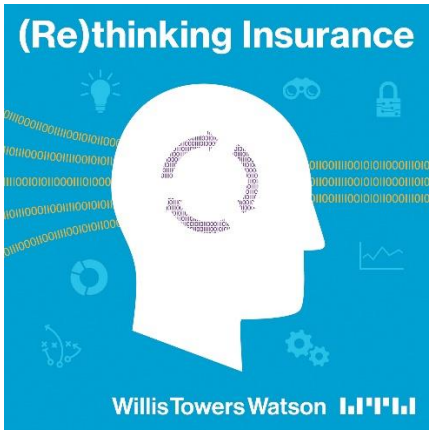

Episode 20: IFRS 17: deriving discount rates in imperfect markets

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KUNJ MAHESHWARI: A good indicator which might be easier to spot is how volatile have the rates been. In more advanced and more developed markets, although there can be periods of volatility, those are episodes and those are self-contained. Whereas, in systemically inefficient markets, what you find is that the price volatility is very extreme.

NARRATOR: You're listening to Rethinking Insurance, a podcast series from Willis Towers Watson, where we discuss the issues facing P&C, life, and composite insurers around the globe, as well as exploring the latest tools, techniques, and innovations that will help you to rethink insurance.

VITTORIO MAGATTI: Hello and welcome to Rethinking Insurance. I'm your host, Vittorio Magatti. And today, I'm delighted to be joined by my guest, Kunj Maheshwari, Head of Life Insurance for India and Sri Lanka. Welcome, Kunj.

KUNJ MAHESHWARI: Thank you, Vittorio. It's my pleasure to be here.

VITTORIO MAGATTI: In today's episode, we are going to explore a paper you have wrote with Brian Ring, titled as, IFRS 17: Deriving Discount Rates in Imperfect Markets. But first, let's find out a little bit more about our guest. So, Kunj, googling you, it looks you are also an hotel and club owner in India. Fancy, and good to know. Any thoughts on this?

KUNJ MAHESHWARI: Oh, right. I would wish that was true, but I am very much an actuary by trade.

VITTORIO MAGATTI: OK. So, I think we can start through the podcast. And I have a first question for you. Reading your paper, insurers under IFRS 17 should consider the characteristics of the contracts to derive discount rates. Observable current market prices for financial instruments are the key elements. That sounds great. And I understand that's not always easy, or indeed possible, is that right?

KUNJ MAHESHWARI: Yes. So, it's really a classic actuarial conundrum, Vittorio, where actuaries for many, many years have been trying to understand what is the most appropriate discount rate or interest rate to use when you're determining time value of money for long term insurance contracts. And this problem has had many solutions over the years. IFRS 17 points to a particular principle to derive this same solution for the same problem. Where often times in recent years, what has happened is, insurers have tended to use metrics similar to sort of market consistent valuations, or metrics similar to what Solvency II prescribes.

And it has been in vogue to use market derived risk free rate as a starting point. In that, what I mean is, you look at the assets available in the market, you look at the traded volumes, you look at the

traded prices, and you impute from those the time value of money for a risk free curve and start from there.

Now usually, it's very easy to do that if you have a well functioning, well developed market. But what do you do when you don't have such a market? When you have a market which may well have goods available, which may well have prices available, but they are not very robust or reliable. Or you might even have a market where prices and goods are not available at all durations, but your insurance contract liabilities run for a much longer period than the available assets in the market.

These are the kind of challenges and questions we often face when we work with our clients to determine the discount rates. And these are the challenges that we have tried to address through the paper, particularly in the context of how do you deal with imperfect information. How do we deal with markets where not enough data is available, or where the data is available, it is for some reason not good enough.

VITTORIO MAGATTI: That's very interesting, Kunj. Now, can situations arise when the efficient market hypothesis break down?

KUNJ MAHESHWARI: Absolutely, and we see that all the time. So, the traditional economic theory, or many economic constructs and financial economics are based on rational behavior from both buyers and sellers. And there is an assumption that all market participants behave irrationally and in their best interests.

So, whatever the price determined by the market is, it's the aggregation of the consensus view of a large number of participants in a well functioning perfect market. Now, we've seen several instances where this may not be the case, both in developed markets and in less developed markets.

For example, for the 2008 crisis, we saw liquidity crisis making the yields and making the available rates in the market very, very volatile. Are those the appropriate rates to use at that point in time for long term liability calculation? I don't know.

That situation might happen from time to time in more advanced economies, but is a persistent problem in less advanced economies. For example, in many parts of Asia, or even Africa, or South America, or even Eastern Europe, you will have markets where inefficiencies are a persistent feature of the market.

So, it is quite common and quite often that efficient market does not always play out, and therefore you don't always have efficient prices. And therefore, when it comes to valuing insurance liability, if you don't have efficient prices and efficient yields, what is the alternative? And that's what we are trying to address in many of the work that we are doing.

VITTORIO MAGATTI: Great. So, I think that the major part, or one of the first parts of your activities in your job, taking in consideration this paper, could be to define which of these markets are efficient or inefficient, right?

KUNJ MAHESHWARI: Absolutely. And as I said, it could sometimes be a red herring when you have prices available. So for example, when I work in India, or Sri Lanka, or many parts of Asia, what we find is there are government bonds that are readily traded, there are government bonds that are available in secondary market and primary market. And all of them have quoted prices.

Now, that can sometimes act as a red herring. Because you think that, OK, I have prices available and I can use that to drive my discount rates. But if you scratch a little bit deeper, you start to find certain inefficiencies, certain inaccuracies coming through.

So, the first exercise of our sort of almost mandate on our project is, can we identify-- A, other efficiencies. B, what is the nature of those efficiencies. And then get to the point of how do you then address them. I've given some very useful insights based on our experience on this.

So for example, non-existence of assets is an easy one. Where everybody knows that if you don't have an asset available, then the market is inefficient. Inadequate depth and liquidity requires a little

bit of digging. You can say that the market prices are there, but are the markets sufficiently deep, are the markets sufficiently liquid? You might need to dig for items such as bid offer spreads, nominal outstanding trade volumes, and look at various statistics from the market and then established are the markets deep, liquid, and robust.

A good indicator which might be easier to spot is how volatile have the rates been. In more advanced and more developed markets, although there can be periods of volatility, those are episodes and those are self-contained. Whereas, in systemically inefficient markets, what you find is that the price volatility is very extreme.

Even from one quarter to the other, you see-- For example, in Sri Lanka, we've seen yields change as high as 100 basis points up, and then two quarters later, 200 basis points down. We've seen those kind of swings happen very often.

So, if you just observe the price volatility, that's another clue on how to identify this. A few other clues are, is the demand and supply effect sufficient. Do you have certain government rules or regulations, or certain institutions that weigh heavily on the trades that are taking place. Are there any influence trades. Do you know about the capital markets enough that, is it easy to game the system by some large players.

Or are the derived rates consistent with economic theory. By that, what I mean is, sometimes you have real returns go negative, sometimes you have spreads go negative. Now again, those can happen from time to time in any market, but when it happens on a persistent basis, that's a good clue that the market is probably inefficient.

So, these are a few examples of what you can look out for. And maybe try and judge, is the market that you're dealing with, is the currency that you're dealing with probably a candidate where you need to do a little bit more than just read off the market prices and derive discount rate from there.

VITTORIO MAGATTI: OK. So, for sure, an inefficient market is a market with no data. And we know that there is the possibility that there are some market data-- Or better, there are some market in which data are not in use. So, what can you do, and how do you make this compliant with the standard and for sure the auditors that should accept these kind of assumptions?

KUNJ MAHESHWARI: Yes. So, that's actually a very good question. Now, the way we think about it is-- Ultimately, IFRS 17 standard talks about the revision of discount rate from one lens. But then you have a larger standard, IFRS 13, on fair value measurement, that actually provides a useful hierarchy of inputs on what to do when you don't have directly observable market data and information available.

And that is where we leverage and convince the auditors that, actually, what we are doing is compliant with the overall IFRS framework. And you don't necessarily need to look at only IFRS 17 in isolation, but you can look broader to IFRS 13 and other practices.

Now, what we try to do in the projects we've done is maximize the information that is available to us. So, even though we are saying that certain elements of the market can be inefficient, we want to then identify what parts. Are there durations where the market is functioning OK, and we can use that. We can maximize the information as much as possible. Or we may say that, OK, a particular market that we are dealing with is inefficient, but the currency might be pegged to a more mature market. In case the currency is pegged to a mature market, we can anchor information onto the mature market currency.

This way, we are maximizing whatever information is available to us to the best possible use. If that is also not possible, then we go to the next level, level 2 inputs, and look at historical information, historical long term averages, and try to smooth over some of the short term volatilities.

Or we could even look at some pragmatic choices for long term discount rates in the absence of any reliable information. What do I mean by pragmatic choices? I mean, you can use economic theory, and start from expected real yields and expected steady state growth rate, and derive an assumption based on that.

And lastly, if you can't do anything, you always have the ability to anchor to internal information, and look at how does the insurance company actually manage its own business. What assets is the insurance company investing in. What prices have those assets been bought at. And at what point insurance companies expect to sell those assets. And almost leverage the insurance company's own business model, own investment strategy and internal data to develop a discount rate.

What's important is here, that you maximize and you connect the dots between internal information and the way investment is handled, between whatever information is available in the market, and also certain long term assumptions that require actuarial judgment.

If you can triangulate based on these three dimensions, then actually you've got a very robust answer. And this is exactly what we have been doing for several life insurance companies Whether we are working in markets such as the Caribbeans, such as South Asia, such as Latin America, such as Eastern Europe. Their clients are always asking us-- Well, our market is not like EU, our market is not like USA, what do we do to derive discount rates here?

VITTORIO MAGATTI: That's clear. So, this kind of paper tries to make an answer at a very standard actuarial framework and that we know a problem. For sure, we go through the basics of this paper, we speak about the market that could be efficient or inefficient. We have also some information related to how we can deal in case we are an inefficient market. And now we also make some connection-- And you already mentioned that we had the pleasure to work with life insurers in a lot of developing countries. Any other tools, feedback, experience that you would like to share?

KUNJ MAHESHWARI: Yes. So, that's a good, interesting one, Vittorio. What we have typically found-- That areas that require actuarial judgment, or areas that require information on making an assumption about long term historic-- Long term trend based on historic averages or economic theory. It is always helpful to get engagement across the investment function, the finance function, and the actuarial function. And get a consensus view across different parties in terms of what those assumptions can be. That's one.

Second, always try and leverage the company's own asset liability matching principles, the company's own investment strategy. So, what we start with is not only the liability data and the liability cash flow, but the full asset data, along with investment yields, and so on and so forth.

One very interesting aspect that I learned working on one of these client projects was, between IFRS 9 that requires clients to value their assets based on the business model, and IFRS 17 that requires discount rates to be pegged to the market yields to the extent possible, there is a great possibility of accounting mismatches.

If your business model is a held to maturity model for assets, and you're valuing bonds on an amortized cost basis. Whereas, in IFRS 17, you're deriving yield based on market yields. Inherently, you've created a mismatch between assets and liabilities.

You need to be very careful for these kind of things, which is what we learned on a client project. That if you create discount rate accounting mismatches, it can create havoc in terms of your future financial reporting. Therefore, be very careful of the choices a client has taken in IFRS 9 for their business model. And to the extent possible, make that consistent with the discount rates that you're deriving under IFRS 17. That would be one big take away, or big tip from some of our client projects.

VITTORIO MAGATTI: Kunj, many, many thanks to be here, I think it was very helpful to have this kind of information, to go through this topic. Thanks a lot.

KUNJ MAHESHWARI: Thanks, Vittorio. It's been a pleasure speaking to you. And I'm always very happy to talk about specific issues of emerging economies, developing markets. That's where I work. That's my bread and butter. And I do appreciate that a lot of thinking, or a lot of thought leadership happens in more advanced economies. But there's a lot of nuances in smaller countries, smaller economies that need to be thought through as well. So, I'm very happy to talk about those kind of things. Thank you very much for having me.

VITTORIO MAGATTI: Amazing. And thanks for listening.

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