FDTF Call Notes

*31 Aug 2021*

# Attendees

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# Agenda

Continue from last time.

# Meeting Notes

## Money and Currency Concepts

Last time we picked up some concept around money supply and said we would continue from that point.

What is our scope i.e. what questions are we aiming to answer?

General scope: define the basic concept around money and currency and diagram the in a concept model (i.e. taxonomy + differentiae).

Basic concepts we have:

* Currency (contextually defined thing)
* Money

### Currency as Relative things

Cf. Seat and Chair.

i.e. Seat = something you can sit in

A divan is a seat but not a chair

A rock I can sit on is a seat. Or a tree stump.

Also other kids of seating furniture like a bench.

Chair is something built to be a chair.

Some things may be built to be used both as a chair and as aa step ladder.

There are also things that are explicitly chairs that are not intended to be sat on i.e. developed as art. For example gigantic chairs built as art.

i.e. money created for the purposes of being currency.

Almost anything can be currency. Then there are things developed explicitly to be used as currency.

A useful word for those is Money.

When we have a CB issue something for use as currency, that is money.

#### Currency

Things that can be used as currency:

What it means to be used as currency (Searle's definition):

* Means of exchange
* Store of value
* Unit of measure of value

Characteristics that make something more or less usable as currency:

* Interchangeable
  + Including Fungible

Then

### Money

Money is designed to have these characteristics – just as a chair is explicitly designed (unless art) to be comfortable to sit on.

So..

### Money Supply

To the scoping question.

How much do we need to define in order to sensible frame questions on e.g. digital currency for the RFI; how much do we need to define to provide useful definitions (and concepts) for other TFs.

Last time – we diverted into the 'Account based v Toeb based' but with this analysis it seems more likely we can define all 'money' as some kind of token, whether physical or virtual (as money supply).

So thee distinctions will help clarify these notions we hope.

### Discussion

Wealth of Nations

Reductionist versus systems thinking (more network based) approach. Wrt Money and Money Supply.

In 'The Wealth of Nations': the fundamental 'currency' money is nation based. There are also exchanges of gold but these are negotiated, as is Fx. And is based on the Nation.

Do we need to capture that concept, to have globally defined concepts across these notions.

e.g. notions of value.

So if I need to use currency (or money) I am tied in to the specific money that has currency in the economy in which I a transacting. Keeping this in mind may resolve some potential confusion e.g. it's not trivial to talk of exchanging these things without accounting for that.

### Money Supply

Then Money Supply.

<https://en.wikipedia.org/wiki/Money_supply>

Money Supply – defined in relation to what?

* Nation
* Economy

e.g. EUR has an economy.

Whatever currency is exchangeable defines an economy.

A distinction:

* Formal acceptance (legal tender)
* Informal acceptance

e.g. ZAR in ZW: informal; ZAR in Lesotho – formally accepted so Lesotho is part of the ZAR economy.

See previous notes on 'acceptability'

- is a feature of 'Currency' i.e. is it current.

Then

Economy: defined by Acceptability?

Nation: defined by who supplies the Money Supply.

Then there is Reserve: many countries have their currency reserves.

Legal Tender – does not apply in all jurisdictions.

#### Reserve Currency / International Reserve

Unsure:

Is the USD an international reserve currency? Does USD always sit on one specific of a quoted Fx rate by convention because of its status – or ae we misremembering that?

e.g. in some scenarios, would you exchange 2 things via the USD?

These considerations are not intrinsic to the definitions e.g. if the ReMinBi were to take on the same role in the future.

Recalling these were all human conventions.

### Money Kinds - History

Worth tracking the progression:

1. Scarcity value e.g. cowrie shells, wumpum etc.
2. Precious metal as currency (performing as a scarce thing and a thing that is valued)
3. Currency backed by precious metal (paper currency)
4. Fiat currency – not backed by precious metal

That word Currency.

In (1) no Nation needed to issue that stuff.

### Value

True value is belief.

Hence runs on banks.

Fractional reserve banking (when backed by gold as well as now in Fiat)

See

<https://en.wikipedia.org/wiki/Fractional-reserve_banking>

#### Nation States:

Used to be the ones holding the gold in (2).

Now nation state is critical in the belief in the value of the money as currency.

Or whoever is behind the Central Bank.

So Central Banks create money.

CBs were created to resolve the issue of bank runs.

#### Liquidity

This relates to liquidity:

Banks borrow short and lend long.

If there is a run on that money, it is not all available.

So the CB provides liquidity to banks.

Next concept: Liquidity.

With a Reserve system you can get the money for the reserve bank to return the fuds (monies) to the depositors. The Reserve Bank can wait.

Why it can wait: it has the taxation power of the state behind it.

Even with a CB it can happen – e.g. in the 1930s, where there was a reserve bank, so Roosevelt created the 'bank holiday'.

### IImplications

So what are the concepts behind these things? It is not Money and Currency but Value and Belief.

This will have an impact on:

* Digital currencies
* Cryptocurrency

What is the underlying concept – with each of these kinds of thing?

e.g. behaviorally, legally etc.

This is why it becomes hard to define these concepts and their inter-relationships.

And the concepts in play in crypto, in digital currency and so on.

#### Crypto

So with crypto, they eschew 'fiat' in favor of type 0.

(except e.g. Tether – see note on pegging v backing)

Do all have a PoS concept behind them.

What about e.g. IOTA – fixed supply, no PoS / Po anything. Based on limited supply alone.

#### Value:

* Value in exchange
* Value in use

As long as someone thinks that someone thinks that a thing has value then it does.

Nation: has taxation powers.

Without that it's the same as a Ponzi scheme.

Is that right? This is one argument – see The Wealth of Nations.

e.g. England: Mercantile trading – you want to collect the most precious metal (e.g. more than France or Spain has) and using that – putting it to work building things and taking over places.

Versus keeping the wealth. E.g. Switzerland v Britain.

Also how they suppress existing economic or productive activities

### Economic Activity

Another aspect of 'money' is that it reflects the economic activity of the (Nation? Economy?)

What does that mean e.g. debt, manufacturing activities, production or something else, or a combination of these? Or we don't know / opinions vary.

One fundamental principal widely held is that the economy must always grow to work at all. That's to the 'Economic Activity' part of this.

Why? (previous cultures have not done)

Things we need to define:

* What does it mean for an economy to grow?
  + How do you measure productivity?
    - Accounting
    - Indices

Supply Chains and Covid: starting to discuss other ways of organizing eg. our long, JIT supply chains. Outsourcing to 'cheaper' economies, reflecting short term gains on the bottom line. Until you can't get those goods.

See

<https://www.investopedia.com/stakeholder-capitalism-4774323>

Questions: Growth in what

e.g. rather than just serve one limited set of stakeholders, but extend to the population as a whole and the state as a whole.

Even in investment – we are now seeing a move to ESG as indicators and a set of factors that talk to these broader kinds of growth of value over and above 'bottom line shot term profitability.

This has a relevance to this discussion on money and currency. Money is the grease that allows this system to operate.

#### Money as a Measure

Use of money as a measure? As a measure of what?

- seems we see money used as a measure without being clar of what it is a measure.

In terms of our conceptual structure:

* Something as a measure of (something)

As distinct from the regulatory aspects. Those need to be diagrammed separately.

So we need to look at these from different PoVs:

* Consumer transacting
* Large nation transacting
* Government regulating

### Carbon Credits

Carbon Credit – can that be considered as a currency? Or as a monetary unit?

This is 2 questions:

* Can Carbon Credits be used as currency?
* Can Carbon Credits be considered as 'Money' i.e. something developed explicitly to be used as currency?

Seems to be Yes to both.

However Money reflects some (economic activity) whereas Carbon Credit reflect some Carbon sequestration.

However, once created, regulators are giving value to the concept of a carbon credit in the EU, not in US – they do not have currency).

#### Some clarity:

According to the World Bank, there are 2 main cornerstones of carbon pricing: emissions trading systems (ETS) and carbon taxes. The first, also known as a cap-and-trade system, caps the total levels of carbon and other GHG emissions. It works as a system where caps are increasingly reduced every year and where businesses with low emissions can sell the allowances they didn’t spend to others who spend more than they were allowed to. This creates the supply and demand of the carbon market.

Carbon pricing – similar to pricing of metals, energy, other commodities.

Almost a hedge – as a kind of credit.

e.g. to trade the credit, I take my original carbon ceiling and hedge the ris of going over, by using carbon credits I have built up ( = Reserves )

Another concept: Reserve

Hedges – apply in any market

#### Also

According to the Corporate Credit Institute, a carbon credit is a tradable permit or certificate that provides the holder of the credit the right to emit one ton of carbon dioxide or an equivalent of another greenhouse gas. The main goal for the creation of carbon credits is the reduction of emissions of carbon dioxide and other greenhouse gases from industrial activities to reduce the effects of global warming.

See

<https://youmatter.world/en/definition/definitions-carbon-price-carbon-credit/>

Definition in that link:

10 US states make up a regional Greenhouse Gas initiative – a cap and trade program in the US.

## Conclusions

We have gone beyond Finance to economics generally.

Money represents something and that something lives in the economics world.

e.g. Economic Activity. As a measure of an economy can be quite fragile e.g. high frequency trades.

- if these are even economic activity – as it does not represent any real world economic growth.

So there are exchanges happening that are activity but no value.

See earlier link about Bitcoin being Legal Tender in El Salvador.