



Francesco Filia: How to navigate the cliff edge in markets

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Erik: Joining me now is [Fasanara Capital](#) founder, [Francesco Filia](#). And I always enjoy interviewing Francesco because, not only does he always send us a terrific slide deck, but it's usually a big slide deck. So we won't be able to get to all of the slides in this deck. I do strongly encourage our listeners to peruse the entire deck because it has some really fantastic content in it.

You'll find the download link in your Research Roundup email. If you don't have a Research Roundup email, that means you haven't yet registered a free account at macrovoices.com. Just go to our home page at macrovoices.com, look for the red button that says [Looking for the Downloads?](#) right next to Francesco's picture on our home page.

Francesco, we can't get into every single slide here, so I want to start maybe with Page 6, I believe, where you're looking at the 50-year swap rate. Tell us what's going on here and fit it in to the big picture of what you see in the market.

Francesco: Thank you, Erik, and thank you for inviting me again.

This slide is really to simplify the dramatic and also comical situations that we find ourselves into in the markets. There is always attention being shifted to this or that trigger to a market downside or this or that theme of the day.

I guess in days like this it's the coronavirus, the COVID-19. Prior to this it was the assassination of the Iranian general. Before that it was trade wars, or the repo mess, and this and that.

But the reality, the big, big elephant in the room is simpler than that. And it is really the dramatic situations that bonds are into where we live through negative interest rates. And for that much bonds around the globe, and this is not even making the headlines any longer. It is a fact of life. It is considered just part of the furniture. It is not raising eyebrows.

But you have bonds, even long-dated maturities. And here we simplify, for example, the 50-year swap rate, which is representing swaps in Europe, for the oil curve that dipped into negative territory last December and now again is very close to zero. It's probably going to go below zero again.

And our point with this is really that bonds when they yield negatively are no longer bonds. We

should find a different name for it. Probably to be called fake-cash or quasi-bond or anti-bond or something like this. We need to find a name for it, but it's definitely not a bond.

And the point that we make here is that this is the elephant in the room. It is driving valuations all across asset classes. There is the low of communicating investors, which is at play. And which means that if you retire one entire asset class from the market, the nearby asset classes will need to benefit from it for various reasons. But really mechanical reasons.

Which is also what is being theorized by central bankers when doing these dramatic negative rates in the form of portfolio balance channel theory, really the form of trickle-down effect, into other asset classes and eventually into the real economy.

Which clearly failed. Because we haven't seen all of those have a positive implication in the real economy.

And these are not bonds anymore. It means, really, that when we look at balanced portfolios out there, which is the majority of asset allocation globally, and when we look at the 60/40, 40/60, whatever, really we look at the portion of bonds, which is not there anymore.

I mean, we think it is there, but it is not there. It is a figment of imagination. That bond is not there.

Which means, really, that the portfolio at that point is long-only equity. And next to the equity there is fake-cash or something that used to be a bond.

That in reality probably is cash. Because it's not yielding any money but also can bite back and can create some damage at some point down the road. Because there is also a very long extension in maturity and therefore a price risk and a duration risk.

So this is just to see that the big elephant in the room is negative rates. It's affecting – in the next slide you see a bond of Nokia, on Page 7.

Nokia is a beautiful company. Nothing to say about it except that it is sub-investment grade. But even if it is a beautiful company, you should probably not trade at 11 basis points over. And it was trading negatively at some point during the summer of last year. And probably is going to go back to negative territory.

It's a short-dated bond. Yes I take that. But still there should be no reason in the world why this bond trades where it's trading. And the abnormality of the situation doesn't stop there.

On the next slide, Slide 8, we have a reminder of the situation – the comical situation of the Austrian bond 100 years in duration that rallied by something like 80% in a matter of a few months.

I mean, it's worth being reminded of. Absolutely we all know about it. It made the headlines when it first happened. And now it's forgotten.

And here is a market where a bond can trade up in price as big as Tesla. And it gets forgotten. And it is a market where the investor community is looking at bonds for capital gain and equities for income. So the lows of finance have been completely flipped.

I think that on negative rates a lot can be said. One of the points that we make is that there is a **nocebo** effect to negative interest rates. A nocebo is the opposite of placebo.

Placebo is that terminology utilized in medicine where there is a substance that has no real impact on one's cells but still gets to be positive because of the psychological effect that it has got on the person that believes it to be positive.

And in the same way we think that there is a nocebo effect on negative rates. When investors are faced with negative rates, they have all sorts of negative implications when looking at their future expected returns. Which are considered to be lower. And therefore there is less of a need for capital expenditure and for investment, productive investments.

And you see this into savers which save less, consumers which consume more. All sorts of negative implications. And this is really psychological.

In addition to that, there is obviously the also negative implications from the mechanical standpoint that – for example, European banks have had to pay 25 billion to the ECB because of negative rates. And that has obviously weighted on their profitability.

But it is really the nocebo effect that we think is much more powerful and is highly underestimated by policy makers these days.

Erik: Francesco, it's fascinating to me because I hear from so many of the smartest people we talk to about this same issue. Which is bonds are not really bonds anymore.

Jeff Snider told us you have to recognize that the old idea of a Treasury bond as an investment, it's really not a viable investment. It returns a negative real interest. There is no sensible reason to invest in it. It has become a tool of large financial institution balance sheet management that really no longer makes sense.

I spoke to Ralph Delguidice about this same subject last week and he echoed Jeff's comments and had a lot more to say about it.

So I want to go a little deeper in what you just said. I get it. I understand that bonds are not bonds anymore. But what are the systemic implications of what used to be considered the safest investment on Earth?

And furthermore, the core investment for a lot of pension funds and other major institutions was always the US Treasury bond. Cue the patriotic American music. You've got the full faith and backing of the US government. It's the best investment on Earth.

You and Jeff Snider and Ralph Delguidice seem to agree it's not even an investment anymore.

What are the implications of that?

Francesco: Well, the first one, let me start with systems theory. We try to look at markets as complex, dynamic systems. So not at the single parts in isolation, but the system as a whole. And I think that – obviously when you speak about system risk, you should think about the systems first.

The first effect that you have, having retired bonds, having rendered them the equivalent of tax bills, is the following: You have lost the buffers in the system against risk and negative impacts. You have lost the ability to absorb shocks. When the system is subject to a stressor, it is unable to go back to the initial position because they have lost the buffer.

And the buffer of bonds is very well known. We know from the past crises, 1929, 2000, 2008, 1987 even, we know that whenever equity markets were in freefall, bonds could save the day to a balanced portfolio.

So they could rally, bonds. They were easily moving lower and kind of softening the losses on the equity part.

This today is impossible because the rates are already very low. And I remember when we did this podcast last year, that the rates were higher than they are today. But still they could fall. And indeed they fell as the markets showed some weakness here and there.

But now you have the long-dated Treasuries yielding below 2%. So, yes, they can still fall further. They can go down to zero or even negative territory.

But most of it is done. Most of it is behind us. So that buffer, which is a caution against risk, is lost. And that is a big deal for balanced portfolios around the world.

It means that during the next big equity downfall you have bonds that are unable to rally. It means that the losses in the financial markets are going to be way larger. If the losses in the financial markets are going to be way larger, it means also that the implications for the real economy are potentially much bigger.

And the second effect that it has got – and here I go into more the psychological effect – is the fact that this market has become a nihilist. Meaning that there is no morality attached to the market any longer because people have gotten used to ignore completely valuations.

And this starts again with bonds. I mean there are a lot of examples in this presentation about equity nonsense. There is the one of Moody's that is trading like a tech company. There is the peak peg ratio. Here is Slide 10 where that is effectively comparing the valuations on the S&P to their potential growth, which is also out of whack.

But I would say that on bonds, just to keep it general, the market is nihilist because they have lost morality.

And what is the morality to financial markets? The morality to financial markets is valuation. And we all agree in the market that these days valuations are not the main driver of performance. Momentum is. It's one big momentum trade.

But not being driven by valuations does not mean that valuations are completely to be ignored and are completely to be ridiculed. And these days to have a bond like this it's a completely ridiculous proposition.

And it's funny that so many market participants try to find some rationale in where bonds are trading by calling into effect demographics or inflation expectations or any other type of technological improvement and therefore pressure down on prices.

These are all nice arguments, but none of them is really able to justify why bonds should be a tax bill, why bonds should be trading negatively. And not zero or slightly positive.

So I think this is a big monstrosity and it's creating the type of market that we are facing. Especially when coupled with quantitative easing, when coupled with talks of MMT and forward guidance for more monetary injections. And then, no wonder that you have this big wave up in prices totally de-correlated from valuations.

Erik: Francesco, there is another common theme that really rings true for me in your slide deck. As I talk to some of the other smartest people that we have on the program, they've all told me in different ways, look, don't just dismiss the blowups we've had in the repo market. The daily liquidity situation that is getting critical in financial markets, it's not just an anomaly; it's not just a month-end effect. There is something significant that warrants paying close attention to.

So it came as no surprise to me when I see Page 14 in your deck, you've got a title here that says The Risk of a \$2 Trillion Market Call. And the heading above it is The Upcoming Daily Liquidity Crisis.

What are you talking about? And how does that play in to the whole story of what's on in the marketplace?

Francesco: Well, basically, we have lived in an environment where the market has been trained to believe that a downfall in prices of 2% to 5% is enough to trigger a buy the dip

opportunity. This has been recent years, especially in the US markets.

And this has generated all sorts of market behavior.

The other thing that we have seen in the last 10 years is the rise of the machines in the passive investment strategies. So there are a lot of vehicles out there which are in autopilot. Different degrees of autopilot, but still in autopilot. And it goes not only to the CTAs or to the quant funds, it also affects the risk parity, the risk premia, the low volatility vehicles, and obviously the totally passive, the ETFs and the like.

So the passive vehicles have been also a consequence of the fact that, as yields go close to zero, there is even more of a pressure to compress fees on fund managers. And what better way is there is to compress fees if not to go totally passive? With totally passive, the fees can be – I've seen totally close to zero.

Then there is another element to this, which is ETFs have given direct market taxes to retail. Retail in the past, it used to be intermediated by either financial advisors or by fund managers. Today retail has got one direct access to the market. And all of the new technologies affecting the asset managers are there to eliminate the intermediary.

So the other element of this, and I may conclude there, is the daily liquidity. So there is an obsession by the investor community for daily liquidity vehicles. And they are called differently in different geographical areas.

So in the US you have the '40 Act. And then you have also the ETFs, obviously. In Europe you have all the UCITS funds, which are really the bulk of the asset fund management for the industry.

So taking into account these three elements:

* Passively managed, which means autopilot and passive aggressive – if the market goes down they go down with the market. So they will sell as the market goes down.

* Retail driven, which means weak hands. Because the retail would be the first to lose in a panic mode when there is a downfall in prices.

* And the third element is daily liquidity, which means hot money. This means that if the investors want out there is no gate in front of it. You can just simply sell and this money is due the next day.

So the toxic combination of these three elements is what really makes the market structure dangerous these days.

There could be a situation – and it almost close to happened in December of 2018 – where the

stock market loses 10% to 20% in one single months. That provokes headlines and panic selling, selling on the side of retail investors and those investors at large.

And that could equate into a very big margin call. A very big redemption event. Where on a day-to-day basis you could have \$2 to \$4 trillion being sold in the market in a very short fashion. It's a snowball effect at that point.

And my point is that if that takes place – and it may have been almost taking place back in December and that's why central banks panicked – if that takes place, there will be no way for the Fed, for the ECB, for the Bank of Japan, for the Bank of England together to intervene and prevent that from creating havoc in the markets. That will be too big for anybody to manage.

How do we get to this \$2 to \$4 trillion? I mean it's very simple math, it's not rocket science. If you take just the three top asset managers globally, Vanguard, State Street, and BlackRock, you're looking at something like \$17.2 trillion in assets under management last time I checked. It's a monumental big amount of assets under management.

If you consider a market downfall of 20% on any given month and then you consider investors redeeming after such a panic situation in the market, you can easily see that they may redeem 10% to 20% of their holdings in the market. They may just try to liquidate that. And here you go, you are already at \$2 to \$4 trillion, just considering the top three asset managers alone.

This also brings us to another point, which is the fact that asset managers have never been considered strategically important financial institutions. Whereas they are these days because of this structure of the market, because of the size that they got themselves into, and the systemic implications of their role in such markets.

And let me also say that there is a parallel to these to the previous crisis, which is 2007-2008. At the time it was a leverage problem. We had the banks like Lehman which were levered up 40 times.

And at the time the problem was a margin call. The margin call meant that all of a sudden the money could be asked from Lehman or from banks like that and Lehman would have to pay them back the next day or in a very short fashion.

With that much leverage, there is caused an over-compensation to the downside. As the collateral value shrank because of falling prices, the lender would ask the money back from Lehman and Lehman would have had to liquidate positions on the back end.

Now that risk is not as big as it used to be back then. And surely it is not as big for the banking sector. But guess what. The risk is as big as then or much higher in the asset management industry.

And it does not come through leverage. It comes through notional. So we have this very

sophisticated concept that we have developed here at Fasanara which is notional after leverage.

So do not be fooled by the leverage itself being not as big as then. But just look at the notional. And the notional for the asset management industry, as I said before, can be looked at as that \$17 trillion on three managers alone.

I think that that is the real, the time bomb that is sitting in the market. And whenever we look at new triggers in the market we should always ask ourselves what's behind the corner. Are really going to face this \$2 to \$4 trillion margin call? And if we do, what happens?

And I think that me and you, we don't know really for sure whether this is going to happen and with what time frame. And we don't know if we should be panicking for this or not. But I think that there is somebody in the market out there that really knows this a little bit better and that is the central banks themselves.

And if I read through their behavior over the last few years, I can see that they really panic when the market is going down. We have seen this in December of 2018 where the Federal Reserve flipped in a dramatic U-turn moving from QT, quantitative tightening, all the way to quantitative easing. And even talks of MMT.

At the time we called that jumping the shark because it was really not necessary, but they did. And, admittedly, they must have been really scared about what was going on in the market. And they moved also into rate cuts.

We saw it again in September of 2019, where there was the repo mess, associated to clearing houses most likely. And they panicked back then as well. And they embarked into a big balance sheet expansion. Half a trillion got printed out. It's really similar to QE. At the beginning it was only repo, then it became T-Bills. Which is the very definition of QE.

And guess what. T, the last time around that this happened was at the turn of the century in Y2K. And even back then there was a bubble forming which was then followed by a big overcompensation to the downside and a big bust.

So we can see – we can read the panic of the central banks as proof of the fragility of the system. And I would look at them as smoking guns.

Erik: Francesco, something that has always appealed to me about your work and your perspective on markets from our previous interviews is your focus on markets as complex systems with a lot of interdependencies and complex feedback loops. It's not simple, there's a lot of interdependency in how markets actually function as complex systems.

And I know we've talked about that in past interviews. But I don't remember really any objective tools for managing or controlling or coping with risk in these complex systems. If I

look ahead to Page 24 in the slide deck, it looks like perhaps you're introducing some new tools to do exactly that. Am I right? And if so, tell us all about them.

Francesco: Yes, absolutely. I mean we are alone in this endeavor because we don't think or we don't know about many people trying to do this because it is believed to be impossible. It is believed to be impossible for somebody to estimate the probability of a crash, in market terms.

Or when you look at natural systems, natural ecosystems, it is believed to be impossible to really predict with certainty or with a very high degree of probability when there is the next earthquake or the next epileptic seizure in the brain and so on and so forth.

But guess what. In the physical world, ecologists and scientists are indeed spending a lot of time in tools associated with complexity theory and with systems theory. And there is a range, a body of research that is attempting to do just that. In the market, you find nobody trying to do that. So we tried to fill the gap, in a way.

In the market, you find the same conventional traditional market analysis that you found 20-30 years ago, which looks at triggers all the time. It looks at this trigger being the trade wars, or that trigger. And if there is no trigger nothing will happen.

But systems theory tells you that you don't need a trigger necessarily. It's the systems that transition at some point after you reach a critical threshold. And we try to estimate in values, shapes, and forms, what is that critical threshold. What is the proximity to that market cliff?

And there are a number of tools which are offered to us by complexity theory. They are not perfect tools, obviously. When you say you estimate the timing, it doesn't mean this week or this month. It doesn't even mean this year.

But it can shed some light on the current market events. And it can help you navigate in a bit better way than the traditional market analysis.

The traditional market analysis looks – if you wanted to have a sensor to chaos – has been used to look at the VIX or the implied volatility. And that has been used in various shapes and forms, like the value at risk for example. And that has been an element that has been utilized to determine certain leverage in the portfolio, a certain risk exposure, a certain position sizing.

But guess what. When it comes to systemic risk, volatility is actually groundwork. It's a necessary condition to systemic risk because it is exactly after a prolonged period of low volatility that you end up into trouble.

And this has been proven time and time again over the course of modern financial history. It's when volatility is low that complacency grows. And the banks, they start to overextend themselves into lending and into credit and into leverage. And that's when the problems arise.

So VIX cannot help. Volatility cannot help. Value at risk cannot help. So what we tried here is to procure some different tools based on complexity and not based on volatility. And the tools that we have been trying to produce are these following tools.

So we have (1) to visualize the tensions in the market structure. It's like taking a picture of the market at each point in time from the viewpoint of the structure. And to us it's a little bit like taking a picture of the assassin on the crime scene. There are certain faces of the market during bad and good times which can be taken a picture of.

And, for example, if you go to Page 25 of the presentation, you will see that the market during Lehman – if you take this picture – this picture is based on agent-based modeling and pairwise correlations and a few other things – and it's focusing on the largest ETFs – you can see that the face of the market during Lehman is much different than the face during market condition like September 2010.

And then you see again that the face of the market right now, in recent times, it really looks very similar to the one of Lehman and not like to the one of a healthy market condition.

So on this market deck, there will be also a link that projects you into a page on our portal where you can see these visualization tools on the market at any given point in time on a weekly basis.

So this is #1. This is what we try to see. Where do we stand in terms of market structure?

Then there is a tool that helps you to monitor the impact of a market epidemic. We update our simulations. And they say, basically, how damaging a certain market structure can be.

And this is Slide 28. And here we can see that for a certain market event you could have a downfall on the S&P as big as 60%. And this, by the way, is no big surprise. These days the S&P is so expensive that if it goes down 30% it will go back to a price where it will go to a position where it's still extremely expensive.

And so it means that we put ourselves really in the corner of the market, because not even at 20% to 30% a reprice will mean that you make it fairly valued. So this is no surprise, this analysis.

Then you have a tool to estimate the proximity to a large-scale systemic risk event. This is what we call the SRI. It's a systemic resilience indicator. You can find it on Page 29. It's a long-wave tool.

It doesn't help you to determine what will happen tomorrow, obviously. But it tells you that this market setting is already way more dangerous, way more expensive than Lehman time. And also than the turn of the century during the tech bubble.

It's the pink line and it shows that we are really into a dangerous zone where if there is a critical transition it can be no surprise. It is measured in mathematical quantities.

This sensor is based on the Ricci curvature. Now, I will not go into the theory of it. But I will just say that the Ricci curvature is a similar mathematical quantity to entropy. The difference is that entropy looks at the narrow nodes, the closed nodes in a system, whereas the Ricci curvature looks at the distant nodes. And we think it's more relevant for the market structure.

We did all of these already a year or so ago. And we decided to add to the toolkit some short-dated, small-scale indicators. Because it's always good to say something about the next cycle and the big wave. But what about the next 15 days, or even the next 5 days.

So we tried utilizing complexity again, not volatility, to determine the probability of a small-scale market even on a short horizon of 5 to 15 days. And this is what can be found on Pages 30 and 31.

The latest one that we are yet to publish is on Page 31. And this measures the probability of a downfall of 2% to 5% in the next five days. It is based on earthquake technology, earthquake mathematics. And we can see that the accuracy of this indicator according to our analysis has been above 65%. So it was actually very good.

When we compare it with the more traditional indicators like the VIX and like volatility, it was actually a superior indicator. So we are very flattered by those results.

On Page 30, you see another one which is based again on early warning signals coming from systems theory. And, again, it estimates the probability of seeing a market fall in the following 15 days.

Put them all together and you are on Page 32. And this, to us, is the cockpit to systemic risk. So it's the combination of all of those systemic risk alerts in one place. And this is what we look at to determine whether or not it's time to go, it's time to position, it's time to capture the moment of discontinuity.

And here you have all of them together. The 5 days, the 15 days, the Ricci curvature, which is the long wave, and the market structures, which is this continuous peak of the market structure to know whether or not we are in a dangerous situation.

And this again, Erik, it doesn't give any certainty, obviously. But I think that, despite the fact that it's difficult, we should all try to attempt to create something new in the asset management industry when it comes to keeping ourselves with tools that can help us estimate the state of the systemic resilience and systemic fragility in the markets.

Erik: Well, Francesco, it's so tempting. You've got such a smorgasbord of fantastic slides and graphs on this deck, I want to just spend three hours asking you all about it.

But I know what our listeners are going to appreciate most is if we focus on how to translate all of these high-level concepts into actionable trading ideas.

So what can you tell us about what you conclude and where this all takes you in terms of what to do in today's market?

Francesco: Well, I would go to Slide 18. On Slide 18 we summarize what we think is the options to a rational investor. Assuming there is still a rational investor out there, because most people are making too much money to care.

And that is also part of the systemic risk argument, that there are a lot of perverse incentives baked in the cake, making the crisis also much more likely.

We think that the one option is obviously the simplest of all, which is to go into cash and gold and wait it out. I think this is a fair possibility for investors to decide to do. They have made good money in the bull-run and it may be time to take money home and just wait for better times to invest, when their return expectations are better than they are today. And at that point a combination of gold, cash, and patience can be the best one.

If you want still to be involved into markets, our personal recipe for how to tackle the current market structure is the following one. One is tail risk. You just go for it, you try to capture the moment of the adjustment. In itself, it's a great opportunity. We have called it a generational opportunity.

As I said, the S&P down 30% doesn't cut it. Here we are talking about something much more dramatic. I would say an S&P below 2,000, if anything. But even if it's not down there, it's still going to be really a big event, in my personal opinion.

And the way to position for this is a tail-risk strategy involving a bunch of different things, some of which having to do with ways of edging the portfolio. But it is really, as far as we are concerned, it is really a very high-octane proposition where you are prepared to lose 10% to 20% a year but you can make 500% if the time comes and the adjustment comes.

I don't think you can do this by having a positive carry. So I don't believe it is possible in these days in the market to still get positive performance and at the same time be ready for the moment of adjustment. I am a strong believer of the fact that if you are not losing money you are probably not ready to capture the moment when the moment comes.

The second strategy is a quant strategy. So in our own trading we apply quantitative techniques to trading and we guide those quantitative techniques with complexity-based indicators.

Again, not volatility driven but complexity-based. Complexity means linked to the structure of the market, looking at things like what are the tensions in the system. And when those tensions

arise, the indicators they tell us to go quickly into cash, possibly also into short.

And this is another thing, the indicators that we discussed before are all usable, let's say, to this purpose.

The other one which I think is actionable is what we call alternative credit. Which means – in the public markets it's very difficult to make a living these days. You can either go with the flow and follow the momentum and still make your assets grow.

But you're probably not doing the most sensible thing because you are picking dimes in front of a steamroller. There is a big event in front of you. You don't know when but there is. And therefore it's probably not a very honest proposition.

And we think that the public markets are really unattractive these days in both public equities and public bonds. If you go to the most classical private debt strategies, you also don't find a great appeal because there is a bubble there as well. You are literally surrounded by bubbles everywhere.

But there is a way that you can go, which is to go to the real economy and try to find anti-bubbles or places that are not expensive as yet. And what do I mean? The market of the mid-caps.

There are small and medium enterprises are still financing themselves at very high rates, 5% to 10% if not higher, whenever they can find the funding. Sometimes they aren't even able to find the funding.

And I think that the bubble is on the large corporates because the large corporate are such – as Nokia, as we have seen before – are trading at zero. Literally, zero.

But the SMEs are still paying top dollars for their funding. And definitely there is more risk associated to SMEs. But if I can compare an SME paying 10% to a large corporate paying zero, I would argue that the bubble is on the large corporates and is not on the SME.

When you are paid zero on a bond investment or on a financing, you really have no buffer against any type of credit risk. So little needs to happen for you to lose money.

When you are invested into SMEs at a 10% deal, you have a big buffer. And then you ask yourself what was the default rate of SMEs during the Lehman crisis? And the answer is, it was 4% in continental Europe for example. 4% to 5%. It was actually not staggeringly high.

And this means that you have a big buffer which may insure you for something which is even bigger than what happened during Lehman. And this to me is a resilient investment. A resilient place for money.

Now, to trade with SMEs is not the same as with large corporates. It requires a totally different approach. You need proper infrastructure, proper technology, boots on the ground, a lot more people. It's a much more cumbersome proposition.

But I think that these current markets are pushing ourselves into looking at the next trade in a bit more inventive way. And going outside of the box and trying to really find things to justify also our management fees and performance fees.

Erik: Francesco, final question. I know that a lot of your research, and I guess we haven't talked about it in this interview, so maybe you could elaborate first.

But a lot of your research that we've discussed before describes reasons that the market has changed in a way that very rapid reactions and changes – more the flash crash as opposed to the five-year long bear market.

I want you to first address why your research reveals that that kind of move is more likely in the market structure that we have.

But, particularly – and this is just my own view – I really think that the biggest and most mispriced risk in decades is this coronavirus situation. I think that it has the potential of causing much more economic damage than almost anyone is anticipating.

If it turns out that I'm correct, that coronavirus is bigger than most market participants have estimated, what could it mean in terms of how the structure of the market might result in perhaps a very rapid event as opposed to a slow event in terms of financial market reaction?

Francesco: I believe that a flash crash, so a crash where the speed of adjustment is really very high, is a definite possibility.

I also believe that sometimes it's the only possibility because the opposite to that or the alternative to that would be a slow-moving downfall in prices. I don't see that happening. Also because the central banks would intervene again. And so, also by definition, it cannot happen that easily.

Whereas I think that a flash crash, if it happens in the fashion in which I described before where there is a huge margin call of \$2 to \$4 trillion, would be too big for them to tackle. So, in a way, it's a way for the market system to bypass the line of defense of the central banks.

In my mentality, my idea, my theory, it's the only way for the system to adjust and let go potential energy. It is exactly because of all this inferencing that the central banks have tried to give to the markets, to these broken markets, these fake markets, these pampered markets, that will make it more likely for the system to adjust in a very dramatic and fast fashion.

And coming to the coronavirus, or the COVID-19, I think that – look, the market interpretation

of it is very clear. So the market thinks that this – at least at the beginning the market interpreted that as a little bit like what happened in the US during the freezing cold weather in 2016 I believe it was, where there was a lost quarter of GDP followed by very strong pent-up demand.

And then following that, also, the expectation of a millennials type of market, which is for central banks to intervene and to end adversity with even more monetary printing.

So the market looks at this and says, yes, but China is a very proud nation. They are going to print left, right, and center in order to fill the gap provided by the coronavirus.

So that is the interpretation of the market. Now, if they are right or wrong in this specific instance, I don't know. I can definitely agree with you that the potential implications are huge. Because they work on an already fragile market structure.

And what I can say about the coronavirus is that, if a market event like the assassination of the Iranian general back in early January was leading to a potential also risky situation on the geopolitical front but you could never be sure about it, in the case of the coronavirus, in addition to the dramatic situations of the pandemic which is not dramatic now but it could become, you have a real implication in the real economy.

Because if we block a certain economic area, like some parts of China, more recently also the northern part of Italy, and so on and so forth, you create an economic impact already tangible even before you discover whether or not the pandemic reaches a certain alarming state.

So, and particularly in the Chinese case, you block the supply chain. And there are some companies which may not be able to recover from it.

So it is definitely a very serious situation. And could definitely be one such element that provides the trigger. I don't think a trigger is needed, but definitely this could be one that accelerates the adjustment in the markets.

Erik: Francesco, I want to close by just emphasizing to our listeners, because we have a lot of people who listen while driving and they can't download the slide deck. Folks, we've barely even scratched the surface of how much content exists in this slide deck. So once your drive is done, I really do encourage you to download the deck. There is a lot more here than we've had time to discuss today.

Beyond the slide deck, Francesco, for people who want to follow your work or learn more about what you do at Fasanara Capital, please tell them how then can contact you and follow your work.

Francesco: Our website is probably the right place. It's fasanara.com.

You won't find much information about our investment vehicles there. We tend to avoid doing that. We don't like speaking about specific fund products. We keep it very generic and very theoretical in a way. I think we shared in this presentation more than we are accustomed to, in a way. Hinting to some of our strategies.

But definitely the point of contact could be the website. We publish research on market topics. Our attention in the recent past has been on systemic risk because we think nobody else is caring about it, or not too much. And therefore we have been focusing on that.

And we encourage everybody listening that wants to contribute to our research to please offer to do so. Because we believe in the open ecosystem in terms also of our work activities. And we like to tie up to people that today have something to say and something to contribute.

Erik: Well Francesco, I can't thank you enough for a terrific interview.

Patrick Ceresna and I will be back as MacroVoices continues right here at macrovoices.com.