

## Engineering Financial Instability

In a rapidly changing world which is increasingly interdependent, and relies on rapidly evolving financial systems to underpin its economy, it is important to understand what threats or opportunities might exist for the UK and her allies across the globe. By considering the changing economic landscape the UK can look to prepare against 'future shock'; considering what threats it should be aware of, alongside what opportunities could be exploited to improve both the security and stability of the UK and her allies.

The Engineering Financial Instability Conference seeks to understand how modern financial systems could be used:

- To prevent a country from being able to deliver Defence and Security for its citizens, either at home or abroad.
- By other states or non-state actors to create or augment instability around the world.
- To facilitate the funding of illicit activity.

The aim of this conference is to bring together people from a wide range of backgrounds to think beyond the realms of what is currently possible to how technology and societal attitudes might change in the future and how this might enable States, NGOs and individuals to leverage the financial system to achieve their ends.

We are keen to engage with people from all stages of their careers and from a wide variety of backgrounds including (but not limited to):

- Politics,
- Economics,
- History
- International Relations,
- Defence,
- Finance,
- Philosophy,
- Anthropology
- Ethics,
- Technology
- Systems Thinking

The conference is split into four interlinking themes

1. Exploiting Financial Friendship
2. Modern Siege
3. Covert Finance
4. Destabilisation of Financial Systems

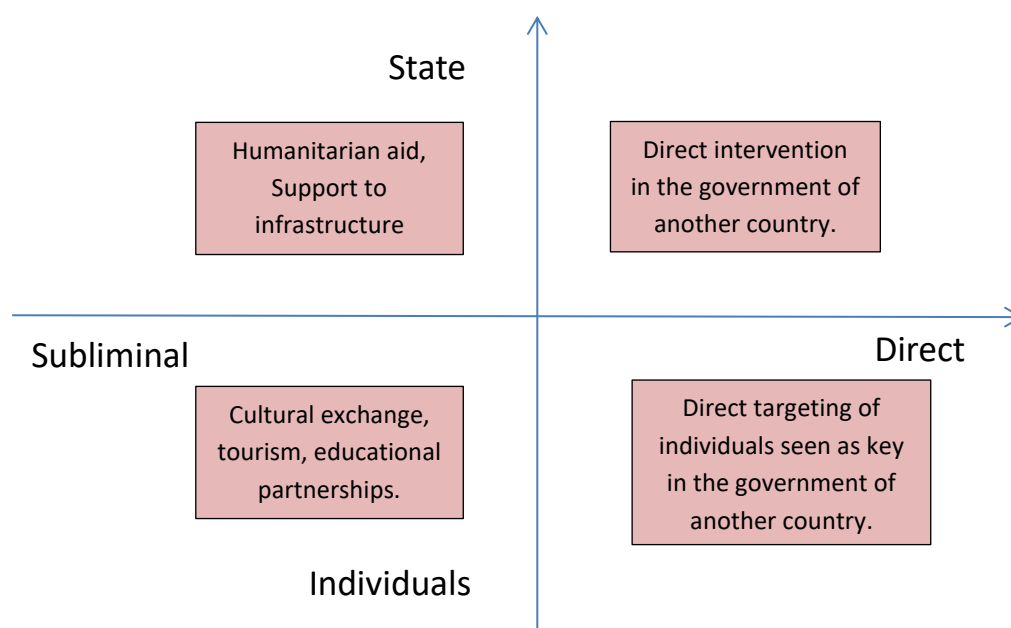
## 1. Exploiting Financial Friendship

In this theme we are looking at how a state might seek to influence other nations to promote its political ends beyond its own boundaries. This might be achieved through providing finance or aid to that state or its population on favourable terms.

This might be a state seeking to influence another state or a state seeking to influence individuals within another target state and could potentially be either direct or more subliminal in nature.

Whilst we do not wish to constrain the ideas that the Conference and workshop will produce initial thinking has raised issues such as:

- the difference, or otherwise, of the impact achieved by aid and/or loans on both the donor and recipient nation
- the changing balance of how nations across the globe seek to use financial support beyond their borders as a means of achieving influence
- whether the way countries might use this in the future is changing relative to how it has been used in the past
- the motivations both long and short term of donor countries
- the dynamics of any dependant relationship established between the donor and recipient countries
- the difference between influence gained through Aid as compared with repayable loans and which is more effective?
- The use of such things as IPOs being offered to senior officials/politicians in a recipient country or turning a blind eye if funds which are given as aid for a specific purpose are side lined to another purpose in order to increase the popularity of the donor country's government or as bribes to donor country officials
- The impact of the multinational nature of education; offer scholarships to specific nationalities, opportunity for sleepers to be embedded in financial institution.



## 2. Modern Siege

Historically part of warfare has been the ability to deny the enemy access to key supplies, food and water supplies to castles or cities from mediaeval times through to Stalingrad in 1941 and sanctions have and are used as a way of undermining a government's ability to trade and therefore fund its necessary domestic activities.

Whilst we do not wish to constrain the ideas that the Conference and workshop will produce initial thinking has raised issues such as

- Making sanctions ineffective
  - Would it be possible to bypass the current international payment system which relies on the dollar and either establish an alternative international payment system, albeit not globally accepted, or an electronically enabled system based on a crypto currency either 'mainstream' or less open?
- Understanding the impact of potential legitimate alternative payment schemes.
- Identification of the key commodities in the modern world.
  - Food and water,
  - Access to information,
  - IP as a commodity,
  - Lithium, rare earth metals for the electronics industry,
  - The ability to trade in general rather than specific items.
- The impact of physical attacks, rather than, or to enhance, cyber-attacks on key information nodes or servers which underpin the financial industry.
- The impact of technology on sanctions.
  - 3D printing reducing the need for physical transfer of goods,
  - improvements in alternative energy sources reducing the importance of oil,
  - Replacing consumables with recyclable alternatives.
- We are also interested in the impact of sanctions both intended and unintended.
  - How would the population react to having no access to information?
  - Do sanctions force countries to develop their own alternatives and become stronger?
  - Does deprivation promote radicalism and therefore make a country more dangerous rather than less?
- Understanding the global supply chain in order to predict the impact sanctioning a particular item.
  - Could such a model be exploited by enemy nations or organisation



### 3. Covert Finance

In this theme we are asking the question about how states and non-state actors might finance their activities around the world and/or raise money to pursue their aims whilst hiding their identity and true purpose.

Specific examples based on individual organisations or states are not being considered. We are interested in understanding how modern technology might be employed, or electronic systems bypassed in the pursuit of transferring money or other 'tokens of good will' for nefarious reasons.

Whilst we do not wish to constrain the ideas that the Conference and workshop will produce initial thinking has raised issues such as

- Could systems like Paypal, Alipay or the new FaceBook Libra currency effectively put payment systems into private hands? Does this matter? How might it impact the ability of a government to seize/freeze assets?
- Could systems like Paypal, Alipay or the new FaceBook Libra, but based outside the US, undermine the US\$ based payment system?
- The impact of crypto currencies on 'trust' between inherently untrustworthy people
- Bitcoin/distributed ledger is a record of transfers not ownership. Would it be possible to transfer ownership covertly by transferring private key information directly from one person to another? (This would move the 'trust' back from the system to the individuals involved.)
- What is the impact of the use of mobile phones to transfer money both between people and financial institutions? (potential for hacking)
- The use of crypto currencies for the payment of ransoms, bribes etc...reduce detectability?
- The influence of the diaspora in syphoning money from legitimate business activities in their new country to illegitimate activities in their old country.
- The different between the 'proceeds of crime' and money raised to undertake criminal activities which may not in itself be the 'proceeds of crime'
- Insider trading or other financial crime to raise funds
- How might organisations raise funding covertly? - Crowd funding - Initial Coin Offering (ICO) - Transfer via Blockchain (MoneyVault?) - Cryptocurrencies - 'Smart Contracts' - Alternatives to PayPal (e.g. networks of local bankers)
- The impact of humanitarian aid.



#### 4. Destabilisation of Financial Systems

Whilst major financial hubs might be thought of as immune to deliberate catastrophic destabilisation could a smaller incident be created to augment a planned, parallel, more traditional attack in order to distract attention or hamper a response. To what extent could individuals or small groups create such a crisis?

In smaller countries could such an attack be used to create political unrest which might result in the destabilisation of a government or create the opportunity for an aggressor state to take action?

Whilst we do not wish to constrain the ideas that the Conference and workshop will produce initial thinking has raised issues such as

- Could crypto currencies mean that state effectively lose control of the money supply and therefore financial control? Could financial control end up in the hands of a private company? Would this fuel a loss of national identity?
- Rather than create a collapse could a boom be engineered and the bust will follow automatically.
- What would be the impact of a cyber-attack that simply slowed the payment systems down rather than something more obvious and easily detected?
- What is the relative impact of attempting manipulate markets over currencies?
- What is the impact of financial transactions moving from being mainly bank to bank to being mainly bank to person or person to person?
- Could the interconnectedness of the financial world allow a more mainstream country or institution to be undermined by an attack on a more vulnerable one?
- How would 'fake news' or simply the prevalence of uninformed opinion available on the internet affect the stability of markets and currencies, or would its prevalence actually cause a form of stability cause by and inability to know for sure what is true and therefore create a reluctance to respond?
- Could individuals or small groups disrupt the financial sector in parallel to a period of political instability to magnify that instability?
- Could AI be trained to recognise patterns of trading and act to destabilise a market when the opportunity arises? What other nefarious activity could AI be trained to execute?
- Traditionally black markets operate on the £ or the US\$, if the £ were to become less of an internationally currency what would the impact of this be? Particularly in allowing (or

