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WEATHERING THE 'PERFECT STORM'

Addressing the Agriculture, Energy, Water, Climate Change Nexus

The Crawford Fund
2019 ANNUAL CONFERENCE

Parliament House, Canberra, Australia

12-13 August 2019



Editor Ann Milligan

Q&A

Chair: Malcolm Thompson

Panel: Sarah Barker, Sir Charles Godfray

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Obviously in financial markets, particularly because there's so much money awash in the markets at the moment, there are many institutions which are placing bets on the other side, who think that offering a premium or a discount for those sectors, or those industries which are responding actively to adapt to climate change. What do you say to that?

A: Sarah Barker

Last year, when questioned, asset managers, who basically invest the money on behalf of the large institutions, 95% of them said that they expected a sub-prime crash in markets over the next five years. If you talk to asset managers about that disconnect, they say, "Oh yes, but we're going to get out before the crash", to which my response is, "Well if you know when that's going to be, you've hit investment nirvana, because you know it's coming". To me it seems the big shift is going to happen because we have regulation, prudential regulation, and jurisdictions like Europe and China changing, requiring this stuff to be priced based on how sustainable you are. That's actually being driven because the European Commission is considering a recommendation, by their high level expert group on sustainable finance, to actually change the capital regulatory requirements in Europe, if they are green versus if they are brown. And to my mind, once that price signals starts filtering through, that's one of the potential triggers for the sub-prime.

Q: Dr Peter Carberry, ICRISAT, India

Sarah, thanks for your talk. You were talking about risk and uncertainty around the financial markets. I expected to hear a much more probabilistic view of what's happening. You were very deterministic, very definitive about what's going to happen. Is that the narrative you have to take in your world?

A: Sarah Barker

Yeah, that's a really good question, and obviously in 20 minutes it's a bit of a high-level overview. I think the one issue that markets do struggle with is the breadth of the uncertainty and how much it's changed already. It will change more. By how much? That's what we don't know. And so that's why the focus is very much on a range of possibilities because the fact is that no-one can tell if there might be a 20% chance that something will happen, or if it is a 10% chance that that will happen. So we do need to talk in terms of what we know for sure.

A: Sir Charles Godfray

I think one of the interesting ways of looking at the 2008 financial crisis was that it was a failure of statistics: that the correlations between different risks were not put into the models that the banks were using to estimate their risks.

This Q&A report has been prepared from a transcript.

I think there is some encouragement that the industries are taking into account some of the physical correlations that can lead to, for example, in the ag world, multiple bread-basket failures in different regions.

A: Sarah Barker

We're still not great at it though. Even just thinking about the way that we stress test portfolios, and say, "OK, what happens if there's global recession? What happens if there's deflation?". I think we could get a lot better at looking at, "Well what if there is a super typhoon in Japan?". We can't look at that in isolation because of the flow-on and secondary effects that would have all across the world. I think we do need to get a lot better at that.

Q: Male

Thank you both for your addresses. Looking at the graphs this morning of the consumption of beef in China going up linearly. How are we going to turn around and tell the consumer in China, "You're going to destroy the planet if you keep on eating that lovely beef". What sort of solutions can we start looking for?

A: Sarah Barker

From stress test scenarios, we think that soon the inevitable policy response scenario will be 'destructive decarbonisation'. That means we think the world will get to a point in a few years' time where everyone goes, "Oh, Armageddon, bother! War footing!", and everything has to decarbonise 'overnight', and countries will impose a carbon tax levy, effectively 'overnight'. In China, where they still have very much a command-and-control system of government with five year plans, if in a five-year plan they decree "No-one can consume more than two kilograms of beef a year", then that is what will happen. The people who will be most affected are the middle class in China and India and the developing world, who are becoming richer and want to live like we live, of course. There are two alternatives here: either that will continue and there will be entire global collapse, which doesn't really benefit anyone's economy; or we will have that sharp correction.

A: Sir Charles Godfray

I've just a few comments on that. Chinese dietary guidelines are changing and recommending less meat, which is a baby step but is a sign of things to come. And the 'Beyond Meat' company has done extraordinarily well, and there has been investment from traditional meat companies. I think that they're looking at the potential regulatory risks ahead and taking action now, before government does.

Q: Female

In terms of the modelling and looking at the economic impacts and what insurance companies and banks are considering, with the agricultural sector in particular, we see climate change getting more challenging and that science and especially research and development is not necessarily keeping up. So how much is the investment the countries are making in research and development also factoring in what the private sector and modelling are looking at?



Sarah Barker during her Keynote address in the Great Hall of Parliament House.

A: Sarah Barker

I haven't thought of it like that before. No one ever invests enough in R&D; that's the way it is. But there are a lot of statistics around now, particularly in the US, where people are trying to build levee banks to protect their own properties, and that then compounds flooding downstream, etc. There's a lot of data coming out of the US now about the economic dollar value of prevention versus recovery, because they've also got national flood programs where if you do get flooded the federal government will pay you to rebuild on the same spot. But I think it's a really insightful comment that we're really not investing enough, anywhere near enough in this.

A: Sir Charles Godfray

I'm so glad it's a corporate lawyer, not the university professor, arguing for money going into research!

Q: Malcolm Thompson

I think it's interesting that the OECD recently pointed at the amount of subsidies that are going to agriculture worldwide. A proportion of that could be dedicated to R&D; they make the argument that that would be a much more effective way of building resilience.

Q: Female

Do you come across the 'de-growth' argument? I know it's still a very niche kind of a discussion. I mean, it makes sense that you cannot keep growing without limit.

A: Sarah Barker

Growth, in the way that we know growth, cannot continue, and that's just a mathematical proposition. The Earth can't support us. So I suppose there are

two alternative things that will happen: either there'll be the global collapse, which will force everyone to live within the planetary means, or, and this is where my hope lies, we do move to a far more circular system of economy. Because if that's the case then from an economic perspective resources are effectively unlimited. But from a physical limits perspective, growth can't continue as it is.

A: Sir Charles Godfray

I completely agree with that. I think the narrative, and how you phrase it, is really important. Nick Stern, for example, talks very much about decoupling. There's a straight economic version; there's also a social norm aspect to it: what we consider to be wellbeing, what we consider to be good life. Going back to your point about the Millennials, I think they're redefining some of those concepts. There is a lot of interesting new economic thinking about exactly what is utility in a modern sense.

Q: Tony Fischer, CSIRO Canberra

Can you discuss a little bit more the economics of carbon sequestration, especially in landscapes, and apart from the Armageddon situation that you describe, how can you see it evolving?

A: Sir Charles Godfray

This isn't really my area. We have to have a realistic carbon price; we've been pretty hopeless about that in Europe. Putting a proper price on carbon wouldn't solve everything, but it would be a tremendously good incentive. I think that by mid-century we may be looking at, not only carbon sequestration, but active carbon removal, carbon capture and storage.

Q: Josie Ginty, The University of Melbourne

Sarah, when you were talking about the deterministic approach in terms of the changes you said have to happen in the agricultural industry, do you take into account, when looking at those costs and benefits, the ethical changes that are coming with that as well? Obviously there's going to be human rights and animal welfare consequences, in the worst case scenario. I am wondering if and how you account for those costs?

A: Sarah Barker

Absolutely, although there is no cost as high as a four-degree world, because that's not good for anyone, but I think you are absolutely right. We are seeing at a micro level the impacts on the communities where coal-fired power plants are shutting down and there haven't been plans to transition the industry in those areas. It's going to be that on steroids, quite frankly, but it's not that we have to stop that pain. The transition has to happen. There are two alternatives: it happens or we're 'stuffed', and that would not be good for anyone. Transition is good for everyone! It might mean different things for different people, but it's good for everyone. Rather than starting from where we are now and thinking about transition in incremental shifts, I think, we should look at the target and ask what are the options for getting there? And what are the decision paths that we have in front of us now that are either maladaptive or enablers to getting us to that state?

Q: Wesley, The University of Western Australia

Thanks so much for your talks. You've talked about the financial costs of global warming and no country is on track to meet their climate change obligations and the biggest economies in the world aren't anywhere close, so is there a point where the private sector says OK, we're going to leave the governance behind and go it alone?.

A: Sarah Barker

Really the market is leading on this; it's quite extraordinary, and if I was a betting lady I would bet on the money every time. We're looking at price parity between electric vehicles and cars with internal combustion engines in the UK by 2022. Once that happens who cares? In 75% of cases, in developed countries and China, it is already cheaper on a marginal cost basis to shut down your coal-fired power utility and install solar with storage. So those tipping points are very, very close. It would be better if the policy settings were efficient and conducive to the transition, but the market is moving ahead anyway. You're not going to get a coal-fired power plant funded in Australia. You're not going to get it insured. That's the market.

Chair: Malcolm Thompson

OK, we're going to need to finish there. Please join me in thanking our keynote speakers again.