBEL PRIZES WON FROM 1900 TO 1913



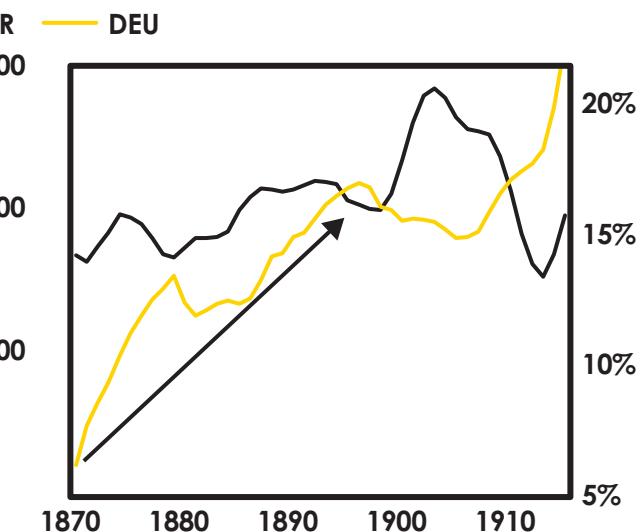
RELATIVE SHARES OF WORLD MANUFACTURING OUTPUT



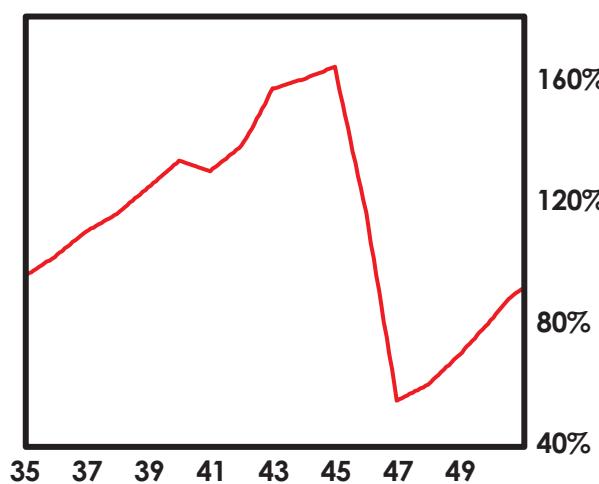
WARSHIP TONNAGE (THOUSAND TONS)



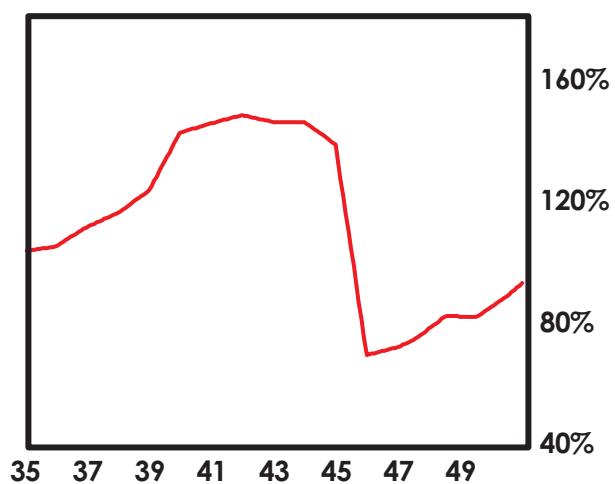
SHARE OF GLOBAL MILITARY SPENDING (EST, 10YR AVG)



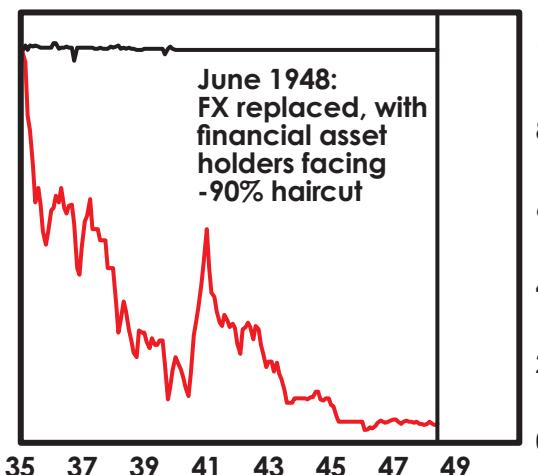
DEU REAL GDP PER CAPITA



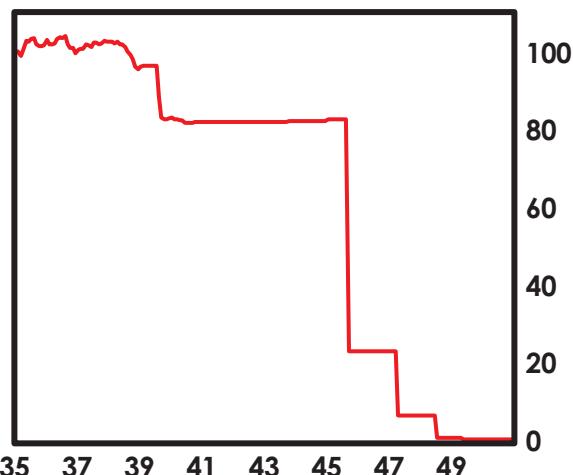
JPN REAL GDP PER CAPITA



— DEU Spot FX vs USD (Indexed to 1935)
 — DEU Black Market Spot FX vs USD
 (Indexed to 1935)

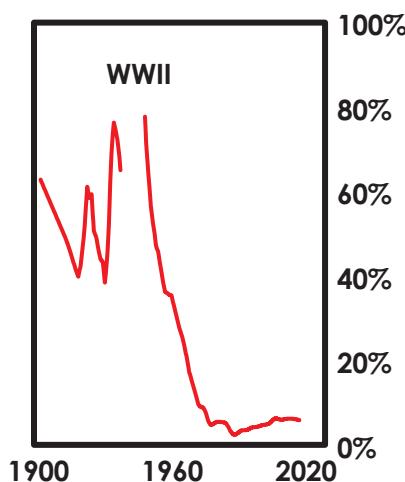


JPN SPOT FX VS USD (INDEXED TO 1935)

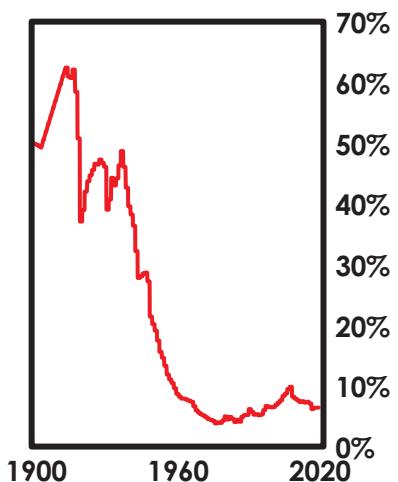


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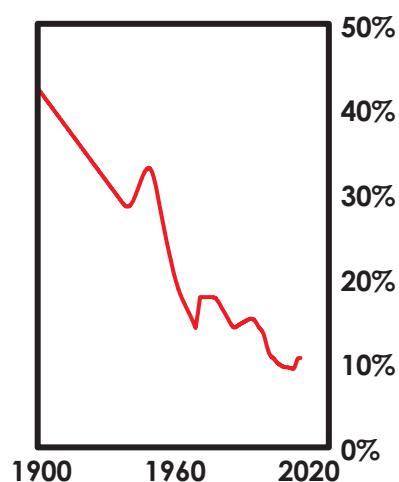
GBP SHARE OF GLOBAL RESERVES (EX-GOLD, EST)



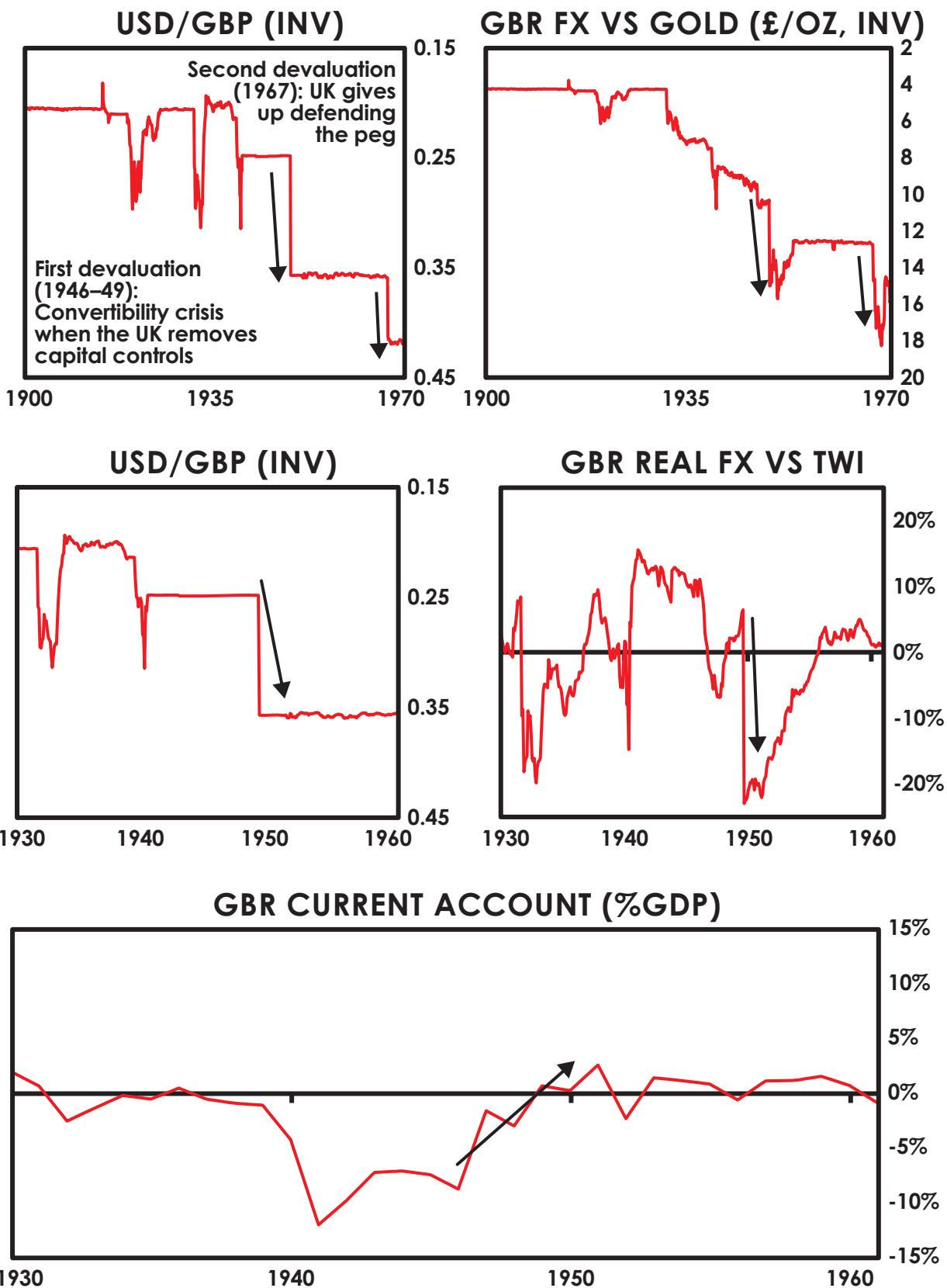
GBP SHARE OF GLOBAL DEBT (EST)

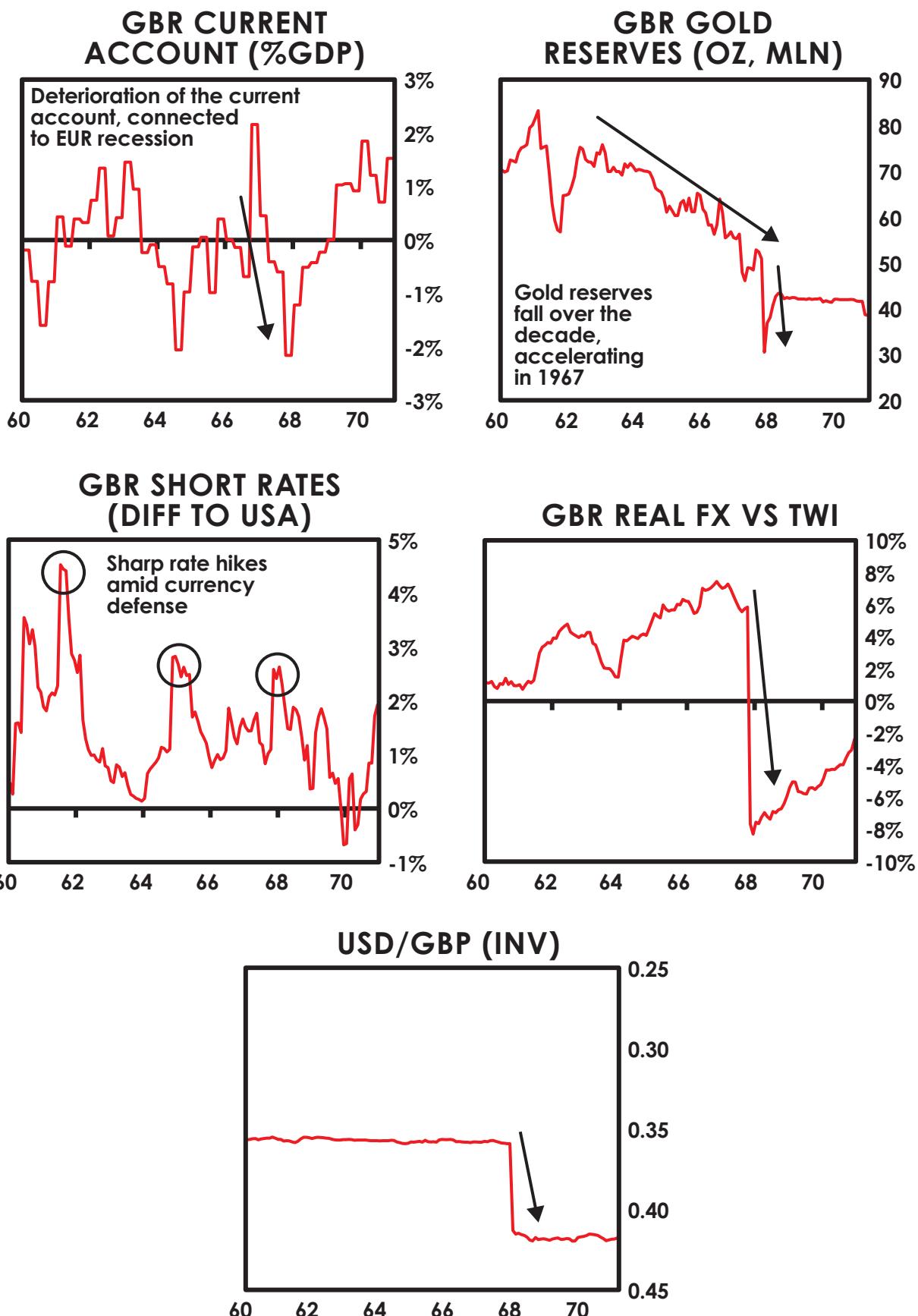


GBP SHARE OF GLOBAL TRANSACTIONS (EST)

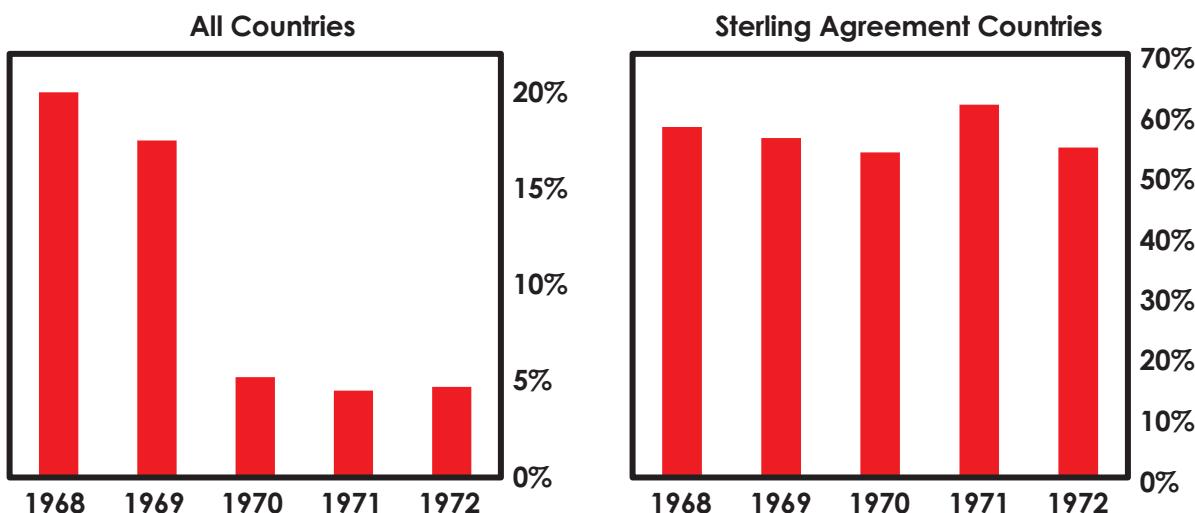


¹¹This chart shows the official exchange rate between dollars and deutschemarks as well as an unofficial (black market) rate that was based on actual transactions between New York and Germany during that time period. The unofficial rate shows that the true value of the deutschemark was collapsing during the period.





AVERAGE SHARE OF POUNDS IN CENTRAL BANK RESERVES (%TOTAL)



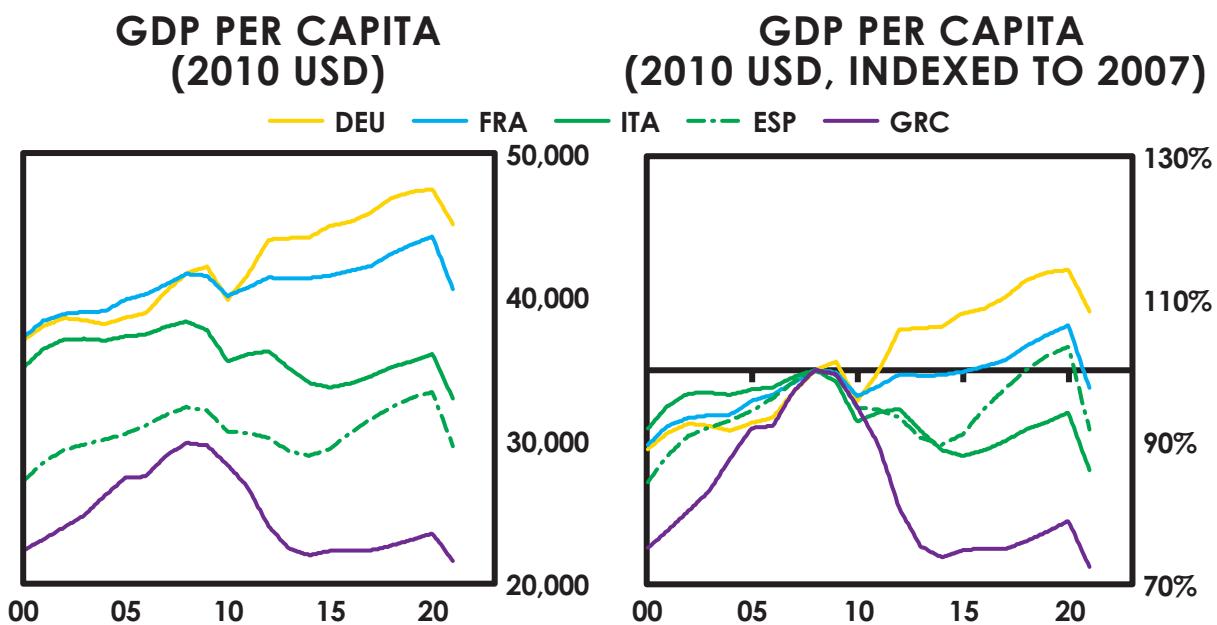
Central banks begin selling their sterling reserves following the devaluation. The share of the pound collapses.

Sterling Agreement countries promise to continue holding pounds, but only if 90 percent of their dollar value is guaranteed by the British government.

THE EUROZONE COMPARED TO THE US AND CHINA

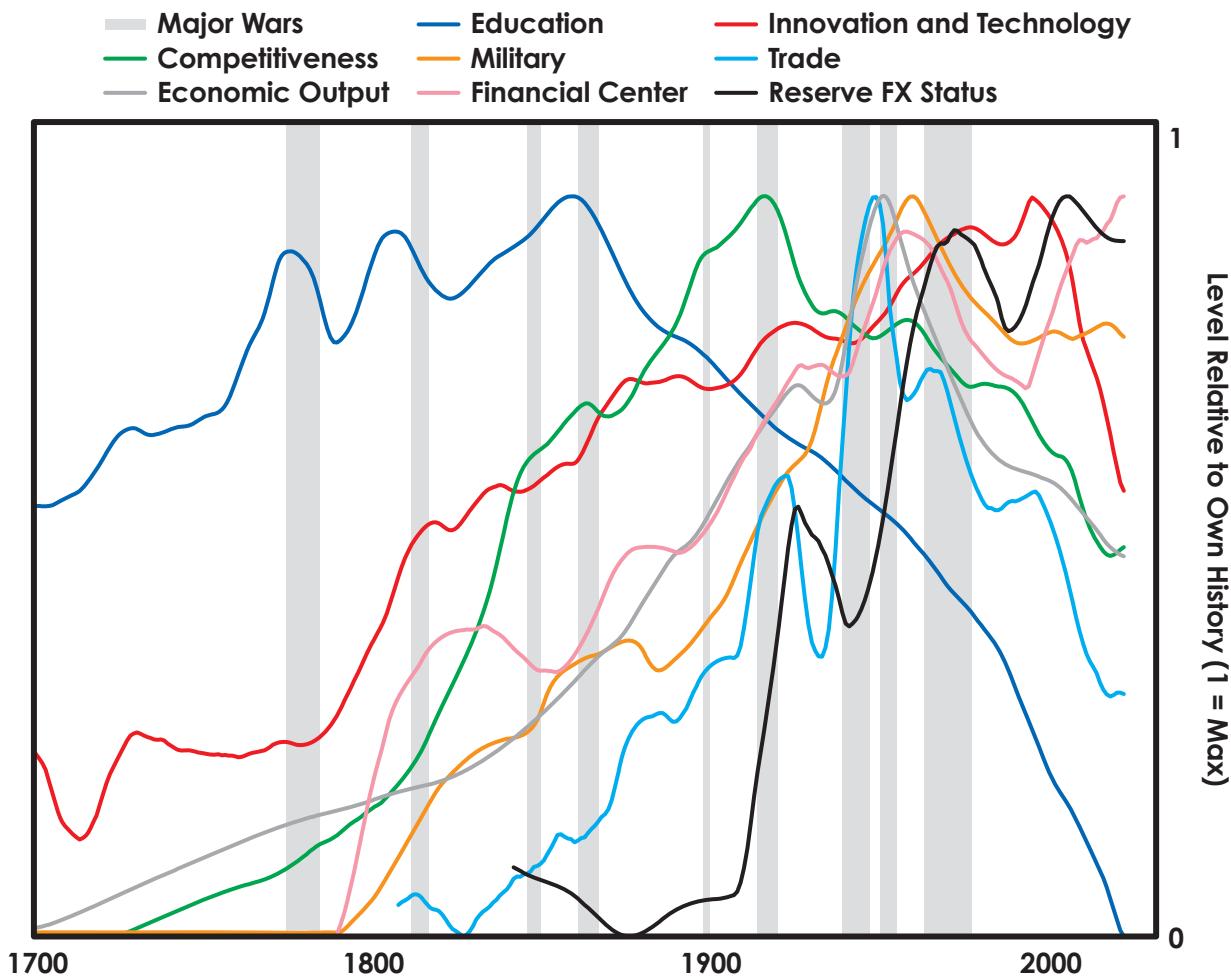
	EUR	USA	CHN
Empire Score (0 to 1)*	0.55	0.87	0.75
GDP Per Capita (2017 USD, PPP Adj)	41,504	60,236	16,411
GDP (%WLD, PPP Adj)	13%	17%	23%
Population (%WLD)	4%	4%	18%
Exports (%WLD)	12%	11%	15%
Military Spending (%WLD)	9%	28%	19%
College Grads (%WLD)	13%	20%	22%
Patents (%WLD)	11%	17%	41%
Nobel Prizes (%WLD)	11%	32%	2%
Equity Mkt Cap (%WLD)	8%	55%	10%
Intl Transactions in Currency (%WLD)	28%	55%	2%
Official Reserves Held in Currency (%WLD)	21%	62%	2%

*Europe Empire Arc treats major Eurozone countries as single unit for purposes of comparison.

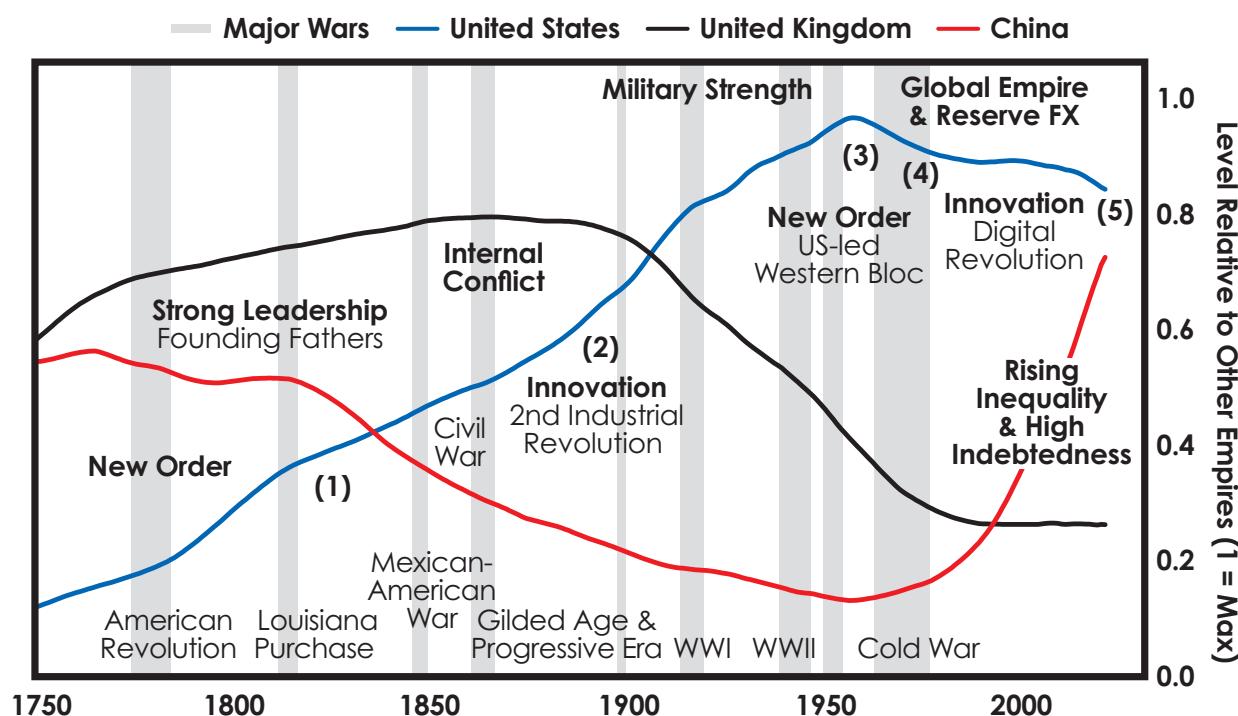


THE BIG CYCLE RISE AND DECLINE OF THE UNITED STATES AND THE DOLLAR

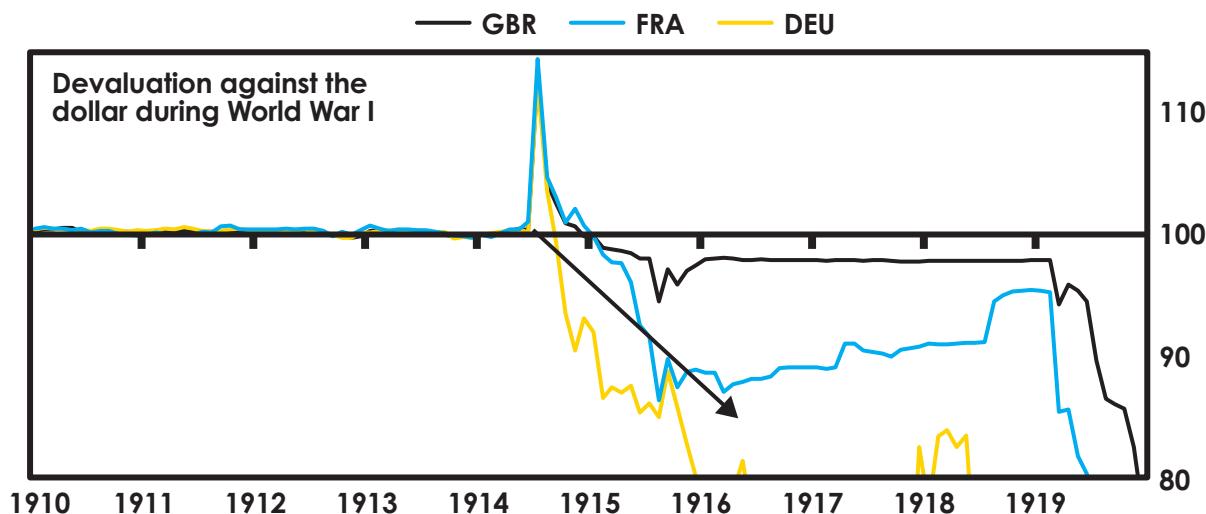
UNITED STATES: INDEX OF KEY DETERMINANTS



US ARC 1750–PRESENT

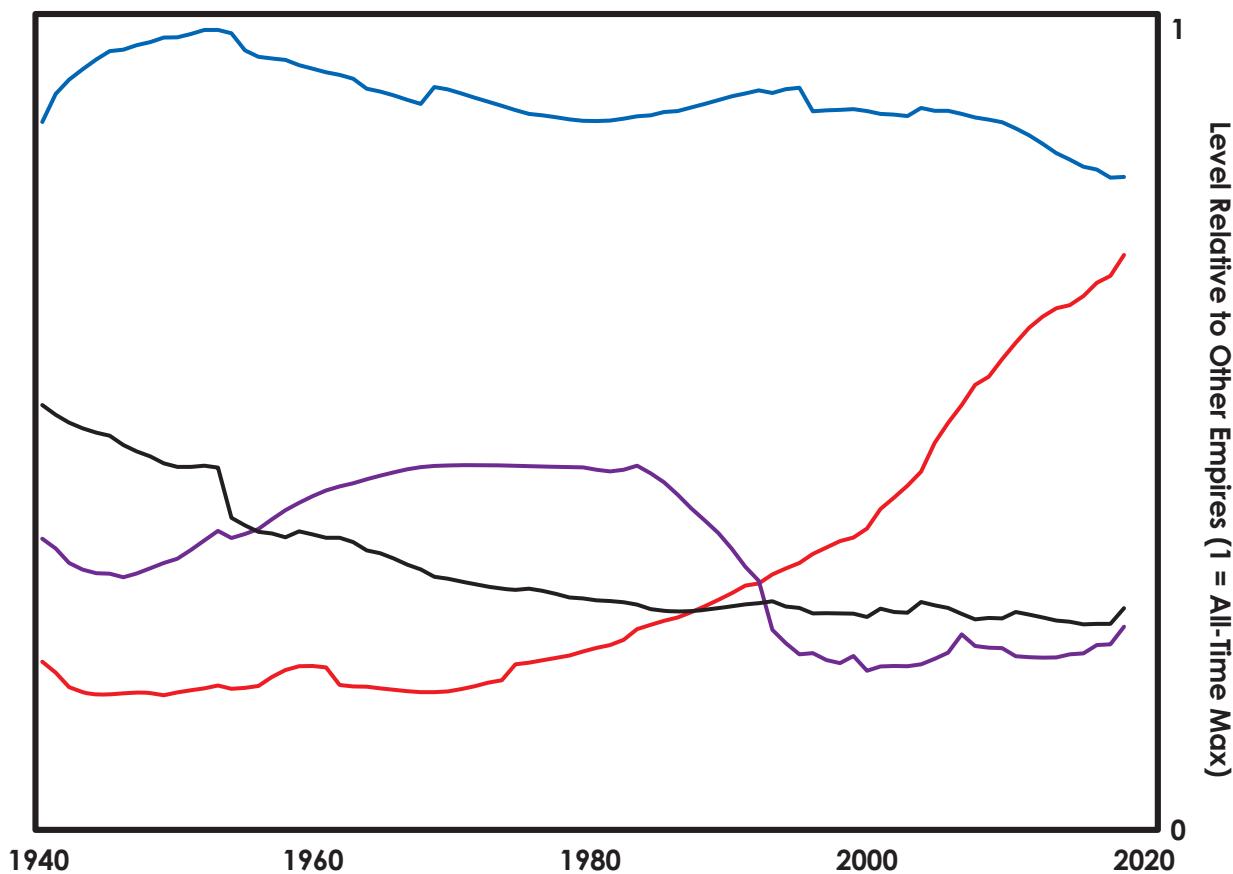


SPOT FX RATE VS USD (INDEXED)



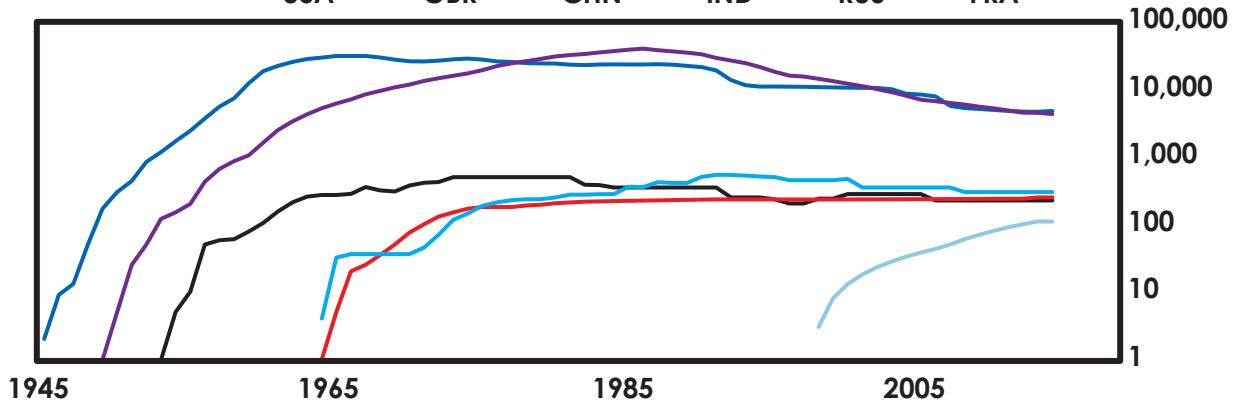
RELATIVE STANDING OF GREAT EMPIRES

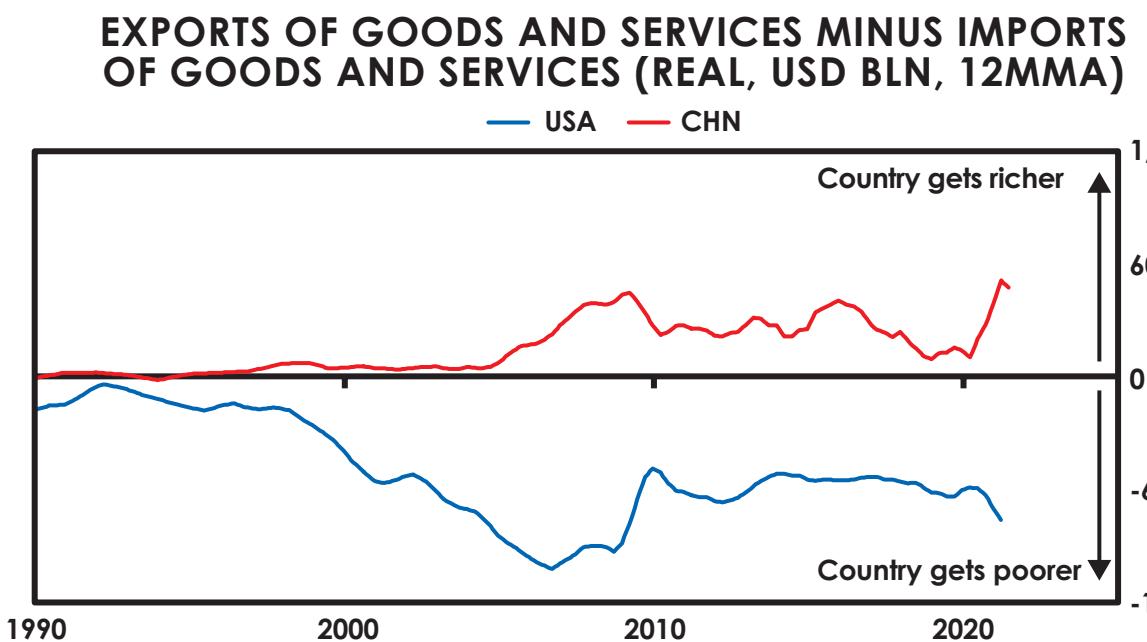
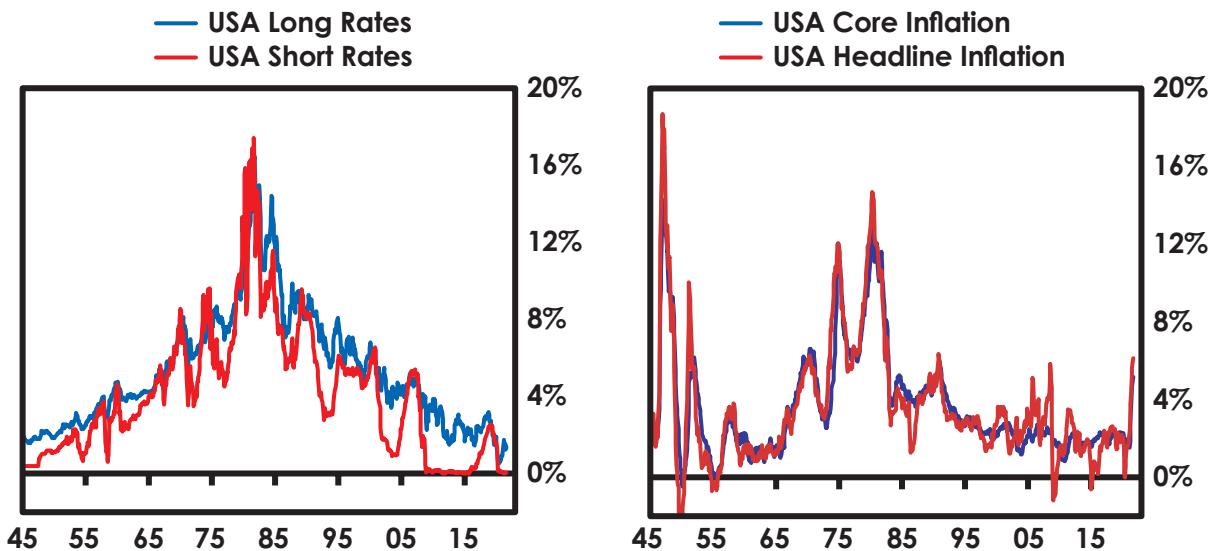
— USA — CHN — GBR — RUS

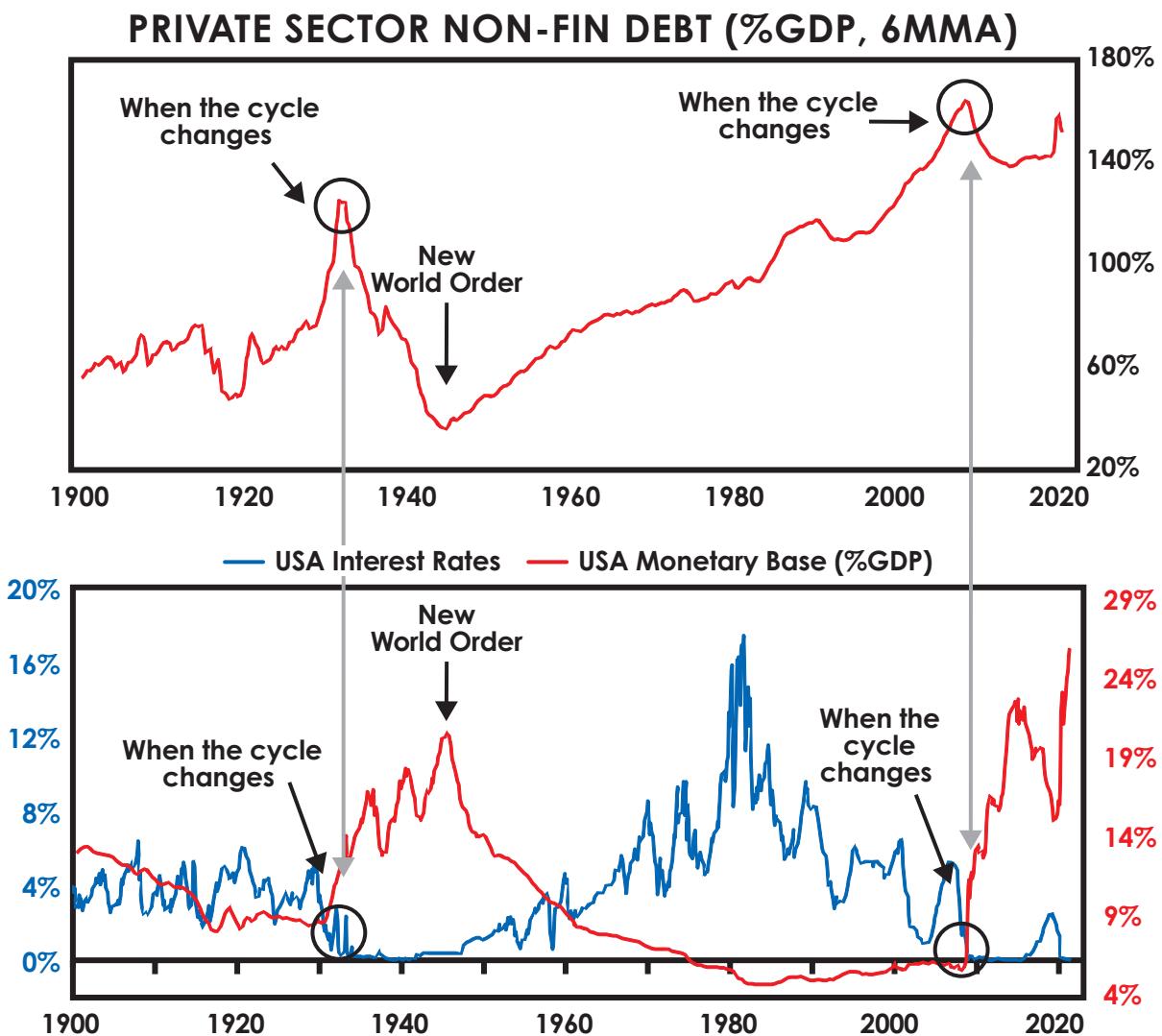


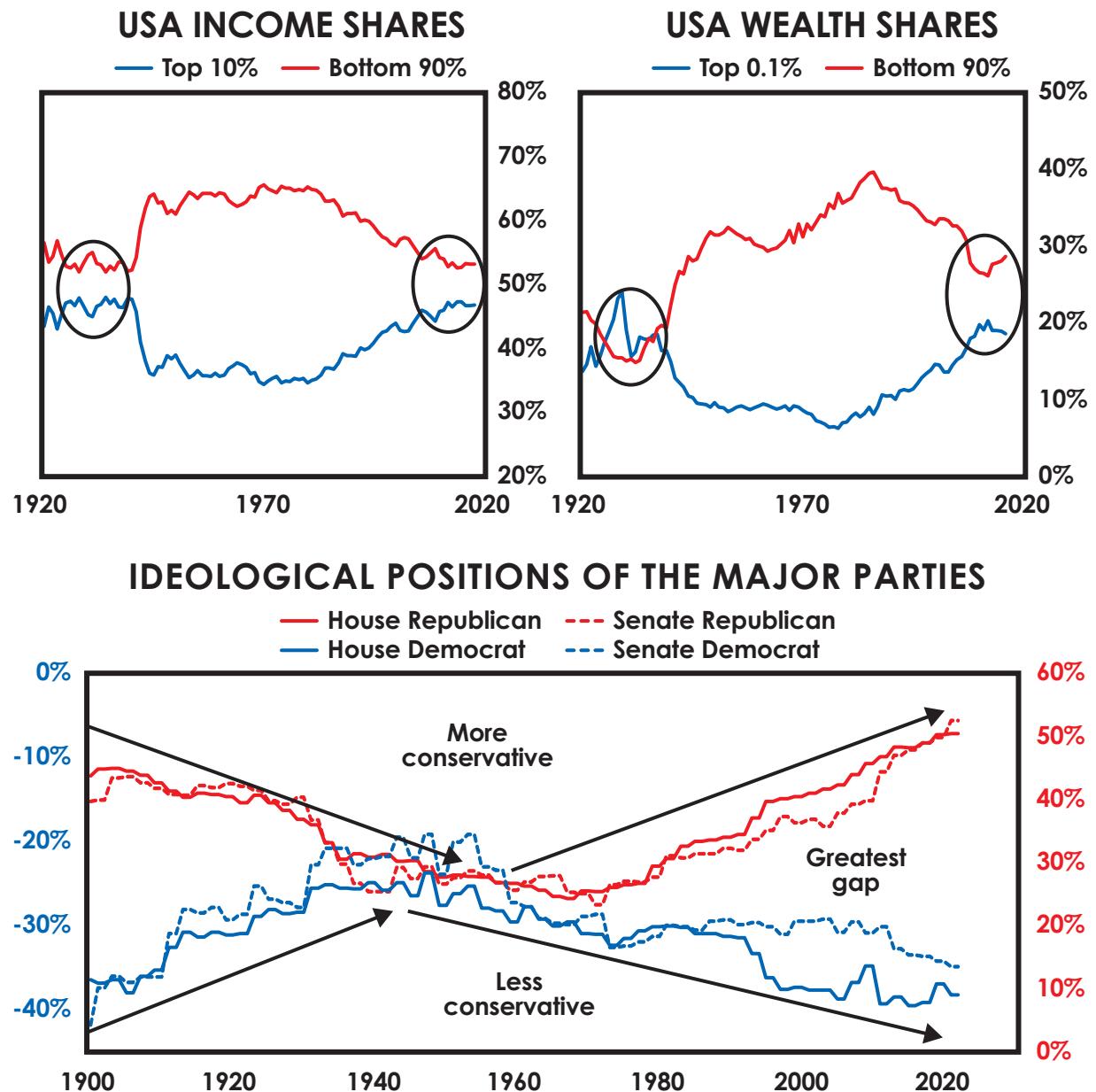
NUCLEAR WEAPONS STOCKPILE (# WARHEADS, LOG)

— USA — GBR — CHN — IND — RUS — FRA

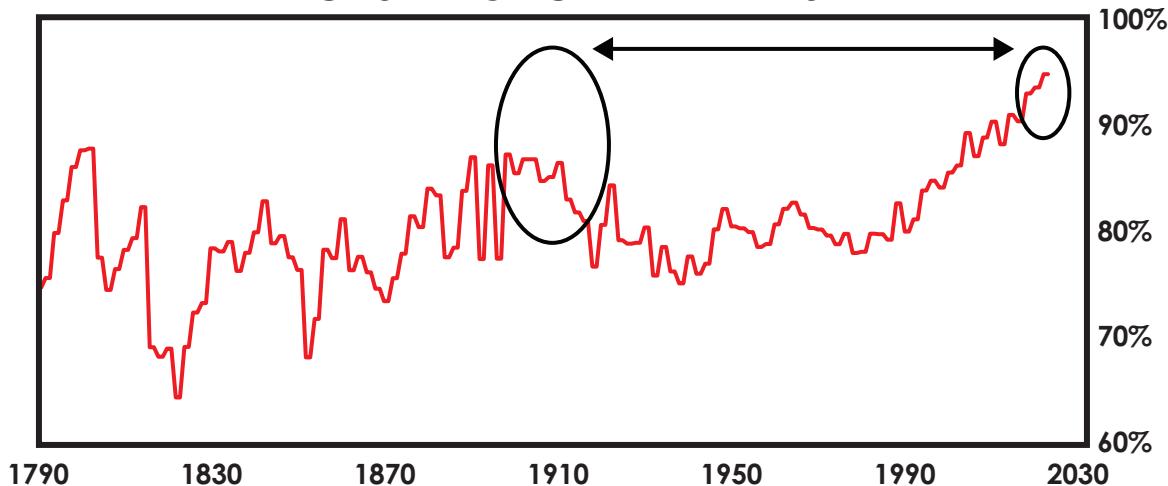






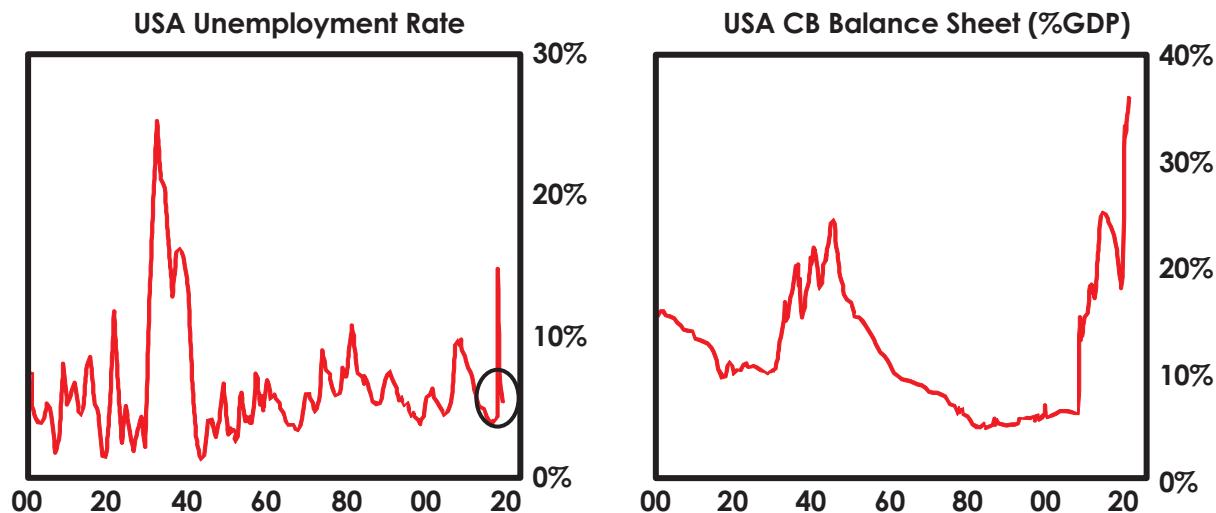


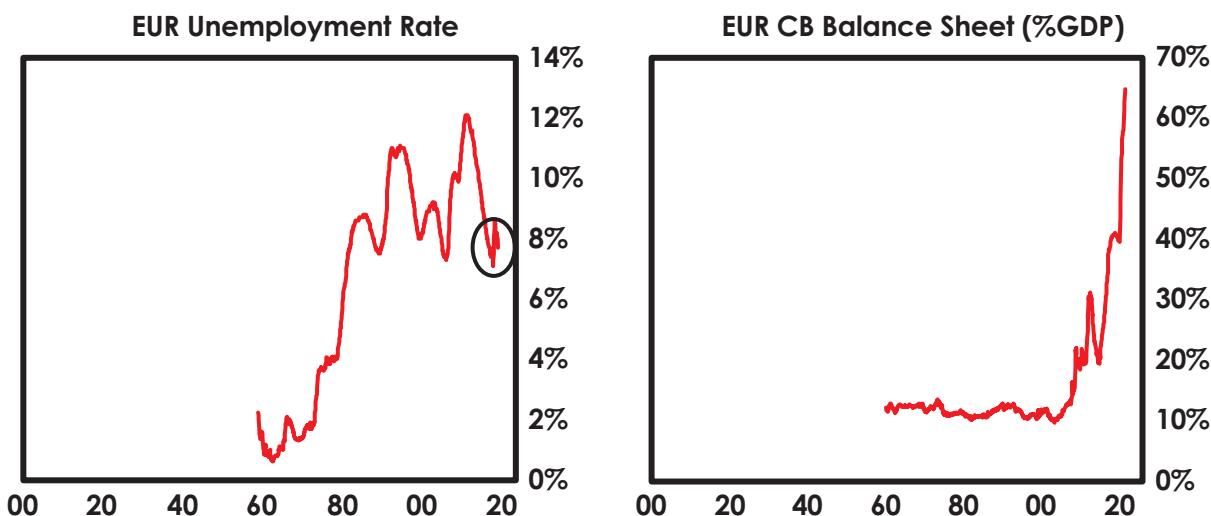
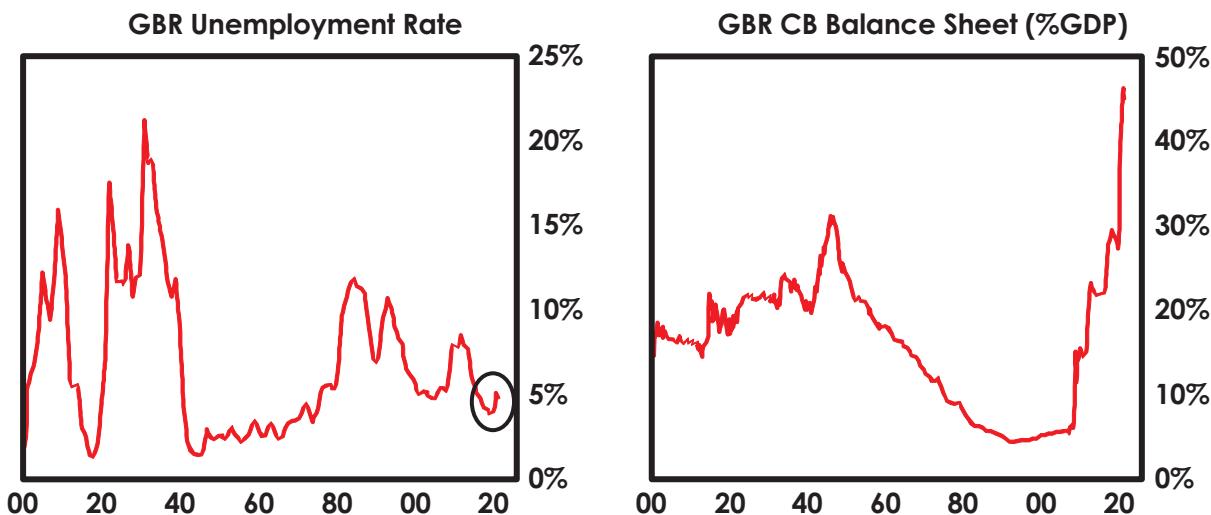
SHARE OF CONGRESSIONAL MEMBERS' VOTES CAST ALONG PARTY LINES



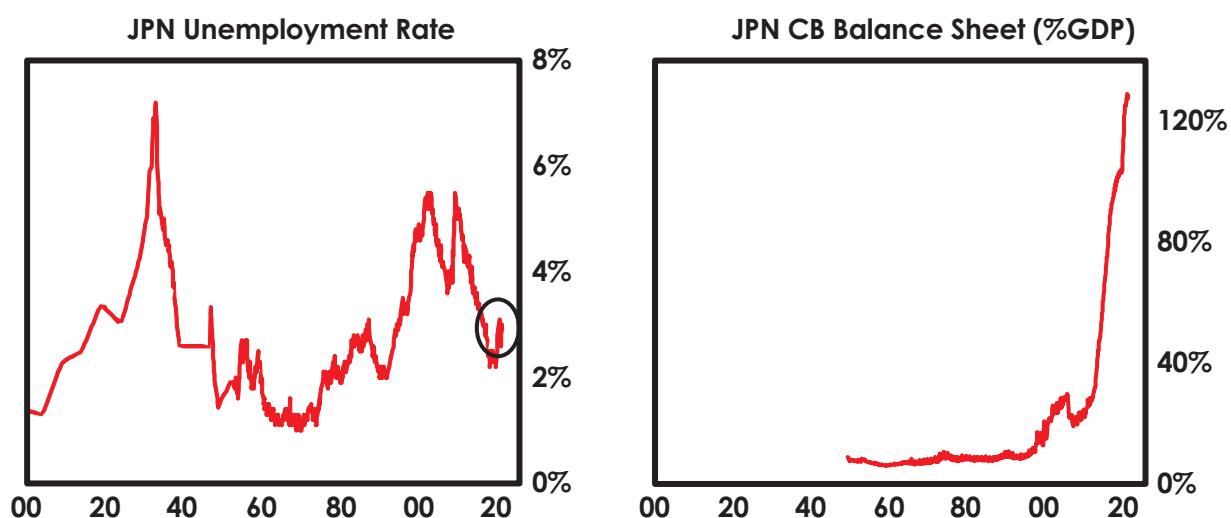
This chart shows the average predictiveness of a given member's left/right ideology in determining their vote across chambers for each congressional session as measured by NOMINATE, an academic model of ideological preference.

UNITED STATES



EUROPE**UNITED KINGDOM**

JAPAN



POLITICAL SPECTRUM 50 YEARS AGO



POLITICAL SPECTRUM 2021

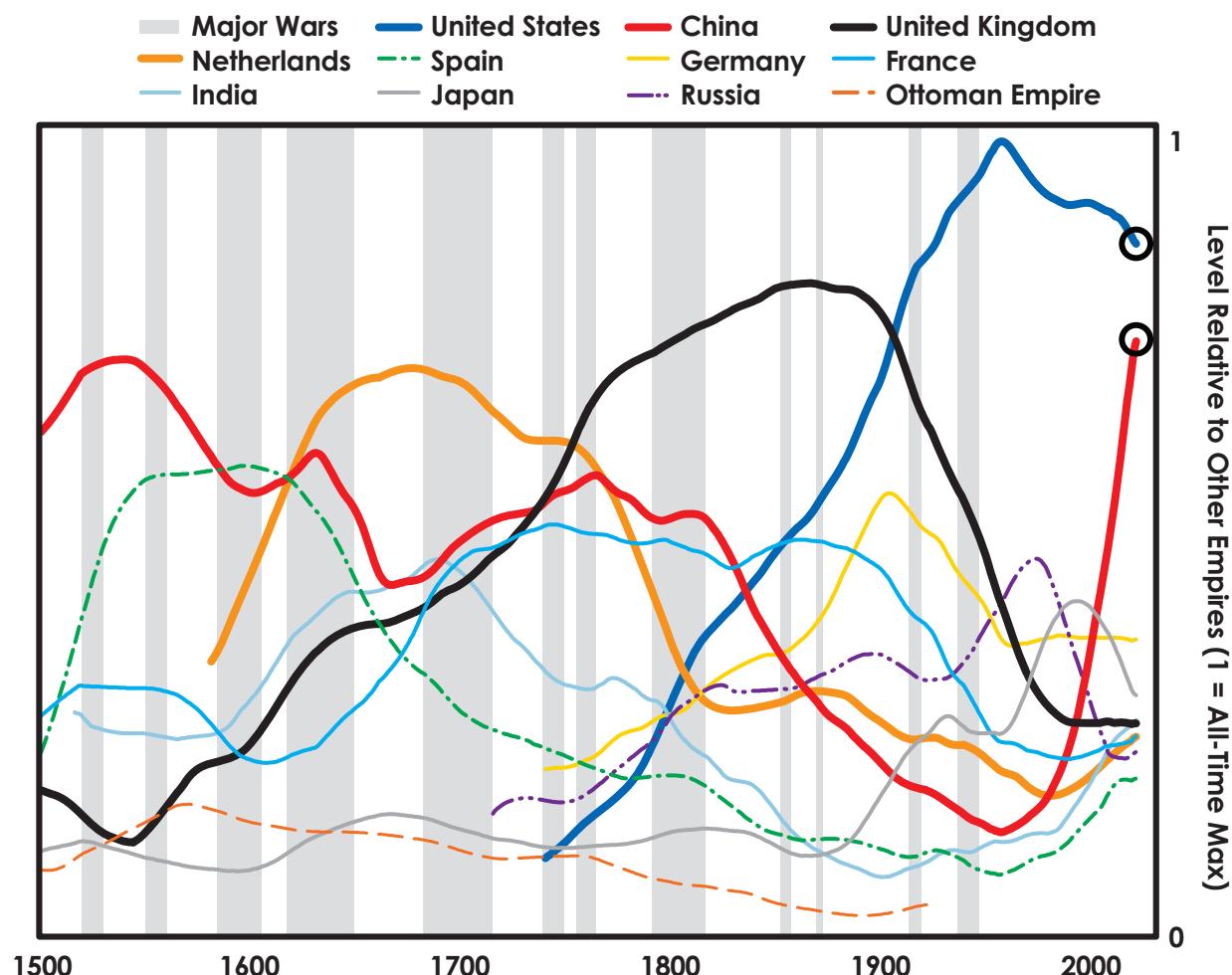


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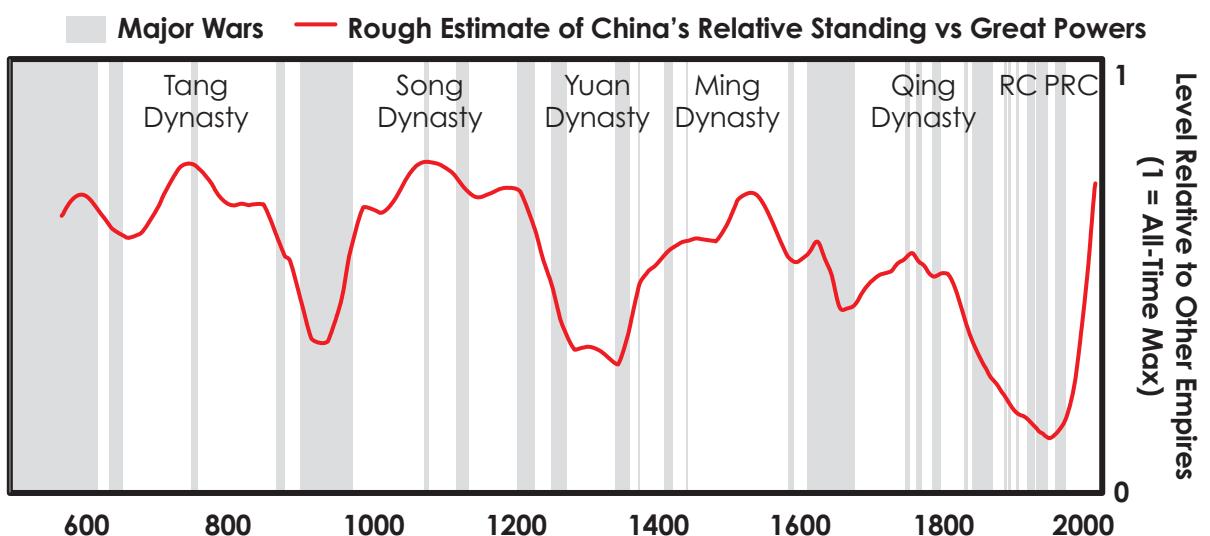
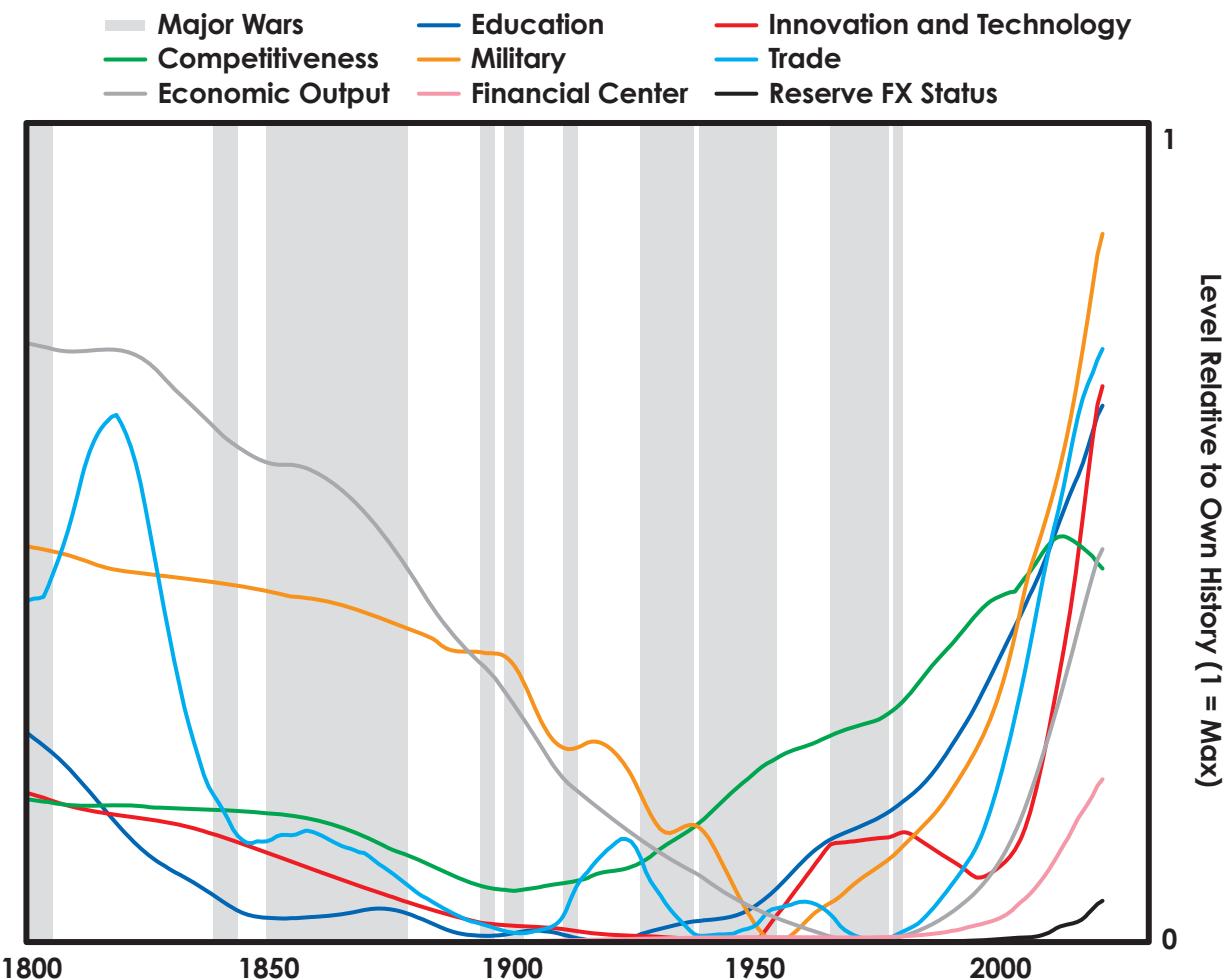
¹² Shading indicates degree of polarization.

THE BIG CYCLE RISE OF CHINA AND THE RENMINBI

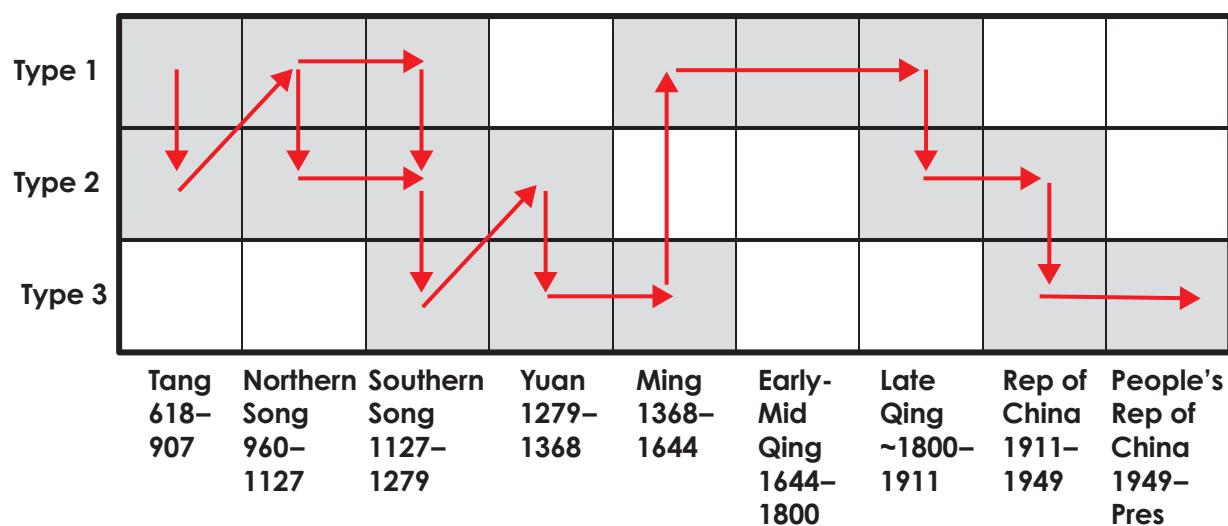
RELATIVE STANDING OF GREAT EMPIRES



CHINA: INDEX OF KEY DETERMINANTS

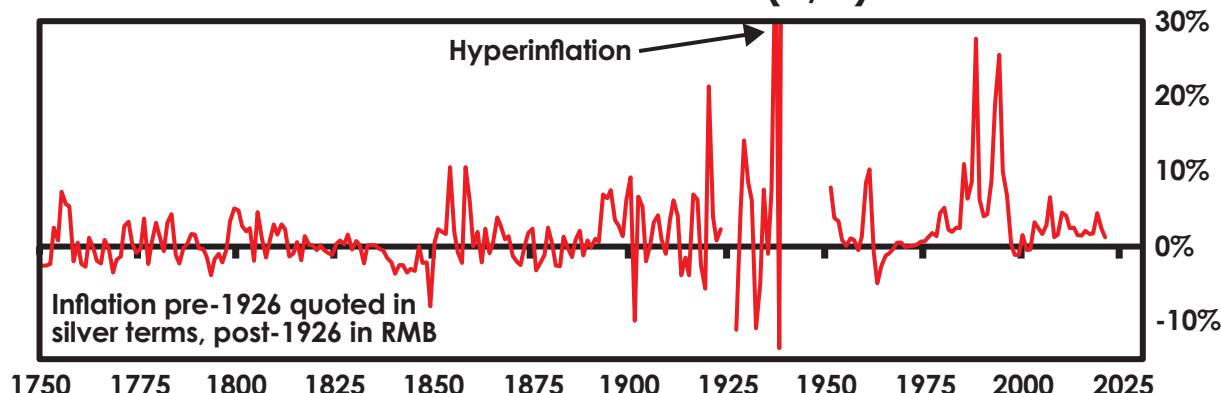


TRANSITIONS ACROSS DIFFERENT TYPES OF MONEY IN CHINESE HISTORY

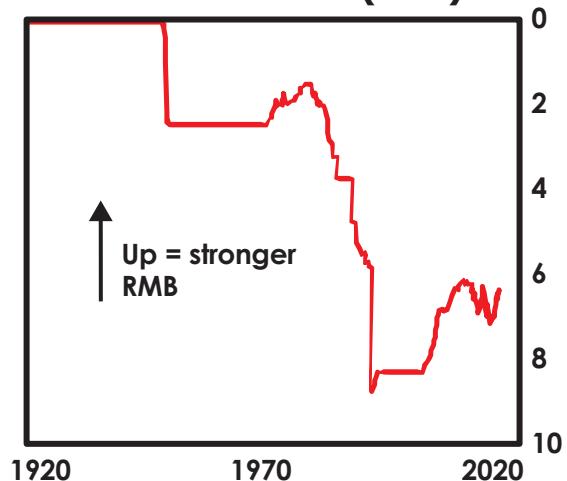
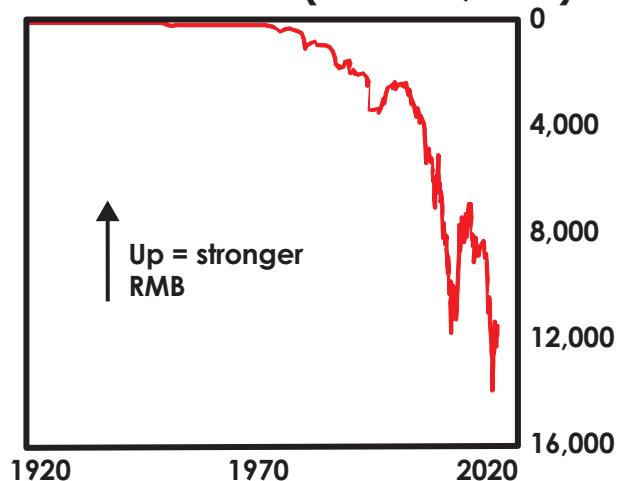
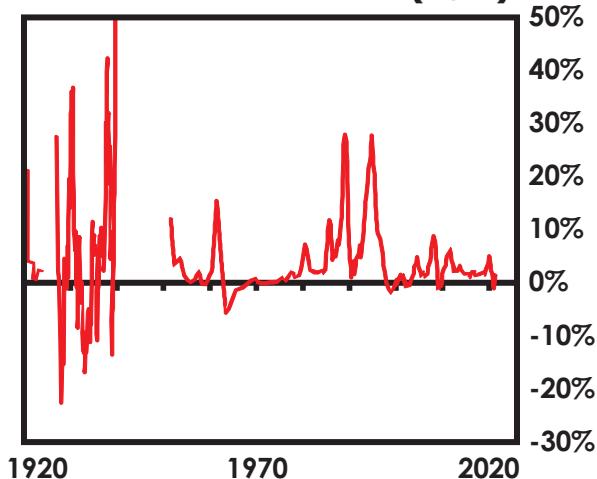
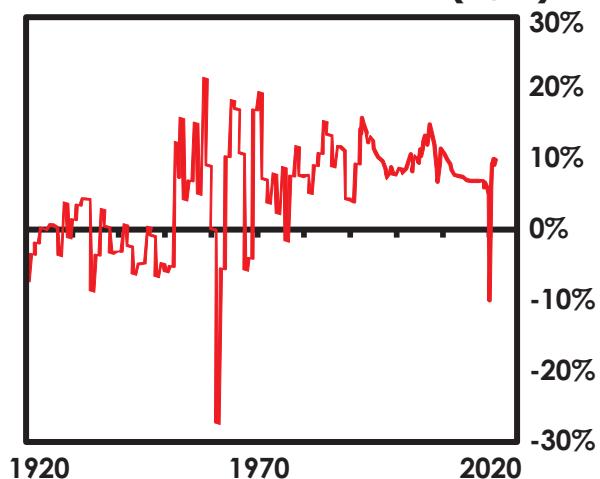


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CHINESE INFLATION (Y/Y)



¹³ I produced this diagram working with Professor Jiaming Zhu.

CNY VS USD (INV)**GOLD PRICE (IN CNY, INV)****CHN INFLATION (Y/Y)****CHN REAL GROWTH (Y/Y)**

CHINA'S DEVELOPMENT SINCE 1949 AND 1978

	1949	1978	2018	Δ Since 1949	Δ Since 1978
RGDP Per Capita*	348	609	15,243	44x	25x
Share of World GDP	2%	2%	22%	12x	11x
Population Below the Poverty Line (\$1.90/Day)**	—	96%	1%	at least -96%	-96%
Life Expectancy	41	66	77	+36 Yrs	+11 Yrs
Infant Mortality Rate (per 1,000 Births)	200	53	7	-96%	-86%
Urbanization	18%	18%	59%	+41%	+41%
Literacy	47%	66%	97%	+50%	+31%
Avg Yrs of Education	1.7	4.4	7.9	+6.2 Yrs	+3.5 Yrs

*USD 2017, PPP-adjusted

**The World Bank only has poverty data back to 1981

UNITED STATES**CHINA**

	1980	Today	Change	Change (%)	1980	Today	Change	Change (%)
Average Years of Schooling	11.9	13.6	+1.7	+14%	4.6	7.9	+3.3	+72%
Govt Spending on Education (% of GDP)	5.30%	5.50%	0.20%	+4%	1.90%	5.20%	3.30%	+174%
Est Population w/ Tertiary Education (Mln)	25	60	+35	+140%	3	120	+117	+3,900%
Population w/ Tertiary Education (% Working-Age Pop)	17%	28%	11%	+68%	1%	12%	11%	+2,272%
Population w/ Tertiary Education (% World)	35%	15%	-20%	-57%	4%	31%	+27%	+590%
STEM Majors (Mln)	3	8	+5	+141%	1	21	+21	+4,120%
STEM Majors (% World)	29%	11%	-18%	-62%	5%	31%	+26%	+535%

CHAPTER 13

US-CHINA RELATIONS AND WARS

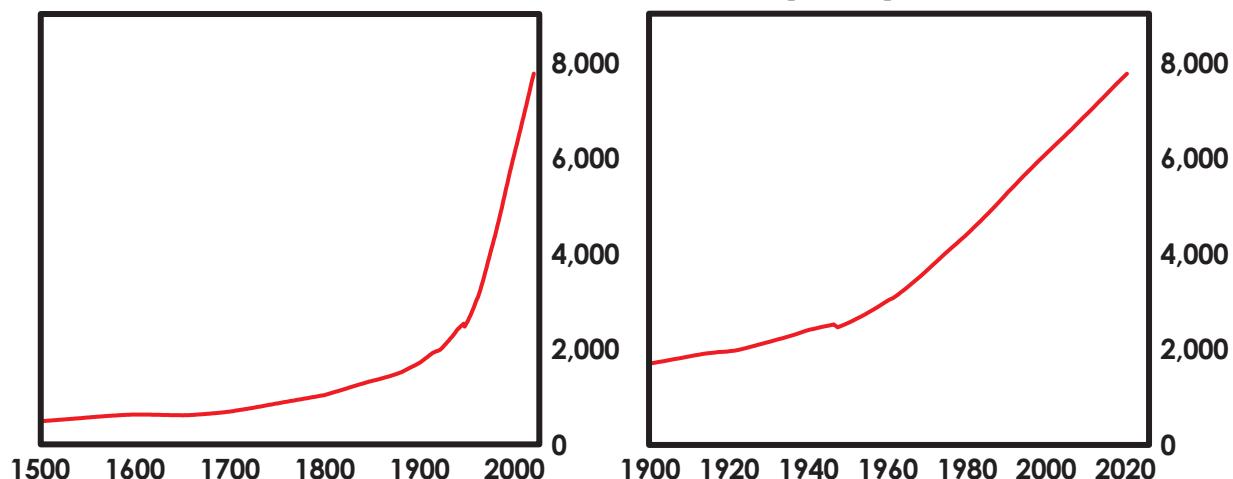
SHARE OF CENTRAL BANK RESERVES BY CURRENCY

USD	51%
EUR	20%
Gold	12%
JPY	6%
GBP	5%
CNY	2%

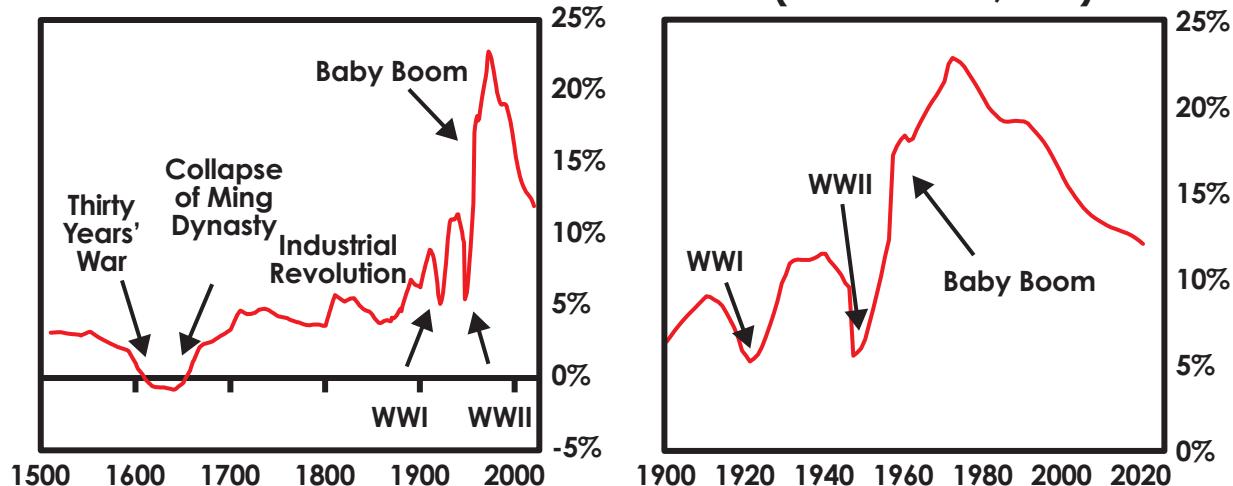
Based on data through 2019

THE FUTURE

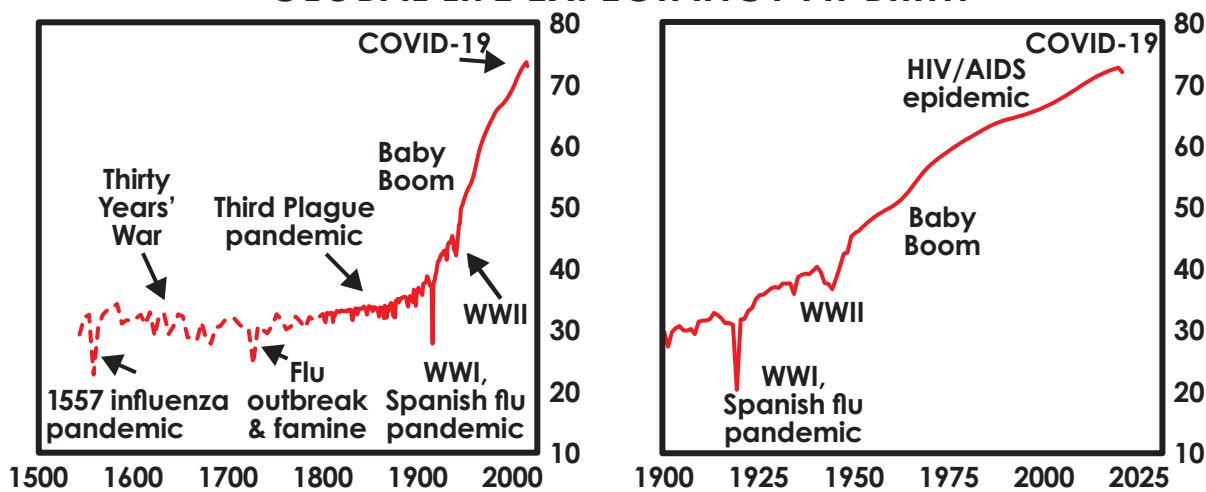
GLOBAL POPULATION (MLN)



GLOBAL POPULATION GROWTH (10YR CHG, EST)

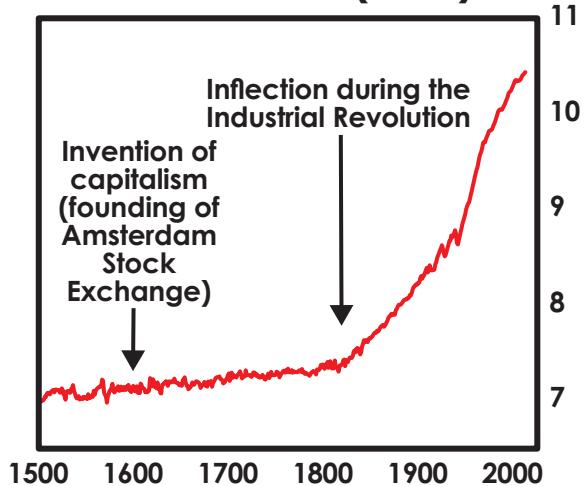


GLOBAL LIFE EXPECTANCY AT BIRTH

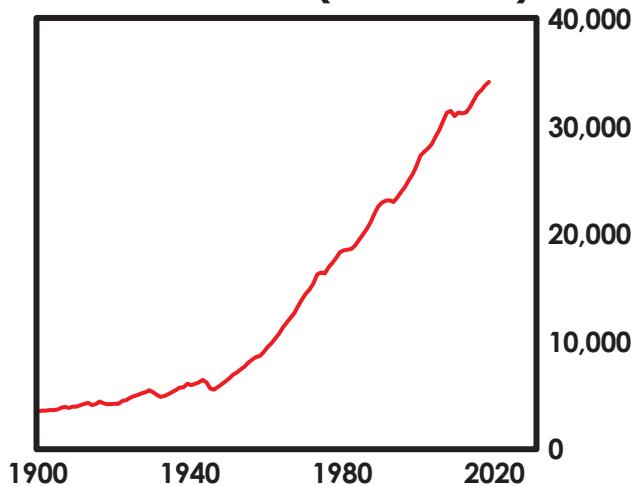


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GLOBAL RGDP PER CAPITA (LOG)

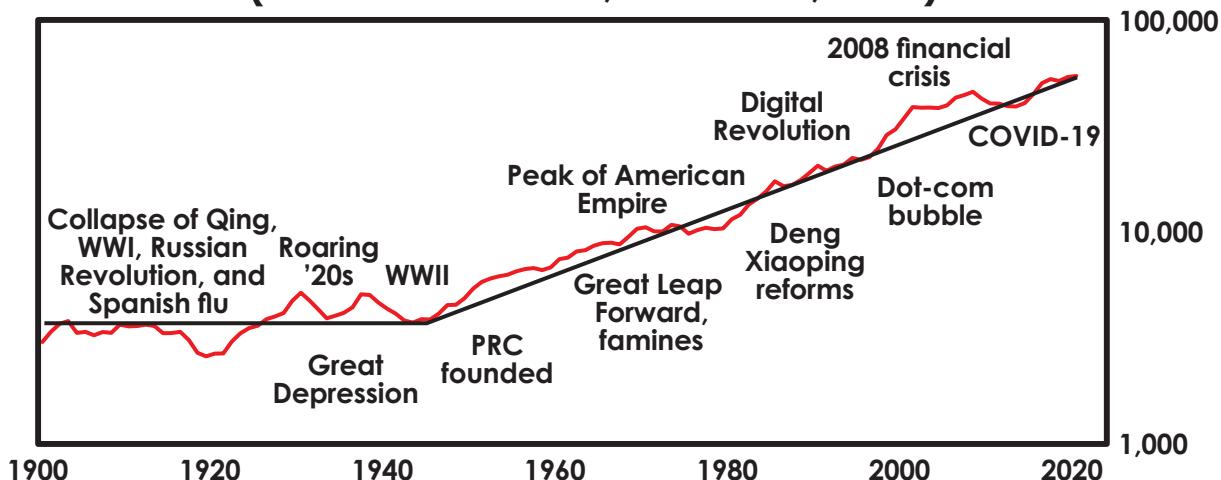


GLOBAL RGDP PER CAPITA (2017 USD)

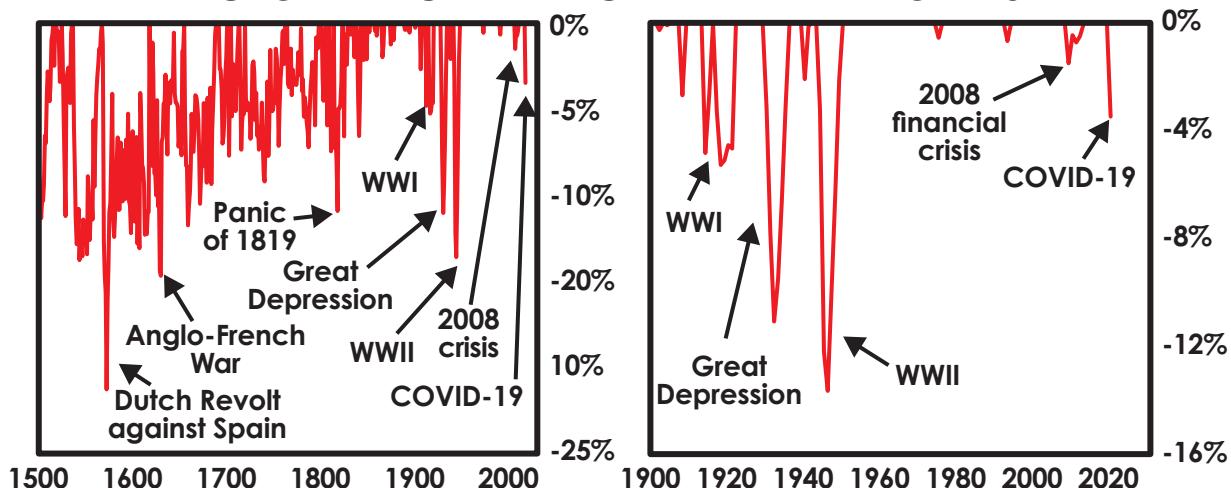


¹⁴ Importantly, a number of the charts shown on these pages rely on the record from fewer countries further in the past, due to limited reliable data history. Life expectancy prior to the 1800s is solely based on Great Britain (marked by the dotted line). Global RGDP is primarily a mix of European countries before 1870. And there are not good records of total wealth prior to the 1900s, so I can't show you the picture before then.

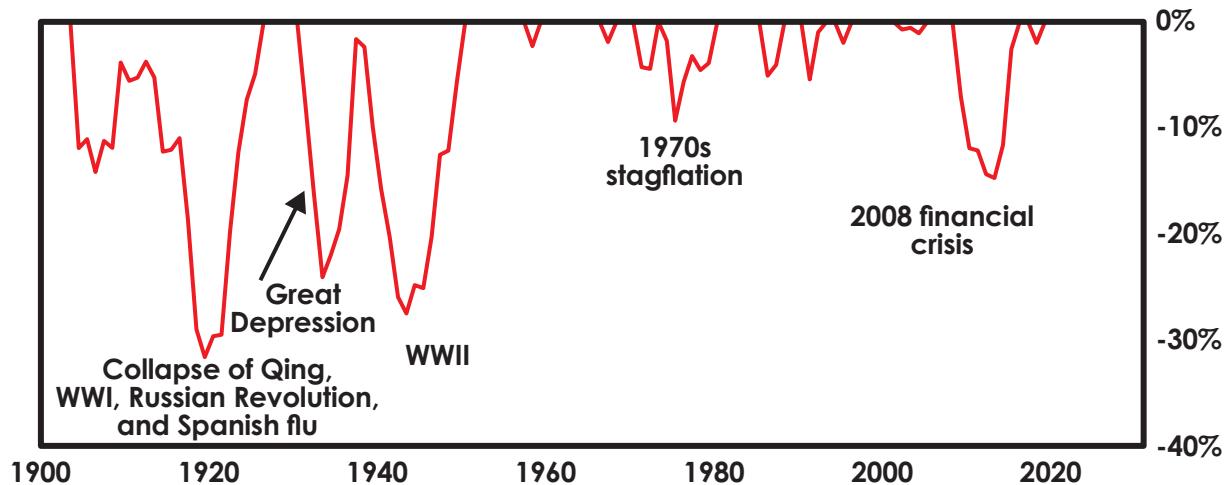
GLOBAL REAL WEALTH PER CAPITA (ROUGH ESTIMATE, 2017 USD, LOG)



GLOBAL RGDP PER CAPITA DRAWDOWNS

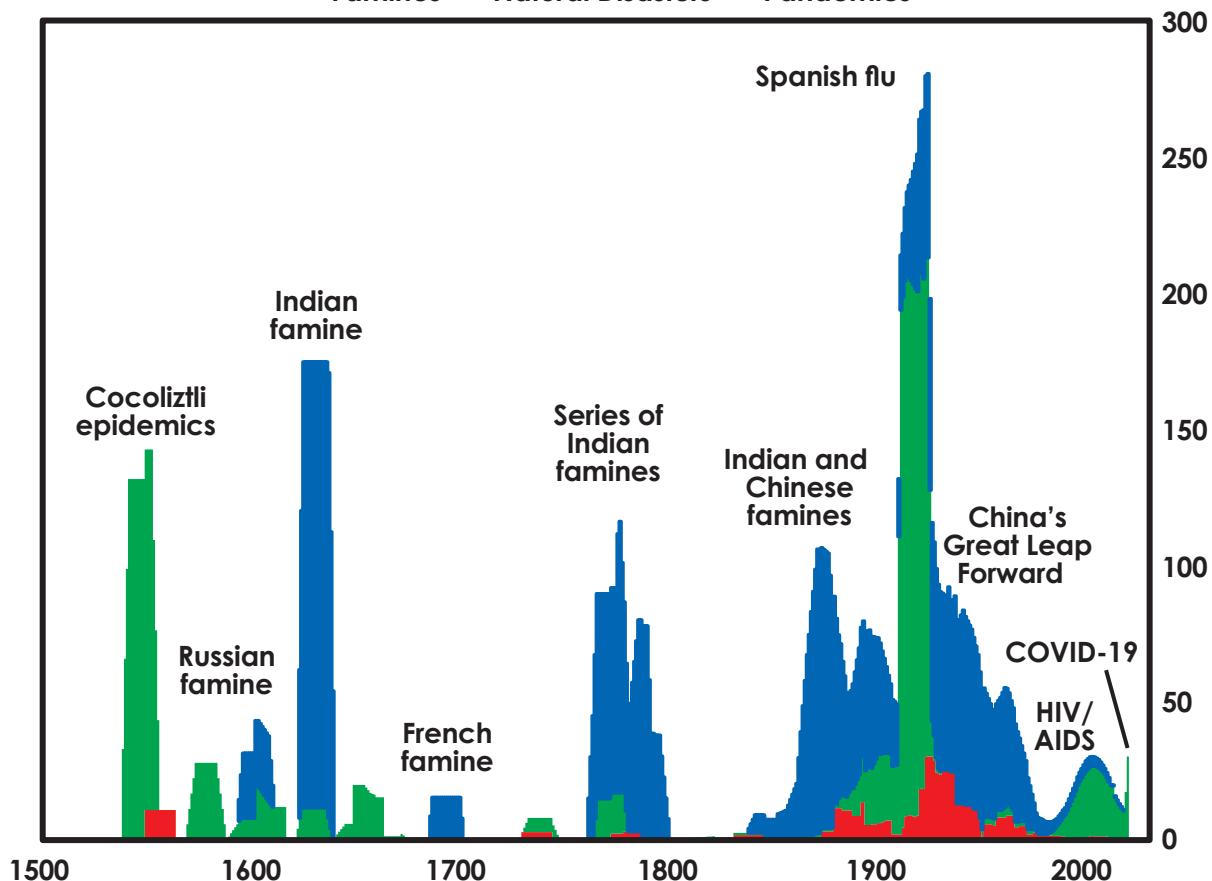


GLOBAL REAL WEALTH PER CAPITA DRAWDOWNS



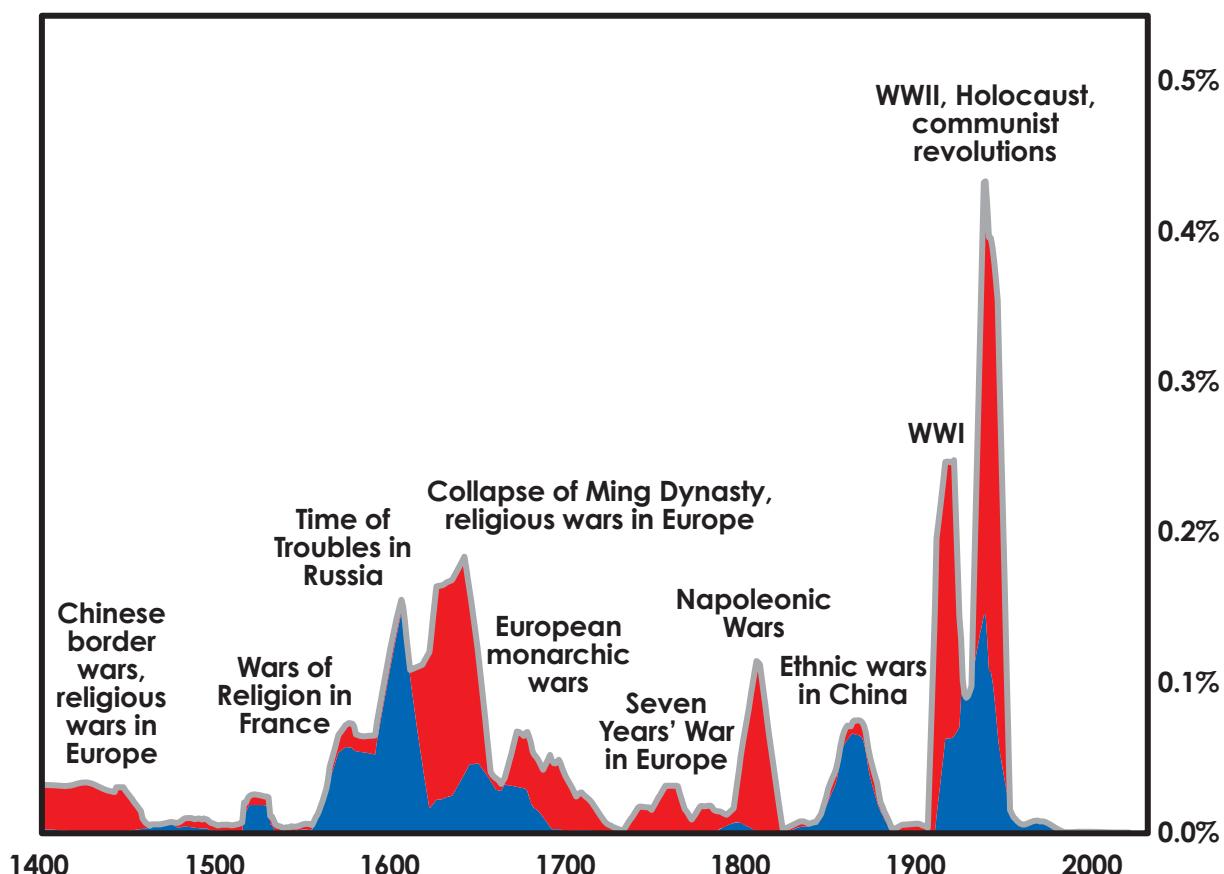
GLOBAL DEATHS BY CATEGORY (RATE PER 100K PEOPLE, 15YMA)

■ Famines ■ Natural Disasters ■ Pandemics

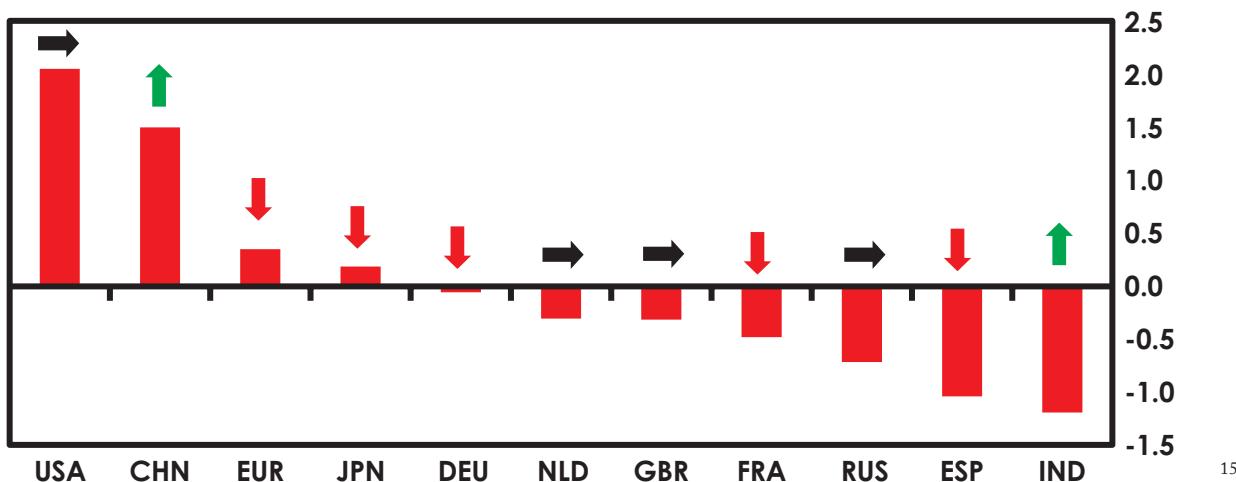


ESTIMATED DEATHS FROM CONFLICT (MAJOR POWERS, %POP, 15YMA)

■ Internal Conflict ■ External Conflict ■ Total

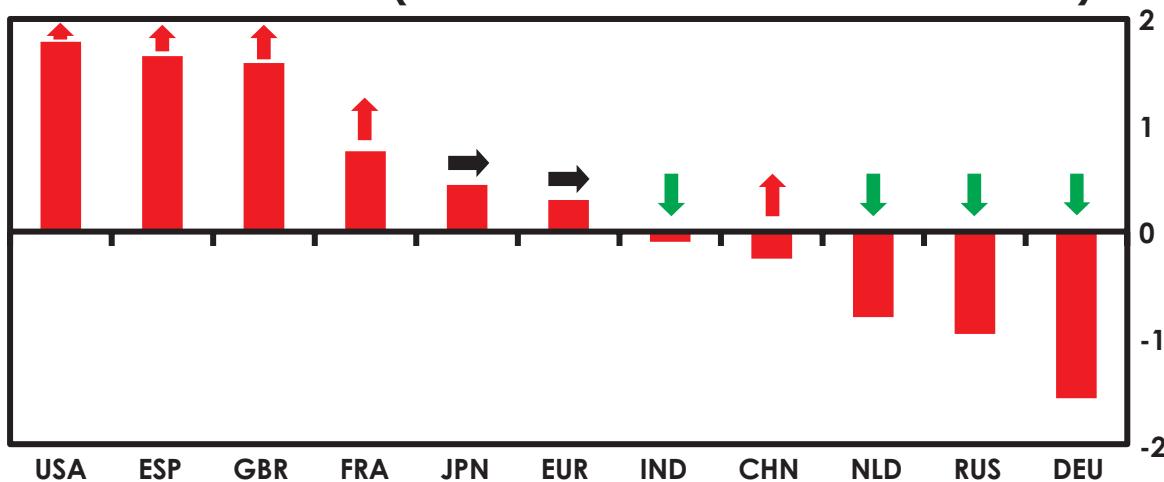


CURRENT INNOVATION AND TECHNOLOGY SCORE

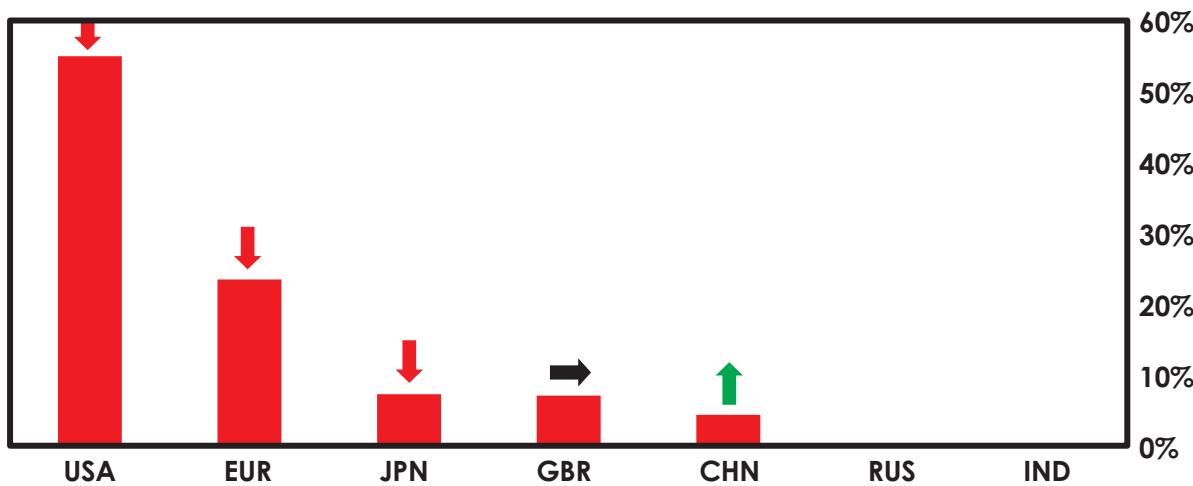


¹⁵ Arrows denote the 20-year change in the gauge.

DEBT BURDEN (UP = WORSE FINANCIAL POSITION)



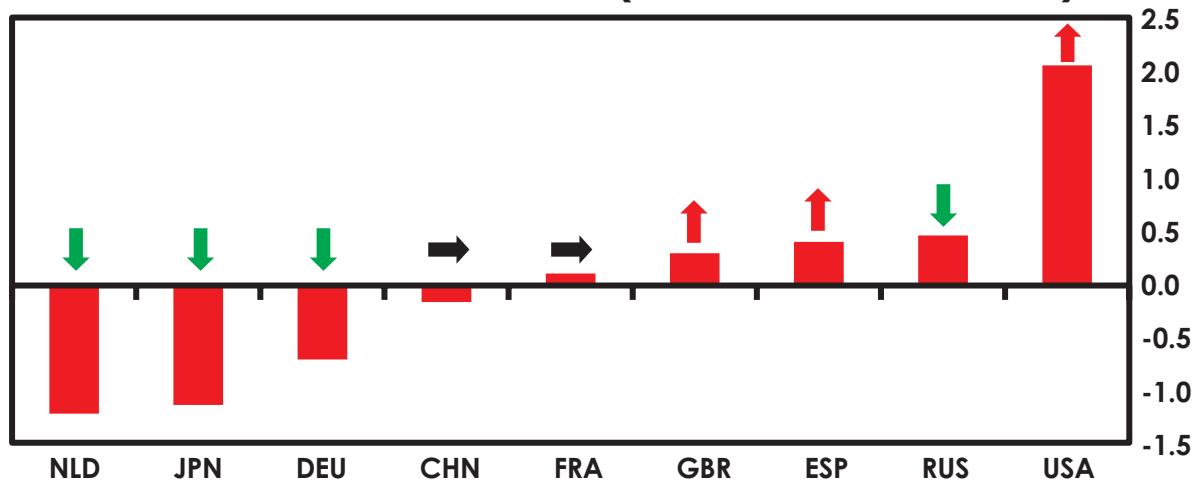
RESERVE CURRENCY STATUS



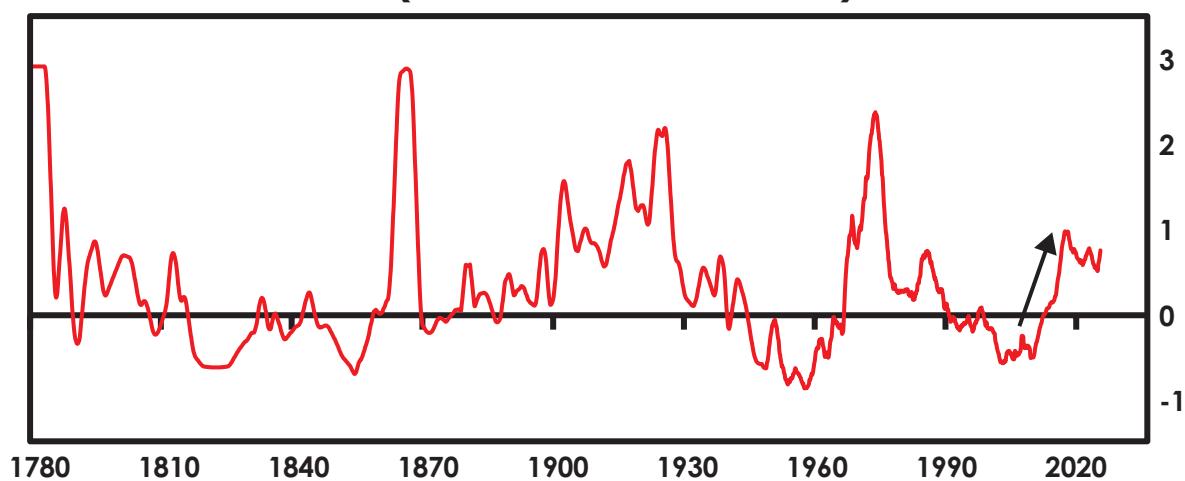
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¹⁶ Individual European countries are not shown on the reserve currency status gauge due to the European Monetary Union (all these countries use the euro)—so only the Europe aggregate is shown. The measure shows an average of what share of global transactions, debts, and official central bank reserve holdings are denominated in each country's currency.

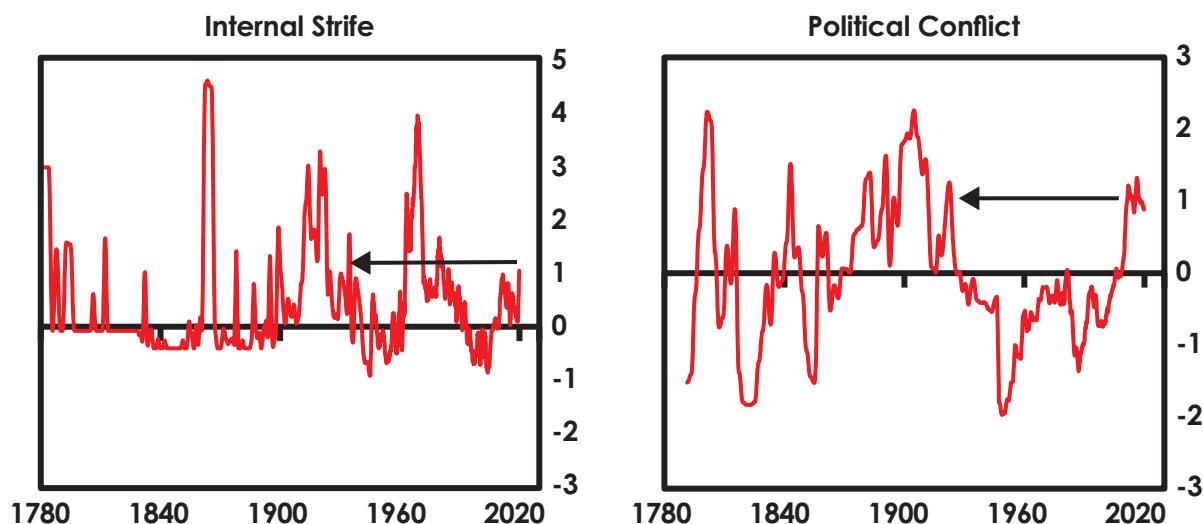
RELATIVE INTERNAL CONFLICT GAUGE Z-SCORE FOR MAJOR POWERS TODAY (UP = MORE CONFLICT)



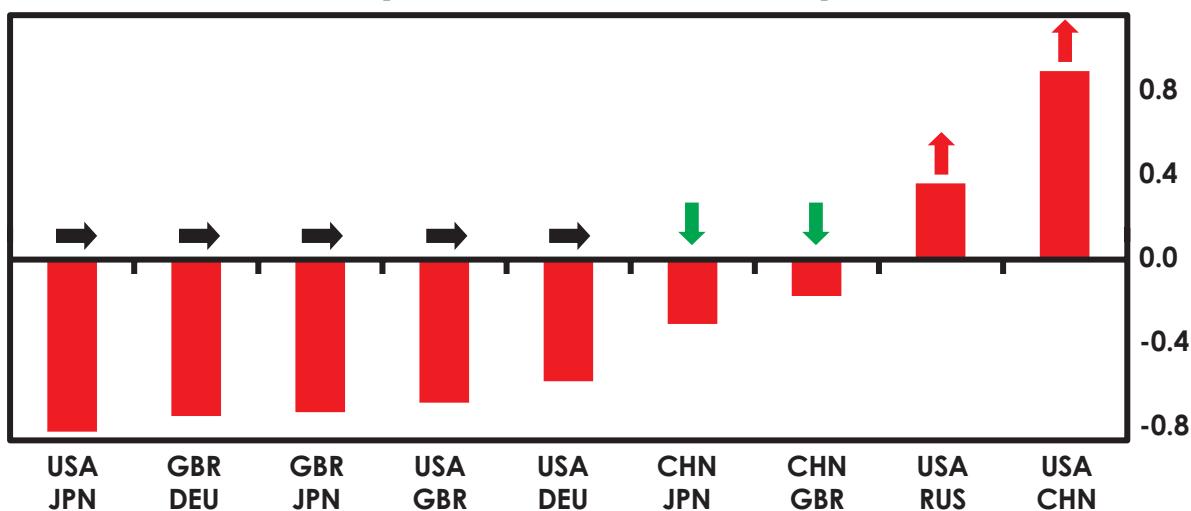
USA INTERNAL CONFLICT GAUGE Z-SCORE (UP = MORE CONFLICT)



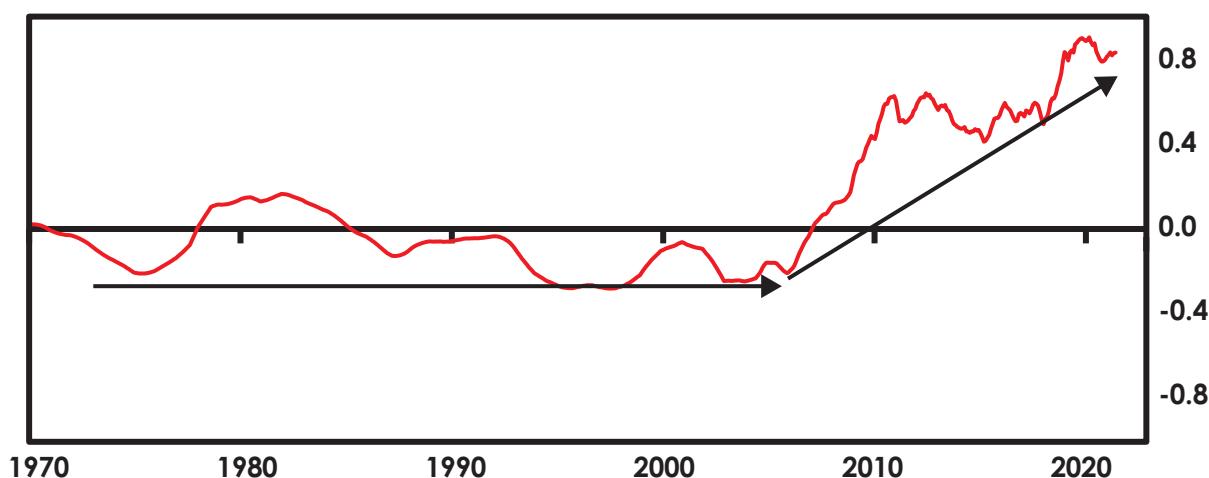
USA INTERNAL CONFLICT GAUGE BREAKDOWN



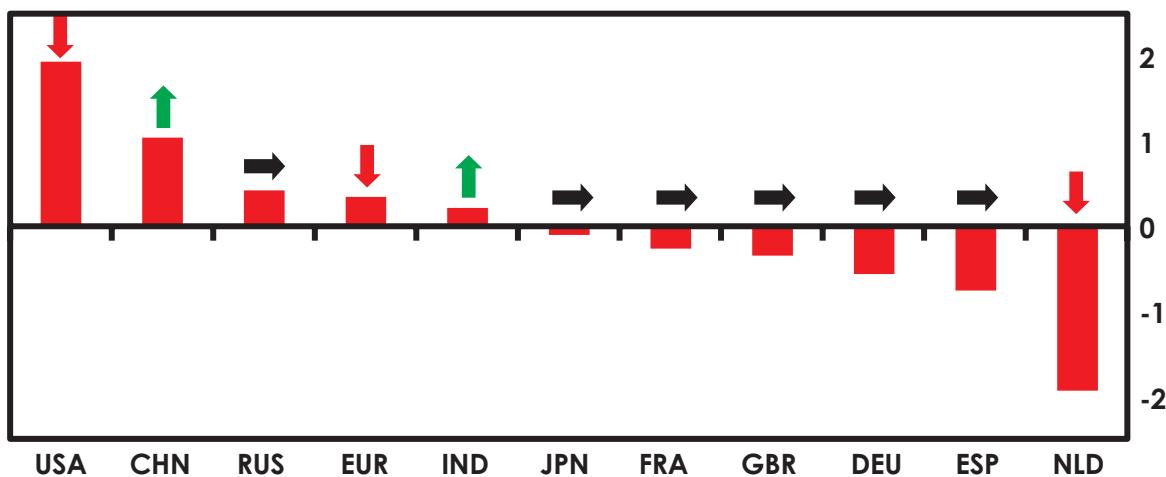
LATEST INTERCOUNTRY CONFLICT Z-SCORE (UP = MORE CONFLICT)



USA-CHINA CONFLICT GAUGE Z-SCORE

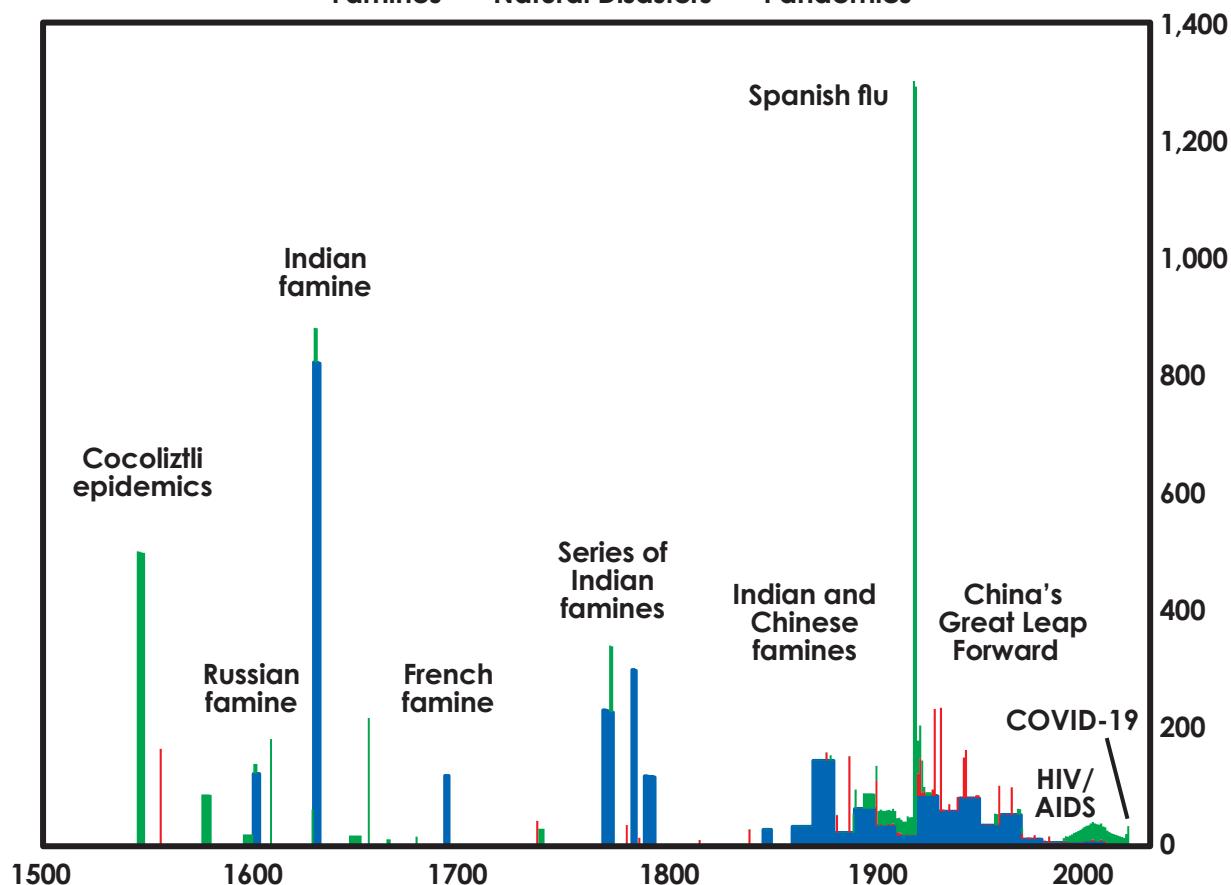


CURRENT MILITARY STRENGTH (UP = STRONGER)

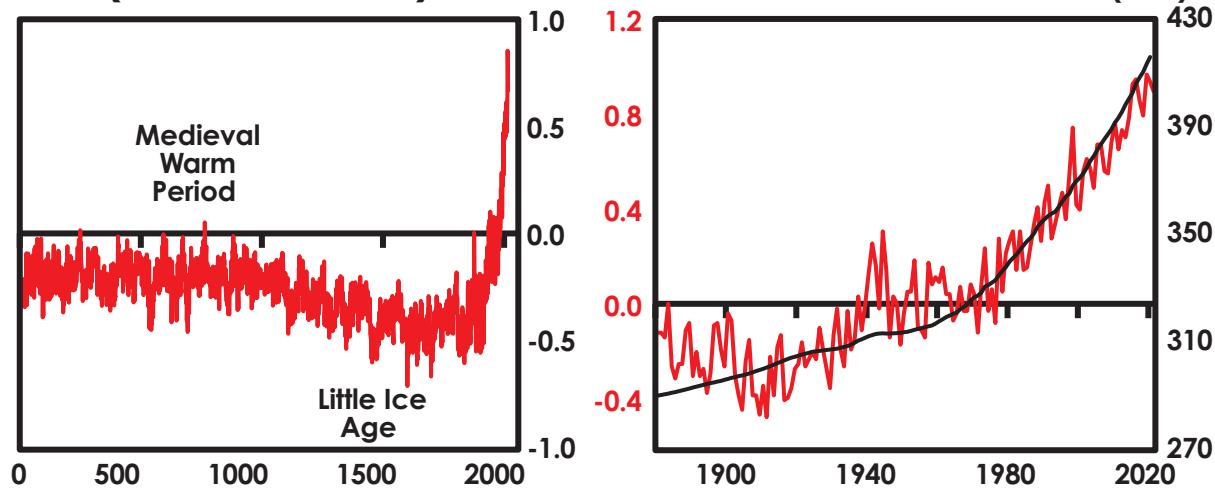


GLOBAL DEATHS BY CATEGORY (RATE PER 100K PEOPLE)

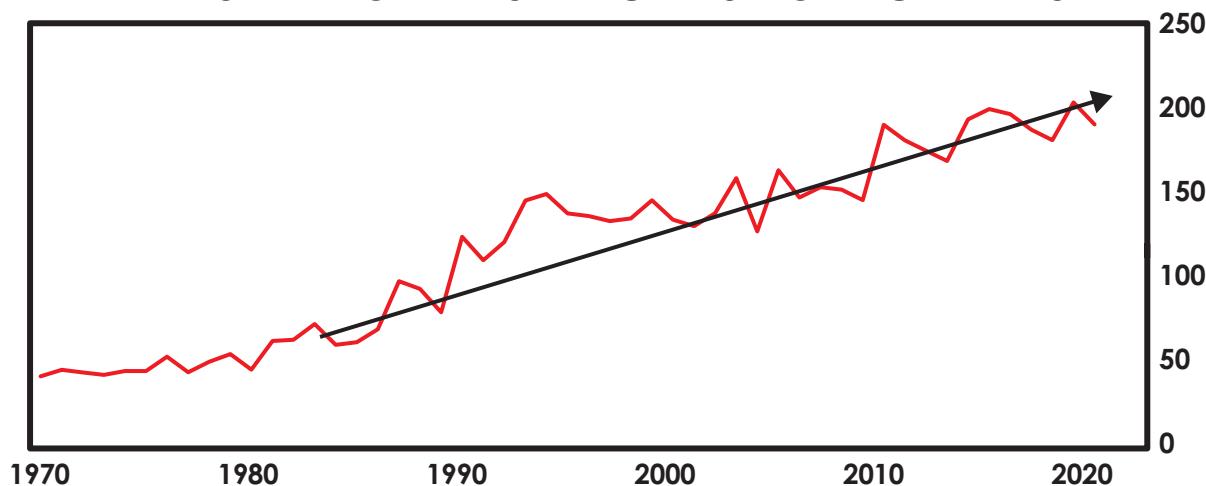
■ Famines ■ Natural Disasters ■ Pandemics



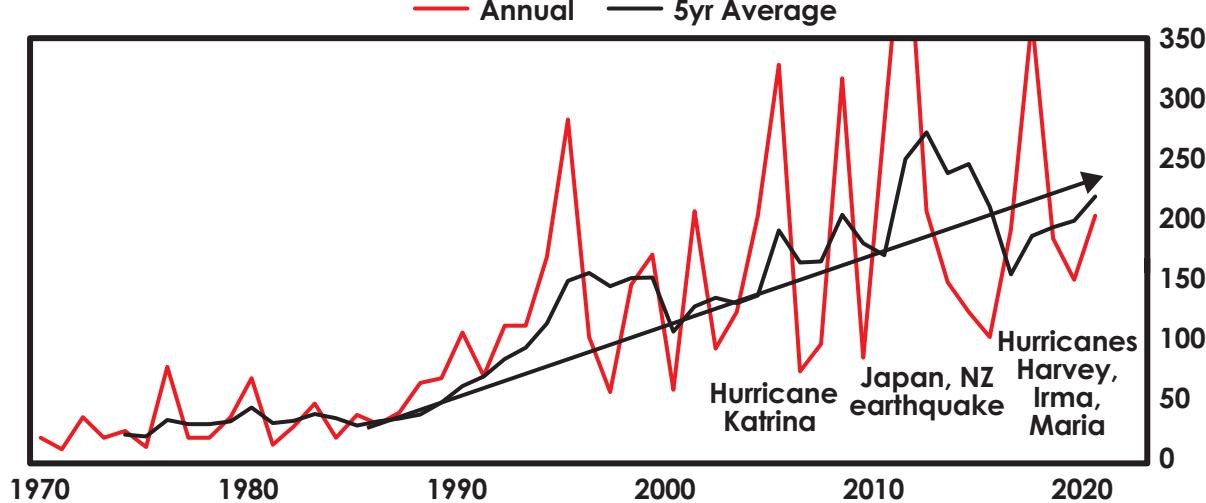
GLOBAL TEMPERATURE VS 1961–1990 AVG (°C, SINCE 0 CE)



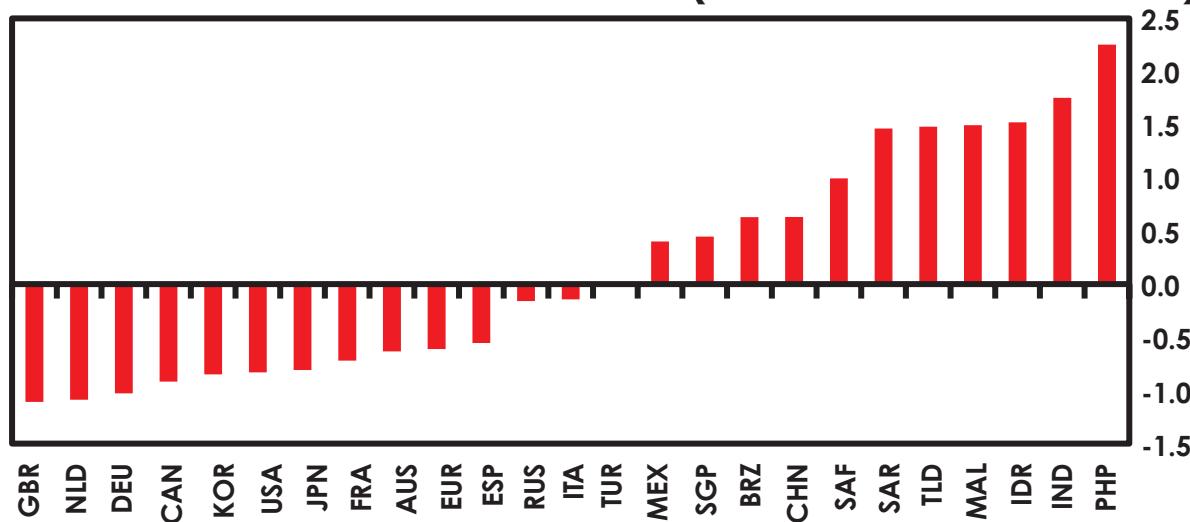
NUMBER OF NATURAL CATASTROPHIC EVENTS



TOTAL LOSSES FROM CATASTROPHES SINCE 1970 (2020 USD, BLN)



CLIMATE CHANGE VULNERABILITY (UP = MORE VULNERABLE)



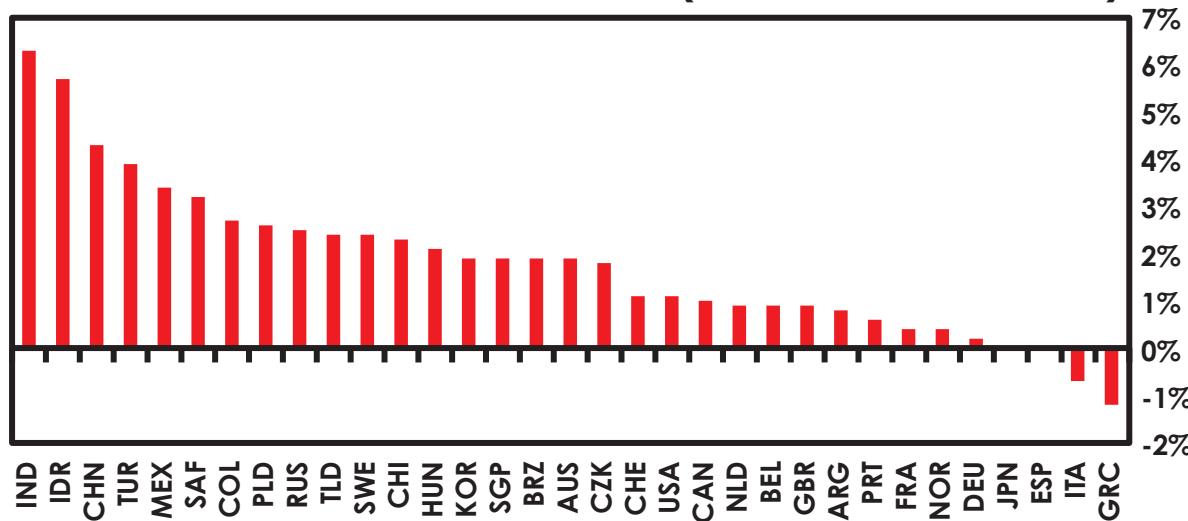
CURRENT READINGS ACROSS MAJOR POWERS

(Z-Score and 20-Year Change Denoted by Arrows)

	GAUGE QUALITY	USA	CHN	EUR	DEU
EMPIRE SCORE (0-1)		0.87	0.75	0.55	0.37
Debt Burden (Big Economic Cycle)	Good	-1.8	0.3	-0.3	1.6
Expected Growth (Big Economic Cycle)	Good	-0.7	0.4	-1.0	-1.0
Internal Conflict (Internal Order; low is bad)	Good	-2.0	0.2	0.4	0.7
Education	Good	2.0	1.6	0.3	-0.2
Innovation & Technology	Good	2.0	1.5	0.4	-0.1
Cost Competitiveness	Good	-0.4	1.2	-0.6	-0.6
Military Strength	Good	1.9	1.0	0.3	-0.6
Trade	Good	1.1	1.8	1.3	0.6
Economic Output	Good	1.7	1.8	0.6	-0.1
Markets & Financial Center	Good	2.6	0.5	0.4	-0.2
Reserve Currency Status (0-1)	Good	0.55	0.04	0.23	
Geology	Good	1.4	0.9	-0.4	-0.7
Resource-Allocation Efficiency	OK	1.3	0.0	-0.8	0.6
Acts of Nature	OK	-0.2	-0.1	0.0	1.1
Infrastructure & Investment	Good	0.7	2.7	0.2	-0.3
Character/Civility/Determination	OK	1.1	1.5	-1.0	-0.5
Governance/Rule of Law	Good	0.7	-0.7	-0.4	0.7
Gaps in Wealth, Opportunity & Values	OK	-1.6	-0.4	0.3	0.7

	GAUGE QUALITY	JPN	IND	GBR	FRA
EMPIRE SCORE (0-1)		0.30 ▼	0.27 ▼	0.27 ►	0.25 ►
Debt Burden (Big Economic Cycle)	Good	-0.4 ►	0.1 ▼	-1.6 ▼	-0.8 ▼
Expected Growth (Big Economic Cycle)	Good	-1.1 ►	1.1 ▼	-0.8 ▲	-0.9 ►
Internal Conflict (Internal Order; low is bad)	Good	1.1 ▲		-0.3 ▼	-0.1 ►
Education	Good	0.2 ►	-1.2 ▼	-0.2 ►	-0.5 ►
Innovation & Technology	Good	0.2 ▲	-1.2 ▼	-0.3 ►	-0.5 ►
Cost Competitiveness	Good	-0.3 ►	2.4 ▼	-0.3 ►	-0.6 ►
Military Strength	Good	-0.1 ►	0.2 ▲	-0.3 ►	-0.3 ►
Trade	Good	-0.5 ▼	-0.8 ▼	-0.6 ►	-0.5 ►
Economic Output	Good	-0.3 ▼	-0.2 ►	-0.3 ►	-0.5 ▼
Markets & Financial Center	Good	0.1 ▲	-0.8 ▼	0.0 ►	-0.3 ►
Reserve Currency Status (0-1)	Good	0.07 ▲	0.0 ►	0.07 ►	
Geology	Good	-1.1 ►	0.3 ►	-0.9 ►	-0.5 ►
Resource-Allocation Efficiency	OK	0.1 ▲	0.2 ►	0.3 ►	-1.3 ▼
Acts of Nature	OK	1.5 ▼	-2.4 ►	0.4 ►	0.0 ►
Infrastructure & Investment	Good	-0.2 ▼	-0.3 ▲	-0.6 ▲	-0.2 ►
Character/Civility/Determination	OK	0.5 ▲	1.3 ►	-0.4 ►	-1.5 ▼
Governance/Rule of Law	Good	0.8 ►	-1.1 ▼	1.2 ▼	0.3 ►
Gaps in Wealth, Opportunity & Values	OK	0.9 ▲	-1.8 ►	-0.2 ▼	1.1 ▼

	GAUGE QUALITY	NLD	RUS	ESP
EMPIRE SCORE (0-1)		0.25 ▶	0.23 ▶	0.20 ▶
Debt Burden (Big Economic Cycle)	Good	0.8 ▲	1.0 ▲	-1.7 ▼
Expected Growth (Big Economic Cycle)	Good	-0.8	-0.2	-1.1 ▲
Internal Conflict (Internal Order; low is bad)	Good	1.2 ▼	-0.5 ▲	-0.4 ▲
Education	Good	-0.7 ▶	-0.5 ▶	-0.9 ▶
Innovation & Technology	Good	-0.3 ▶	-0.7 ▶	-1.0 ▼
Cost Competitiveness	Good	-0.8 ▶	0.7	-0.6 ▶
Military Strength	Good	-1.9 ▲	0.4 ▶	-0.8 ▶
Trade	Good	-0.6 ▶	-0.9 ▶	-0.9 ▶
Economic Output	Good	-0.3 ▶	-1.4 ▶	-0.9 ▼
Markets & Financial Center	Good	-0.5 ▶	-1.1 ▶	-0.6 ▶
Reserve Currency Status (0-1)	Good	0.0		
Geology	Good	-0.5 ▶	1.9 ▶	-0.6 ▶
Resource-Allocation Efficiency	OK	-0.1 ▼	1.3	-1.6 ▲
Acts of Nature	OK	0.5	-0.1	-0.7
Infrastructure & Investment	Good	-0.4 ▶	-1.0 ▼	-0.6 ▼
Character/Civility/Determination	OK	-0.3 ▼	0.1	-1.0 ▶
Governance/Rule of Law	Good	1.0 ▶	-1.9 ▶	-0.7 ▲
Gaps in Wealth, Opportunity & Values	OK	0.6 ▲		0.4 ▼

REAL GDP GROWTH ESTIMATE (NEXT 10 YEARS, ANN)

APPENDIX

COMPUTER ANALYSIS OF THE CONDITIONS OF, AND PROSPECTS FOR, THE WORLD'S LEADING COUNTRIES

UNITED STATES—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.87

Rank: 1



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.7	10	↘
Debt Burden	High Debt	-1.8	11	↘
Expected Growth	1.1%	-0.7	4	↘
Internal Order	High Risk	-1.8	11	↘
Wealth/Opportunity/Values Gap	Large	-1.6	9	↘
Internal Conflict	Very High	-2.0	10	↘
External Order	At Risk			↘
Eight Key Measures of Power				
Markets & Financial Center	Very Strong	2.6	1	→
Innovation & Technology	Very Strong	2.0	1	→
Education	Very Strong	2.0	1	↘
Military Strength	Very Strong	1.9	1	↘
Reserve Currency Status	Very Strong	1.7	1	↘
Economic Output	Very Strong	1.7	2	↘
Trade	Strong	1.1	3	↘
Cost Competitiveness	Average	-0.4	6	→
Additional Measures of Power				
Geology	Strong	1.4	2	→
Resource-Allocation Efficiency	Strong	1.3	2	↘
Infrastructure & Investment	Strong	0.7	2	↘
Character/Determination/Civility	Strong	1.1	3	→
Governance/Rule of Law	Strong	0.7	5	↗
Acts of Nature	Average	-0.2	9	

Getting better

Getting worse

Flat

CHINA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.75

Rank: 2



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.4	3	↘
Debt Burden	Low Debt	0.3	4	↘
Expected Growth	4.3%	0.4	2	↘
Internal Order	Moderate Risk	-0.1	7	→
Wealth/Opportunity/Values Gap	Relatively Large	-0.4	8	→
Internal Conflict	Average	0.2	5	→
External Order	At Risk			↘
Eight Key Measures of Power				
Trade	Very Strong	1.8	1	↗
Economic Output	Very Strong	1.8	1	↗
Education	Strong	1.6	2	↗
Innovation & Technology	Strong	1.5	2	↗
Cost Competitiveness	Strong	1.2	2	↘
Military Strength	Strong	1.0	2	↗
Markets & Financial Center	Average	0.4	2	↗
Reserve Currency Status	Weak	-0.7	5	↗
Additional Measures of Power				
Infrastructure & Investment	Very Strong	2.7	1	↗
Character/Determination/Civility	Strong	1.5	1	→
Geology	Strong	0.9	3	↗
Resource-Allocation Efficiency	Average	0.0	7	→
Governance/Rule of Law	Weak	-0.7	8	↗
Acts of Nature	Average	-0.1	8	

↗ Getting better ↘ Getting worse → Flat

EUROZONE—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.55

Rank: 3

→

The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Moderately Unfavorable	-0.9	6	↘
Debt Burden	Moderately High Debt	-0.3	6	→
Expected Growth	0.3%	-1.0	8	→
Internal Order	Low Risk	0.3	5	↗
Wealth/Opportunity/Values Gap	Typical	0.3	6	↗
Internal Conflict	Average	0.4	4	→
External Order				
Eight Key Measures of Power				
Trade	Strong	1.3	2	→
Reserve Currency Status	Average	0.1	2	↘
Economic Output	Strong	0.6	3	↘
Markets & Financial Center	Average	0.4	3	→
Innovation & Technology	Average	0.4	3	↘
Education	Average	0.3	3	→
Military Strength	Average	0.3	4	↘
Cost Competitiveness	Weak	-0.6	8	→
Additional Measures of Power				
Infrastructure & Investment	Average	0.2	3	↘
Geology	Average	-0.4	5	→
Governance/Rule of Law	Average	-0.4	7	
Resource-Allocation Efficiency	Weak	-0.8	9	
Character/Determination/Civility	Weak	-1.0	10	→
Acts of Nature	Average	0.0	5	

↗ Getting better

↘ Getting worse

→ Flat

GERMANY—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0–1)

Level: 0.37

Rank: 4

→

The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.4	4	↗
Debt Burden	Low Debt	1.6	1	↗
Expected Growth	0.3%	-1.0	9	→
Internal Order	Low Risk	0.7	3	↗
Wealth/Opportunity/Values Gap	Narrow	0.7	3	→
Internal Conflict	Low	0.7	3	↗
External Order				
Eight Key Measures of Power				
Trade	Strong	0.6	4	→
Economic Output	Average	-0.1	4	↘
Innovation & Technology	Average	-0.1	5	↘
Education	Average	-0.2	5	→
Markets & Financial Center	Average	-0.2	6	↘
Military Strength	Weak	-0.6	9	→
Cost Competitiveness	Weak	-0.6	10	→
Reserve Currency Status				
Additional Measures of Power				
Resource-Allocation Efficiency	Strong	0.6	3	↗
Governance/Rule of Law	Strong	0.7	4	→
Infrastructure & Investment	Average	-0.3	7	→
Character/Determination/Civility	Average	-0.5	8	→
Geology	Weak	-0.7	9	→
Acts of Nature	Strong	1.1	2	

↗ Getting better ↘ Getting worse → Flat

JAPAN—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.30

Rank: 5



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.1	7	→
Debt Burden	Moderately High Debt	-0.4	7	→
Expected Growth	0.0%	-1.1	11	→
Internal Order	Low Risk	1.0	1	↗
Wealth/Opportunity/Values Gap	Narrow	0.9	2	↗
Internal Conflict	Low	1.1	2	↗
External Order				
Eight Key Measures of Power				
Reserve Currency Status	Weak	-0.5	3	↘
Education	Average	0.2	4	→
Innovation & Technology	Average	0.2	4	↘
Markets & Financial Center	Average	0.1	4	↘
Cost Competitiveness	Average	-0.3	4	→
Trade	Average	-0.5	5	↘
Military Strength	Average	-0.1	6	→
Economic Output	Average	-0.3	7	↘
Additional Measures of Power				
Governance/Rule of Law	Strong	0.8	3	→
Character/Determination/Civility	Average	0.5	4	↘
Infrastructure & Investment	Average	-0.2	4	↘
Resource-Allocation Efficiency	Average	0.1	6	↘
Geology	Weak	-1.1	11	→
Acts of Nature	Strong	1.5	1	

↗ Getting better

↘ Getting worse

→ Flat

INDIA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.27

Rank: 6



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Highly Favorable	0.8	1	↘
Debt Burden	Moderately Low Debt	0.1	5	↗
Expected Growth	6.3%	1.1	1	↘
Internal Order	High Risk	-1.8	10	→
Wealth/Opportunity/Values Gap	Large	-1.8	10	→
Internal Conflict	Very Low			
External Order				
Eight Key Measures of Power				
Cost Competitiveness	Very Strong	2.4	1	↗
Military Strength	Average	0.2	5	↗
Economic Output	Average	-0.2	5	→
Reserve Currency Status	Weak	-0.8	6	
Trade	Weak	-0.8	9	↗
Markets & Financial Center	Weak	-0.8	10	→
Innovation & Technology	Weak	-1.2	11	↗
Education	Weak	-1.2	11	→
Additional Measures of Power				
Character/Determination/Civility	Strong	1.3	2	→
Geology	Average	0.3	4	→
Resource-Allocation Efficiency	Average	0.2	5	
Infrastructure & Investment	Average	-0.3	6	↗
Governance/Rule of Law	Weak	-1.1	10	↗
Acts of Nature	Very Weak	-2.4	11	

↗ Getting better ↘ Getting worse → Flat

UNITED KINGDOM—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.27

Rank: 7



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.7	9	↘
Debt Burden	High Debt	-1.6	9	↘
Expected Growth	0.9%	-0.8	6	↘
Internal Order	Moderate Risk	-0.2	8	↘
Wealth/Opportunity/Values Gap	Relatively Large	-0.2	7	↘
Internal Conflict	Average	-0.3	7	↘
External Order				
Eight Key Measures of Power				
Reserve Currency Status	Weak	-0.6	4	→
Markets & Financial Center	Average	0.0	5	↘
Cost Competitiveness	Average	-0.3	5	→
Education	Average	-0.2	6	↘
Economic Output	Average	-0.3	6	→
Innovation & Technology	Average	-0.3	7	→
Trade	Weak	-0.6	7	→
Military Strength	Average	-0.3	8	→
Additional Measures of Power				
Governance/Rule of Law	Strong	1.2	1	→
Resource-Allocation Efficiency	Average	0.3	4	→
Character/Determination/Civility	Average	-0.4	7	↘
Infrastructure & Investment	Weak	-0.6	10	↘
Geology	Weak	-0.9	10	→
Acts of Nature	Average	0.4	4	

↗ Getting better ↘ Getting worse → Flat

FRANCE—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.25

Rank: 8

→

The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.2	8	↘
Debt Burden	Moderately High Debt	-0.8	8	↘
Expected Growth	0.4%	-0.9	7	→
Internal Order	Low Risk	0.5	4	→
Wealth/Opportunity/Values Gap	Narrow	1.1	1	↗
Internal Conflict	Average	-0.1	6	→
External Order				
Eight Key Measures of Power				
Trade	Average	-0.5	6	→
Military Strength	Average	-0.3	7	→
Markets & Financial Center	Average	-0.3	7	→
Education	Average	-0.5	7	→
Innovation & Technology	Average	-0.5	8	↘
Economic Output	Weak	-0.5	9	↘
Cost Competitiveness	Weak	-0.6	9	→
Reserve Currency Status				
Additional Measures of Power				
Infrastructure & Investment	Average	-0.2	5	↗
Governance/Rule of Law	Average	0.3	6	→
Geology	Average	-0.5	7	→
Resource-Allocation Efficiency	Weak	-1.3	10	↘
Character/Determination/Civility	Weak	-1.5	11	→
Acts of Nature	Average	0.0	6	

↗ Getting better

↘ Getting worse

→ Flat

NETHERLANDS—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.25

Rank: 9



The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.0	5	
Debt Burden	Low Debt	0.8	3	↗
Expected Growth	1.0%	-0.8	5	
Internal Order	Low Risk	0.9	2	→
Wealth/Opportunity/Values Gap	Narrow	0.6	4	↘
Internal Conflict	Low	1.2	1	↗
External Order				
Eight Key Measures of Power				
Innovation & Technology	Average	-0.3	6	→
Economic Output	Average	-0.3	8	→
Markets & Financial Center	Weak	-0.5	8	→
Trade	Weak	-0.6	8	→
Education	Weak	-0.7	9	→
Cost Competitiveness	Weak	-0.8	11	→
Military Strength	Very Weak	-1.9	11	↘
Reserve Currency Status				
Additional Measures of Power				
Governance/Rule of Law	Strong	1.0	2	→
Character/Determination/Civility	Average	-0.3	6	↗
Geology	Average	-0.5	6	→
Resource-Allocation Efficiency	Average	-0.1	8	↗
Infrastructure & Investment	Average	-0.4	8	→
Acts of Nature	Average	0.5	3	

↗ Getting better

↘ Getting worse

→ Flat

RUSSIA—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.23

Rank: 10

→

The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Somewhat Favorable	0.5	2	
Debt Burden	Low Debt	1.0	2	↗
Expected Growth	2.5%	-0.2	3	
Internal Order	Moderate Risk	-0.5	9	↗
Wealth/Opportunity/Values Gap				
Internal Conflict	Average	-0.5	9	↗
External Order				
Eight Key Measures of Power				
Cost Competitiveness	Strong	0.7	3	
Military Strength	Average	0.4	3	→
Reserve Currency Status	Weak	-0.8	6	
Education	Weak	-0.5	8	→
Innovation & Technology	Weak	-0.7	9	→
Trade	Weak	-0.9	10	→
Markets & Financial Center	Weak	-1.1	11	→
Economic Output	Weak	-1.4	11	→
Additional Measures of Power				
Geology	Very Strong	1.9	1	→
Resource-Allocation Efficiency	Strong	1.3	1	
Character/Determination/Civility	Average	0.1	5	
Infrastructure & Investment	Weak	-1.0	11	↘
Governance/Rule of Law	Very Weak	-1.9	11	→
Acts of Nature	Average	-0.1	7	

↗ Getting better ↘ Getting worse → Flat

SPAIN—KEY DRIVERS OF OUR COUNTRY POWER SCORE

Overall Empire Score (0-1)

Level: 0.20

Rank: 11

→

The Big Cycles	Level	Z-Score	Rank	Trajectory
Economic/Financial Position	Unfavorable	-1.9	11	↘
Debt Burden	High Debt	-1.7	10	↘
Expected Growth	0.0%	-1.1	10	↘
Internal Order	Moderate Risk	0.0	6	→
Wealth/Opportunity/Values Gap	Typical	0.4	5	↗
Internal Conflict	Average	-0.4	8	↘
External Order				
Eight Key Measures of Power				
Cost Competitiveness	Weak	-0.6	7	→
Markets & Financial Center	Weak	-0.6	9	→
Military Strength	Weak	-0.8	10	→
Economic Output	Weak	-0.9	10	↘
Education	Weak	-0.9	10	→
Innovation & Technology	Weak	-1.0	10	↘
Trade	Weak	-0.9	11	→
Reserve Currency Status				
Additional Measures of Power				
Geology	Weak	-0.6	8	→
Infrastructure & Investment	Weak	-0.6	9	↘
Governance/Rule of Law	Weak	-0.7	9	↘
Character/Determination/Civility	Weak	-1.0	9	→
Resource-Allocation Efficiency	Weak	-1.6	11	↘
Acts of Nature	Weak	-0.7	10	

↗ Getting better ↘ Getting worse → Flat