

Cambridge Centre for Risk Studies

GEOPOLITICAL AND SECURITY RISKS – CCRS RISK OUTLOOK

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A Decade in Geopolitical Change

Egypt Erupts in Jubilation as Mubarak Steps Down

Ukraine mobilizes troops after Russia's 'declaration of war'

Libya: Obama, Cameron and Sarkozy vow Gaddafi must go

Narendra Modi walks the talk with surgical strikes against Pakistan

Syria crisis: Obama welcomes Russia's chemical weapons proposal

Greek referendum no vote signals huge challenge to eurozone leaders

How the Killing of Bin Laden Has Crippled al Qaeda

Turkey coup attempt: What happened that night?

EU referendum: England leads UK to exit

Is Europe lurching to the far right?

Who are Isis? The rise of the Islamic State in Iraq and the Levant

Donald Trump Is Elected President in Stunning Repudiation of the Establishment

Colombian high court rules FARC peace law must be sanctioned

Nigeria's Boko Haram: Who Are They and What Do They Want?

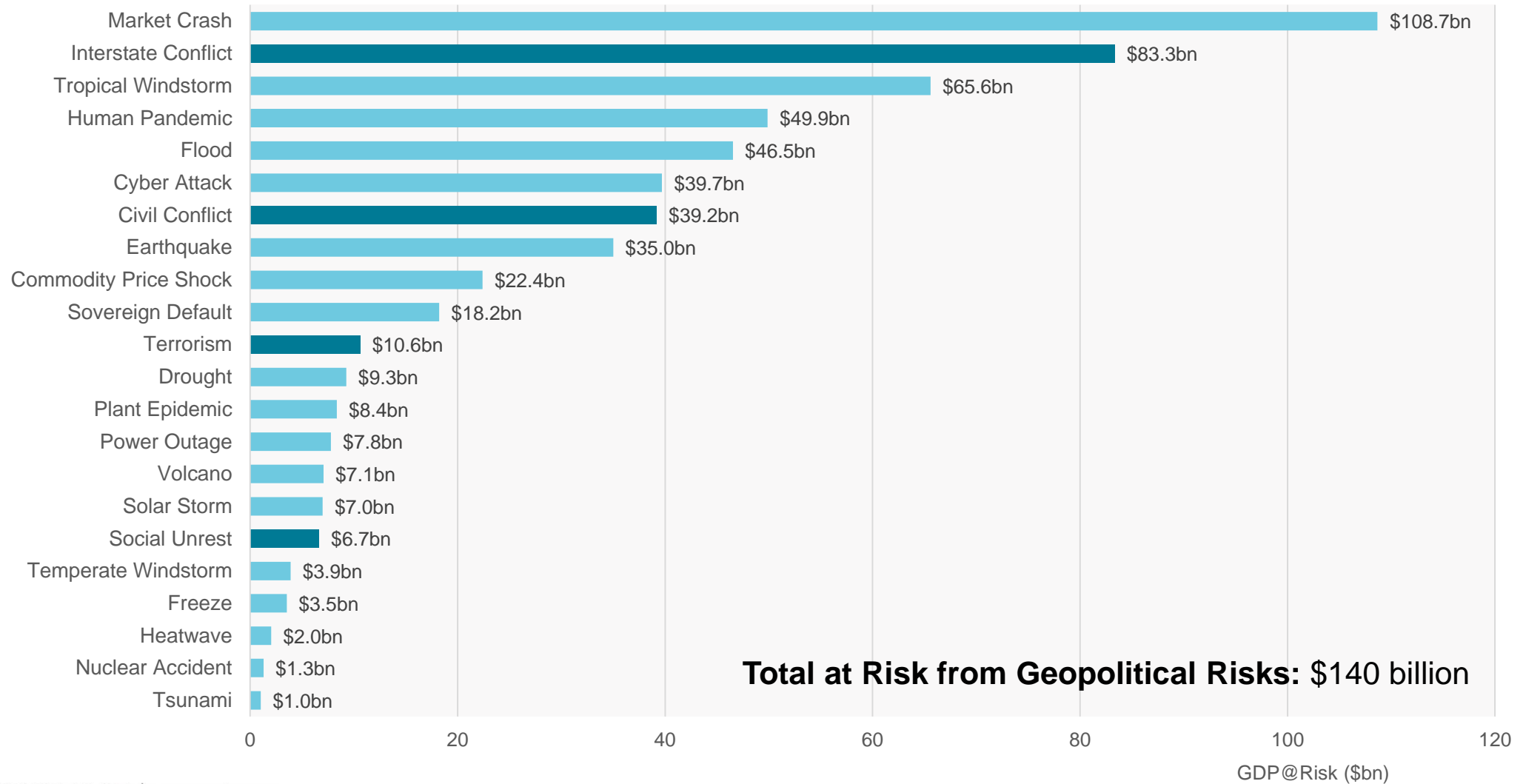
North Korea: The Rubicon is crossed

Kashmir: at least eight killed as Pakistan and India resume hostilities

'This Is Going To End Ugly': Venezuela's Power Outage Drags On

Khartoum protests resume after Sudan military admits abuses

Geopolitical Risks in the Global Risk Index 2019



The view from 2009

Economic Risk

Human Risk

Natural Hazard Risk

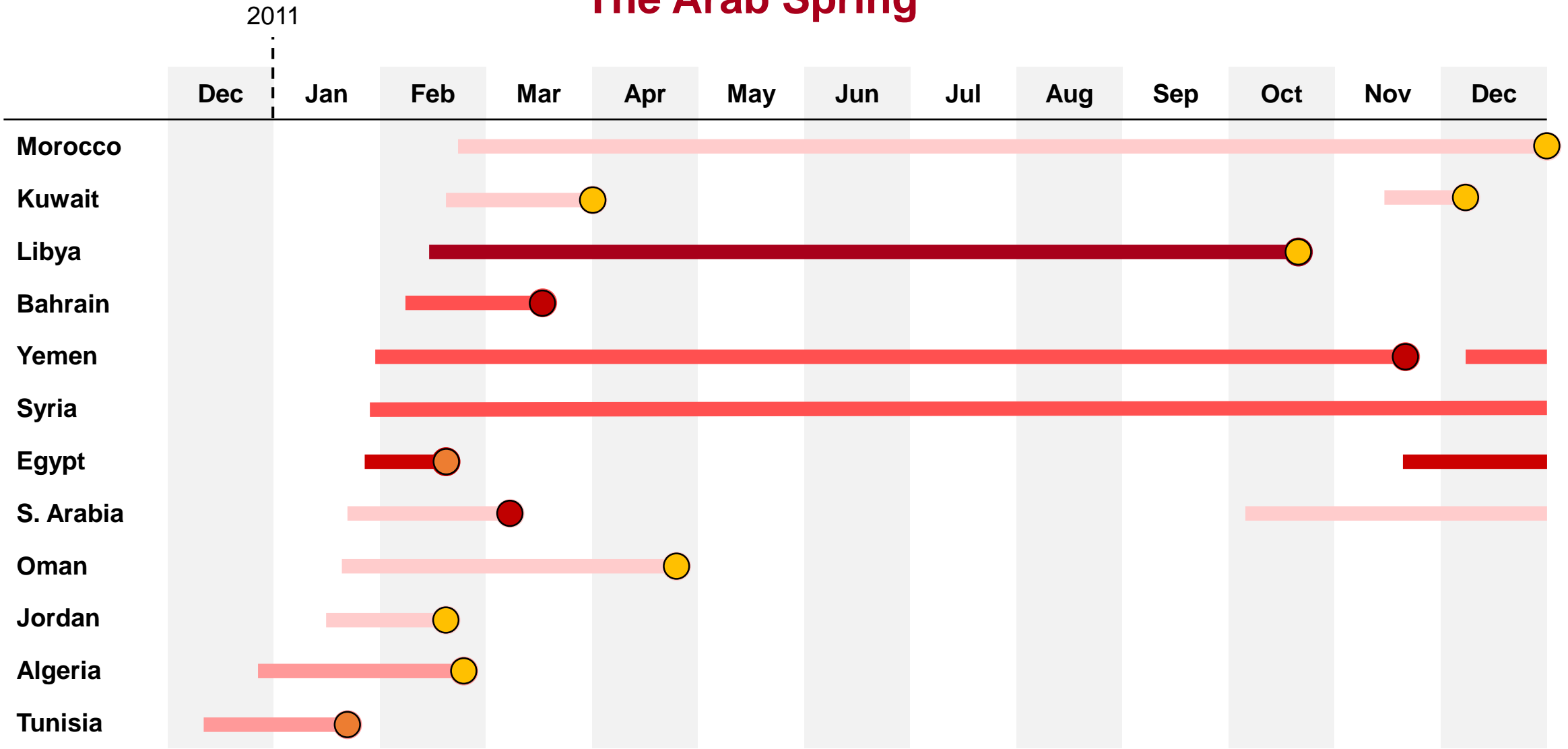
Geopolitical Risk

2008	2009	2010
Asset price collapse	Asset price collapse	Asset price collapse
Retrenchment from globalisation	Retrenchment from globalisation	Retrenchment from globalisation
Slowing Chinese economy	Oil and gas price spike	Oil and gas price spike
Oil and gas price spike	Chronic disease	Chronic disease
Pandemics	Fiscal crises	Fiscal crises

2016	2017	2018
Failure of climate-change mitigation and adaptation	Weapons of mass destruction	Weapons of mass destruction
Weapons of mass destruction	Extreme weather events	Extreme weather events
Water crises	Water crises	Natural disasters
Large-scale involuntary migration	Natural disasters	Failure of climate-change mitigation and adaptation
Severe energy crisis shock	Failure of climate-change mitigation and adaptation	Water crises

World Economic Forum Global Risk Report

The Arab Spring



Geographic breakdown

Europe

- EU membership crisis
- Migrant and sovereign debt crises
- Right-ward shift in democratic elections
- Separatism crises (Brexit, Catalonia, Scottish referendum, Bavaria, etc.)

North America

- Constitutional crises
- Foreign interference in elections
- Emergence of anti-establishment groups, voting blocs, and pundits
- Erosion/reform of long-standing trade allegiances (TPP, NATO, NAFTA)

South America

- Stagnating economic conditions and oil crises
- Political fractionalisation
- Political corruption
- Anti-establishmentism
- Wide-spread social unrest

Middle East and North Africa

- Political fractionalisation
- Resource conflicts
- Separatism conflicts and civil war
- Political incoherence
- Terrorism
- Increased competition for resources
- Foreign intervention in conflict

Sub-Saharan Africa

- Constitutional crises
- Social unrest and military intervention
- Insurgency and terrorism

South Asia

- Constitutional crises
- Significant impact from climate change
- Territorial disputes (India-Pakistan)
- Terrorism
- Foreign intervention in conflict

East Asia

- Competitive economic initiatives (BRI, AIIB)
- Territorial disputes (East and South China Seas, North and South Korea)
- Emergence of a new nuclear power
- Significant demographic challenges

Asia-Pacific

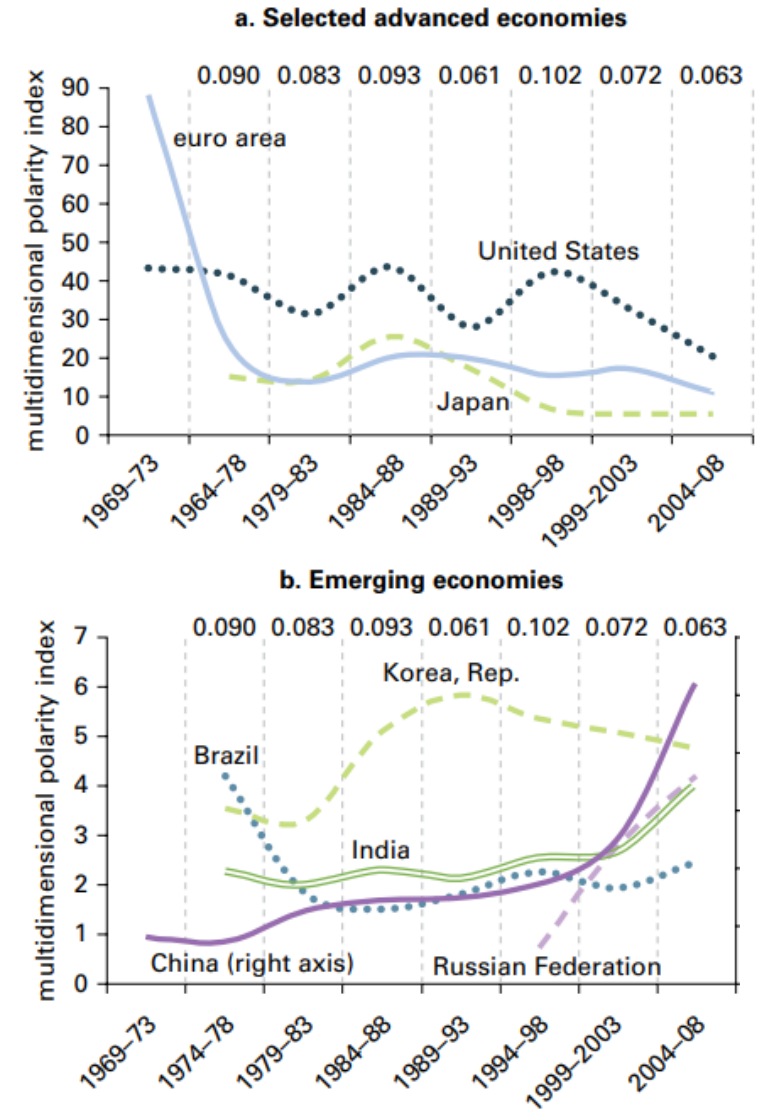
- Re-orientation of political trajectories
- Human rights abuses (Rohingya crisis)
- Terrorism
- Right-ward shift in democratic elections
- Significant impact from climate change

The changing status quo

- Transition to multipolarity as the 'global policeman' model erodes
- Return to a state of 'Great Power Competition'
- Regional instability is driven by competition for reliable security
- Global inequality leads to a new culture of social disruption and rising populism
- Insurgency incubates new and novel terrorist development
- Technology creates new arsenals and fields for dispute and war

Return to Great Power Competition

- Return to a climate of multipolar power not seen since the end of WWII
- With developing economic power, states have become more assertive in their diplomacy and more aggressive in publicising their strategic competitions
- Erosion of the geopolitical status quo has undermined assumptions of security and penalty surety; long-term strategic alliances are falling prey to short-term solutions to regional problems
 - The modernisation of the Chinese navy
 - Pursuit of nuclear weaponry in North Korea
 - Erosion of NATO's coherence
 - Russian expansion in Eastern Europe
 - Establishment of proxy wars under the guise of 'intervention'
 - Founding of dedicated cyber defence units and cyber weaponry



Evolution of multidimensional growth

Source: The World Bank, *Multipolarity: The New Global Economy*

Global inequality: a common cause

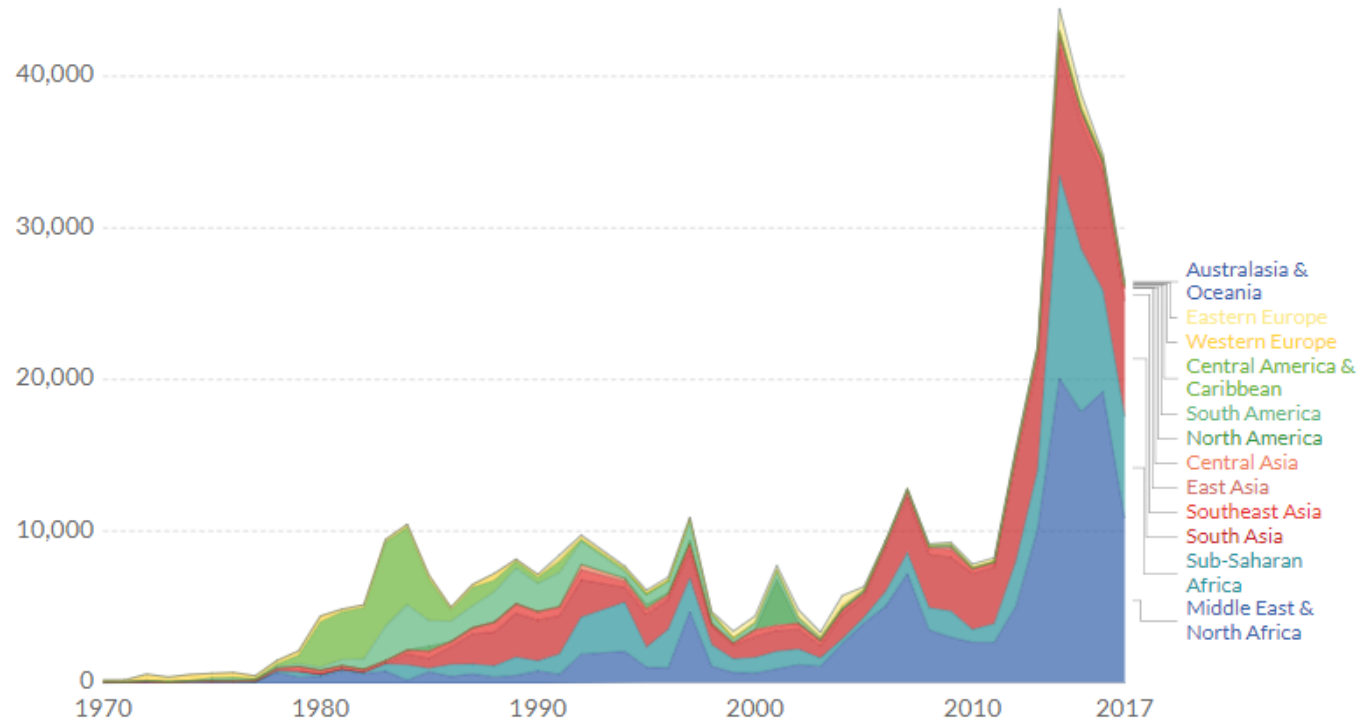


- Following the introduction of austerity measures in the West and downstream impact of the Great Financial Crisis to developing economies
- Populations are using mass movements to challenge governments and the status quo's inequality, corruption & kleptocracy, insecurity, poverty, discrimination etc.
- Western movements are largely based on frustrations regarding income inequality, political posturing & populism (rights, economics, environment, xenophobia & nationalism)
 - Occupy Wallstreet, Ferguson riots, Black Lives matter, Antifa and far-right protests, *gilet jaunes*, Extinction Rebellion
- Other movements in developing countries are seeking to curb the power of authoritarian governments that are undermining individual liberty and self-determination
 - Turkish unrest and attempted coup, Hong Kong student and extradition protests, Venezuelan unrest, Sudanese mass protests and massacre



Regional instability

- Popular protest movements are exploited and/or misappropriated by state and non-state actors, leading to new forms of extremism, sustained by security fears in vulnerable regions
 - The impact of the Arab Spring in many regions has been ongoing insecurity, civil disruption and dispute, the rise of corrupt regimes and the proliferation of sectarian violence
- The intervention by major powers contributes to the cycle of destabilisation by shifting strategic competition and projecting power into foreign battlefields
 - Russia and Turkey's intervention in Syria; Saudi Arabia's actions in Yemen; Iranian backing of militias in Iraq
- Terrorism has grown as a result of spreading insurgency, tripling in some areas since 2010



Terrorism deaths by region, 1970-2017

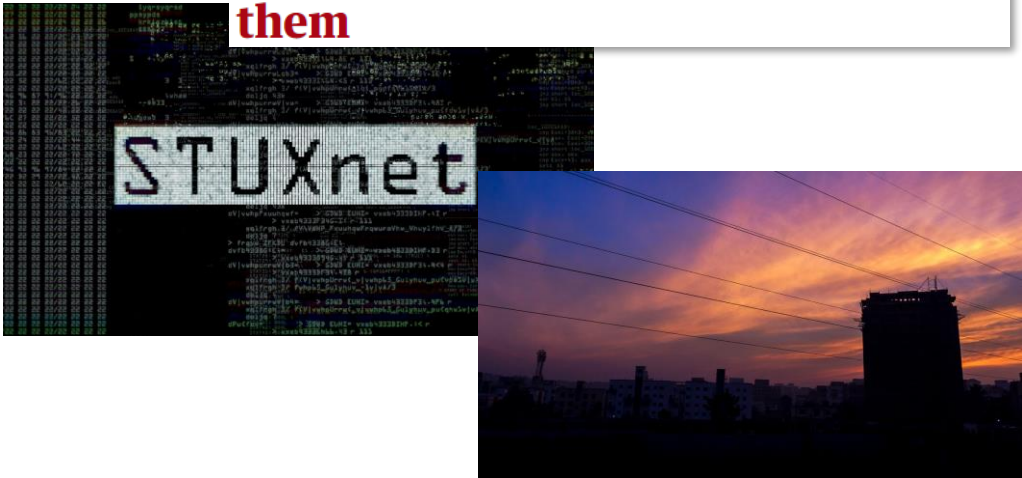
Source: Global Terrorism Database

The role of technology



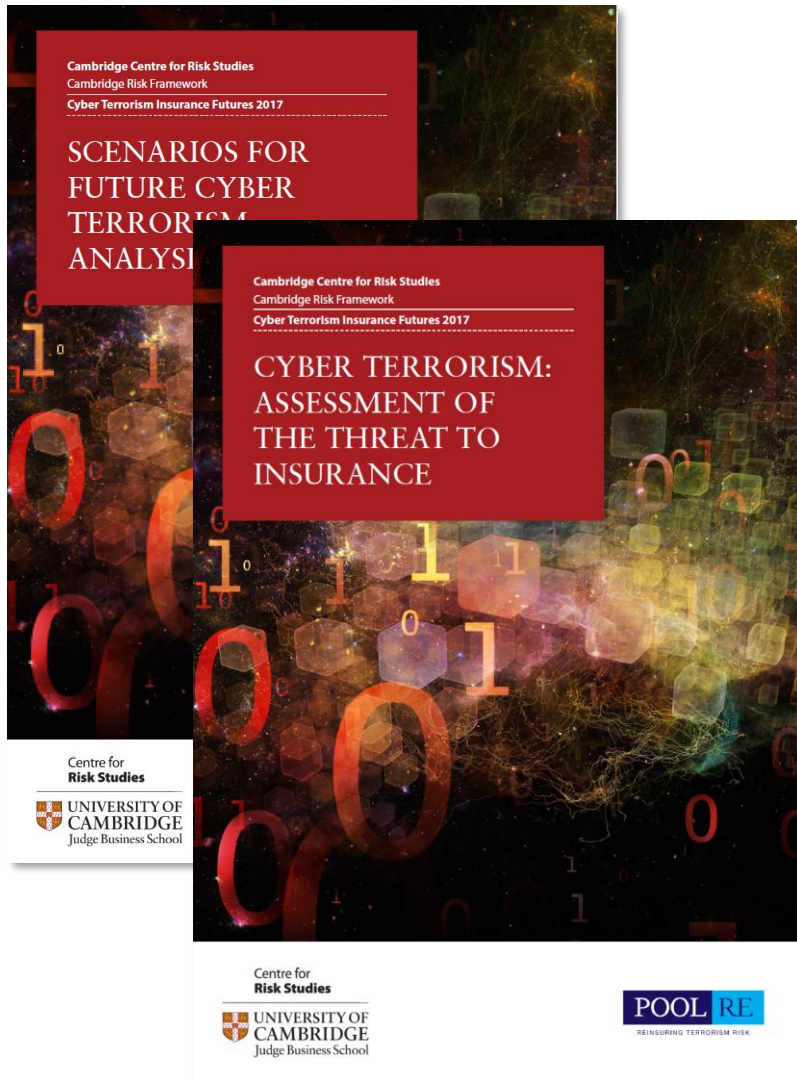
Russia 'meddled in all big social media' around US election

Hong Kong's digital battle: tech that helped protesters now used against them



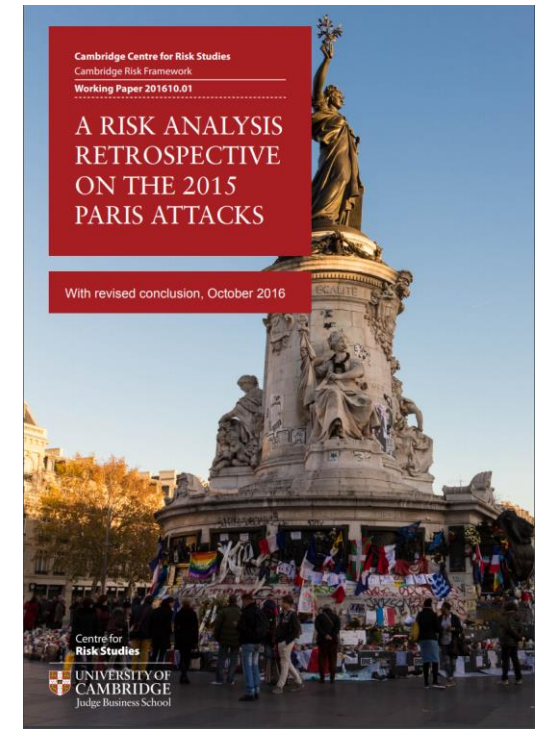
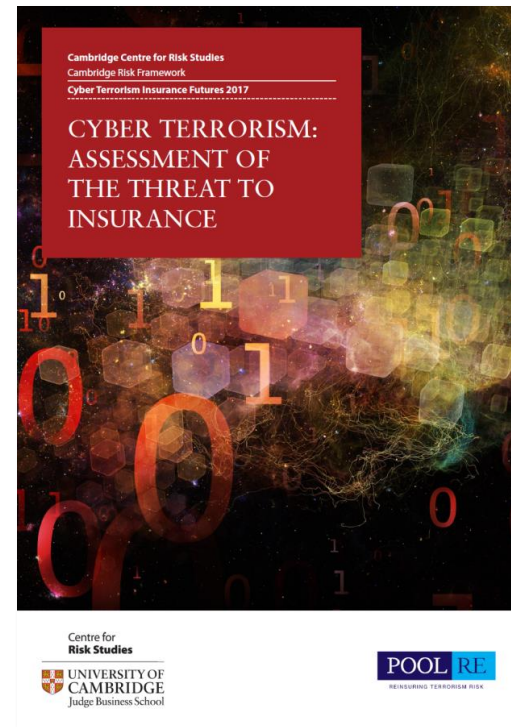
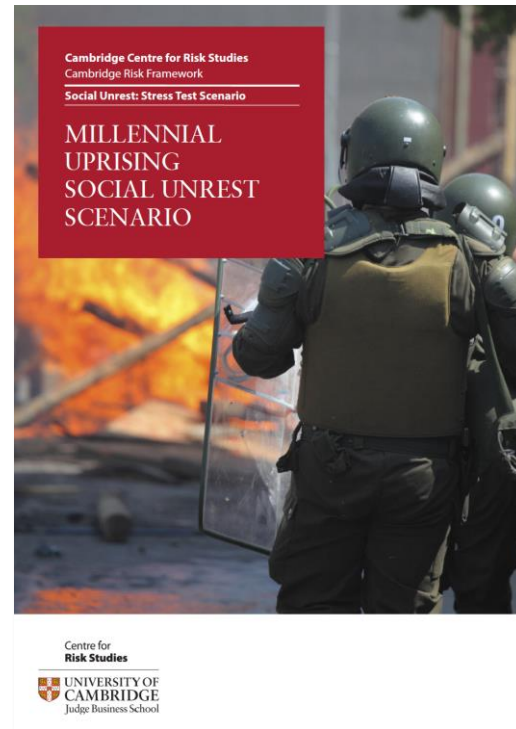
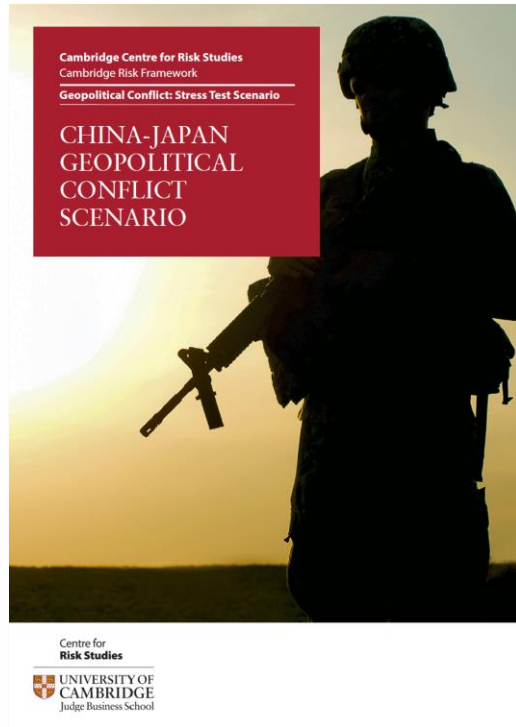
- New and spreading technologies are altering the face of conflict and protest, which has changed little since the end of WWII
- The impacts of social media proliferation on the Arab Spring are debated, but higher levels of connectivity undoubtedly allow for communications and shared planning between isolated or disenfranchised groups
 - In 2016, IS' sophisticated use of the internet as a tool for propagation, radicalisation and recruitment became widely known
- Cyber is undoubtedly becoming political, as a tool of manipulation and obfuscation, a means of undermining and exploiting technologies, and a method for surveillance and spycraft
- So far, malicious cyber behaviour by nation states has existed below the threshold of traditional war, and is limited by international deterrence measures

Cyber Terrorism



- Since 2016, the Centre has been examining the potential for the threat to emerge and what impact it may have when it does
- Monitoring capabilities of terrorist groups, criminal groups, nation states, hacktivists and lone wolf actors on a quarterly basis
- Creation of low-probability cyber terrorism scenarios with in-depth studies into key loss processes
- Two main risk avenues identified: traditional terrorism carried out using digital vulnerabilities (targeting major industrial sites, high-population areas), or systemic, insidious style attacks driven by the motivation to erode trust in technology (targeting ubiquitous devices, Internet-of-Things, third-party technologies)
- Per our hypothesis, cyber terrorism remains an over-the-horizon threat at present

Geopolitics and Security Research at the Centre



Cambridge Taxonomy of Business Risks

Financial & Economic	Geopolitical & Security	Technological	Environmental	Social & Humanitarian	Governance & Liability
<p>Macroeconomic</p> <ul style="list-style-type: none"> Market Crash <ul style="list-style-type: none"> Asset Bubble Financial Irregularities Economic Recession Economic Restriction Trade Sanctions Tariff War Commodity Price Fluctuation Sovereign Crisis Default Investor Sentiment <ul style="list-style-type: none"> Negative Market Outlook Low Carbon Transition <p>Competition</p> <ul style="list-style-type: none"> Disruptive Competitor Aggressive Competitor <ul style="list-style-type: none"> Price War Counterfeit Products <p>Counterparty</p> <ul style="list-style-type: none"> Creditor Failure Customer/Client Failure Government Failure Supplier Failure <ul style="list-style-type: none"> Supply chain disruptions Bargaining power against suppliers 	<p>Political & Democratic</p> <ul style="list-style-type: none"> Ideological Shift <ul style="list-style-type: none"> Nationalism Populism Protectionism Political Shock <ul style="list-style-type: none"> Sudden Leadership Change Regime Change Political Corruption Nationalisation <p>Political Violence</p> <ul style="list-style-type: none"> Assassination Terrorism Coup d'État Social Unrest Civil Conflict/Separatism <p>International Conflict</p> <ul style="list-style-type: none"> Interstate Conflict <ul style="list-style-type: none"> Conventional War Asymmetric War Nuclear War <p>Criminal</p> <ul style="list-style-type: none"> Cartel Pressure Organised Crime 	<p>Disruptive Technology</p> <ul style="list-style-type: none"> E-Commerce <ul style="list-style-type: none"> Clicks & Mortar Gig Economy Robotics & Automation Artificial Intelligence 5G Technology Augmented/Virtual Reality Blockchain <p>Cyber Attack</p> <ul style="list-style-type: none"> Data Exfiltration <ul style="list-style-type: none"> Intellectual Property Loss Contagious Malware Cloud Service Provider Failure Distributed Denial of Service Attack Financial Transaction Theft Industrial Control System Compromise Internet Service Provider Failure <p>Infrastructure/System Failure</p> <ul style="list-style-type: none"> Network Disruption Power Outage Satellite System Failure Internet Outage <p>Industrial Accident</p> <ul style="list-style-type: none"> Explosion Fire Nuclear Pollution 	<p>Climate Change</p> <ul style="list-style-type: none"> Climate Change Extreme Event Exacerbation Ocean System Change Sea Level Rise <p>Hydrometeorological</p> <ul style="list-style-type: none"> Drought Electrical Storm Flood Freeze Hail Heatwave Temperate Windstorm Tornado Tropical Cyclone Wildfire <p>Geophysical</p> <ul style="list-style-type: none"> Earthquake Tsunami Volcanic Eruption <p>Sustainability</p> <ul style="list-style-type: none"> Natural Resource Deficiency <ul style="list-style-type: none"> Water Fossil Fuels Raw Materials Biogeochemicals Food Insecurity Land/ Ocean System Change <ul style="list-style-type: none"> Biodiversity Loss Ecosystem Collapse Waste and Pollution <p>Space</p> <ul style="list-style-type: none"> Solar Storm (CME) Astronomical Impact Event 	<p>Consumer Power</p> <ul style="list-style-type: none"> Shift in Consumer Demand <ul style="list-style-type: none"> Sustainable Purchasing Transparency of Information <ul style="list-style-type: none"> Supply Chain Provenance Consumer Activism <ul style="list-style-type: none"> Commodity Boycott Brand Name Boycott Single Firm Boycott Brand Management <ul style="list-style-type: none"> Negative Customer Experience Key Influencer Disruption Negative Media Coverage <p>Human Resources</p> <ul style="list-style-type: none"> Labour Disputes & Strikes Loss of Key Personnel Failure to Attract Talent Employment Practices Gender & Diversity Communication Failure <p>Human Capital</p> <ul style="list-style-type: none"> Ageing Population Labour Shortages <p>Humanitarian</p> <ul style="list-style-type: none"> Poverty Hunger or Famine Inequality <ul style="list-style-type: none"> Welfare System Failure Mass Migration <ul style="list-style-type: none"> Refugee Crisis <p>Infectious Disease</p> <ul style="list-style-type: none"> Plant Epidemic Animal Epidemic Human Epidemic/Pandemic 	<p>Regulation & Liability</p> <ul style="list-style-type: none"> Tightening Fiscal Policy <ul style="list-style-type: none"> Taxation Non-Compliance <ul style="list-style-type: none"> Violations of Existing Regulation Internal Corruption & Fraud Negligence Emerging Regulation Occupational Health & Safety Revised Accounting Standards Licence Revocation <p>Contingent Liabilities</p> <ul style="list-style-type: none"> Private Lawsuit Mass Tort Class Action <p>Strategic</p> <ul style="list-style-type: none"> Strategy Failure <ul style="list-style-type: none"> Divestitures Joint Ventures Mergers & Acquisitions Restructuring Asymmetric Board <ul style="list-style-type: none"> Rogue CEO Hostile Takeover Model Failure <ul style="list-style-type: none"> Failure to Forecast Business Future <p>Products & Services</p> <ul style="list-style-type: none"> Product Defect/Failure Innovation (R&D) Failure

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Ideological Shifts

Nationalism/Revisionism



- The nationalism of Vladimir Putin's policies in Russia has emboldened decisions to transgress state lines and embark on territorial gains in Eastern Europe
- **New nationalist parties are gaining footholds in Europe**, with a significant number now represented in European Parliament

Populism



- Considering the plausibility and impact of **a radical left shift governments as a response to nationalist movements**
- Left-wing and ideologically-socialist groups resonate with younger votes, advocating for radical economic redistribution, high taxation on private corporations, increasing the living wage, and hard-limits on carbon emissions

Protectionism

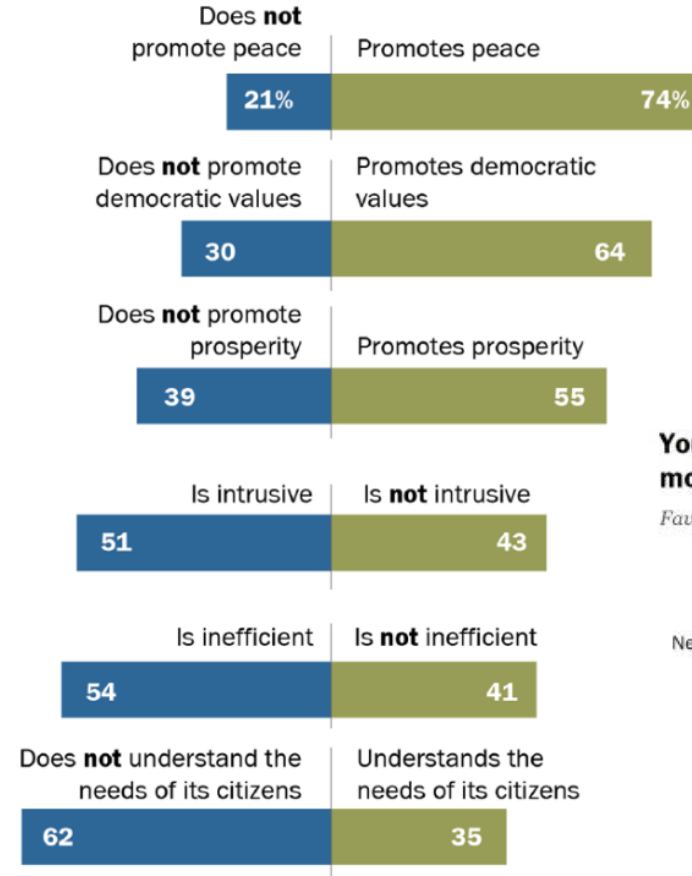


- With trade conditions continuing to sour between the US and China, **the US economy policy is becoming increasingly protectionist**
- With advancing multipolarity, aggressive protectionist economic policies may follow in many global powers

What will become of Europe?

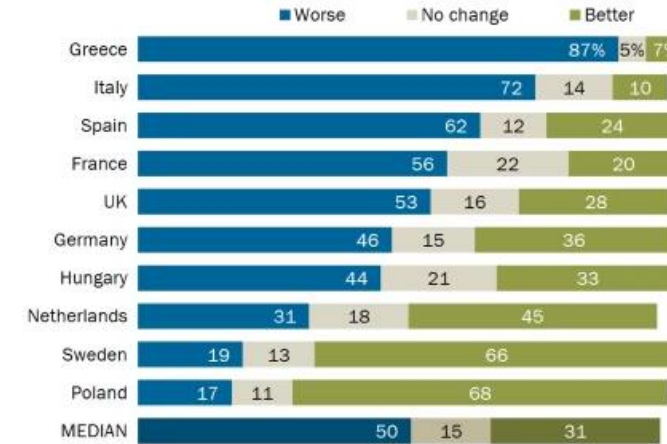
Europeans say Brussels promotes peace, democracy and prosperity, but fails to grasp citizens' needs

% who say the European Union ...



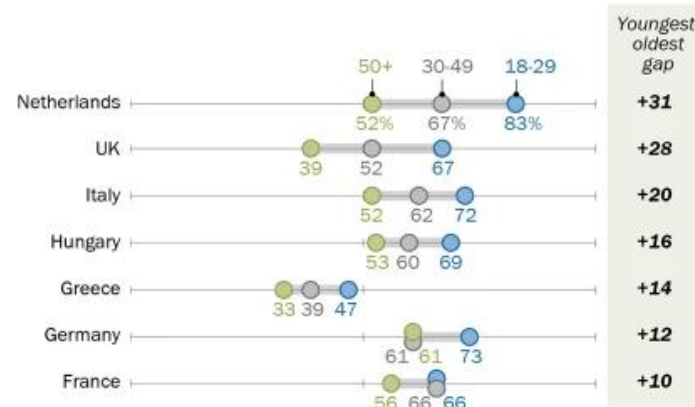
Many say financial situation has worsened for average people

Compared with 20 years ago, the financial situation of average people in our country is ...



Younger adults more likely to see the EU favorably in most countries surveyed

Favorable view of EU

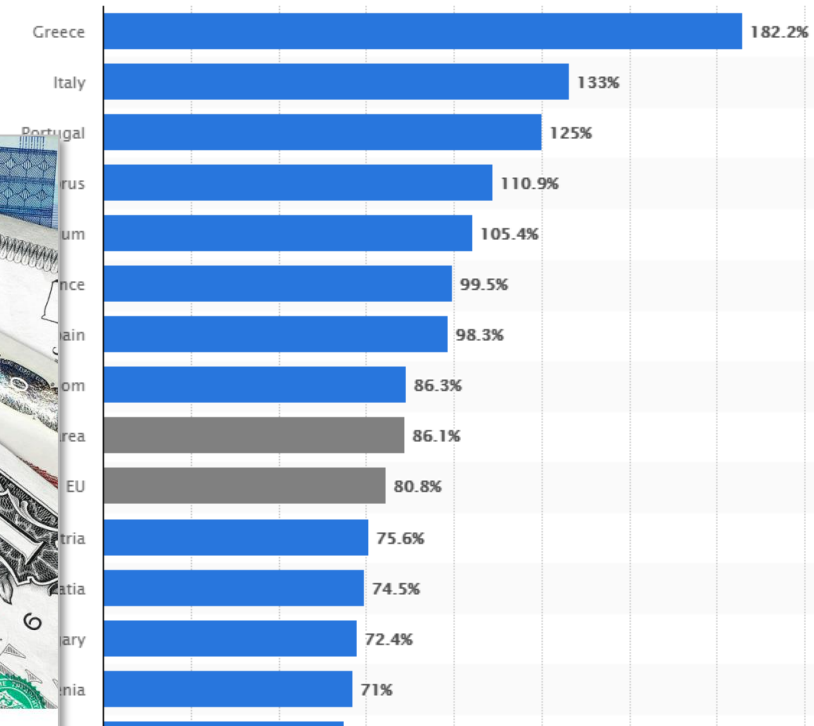


What will become of Europe?

- The CRS scenario 'Eurozone Meltdown' hypothesized a scheme of events which may weaken the EU's economic status sufficiently to render the organisation ineffective
- A new take on the scenario sees Brexit trigger an Italian and Greek exit, followed by defection of debts (6 exits), fragmentation (16 exits), and disintegration (28 exits) of the Union
- Focus on sovereign crisis and sovereign default
- Countries decouple from the Euro, fall out of the European Union and default on their national debt
- Impact on businesses isn't just the additional bureaucratic cross-boarder trading red tape, but the financial crisis that results from the debt defaults

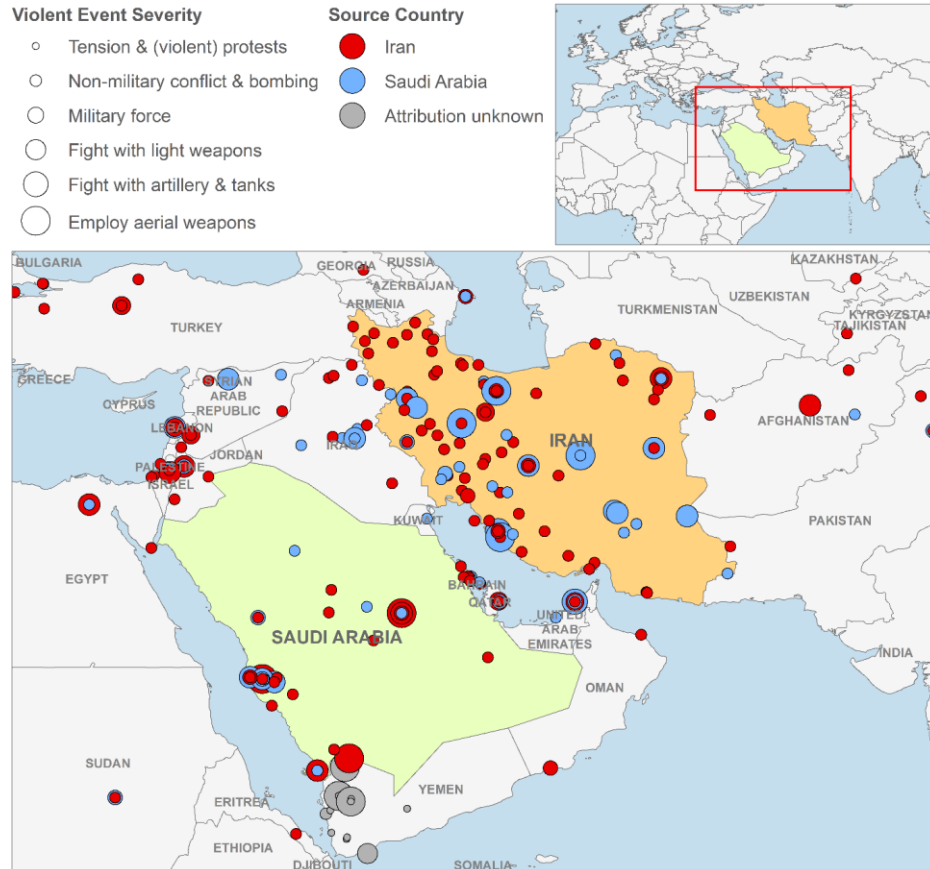


National Debt of EU Countries



V	Variant Name	Number of Countries	GDP \$Bn	% of Global GDP	Annual Prob.
V1	Br-It-Grexit	3	2.3	2.6%	0.05
V2	Debtors Defect	6	4.3	4.9%	0.03
V3	Fragmentation	16	6.3	7.2%	0.005
V4	Disintegration	All 28	16.0	18.1%	0.002

Western Alliance – Iran Interstate War

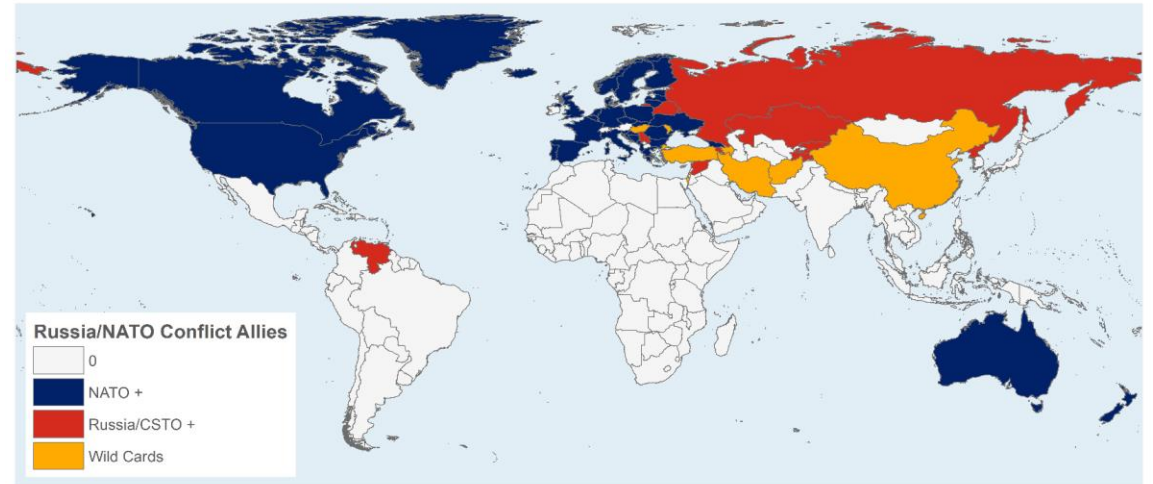


- Long-standing tensions between the two states ignites a “petropolitical” war, recalculating power structures in the region
- A cyber attack against a petrochemical facility in Saudi Arabia triggers a bombing campaign against Iran
- The conflict causes oil prices to spike, leading to a global recession if the war becomes drawn out past the 4 year mark
- A Western alliance intervenes and ultimately resolves the official conflict, though non-state actors (al-Qaeda, Syrian Democratic Forces, the Kurdish population, etc) empowered by the war remain agitated and impact the region for many years afterwards

Scenario Parameters	V1	V2	V3	V4
War duration	1 Yr	2 Yrs	2 Yrs	4 Yrs
Peak oil price shock	25%	50%	100%	150%
Global recession	-	-	-	1 Yr

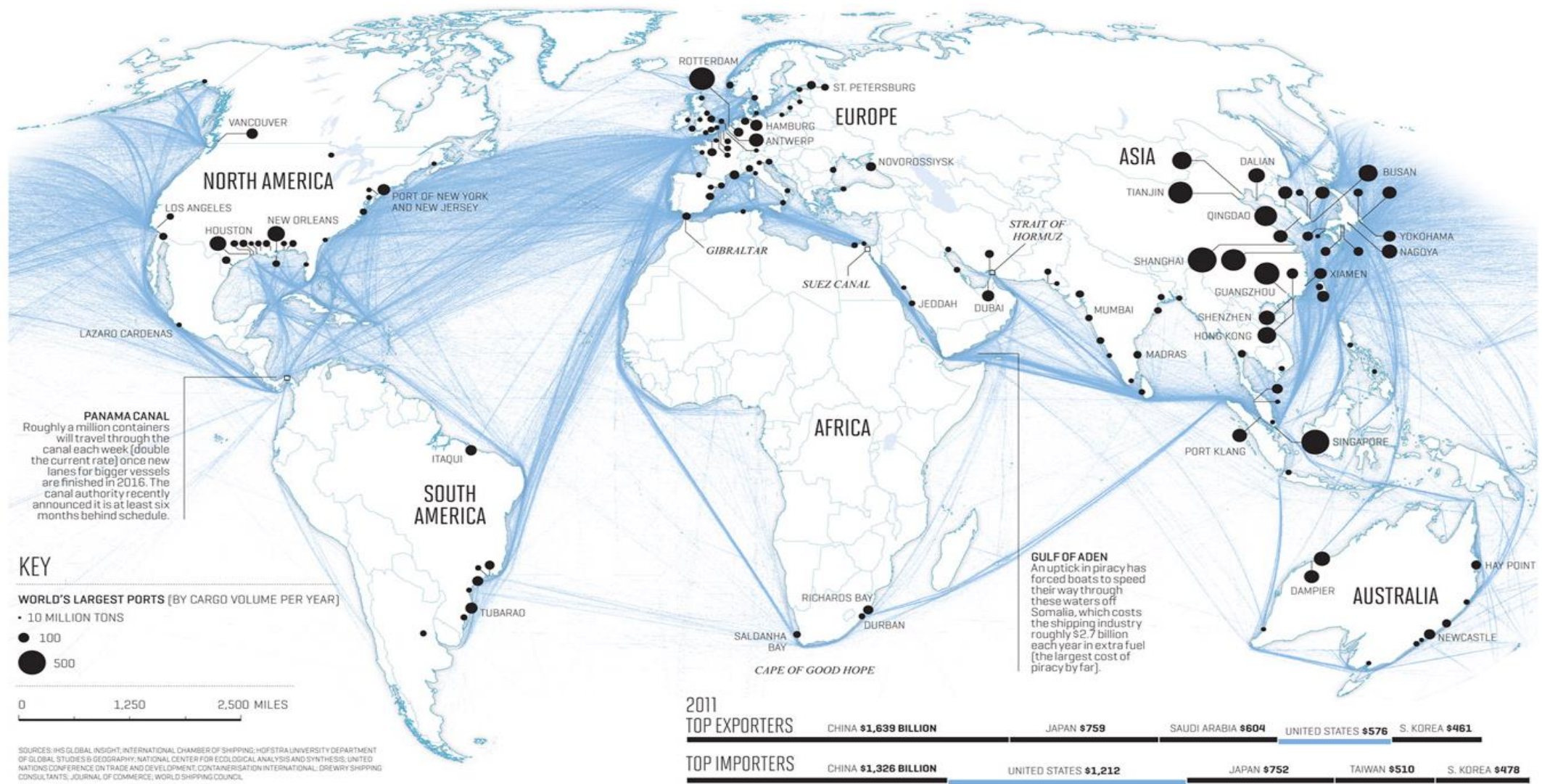
NATO – Russian Interstate War

- Increased bellicosity against Eastern European states by Russia forces NATO to deploy troops
- A hybrid war emerges, in which traditional warfare escalates the conflict, while cyber and informational attacks spread unease
- Extreme scenarios see the deployment of naval assets, weapons of mass destruction and airspace communication jammers, as well as the conflict spread into distant theatres
- The conflict disrupts global supply chains and enforces rationing in many states
- Inflation rises as food and commodity supplies are restricted



Scenario Parameters	S1 Kaliningrad & Hybrid War	S2 Kerch Strait Deployment	X1 North Atlantic & Arctic Deployment
Scenario Description	Hybrid War	Hybrid War + Sea Power	Hybrid War + Sea & Air Power
Property Damage	Minimal	High	High
Civilian Injury & Death	Medium	High	High
Conflict Duration	6 Months	1 Year	2 Years
Trade Disruption	24 Months	48 Months	96 Months
Regional & Global Intervention	Arming and Diplomacy	All NATO+ CSTO+	All NATO+ CSTO+

Emerging risk - Supply Chains



Session Speakers



Discussant: Marianne Schneider-Petsinger

Geoeconomics Fellow, US and the Americas Programme, Chatham House



Conflicts of the Future

Jim Maltby, Principal Scientist, Defence, Science & Technology Laboratory, Ministry of Defense

- Countering risk cultures in defence institutions
- Challenges in managing modern conflict risk



Managing Future Risk in International Supply Chains

Nick Wildgoose, Independent Supply Chain Risk Consultant, Supplien Consulting

- Review of current technology available for managing supply chains
- Supply chain risks in light of populism, mass migration and territorial conflict
- Implications of future risks

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