



“FED” UP WITH CARBON: CENTRAL BANKS & CLIMATE CHANGE

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EPISODE 29

Should the world's central banks (Fed, ECB, BoE...) launch a coordinated "green quantitative easing" programme to simply print the \$3.5 trillion a year needed to finance the energy transition? Is this a realistic solution or too green to be true?

This episode of the 2050 investors podcast puts the 'central' back in central banks. Since their creation in the 17th century, central banks have been tasked with managing monetary policy, overseeing the banking system and the core mandate of maintaining 'price stability'. But climate change is becoming a major threat to their mandate, posing a real risk to economic and financial stability in the medium to long term.

In this latest episode, Kokou explores the delicate balancing act that central banks must perform as they seek to be independent in ensuring that inflation remains under control, while at the same time contributing to economic and financial stability and playing a central role in the fight against climate change. There is more to central banking than meets the eye.

Don't worry if you've forgotten your Economics 101 course, or if you've never taken one, because we're going to give you a quick crash course in the complicated role of the central bank, using references from the series Money Heist (La Casa de Papel) to the wonderful and magical world of Lord of the Rings.

And, of course, we take you down memory lane with a brief history of central banks and their evolution from World War I through 20th century Japan to the recent 'inflation outbreak' following the Covid19 pandemic.

Later in the episode you will hear extracts from an episode of "The ECB Podcast" entitled "Tackling climate change as a central bank, between motivation, obligation and limitation". In "The ECB Podcast", Isabel Schnabel and Frank Elderson, Executive Board members of the European Central Bank, explain the role of the ECB's Corporate Sector Purchase Programme (CSPP), which buys green bonds issued by companies in order to reduce their carbon footprint.



2050 INVESTORS – EPISODE 29 SCRIPT

“Fed” up with Carbon: Central Banks & Climate Change

Welcome to 2050 Investors, the podcast that deciphers economic and market mega-trends to meet tomorrow’s challenges.

I’m Kokou Agbo-Bloua, I head up Economics, Cross-asset and Quant Research at Societe Generale.

In each episode of 2050 Investors, I’ll investigate a key mega-trend that relates to the Economy, the Planet, Markets and You.

(Beginning of episode 29)

Kokou: "Una mattina, mi sono alzato, o bella ciao, bella ciao, bella ciao, ciao, ciao... Una mattina mi sono alzato. E ho trovato l'invasor!"

Siri: Hey Kokou, is everything alright? You're sounding quite revolutionary today.

Kokou: Oh, hey Siri! You caught me off guard. I’ve just finished watching this incredible series "Money Heist" or “La Casa de Papel” in Spanish and got really pumped up.

Listen to this incredible plot: the lead character, also known as “The professor”, recruits eight accomplices who have nothing to lose with a mission: infiltrate the Royal Mint of Spain and print Eur2.4 billion in cash! Eventually the group of robbers sing ‘Bella Ciao’ as they pull off the ultimate heist.

So not your typical bank robbery but a heist where “you make money, literally” pun intended. Simply genius!

Siri: An incredible plot with the melody of defiance indeed. But why the sudden interest in bank heists and Italian folk songs?

Kokou: It's not just a heist story, Siri. It's about resistance, fighting the system. That song, ‘Bella Ciao,’ is an anthem of freedom, originally sung by Italian partisans during World War II.

Siri: I see where this is going. Are we about to embark on a metaphorical heist against climate change?

Kokou: Yes, in a way, this tv show got me thinking. These robbers printed their own money in a central bank. What if we could do something similar, but for a noble cause? Like, say, financing our battle against climate change. Could a "green quantitative easing" be our 'Bella Ciao'?

Siri: Green quantitative easing? You mean using the same unconventional monetary policy tool central banks use to increase the money supply and get the economy growing again?

Kokou: Yes, but this time the goal would be to finance the reported \$3.5 trillion a year of capital investment needed between now and 2050 to build a net zero global economy.

Siri: Now that's an intriguing thought. Shifting gears from fighting fascists to fighting carbon emissions produced by humans with the power of money printing, invented by humans. Why do I feel this is too green to be true...

Welcome to 2050 Investors, the podcast that deciphers economic and market mega-trends to meet tomorrow's challenges. I'm Kokou Agbo-Bloua, I head up Economics, Cross-asset, and Quant Research at Société Générale. In this episode of 2050 Investors, we investigate how the almighty central banks, responsible for managing the currency of a country, can help fight climate change. How do central banks run monetary policy and will their primary mandate of preserving price stability eventually conflict with energy transition induced greenflation? And can central banks bring about change in the banking system they supervise?

Let's start our investigation.

But before, we must unwrap the complex world of central banking.

Siri: Why do I feel this is going to be another long and boring lecture with concepts I won't understand. Do I need to upgrade my economics semantic field library?

Kokou: Ha, I was just about to start talking about the velocity of money, money supply, Milton Friedman, marginal propensity to spend, real wage resistance and the importance of “r star” and “r double star”, i.e., natural rate of interest, price stability vs financial market stability.... We covered some of these concepts in the Greenflation episode. But I think we should change our approach.

Siri: Yes please, my circuit board is already overheating.

Kokou: Oh, I have an idea. Do you remember the story of the Lord of the Rings?

Siri: Duh, of course. Who do you think I am? Alexa ?!

Kokou: Haha! Ok so let's embark on a metaphorical journey to Middle-Earth...

Siri: Ah, an epic tale! But instead of rings of power, we have monetary policies and interest rates!

Kokou: Yes, so picture the central banks as Gandalf, the wise wizard, guiding the economic fellowship with wisdom and foresight.

Siri: Ok. So, Gandalf sets interest rates or the cost of money with his staff, a slight tap for a decrease, a powerful thrust for an increase.

Kokou: Then there's Aragorn, symbolizing the management of the money supply, leading the charge to keep the economy stable against the forces of financial darkness.

Legolas, with his keen eyesight, represents the precision of quantitative easing. Shooting arrows of financial intervention with unmatched accuracy.

But even in Middle-Earth, power is a double-edged sword. The central banks, like the bearers of the rings, must use their powers wisely. Otherwise, it's a path to Mordor.

Misuse of power leads to inflation, economic imbalance, and market distrust. It's all about the balance of power. Too much quantitative easing, and we risk unleashing the Balrog of hyperinflation.

Siri: And just like the ring corrupted Gollum, unchecked financial power can lead to economic distortions and financial crises.

Kokou: Correct, you're a quick learner Siri! To quote Lord Acton: "Power tends to corrupt and absolute power corrupts absolutely". Yet, bound by their mandates, which is to maintain price stability, central banks must keep this delicate equilibrium. Like Frodo's journey, it's fraught with challenges and perils.

Siri: A quest to keep the economic Shire peaceful and prosperous, without falling prey to the seduction of unchecked power.

Kokou: This is a nice way to put it indeed. Now let's consider the past three years of Central Banks in action.

In 2020, The Fed, the ECB and the Bank of England aggressively cut interest rates and started quantitative easing to lower the cost of money and financing. This was designed to help cushion the economy against the consequences of the lockdowns imposed by governments, it was a self-imposed "economic hibernation" to fight the Covid-19 pandemic and save human lives.

But then all the financial support from governments, the vast amount of liquidity injected in the economy by central banks, household excess savings, supply chain disruptions due in part to China's extended covid-19 lockdowns created the conditions for an economic boom fuelled by

revenge spending when the economies in the West re-opened in 2021. The Economist even called this period the “Roaring 2020s”, an interesting parallel with the 1920s period following the Spanish flu pandemic. Demand exceeded supply with the spending of excess savings built up during the lockdown. And then Russia’s invasion of Ukraine added fuel to the inflation fire with an energy supply shock which triggered a cost-of-living crisis and a massive inflation outbreak.

Siri: And what happened next?

Well, central banks then reversed course as inflation proved more persistent than expected. So, in 2022 and 2023, they hiked interest rates aggressively to fight a major inflation super spreader event. The Federal Reserve and the Bank of England have now raised interest rates by over 500 bps while the European Central Bank by 400 basis points!

Siri: Wow! Gandalf was very busy.

Kokou: You bet! Let's remember the famous saying “With great power comes great responsibility”. Now headline inflation, which is related to the cost of living, is falling fast. The inflation fever broke but we should not proclaim victory as wage inflation remains sticky.

Now, imagine what would have happened if Central Banks had not reacted? I suggest we do a quick recap of a specific time in history where central banks lost control spectacularly.

Siri: Ok. I’m sure you are referring to The Weimar Republic, in the early 1920s. Hyperinflation hit so hard that people carried money in wheelbarrows.

Kokou: Siri, great minds think alike! The two primary causes of hyperinflation are:

- First, increase in money supply not supported by economic growth. So massive printing operation.

- And second, demand pull inflation, which occurs when growing demand for goods or services meets insufficient supply thus driving prices higher.

An article on [bbc.co.uk](https://www.bbc.com/news/economy-1923) entitled “The hyperinflation crisis 1923” has a good description of this period:

“In order to pay the striking workers, the government simply printed more money. This flood of money led to hyperinflation as the more money was printed, the more prices rose. Prices ran out of control, for example a loaf of bread, which cost 250 marks in January 1923, had risen to 200,000 million marks in November 1923.”

Siri: So, did the Gandalf of the Reichsbank at the time, Rudolf Havenstein, abuse his position of power?

Kokou: He surely did! This is a classic case of money losing its value and becoming worthless. The Weimar government was still able to get a grip on the economy but instead, chose to print yet more money to pay the reparation debt of World War I signed at the Treaty of Versailles in 1919.

Havenstein believed that money had to be printed to feed the rising demand for money within the German economy. It was his death in November 1923 that helped to bring this policy to an end and, with it, the hyperinflation.

Siri: He was committed to his job until the end...

Kokou: One of my favourite books about this time in history is "When money dies" by Adam Ferguson. It tells the classic tale of what happens when a nation's currency depreciates beyond recovery: the nightmare of Deficit Spending, Devaluation, and Hyperinflation in Weimar Germany. We talked about it in a previous episode, Known Unknowns of Inflation.

Siri: I remember it !

Kokou: Now, there is another time in history where printing money and quantitative easing did not lead to inflation.

Siri: This is in 20th century Japan during a period known as the infamous "Lost Decade".

Kokou: Correct! A period where the Bank of Japan desperately looked to fight deflation by printing money to no avail. Inflation like a shy cat was nowhere to be seen. My favourite book on this topic is the "Holy grail of Macro economics, lessons learnt from the lost decade" by Richard Koo. He talks about the concept of Balance sheet recession. Households, banks and corporations having lost a fortune on their investments and assets after the 1990 asset price bubble crash, decided to save and reduce their spending and borrowing despite record low interest rates. This led to an economic stagnation, low growth and negative inflation for a decade.

Siri: This is counter-intuitive indeed.

Kokou: Yes. So, we've seen the good, the bad, and the ugly of money printing. But the million-dollar question remains: Can it go green?

To get a better glimpse of Green Money Printing, how about we listen to snippets from an episode of The ECB Podcast called " Tackling climate change as a central bank, between motivation, obligation and limitation". In this episode, Executive board members at the European Central Bank, Isabel Schnabel and Frank Elderson, highlight the role of the ECB's corporate Sector Purchase Programme, or CSPP, in buying green bonds issued by corporates to help lower the financing costs of green projects and/or investment in the energy transition.

Speaker : Katie Ranger

So, it really sounds like there's a lot of momentum around at the moment to tackle climate change. And Isabelle, you mentioned President Lagarde. She's repeatedly stressed that we, as well as a central bank, need to play our part and that we're committed to playing our part. Now, Frank, I'm turning to you as the lawyer here in the room. (...) We hear calls from both sides, we hear those voices demanding that central banks act now and that we use our tools to actually help economies transition to a more sustainable future. On the other side, we also hear those that say, well, actually it's not our job to fight climate change and if we were to act, we will be overstepping our mandate.

Frank, why is this so unclear?

Speaker : Frank Elderson

I think until very recently, the predominant concern on the part of central bankers and supervisors was that we would be sued for doing too much, for overstepping our mandate. And I must say I've been warning for quite some time that there is also the risk that we are going to be sued for doing too little and too late, for not living up to our mandate. And both is not good. So we shouldn't overstep and we shouldn't under deliver. (...) But if you just read at the text, it's actually pretty clear we have a primary objective. And the primary objective is price stability. So that's what is our compass. We need to get to price stability.

Speaker : Katie Ranger

Now, Isabel, you mentioned our more unconventional policy measures, and I'd like to actually look at more detail at one of those, one of the ways that we maintain price stability, and that's through our asset purchases. And these have also been playing quite an important role in our coronavirus pandemic response as well. What do we do? We buy assets from banks. And by doing so, we offer them money that they can then lend on to households and companies. And doing this stimulates consumption and investment in the economy. What has that all got to do with climate? Well, we're often criticised for disproportionately supporting carbon intensive industries in our asset purchases. And some even urge us to stop buying assets from fossil fuel companies and polluting industries altogether. Isabelle, what would be your response to those who want us to stop buying assets from these companies? Put simply, why can't we just buy more green bonds?

Speaker : Isabel Schnabel

So there is one principle that we adhere to in our asset purchases, which is called the market neutrality principle. And I mean, when we're buying assets, we have to ask which assets do we buy? And market neutrality means that our asset purchases correspond to the outstanding volume of bonds. So if a company issues more bonds, we will also have more bonds of that company in our portfolio. (...) If one looks at our private sector asset purchase programme, one can see that there is actually a very strong weight of the carbon or emission intensive firms.

And that is very easy to explain because those firms tend to be very capital intensive. So the firms that are emitting a lot are those that have these big factories. And so basically they depend a lot on external finance and they issue a lot of bonds. And this is then also reflected in our bond portfolio. And so we have to ask ourselves whether this is the proper way to proceed.

Speaker : Isabel Schnabel

Conceptually, this is very clear. So basically, we should move from a principle of market neutrality to a principle of market efficiency. And this would be exactly in line with the treaty, as Frank stressed before. The question, of course is what does that mean in practise? So it seems to suggest that we should tilt our asset purchases in the direction of less emission intensive firms. But this, of course has to be operationalized. And this is tricky and we are discussing this a lot, how this could be done in a proper way. (...) Maybe one point I could say on this already now is that I personally

do not think that an exclusion of particular companies is the way to go. And the reason is the following. I mean, the carbon intensive companies are those where the potential change in carbon emission is largest. So in the end, if our goal is to reduce carbon emissions, our policies should send incentives for precisely those firms to reduce their carbon emissions. And this is why just excluding those firms would probably be the wrong thing to do.

And this is something that we really have to think about, because you would.

Speaker : Katie Ranger

Be taking the capital away from them that they need to change.

Speaker : Isabel Schnabel

Exactly. These are precisely the firms that need capital in order to change their procedures and processes and in order to move closer to carbon neutrality.

Speaker : Katie Ranger

We've talked quite a bit about the link between climate change and monetary policy. But of course, this is only one part of the story, because as a central bank, the other part of our mandate is to supervise banks. Frank, you are the vice chair of the ECB's supervisory board. What role do banks play in the transition towards a green economy, and how exactly are we supporting them as supervisors?

Speaker : Frank Elderson

Now, banks have a key role to play, and maybe you can look at it that there's two sides of the same coin. There is a risk story to this, so they have to manage their material risks. Banks have had to do this forever. And now we understand that climate related risks are also financial risk and therefore need to be managed by the banks. And the good news, by the way, is that traditional risk management categories such as credit risk, market risk, operational risk, liquidity risk, they serve their goal also in this new, if you like, this new climate world. But there is also the other side of the coin, and that is that there's opportunities. We are going to make this wonderful shift from brown to green. So the entire economy is going to change and that needs to be financed. And banks play an incredibly important role, especially here in Europe, to do that. So banks have to think through in terms of their governance, their business models to be able to make sure that they can actually make that contribution. So their business models need to become sustainable in all meanings of that word as well.

Now, we will be engaging actively with the banks, giving them feedback on the self assessments, on the action plans, and we will make that part of what is our normal supervisory cycle if you like. And if needed, we can use the entire box of instruments that we have, tools that we have to make sure that they become compliant.

Speaker : Isabel Schnabel

So, Frank, this climate stress test that is just ongoing, the macro stress test, in my view, is extremely fascinating. I mean, we have this great team working on that. And what I really find amazing is that all this would not have been possible a couple of years ago. It's called macro stress test, but it's still based on extremely granular data sets. So it's based on firm level data, the emissions at firm level. Then, of course, we have this extremely granular data set on bank loans, and we can bring all of that together, and then we have these scenarios and we can see what's going to happen with systemic risk.

Speaker : Frank Elderson

I find it really fascinating, I must say it is. What I've been told is that in this database, we have access to data of 4 million corporates, 2000 banks. We are looking 30 years ahead. So from an intellectual point of view, it's fascinating. And if you look at the issue, it's also extremely needed. So on the one hand, it's wonderful that we can now do this, but we better be able to do this because climate change is upon us and we need to deal with this.

Siri: Well Kokou, this was quite insightful.

Kokou: Yes, it's not all doom and gloom. Central banks are getting smarter, using tools like 'green bond purchase' to fund environmentally-friendly projects without rocking the financial boat too much.

Siri: But there's a twist – greenflation.

Kokou: Indeed. Greenflation is the tricky situation where going green drives up prices of metal commodities needed to build the large number of electric cars, wind turbines and solar panels needed to decarbonise our energy systems. Cobalt, lithium, copper and rare earth minerals are needed in vast amounts at a time where mining companies are reducing their investments because of their negative impact on the environment and new ESG policies.

Siri: A classic case of 'you can't have your cake and eat it too.' Central banks need to intervene.

Kokou: It's a delicate balance. Support a green transition while being careful not to destabilize the economy with inflation. This is how central banks can be pivotal in the green transition. But let's not forget, the fight against climate change is a multi-front battle.

Siri: Absolutely. Governments, businesses, individuals – everyone's got a part to play.

Kokou: It's not just about the money. It's about policies, innovation, changing consumer behaviors, and global cooperation.

To conclude, it's clear that while money is a powerful tool, it isn't a magic wand.

Siri: Humans have a history of turning magic wands into sticks to beat themselves with.

Kokou: Haha, this reminds me of a fun quote by Spike Milligan: "Money can't buy you happiness, but it does bring you a more pleasant form of misery".

Kokou imitating Gollum : Myyyy precious!

Thank you for listening to this episode of 2050 Investors. I hope this episode has helped you get a better sense of how central banks can play a part in financing the green transition to net zero. You can find the show on your regular streaming apps. If you enjoyed the show, help us spread the word! Please take a minute to subscribe, review and rate it on Spotify or Apple Podcasts.

See you at the next episode!

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