

Matt Biver & Ken Musick

Episode 223: Unlocking front-office capabilities through a robust data strategy



GUEST Q & A

Stewart: Welcome to another edition of the InsuranceAUM.com Podcast. My name's Stewart Foley. I'll be your host. We've a great podcast for you today. It's something a little different. We often talk about investment strategies and we're interviewing CIOs and so forth, and we're going to be interviewing a CIO person today, but the topic is a little different. The topic today is unlocking front office capabilities through robust data strategy. We're joined today by Matt Biver, who's the co-founder and CEO of

Grandview Analytics, and Ken Musick, Deputy Chief Investment officer of EquiTrust Life Insurance Company. Gentlemen, thanks for being on. Thanks for being on the show. Thanks for taking your time.

Matt: Thanks for having us, Stewart. Really looking forward to this.

Stewart: Oh, it'll be good. So I'm going to start this one off the way we always do. So I'm going to start with Ken. What's your hometown? What was your first job, not the fancy one, and how the hell did you get into the insurance asset management business?

Ken: Well, I grew up in central Illinois, a town called Bloomington. Basically stayed in the Midwest, but a couple of years out east, came back and my first job ever actually was detasseling corn.

Stewart: Oh, there you go.

Ken: Nice central Illinois boy.

Stewart: That's a character-building experience. I can imagine.

Ken: It was, yes. I spent one summer doing it and vowed never to do it again.

Stewart: And dedicated yourself to a college education.

Ken: 1,000%, yes. Luckily, that seems to be paying off so far, and how I got into insurance asset management really was an accident. So I spent a short stint in insurance, call it 15 years ago, swore off insurance and then get called back into insurance asset management about 8 years ago.

Stewart: I'll always say that insurance asset management is the smartest money in the world because you not only have to deal with all the challenges of an incredibly complex capital market, you also have to deal with a myriad of externalities that we've discussed on this show many, many times. So what makes this unique is it's not often that a deputy CIO is in charge of a data project, and I want to talk about how that came to happen, but first, Matt, you are a long time, you're a client of ours, you're also friends, you're in the Chicagoland area, which was home for me up until earlier this year, and it's great to have you on. Same questions for you. Where'd you grow up? What was your first job, and how did your find way into the technology space?

Matt: Yeah, absolutely. Thanks, Stewart, for having me. So I grew up in Dubuque, Iowa. My first job was when I was about 10 years old and I was delivering newspapers. So I'd get up at 4:00 AM on Sundays. I delivered newspapers after school, and it happened to be on a route that was on Grandview Avenue. So if you want to hear more about that background story, I actually have a whole blog written around that on our website.

Stewart: That's so cool.

Matt: Yeah. So that's my first paying job. I think I actually got paid in cash in an envelope. My second job came soon after when I turned 14, but my first job as a W-2 employee was as a busboy.

Stewart: There you go. So this topic is really interesting, and I think it would be helpful to know a little bit about the background of Grandview Analytics and what it is that you do. You're a firm that is well known in certain circles in the insurance investment management arena, but maybe not as a household name as some other bigger tech shops. Can you tell us just some high level overview of Grandview Analytics and what your core business is?

Matt: Sure, yeah. So we're celebrating our 10-year anniversary this year. I founded the company back in 2014 with my business partner, Chris Lamb. We are a consulting company and a data management software company. So we help investment managers, insurance companies, and other types of financial services companies with data and technology initiatives.

Stewart: So I've got a background managing money, and the last firm that I worked for had really good technology. We had really good data, and that made my life much, much easier. The firm I worked prior to that, it was somewhat different. So can you talk a little bit about, and I want to bring both of you in on this, talk about data integration and the benefits of a single source of trusted data.

Matt: Sure. I can start out there. So you often hear within the industry, within the data world, 'single source of truth'. So what is this? This is really a single repository for all of your data throughout an organization that gets brought together so you can look at things comprehensively and make better decisions based on that data. You often see, especially with insurance companies, they have a variety of different data sources. They often have external managers. They have an accounting system. They have an order management system. They have data that they're buying from vendors, and the list goes on. It's really difficult to manage this data because it's coming in all different formats from different providers.

So the single source of truth gives you the ability to look at all of that data based on enterprise guidelines and policies and things like that to govern that data so that everybody that's looking at the data is looking at the same thing and making decisions based off of the same information. In absence of this single source of truth, you often find that you have different analysts with desktop applications that are using different sets of data to report on the same metrics and you end up with different perspectives based on who's preparing a report or an analysis. So it's really valuable from the perspective of efficiencies and decision-making.

Stewart: So how does that ring to you? Does that sound familiar? Maybe we can, I'm sure we'll cover this, but how did the deputy CIO get in this project?

Ken: Get in the hot seat for this project?

Stewart: I didn't want to say that, but that's what I meant. How did you get yourself into this then?

Ken: Well, when you have 5 sources of the truth and random people select different sources for that truth and then generate reports that go to executives, it can be a little bit of a mess. So really, create definitions for all of these data fields or data sources. We had 4 different duration calculations for our portfolio, and we would have literally two committee meetings back to back where we had a duration calculation that was a quarter or a third of a year off from committee to committee.

So people are like, "Why are these numbers wrong?" So there was a lot of skepticism, I would say, over the numbers that we were reporting mostly because they were right or relatively accurate, but they weren't as consistent as they needed to be. So having a "source of the truth" creates consistency and repeatability in those numbers so they actually mean something.

Stewart: When you think about your shop, are you running money inside and outside? Can you talk a little bit about your investment management organization?

Ken: Absolutely. So we, like most life insurance companies, are predominantly fixed income. We manage roughly 90% of our assets internally. We have a very large structured product as well as a privates portfolio. As you can imagine, that's where some of the issues come in. So privates, I don't think this is shocking to anyone, are by far the hardest to report, administer, settle at all. So, because the book is so complex and so manual, having a system where we can repeat these processes is hugely beneficial.

Stewart: Can you talk a little bit about, Matt, I guess I'd go back to you, when we think about data integrity and a single source of truth, does that also allow you to have new capabilities that weren't possible before? Is that kind of an offshoot of where we're going?

Matt: Absolutely. So I kind of compare implementing a data strategy to building a house. You need to lay that foundation first. In order to lay that foundation, you need to have a solid plan in place. So some of the things that you often start with in the asset management world are what we call your master data domains. So you have your security master. This would be an architecture that can support all of your information on your investments for both time series and static data. You have your portfolios and how those portfolios roll up to different legal entities and different things like that. You have your accounting data, your positions, your transactions, and so on.

All of those things are kind of what I call that foundation. You need to get that in place first, and that often appeases many of your accountants. We know in the insurance world, accountants drive a lot of the policies just due to all the regulations and things like that, but once you get that foundation in place, there's so many different ways you can extend those capabilities. You can start layering on your risk data and your performance data. You can start bringing in other market data. You can start extending into more robust risk management capabilities.

Some of the things specific to insurance would be some of the rating agency surveys, looking at RBC and BCAR and strategic asset allocations and things like that, but none of that stuff would be possible if you didn't have that foundation first.

Stewart: Yeah, and I mean, I'm a fellow fixed income nerd as well, and I can imagine that when you've got differences in duration calculations, and you've obviously got investment policy guidelines with duration collars, and if you're like most life companies, you're looking at key rates and there's a myriad of things that you're relying on that data to make those decisions. Can you talk a little bit about what a single source of data, a single source of truth has allowed you to do that was challenging or impossible prior?

Ken: Generate reports, first and foremost, what are we doing, how are we doing it, and why are we doing it, I think that's the biggest part. We haven't necessarily talked about this, but one of the ways that this project really got kicked off is I have a lot of very talented portfolio managers that work for us and they were spending an inordinate amount of time just figuring out basic numbers. So their highest and best use is definitely not diving through the data or liaising with the accounting department to figure out what the "truth" is. So now, we have this system that effectively I can click a button and I can push a report to a portfolio manager and say, "What happened over the past week, month, year, et cetera? These are the goals. This is what you've done. What is the plan going forward to meet our objectives?" So that it allows us to effectively allocate to asset types or portfolio managers and then frankly track their performance?

Stewart: When I think about duration as an example, I mean, it's a risk metric. It measures interest rate sensitivity. For a life company, it's paramount because you have a liability book that you've spent a lot of time determining what your cash flows are, and there's testing around that. So can you talk a little bit about the integration of your data and the risk management implications?

Ken: Yeah. So the big part is, A, you have confidence in the numbers, and then B, you have the numbers every day. So we're able to integrate trades effectively overnight, have a risk metric, have an asset liability metric as far as duration mismatch, and then we're just actually now getting into being able to do more effective scenario analysis as well. So everybody likes to look at a DV01 in key rate durations, but I think actually executing on, call it stress scenarios or risk scenarios, i.e., things that could be very bad for the company, then you have a game plan or at least a roadmap on what you think the balance sheet is going to do, and then you can create a plan so you're not surprised.

Stewart: So you've just been awarded Professor for the Day because I'm going to ask you if you would please unpack what DV01 means-

Ken: Yeah, absolutely.

Stewart: ... for those of us, people who are earlier in their career. No, no, no, there's people who use these podcasts for education, and I love it when we get into a term that maybe not everybody knows. So talk a little bit about a DV01 and why it matters.

Ken: Yeah. So why it matters? So all a DV01 is is the change in value of your portfolio, either the liabilities or the assets for a one basis point change in interest rates or in the revenue.

Stewart: It literally translates to dollar value of a 0.01% change in interest rates, and then key rates, I realize it's a little bit precarious to try to do a key rate duration definition off the top of your head, but give it a whirl.

Ken: So you have duration buckets that every one of your assets will fall into. So a 10-year treasury has a 7-and-change year duration. That's a key rate. So I have assets and liabilities that have, let's call it, buckets of duration expectations between 0 and 5, 5 and 10, and 10 and 15 years. So all we're doing when we do KRDs is say, "Okay. We'll take a 10-year point plus or minus 5 years. Do I have enough assets, call it notional or market value of assets, in that bucket against the same liability expectations?" So if I'm up or down, call it \$10, \$50, \$100 million, that's at least a data point that we can use and we can decide whether we want to address it or not.

Stewart: Yeah, and I mean, I think if you think about key rates, it really gets down to your ... They're also called partial durations or there's other names, but effectively, what you're trying to do is figure out what your exposure to changes in interest rates in a particular part of the yield curve. So you're looking at not only the duration, the whole number of what the portfolio duration is, but also where you're taking that duration risk across the yield curve and using that to manage it against where you're exposed to liability cash flows, and you can use that as a risk management metric. So that's incredibly helpful to get those definitions out there. What other things come to mind when we talk about the capabilities or how you're using the information that you now have at your fingertips?

Ken: Well, and I think it all goes back to repeatability and timeliness. So like I've said, we're just now in the first phase of being able to improve on our capabilities, which is very exciting, tying risk and accounting together, which is going to be beneficial, but it really comes back to knowing what my C1, my risk-based capital charges are on a daily basis, knowing what my rating agency surveys look like on a daily or a weekly basis, and it really comes down to metric because anything that gets measured gets managed.

So instead of generating a rating agency report once a year, I can actually plan for what that report or what that output is going to look like that I have to take to the rating agency at the end of the year or mid-year every day or every month. So every change that we decide to make to the portfolio, we have, call it, six different frameworks that we have to reside within, and we can monitor those and evaluate them for change.

Stewart: That's really helpful. Matt, I mean, there have been a myriad of times over my career where data projects or accounting projects, people just, they struggle with the implementation, which leads me to the question of what are the key ingredients to success in the way that it's been done at EquiTrust?

Matt: Sure. I mean, first and foremost, I think you need to have the right technology and the people in place, but we'll put that to the side. I think the thing that has really made EquiTrust a success, frankly, is Ken's involvement in this project. Ken being a front office representative, we've been able to get perspectives from accountants, middle back office folks, front office folks and have everybody opine on a shared vision of what they're looking for.

So underpinning this is the direct response to your question is data governance and data stewardship. So it's been really great to work with the EquiTrust organization because they have representatives across these cross-functional domains that all have different opinions, who all have different business needs, who all have different deadlines and things like that and we're able to come up, build consensus and come up with an enterprise understanding of all of these critical data points.

Often with our projects, you don't see a lot of front office representation. A lot of front office folks try to stay away from these types of projects, and Ken's leaned into it because he sees the value that he and his teams can get out of the results here.

Stewart: So Ken, I want to hear how you got involved here. It's interesting that I know some shops have embedded IT resources in the investment team. Do you do anything like that at EquiTrust? Do you think it would be helpful? Can you talk a little bit about how you got to be driving the bus here?

Ken: Well, I think it was a process of elimination. We knew we needed better reporting and better data, and I knew I needed better reporting and better data because, actually, back to your point, the very beginning, we have this asset manager that effectively is managing money for an insurance company, but those insurance companies all have very unique regulatory needs. Matt, to your point, they're driven by accounting to certain regards. When I was making decisions, I didn't necessarily know what was going to happen to our books because I would make a decision and be like, "This is the proper or good total return expectation," and then I generated a \$15 million loss, and let's just say I got a talking to.

So really, it was almost by necessity because we need that information in order to make better decisions. So we went through that process and said, "Okay. We need a gold copy. We need to figure out a way to integrate our accounting booker records and our investment booker records so when we make these decisions in the front office, we know how those decisions impact the rest of the business," and because of that, I felt it was a necessity for us to have, and because I felt it was a necessity, I basically was the guinea pig or the sucker, if you will, that had to figure it out.

Stewart: As our friend Wayman Harris refers to it, he refers to it as being voluntold.

Ken: If I could have delegated it, I absolutely would have, but there's some benefits to having the front office very involved.

Stewart: Can you talk a little bit about, you've outsourced this to Grandview, talk a little bit about the benefits of outsourcing versus attempting to do something on your own or build it internally. I know that a lot of times folks have legacy systems and then there's challenges to maintaining those systems and keep them, the documentation, and it's really difficult to build these systems internally from scratch. Can you talk a little bit about the decision to outsource?

Ken: Absolutely. So when I walked into this project, I think it was a relatively quick determination that we'd like to find an external firm that could help us implement something like this. Even if we built the technology part of it, we needed help, and that's frankly because, even though we have a decent-sized balance sheet, we're actually still a relatively small organization, and we frankly didn't have a lot of investment data capabilities two and a half or three years ago.

Stewart: I don't think that's unique to you guys. I mean, I think that the CIOs I know, I mean, all of them have reasonably small staffs and have a lot of information and asset classes that they're expected to, say, grace over and manage a lot of information and risk metrics with limited resources even with a pretty good size balance sheet. I think that's more the rule than the exception, I would think.

Ken: Yeah, and it also kept us on task as well. So we had a team specifically from Grandview that was full-time working for us, making sure that we got what we needed, and then, to be frank, also hounding us to a certain extent. It's like, "Hey, you need to make this decision. You need to integrate this piece. We need a vendor to provide a better transaction report," whatever it may be. So I really appreciated actually having someone or a team, I should say, tapping me on the shoulder saying, "You need to make this decision about X, Y, and Z, and then we can move forward." So I really think that the outsourcing or consulting model, unless you have a very high-powered IT department, is probably the way to go.

Stewart: Matt, you work with several insurance companies, certainly EquiTrust is an important client, but can you talk a little bit about other use cases where the decision to outsource has been made and what are the benefits there?

Matt: Sure. So whether it's Grandview or another outsource provider, I think the thing that external companies can offer, one is best practices. So we are not incentivized to take shortcuts. We want to make sure that our clients are doing things right. When you think about this from a technology perspective, an outsource provider needs to set things up for scale because that's their business. If you look at an insurance company, their business is asset management and insurance, and it's not always technology and data, although it's a huge piece to running the business.

So we do things properly. We set it up for scale. We also don't do things specific to any individual client source systems. So for example, we have a data warehouse within our application that's not built towards any specific source system, but rather built on industry best practices and standards so that our clients can be flexible and plug in their different data sources based on their unique technology stack. It also gives our clients a lot of flexibility to be able to swap in and out data sources.

If you look at EquiTrust as an example, our first delivery phase included probably about 20 different data sources with some of that foundational data that I described at the beginning, and we're right around 60 data sources now, where we're putting that data in through our application every day and automating and producing reports out of it. So it really provides this flexible structure that allows our clients to evolve as their business needs change over time.

Ken: I want to reiterate something that Matt just said though, or expand on it. So especially for a smaller organization, it really helps you define your data stack as well. So the amount of information that I learned as far as where we're accessing data, how, and what the quality of it was phenomenal. That exercise, I think for any organization, it's a good kind of checkup, change the oil type analysis where it's like, "Let's define what we're using and why we're using it and then determine the best way to capture it."

Stewart: Matt, the name of the platform that you use is actually called Rivvit, R-I-V-V-I-T. Can you talk a little about, it is a purpose-built platform. Can you talk a little bit about the capabilities of Rivvit? Then I want to ask Ken what about the Rivvit platform won them over.

Matt: Sure. So a little bit about the name on Rivvit first. So if you think of a rivet, those are those steel bolts that hold bridges together. The way we came up with the name, we spelled it a little bit differently, but Rivvit is this solid foundation that brings systems together, so it's that bridge. What we do for our clients, they often ask or I've heard this question from clients before, "We love Rivvit, but we want to know how we can take more advantage of it," and my response is always, "If you're doing something manual, we can probably automate it for you," so that is usually in the way of data management and data flows and things like that.

So at the core, Rivvit is a data ingestion engine. It is capable of ingesting really any data source, and then we take that data and map it into our data warehouse structure that I described earlier. Then sitting on top of that data warehouse structure is a portal that allows our clients, and this is what Ken and his team access every day to view their information. So they log in, they see their dashboards and reports, they see their data quality checks, they see the status of all of their scheduled data feeds, and they have a lot of transparency into all these really complex things that are happening behind the scenes that it gives them a good pulse on the health of their data and the reliability of it and the accuracy of it and things like that.

Stewart: Ken, I want to ask you this question and just kind of a two-parter. What is it about Rivvit that had you choose it? Then the second thing is, what's one thing that you wish you knew at the outset of the project that you would tell other people who might be sitting in your chair as they embark on a project similar to this?

Ken: So selecting Rivvit was I actually think pretty easy given where we were in our evolution, and it was really a combination of both Grandview and Rivvit. So you can imagine we talked to a bunch of providers, and at the end of the day we felt that Rivvit / Grandview had the highest probability of success in a relatively compressed timeline. So we did not have a lot of internal resources that we could throw at this project, and having Grandview effectively alongside us for the entire thing, in my opinion, is 100% the reason that we were successful in implementing it.

Stewart: That's great to know, and what about a piece, something that you wish you would've known going in?

Ken: Exactly how different the source data systems are. So I'll use an example, call it a security master. So not necessarily everybody on the call will know or listening will know what a security master is, but at the end of the day, it's just a file that stores all the characteristics of an asset or of a bond. I think we have six different security master types for the same bond across the different systems. So harmonizing those, A, was a very large undertaking, but B, was also paramount for success as well.

Stewart: Yeah, because, I mean, if you've got gain/loss constraints and you referenced a realized loss situation earlier, if you've got gain/loss constraints and you need to be able to know what the cost basis is, accurately; I can only imagine that it has helped your ability to make sound decisions significantly.

Ken: 100%. So we make more decisions, better decisions, but not only that, we can plan more effectively as well.

Stewart: I think that's really key, and I think that's another piece of it, that the ability to forecast cash flows, plan, you mentioned the ability to have rating agency reports that aren't done just once a year, but that are done, that are available with a great deal of frequency is got to be helpful as well.

Ken: Yeah, just getting ahead of the curve, trying not to be surprised, and then again, creating scenarios that you think could create stress for the company and planning on very specific actions if one of those happens. So we basically have a playbook now.

Stewart: I've got to think that from an investment committee of the board perspective, their confidence is increased with better reporting. Their main job is governance. You're providing them with better information which makes their lives easier.

Ken: Absolutely. It's also, I like to use the term holistic as well, so you're able to show the entire balance sheet, if you will, so not just the asset side, but also some of the liability metrics, other cashflow metrics. It just creates a much more fulsome picture of how the business is reacting or could react as well depending on what happens.

Stewart: I have gotten a tremendous education on data integration and the importance of a single source of truth here. I want to wrap with a couple of our favorite questions, and whenever we have two people on the podcast, we have to split this because otherwise, it goes a little long. So Matt, I'm going to come to you for the first one, and it's interesting because you're not an investments person, and so this one's going to ring a little different for you, but you've been at this in spite of your youthful appearance for a good long time. What is a piece of advice that you would share with a 25-year-old Matt Biver or someone who is early in a technology career today with everything going on with AI and all of the uncertainty there? What piece of advice would you give yourself at 25 in this market?

Matt: Wow. All right. Let's see here. I think I would probably come back to something around problem-solving approaches. Back when I was 25, I had the luxury of being able to work 80 hours a week without killing myself and just throw myself into problems and not really go into it with a plan. I learned over time that a plan can save you a lot of time and reduce the iterations you're doing something with.

So one thing I learned probably back in my call it 30s, early 30s, would be to write things down. So as I'm trying to solve a problem, I write down what I'm trying to solve and how I'm going to get there and create a plan before I just dive into it, so that saved me a lot of headaches. Sometimes I still need to remind my 45-year-old self of this advice here, but it has helped me. It's also something I use with my 9-year-old as I help him with his math homework. It's like, "You see this massive problem and it can be overwhelming or daunting to look at this big problem, and if you write it down and break it into chunks and solve it piece by piece, I think you'll have a better chance of success." It's the same philosophy we apply to our projects at Grandview as well in terms of having small wins and building on your successes.

Stewart: That's great advice, and for you, Ken, we get the fun one. So this is for a table of up to four people, including yourself for lunch. Who would you most like to have lunch with alive or dead?

Ken: I do not have a good answer for this because you can take it so many ways. Do you want to learn something or do you want to have a good time?

Stewart: See, there you go. Here's the nice thing. You can mix and match. It could be just one person or up to three guests.

Ken: I don't know. I think if I was just going out for lunch or dinner, I think three of my favorite comedians, it'd be the most fun you can have, so Robin Williams, George Carlin, and Richard Pryor at a table.

Stewart: Wow. That's a great answer. That's the first time we've ever had anybody choose comedians. So that's fantastic.

Matt: You can tell that Ken likes to have a good time.

Stewart: Absolutely. Absolutely.

Ken: It's original.

Stewart: For sure. Absolutely. So I really want to thank you both for being on. I also want to say a huge shout out. We've got a brand new chief marketing officer. A lot of times people don't necessarily know this, but we have people who listen to the podcast when it's being recorded just to see if there's ... Sometimes we have compliance people, sometimes we have PR people, sometimes we have just interested folks who are interested in listening. Today, we have Lindy O'Brien, who is our brand new chief marketing officer. This is her first week on the job. So I want to say hi to Lindy and make sure that she feels like she's welcome here.

So we've been joined today by Matt Biver, who's the co-founder and CEO of Grandview Analytics, and Ken Musick, Deputy Chief Investment Officer at EquiTrust Life Insurance Company. Gentlemen, thanks for being on today. I really enjoyed it.

Matt: Thanks so much, Stewart. Appreciate it, Ken.

Stewart: Thanks for listening. If you have ideas for a podcast, please shoot me a note at stewart@insuranceaum.com. You can rate us, like us, and review us on Apple Podcast, Spotify, Amazon, Google Play or wherever you listen to your favorite shows. My name's Stewart Foley, and this is the InsuranceAUM.com Podcast.