California Debt and Investment Advisory Commission

Webinar Transcript

The Public Investment Portfolio: Making Sense of Corporate Notes and Bonds

Wednesday, August 19, 2015

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Corporate bonds and notes are typically unsecured debt instruments issued by corporations including limited liability corporations. A closely related group of securities, medium-term notes, are corporate or depository institution debt instruments meeting certain minimum quality standards. Both types of securities will be referred to as "corporates" for this discussion.

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Title Slide – The Public Investment Portfolio: Making Sense of Corporate Notes and Bonds

Linda Louie: Good morning, everyone. And welcome to the California Debt and Investment Advisory Commission's webinar, *The Public Investment Portfolio: Making Sense of Corporate Notes and Bonds*. My name is Linda Louie and I'm the education manager at CDIAC. Before we proceed with our broadcast, I'd like to share some background and some housekeeping tips. If you are experiencing any technical difficulties, please contact GoToMeeting, at 1-800-263-6317. Again that's 1-800-263-6317. Or you can try their website at the address on the screen. *Making Sense of Corporate Notes and Bonds* is the sixth component of a nine-part webinar series of public investments that CDIAC has scheduled to run through this summer. Each of the nine webinars focuses on a category of statutory authorized investments in a way that will help you to understand many of the features and risks and how you might go about assessing whether or not a particular investment meets or fits your agency's investment policy objectives. We thank you for joining us today, and we hope that you are attending as many of these live broadcasts to gain a fundamental understanding of the spectrum of investment options for the public investment portfolio. However, we do understand that schedules may not permit participation in every webinar, so to help you broaden your knowledge of other investment management topics, CDIAC has a number of different resources and recommended readings available to you on our website. And you can visit them on the CDIAC education web page.

The presentation slides for today's webinar are also available on the CDIAC website at the address on the screen. In fact, all of the webinars in this series are posted in sequence by the date they are offered to the CDIAC website. And usually two to three weeks following each of the broadcasts is when they're posted. In addition, we may point out that the 2015 edition of the CDIAC *Local Agency Investment Guidelines* and the *California Public Investment Primer* are currently linked on the CDIAC main webpage and they're address is listed on the screen, as you'll see. Also know if you would like to view live captioning during the program, you may paste the address on the screen onto your browser or click on the link in the chat section at the bottom of your control panel. In terms of credits, if you would like to receive a certificate of attendance for CPE credit, you must be registered and be logged onto the webinar under your own name for the full term of the broadcast, and then a certificate will be emailed to you within about a week.

During the webinar, you will have the ability to submit questions to the faculty by using the box marked “Questions,” which is near the bottom of your control panel. The speakers will address some of your questions during the presentation, and some may need to be held into the Q&A session at the end of the webinar. However, we try to address your questions in a timely fashion to emphasize any points for your education. Now, if we run out of time for questions, we will follow up with responses on the CDIAC website and you will be notified.

Skipped Slide 2

Slide 3 – Disclaimer (03:23)

Linda Louie: Before I introduce our experts, we ask you take a note of an important notice on the screen. It happens to be a disclaimer. It says basically, today's presentation is informational and does not constitute investment advice or recommendation. There are many risks, policy, portfolio and suitability factors that must be considered by an agency prior to making an investment decision. The webinar material is presented as of today, Wednesday, August 19th, 2015, in its current context. So keep in mind, the replay of the webinar that we post will not reflect any changes in investment authority or market conditions which may occur after today and changes that may affect the suitability of an investment.

Today's webinar is designed to provide you with an overview and understanding of corporate bonds and notes and bring forward their differences beyond their definition. So you'll gain an understanding of what you can and cannot do under California government code, as well as the issuance types and structures of corporates. And you will also gain an understanding of the valuation process through an example and run through some of the analysis required to begin to think about the important considerations necessary to investing in corporates. This is designed as a cursory session, so a more advanced discussion of corporates and their ratings can be achieved by attending the summary course that CDIAC will offer in the future.

Slide 2 – Title (04:58)

Linda Louie: So with these objectives in mind, let me introduce our presenters for today's webinar. I have the great privilege of introducing Martin Cassell. He goes by Marty as well. And Marty is the chief executive investment officer at Chandler Asset Management and is a principal of the firm. Mr. Cassell is responsible for defining, planning and directing the firm's programs and heads up the implementation of the firm's investment strategies and portfolio risk management. He, in fact, designed the proprietary quantitative models that drive the firm's investment process. He joined Chandler Asset Management in 1991 from the City of San Diego, where he managed the City's $1 billion fixed-income portfolio. He began his investment career in 1987, managing the liquidity portfolio at World Savings and Loan. Mr. Cassell frequently speaks to association groups and at the University of California, San Diego, Rady School of Management. He is a member of the CFA Society of San Diego and holds his designation as a chartered financial analyst.

Joining Marty is William Dennehy. He goes by Bill. Bill is a senior vice president and portfolio manager at Chandler Asset Management. He is responsible for implementing portfolio strategy and securities trading in client accounts and leads the credit committee. Prior to joining Chandler in 2011, Bill worked at Northern Trust Global Investments in Chicago. He was most recently there as a senior portfolio manager and vice president with a wide range of responsibilities in asset allocation, quantitative and qualitative analysis. He also holds the designation of a chartered financial analyst.

Adding to the team today is also Garret Sloan. Garret is a fixed-income strategist at Wells Fargo Securities. Mr. Sloan produces a couple of newsletters, such as the Daily Short Stuff and the Money Market Monitor. He also contributes to various topical publications specifically for short-term investors. Mr. Sloan was a contributing author to the Frank Fabozzi textbook *Structured Products and Related Credit Derivatives* and has been quoted in Bloomberg News, Reuters, The Washington Post, Crane's Money Fund, Intelligence and iMoneyNet's Money Market Insight. He has been a speaker at various symposiums and forums, such as Crane’s Money Fund and iMoneyNet’s Money Market Expo and the Money Fund Forum. In addition, he also speaks at various financial association conferences. Garret is a chartered financial analyst and a member of North Carolina Society of Financial Analysts. So he holds his Series 7 and 63 licenses.

So with these great background introductions, CDIAC would like to turn the program over to our outstanding faculty, to make sense of the corporates and notes. So why don't we begin.

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Slide 5 - Benefits Provided by Corporate Notes (08:02)

William Dennehy: Good morning. This is Bill Dennehy from Chandler Asset Management and I'm going to take over the introduction for the seminar this morning. The first slide, we really want to emphasize that California code is predicated on safety, liquidity and return. And we really view or think that a well-diversified mix of highly-rated corporate notes is consistent with this objective. When we think about safety, you know, corporate notes have seniority in the capital structure. A diversified mix of corporate notes really helps to mitigate risk and importantly credit risk. There is a diversified mix of corporate issuers across a wide maturity spectrum, which enables you to diversify your portfolio and match potential cash flow needs. And thirdly, corporate notes because of the additional risk, they enhance the return of a portfolio. We think this is very important in light of the changing dynamics of the market. I'm trying to flip the slide here, but we're having some technical difficulties.

Linda Louie: We are having technical difficulties. If you can hold for a moment.

William Dennehy: Sure. Can someone at CDIAC forward the slide?

Linda Louie: Yes, we will in just a second. We're having some technical difficulties on our side, too. We're working on it right now.

William Dennehy: Thank you, Linda.

Linda Louie: Sure. Okay. Bill, you can proceed and advance your slide.

Slide 6 - Corporate Notes as an Alternative to Agencies (10:14)

William Dennehy: This next slide really shows the changing dynamics of the market pre-crisis, which we termed in December 31 of 2006, versus post-crisis, the most recent post-crisis period, being the most recent year-end, December 31, 2014. What we did is we took a look at Bank of America Merrill Lynch indices between one and five years for the credit sector rated A and above, for senior U.S. agencies both bullets and callables between one and five years, and U.S. Treasuries between one and five years. And you can see that over time because of the conservatorship of the agencies, their percentage of the investable universe has shrunk dramatically. It’s gone from 24% to 6%. And in light of this degradation of this asset class, we really think it makes sense for investors to consider additional asset classes that are eligible under California code to invest in. And if an investor is not willing to do that, it's quite likely that you will have a higher percentage of U.S. Treasury securities, and you will be compromising perhaps the total return opportunity that's available in the market.

Slide 7 - The Agency Sector Continues to Contract (11:30)

William Dennehy: This next slide shows the degradation over time. And you can see that in December of 2006, we were just under 24% and we've been dropping down on a year-over-year basis to at year end December 2014, we were all the way down to 6.3% of those respected pies of assets. We do not think that this is going to change any time soon. So although agencies are unlikely to continue to shrink at the same pace, they are likely to remain a very small percentage of the overall investable universe within that benchmark that we described earlier.

Slide 8 - Adding Value with Corporate Notes (12:08)

William Dennehy: This next slide breaks down that same pie chart that looks at the yield of those representative pies over the various years going back to December 2006, all the way up to the most recent year-end, December 2014. If we look at the yields available in 2006, you can see that the additional spread for investing in agencies versus Treasuries, or the additional yield, was almost 30 basis points – 5.087 versus 4.803. At this point in time, given that additional spread, we're not sure investors would really need to consider corporate notes because they had a safe alternative in the agencies that enabled them to pick up a nice additional return.

As we move forward, all the way to today, December 2014, you can see that spread between agencies and Treasuries, the yield offered by that universe has contracted dramatically. And based on the data that we have, it's only about four basis points. So we think because that spread has gotten so skinny, it makes sense to consider alternative asset classes. And certainly highly rated corporate notes have a nice differentiation versus agencies and corporates. And our seminar today is really about how do you effectively evaluate those securities and the diversified mix of assets to capture that additional spread between agencies and Treasuries up to corporate notes.

Slide 9 – Section 1 (13:44)

William Dennehy: At this point, I'm going to turn the presentation over to Garret.

Garret Sloan: Ok, thank you. The first thing that we want to do obviously with this webinar is not to exclude anybody from any sort of understanding of, you know, the basics of corporate bond investing.

Slide 10 – What is a Corporate Bond? (14:04)

Garret Sloan: So we are going to rewind and go back to the very basics of what a corporate bond is and why it exists in the first place. So the first question is: what is a corporate bond? In its simplest terms, it's a debt security issued by a corporation. If we think about the ways in which a company can fund its operations, it can either use debt or equity. Those are really the only two options available.

If we start with equity, we generally think about common shares in a company or some sort of ownership interest. In the event that the company fails, a shareholder is the last investor to be paid from the sale of assets. Equity share owners participate in the expected earnings of a company either through price appreciation or through dividend payments. On the debt side, debt is another form of capital similar to equity, but it has a much more fixed payment stream. This is why many of us in the industry call the bond market the fixed-income market. I get asked that all of the time. I tell people that I'm involved in fixed income and they say, "Does that have something to do with annuities?" Well, it sort of does, but it's more broad than that.

The fixed-income markets and the bond markets are kind of interchangeable terms. It has to do with the fact that bonds have periodic interest payments and a maturity date on which initial principal investment is repaid. In the event that a company fails, the assets of the company generally go to repay bond holders first before equity holders. We also say that this bond holder has a claim on the company's assets that is senior to shareholders. So we also call that sort of the capital structure of a company, who gets paid first if something goes wrong. From the return perspective, we say that a bond holder's risk is asymmetric because there is still the possibility of losing the entire investment similar to an equity investor. But the upside is not unlimited like it is in equity markets. In the debt markets, the maximum that an investor can earn, assuming that they hold the security to maturity, is the interest rate that is attached to that security.

Slide 11 - Corporate Bonds: *The Basics* **(16:26)**

Garret Sloan: So going to the next slide, Corporate Bonds: The Basics. Corporate bonds are used for a number of different purposes. They can be used to fund acquisitions. They can be used to fund stock buybacks, something that we're certainly seeing a lot of these days with the rise in equity markets. Some companies feel that their stock is lagging versus others, and they use that to support growth and their share price. We've seen the issuance of debt used to refinance higher-cost debt or maturing debt or to expand operations. Generally, a corporate bond will look to obtain a credit rating from one of the large credit rating agencies to attract more investors. A rating provides a level of due diligence from a third party on a company's ability to repay.

We divide ratings broadly into investment grade and non-investment grade. The three largest rating agencies, and we are going to get into this a little bit more, are Moody’s, Standard & Poor’s and Fitch, but we see others as well. For instance, Dominion Bond Rating Service rates a number of Canadian issuers. And there is another company called A.M. Best, which is a ratings agency that specializes in insurance companies. So these are also ratings providers, but when we think of ratings, a lot of times we gravitate towards the big three, Moody's, Standard & Poor’s and Fitch. As we noted before, corporate bonds are different than a share in a company because they provide specific cash flows to investors on specific dates. A bond that pays principal on a single maturity date we often call a bullet security. Bullets have one fixed maturity date and weight. That's specified in the offering documents.

Sorry. I skipped a slide. I'm going to use my arrows instead. Okay.

Slide 12 - Corporate Bond Sectors **(18:34)**

Garret Sloan: So going to the next section here, we want to think about corporate bonds. There isn't just kind of one type of corporate bond like we see in the Treasury market and like we see in the agency market. Corporate bonds can be divided into various sectors. One classification system that we see used often was developed by Standard & Poor's and Dow Jones. It's called the Global Industry Classification Standards. You can see here on this slide here that there are ten sectors. And those ten sectors are subdivided into different industry groups. And there are actually also subindustry groups as well. I certainly wasn't going to put them all on one slide, but you get the gist.

The point of understanding what sector a company is issuing in is to understand what drives that company. It helps you from the standpoint of looking at a company's competitive position within the industry, how it compares to its peers and what metrics may be the most useful in analyzing the company's operations. In some cases, you're going to find companies operating in multiple industries. I can think of a company like Berkshire Hathaway, that owns GEICO Insurance, a large position in Coca-Cola, they own a company called Net Jets. They own Union Pacific. And it was just announced that they were purchasing a company called Precision Cast Parts. Again, that's a completely different animal altogether. And we'll discuss the question of analyzing multiple companies within a family tree later on in this presentation. This is just to give you a sense that there are multiple asset classes that you can invest in.

Slide 13 - Corporate Bond Registrations (20:32)

Garret Sloan: So let's move onto corporate bond registrations. So issuers of corporate bonds in the United States are subject to SEC rules and regulations. The most prominent rule is the Securities Act of 1933 that requires companies to provide investors with information pertaining to a specific bond offering. This is similar to the equities side of the market as well. We call this a registration statement. And that registration statement has to be submitted to the SEC and it will include within it an offering memorandum, or we also call it an offering circular or prospectus. And all of these must be filed with the SEC before a security can be offered to the public.

So one of the things that you can ask if you're working with a broker, is that you would like a copy of the offering memorandum before you make an investment decision. And that might be something in a due diligence program that I would consider to be a best practice, having on hand an offering memorandum and making sure that that is on file. In certain situations, a company can obtain a registration exemption from the SEC. The types of investors that can buy these bonds, oftentimes we'll call these private placements. These types of private placements are subject to an exemption called 144A. That exemption limits the ability to sell these securities to qualified institutional buyers, or QIBs we call them for short.

And QIBs are defined as institutions, not individuals, as institutions with at least $100 million in securities and assets under management. Within that definition, many broker-dealers have interpreted the rule to also exclude public entity investors from the QIB definition. In many cases, many of the public entities that we talk to have much more than the $100 million in assets under management. Even so, there are a number of broker-dealers that interpret the rule not to include public entity investors at all. And we could certainly get into the question of how appropriate that interpretation is, but that's probably beyond the scope of this webinar. I don't know that you want my personal opinions on that.

In some cases you'll also see an issuer issue a bond using something called Regulation S, or Reg S, as well as 144A. And what you'll sometimes see is the same amount, the same maturity, the same terms and conditions. But one is issued under 144A and one is issued under Reg S, and what this is, they're just issuing under both exemptions. And what this does it that it allows them to sell to both international investors under Regulation S exemptions, as well as to domestic investors under the QIB exemption. So it’s not a different security, but it's a different registration. So you'll see that often.

Slide 14 - Corporate Bond: Issuance Trends (23:54)

Garret Sloan: You know, Bill made an excellent point when he was talking about, in my opinion, the growing importance of corporate bonds and just considering them in public entity portfolios. The agency markets, certainly from a total outstanding's perspective, is certainly in slow decline. And that's not something that's market driven. That's something that's driven by regulatory change that we anticipate is going to continue. We understand obviously that, you know, FHFA, which is the regulator for the agencies, is forcing them to wind down portions of their mortgage portfolios and those mortgage portfolios are funded by agency securities. So to the extent that those mortgage portfolios are being wound down, the need for agency securities in the market is going to go down as well. And certainly the first slide that Chandler showed illustrates that very plainly.

And this slide, by contrast, is very different. The corporate bond market is experiencing year after year of record new issuance. Already this year, the U.S. investment grade corporate bond market is close to eclipsing the $1.1 trillion mark in new issuance. And that's in the upper left-hand corner. We show that through year end 2014. In the bottom left-hand corner, what we see, what we plotted here are the ratings categories and the maturities of the new issuance market for 2015. What you can see is that the largest issuance has come in the single A and the BBB sectors, by far the two largest segments in the investment grade credit markets in terms of new issuance as well as total bonds outstanding. One of the things we often see is clients and their investment policies allowing only AA or higher in terms of the minimum credit rating or minimum approval in their investment policies. That's not certainly something that I want to weigh in on in terms of whether or not that is correct for you as an investor. But what you should be aware of is just how much of the market actually exists at the AA and AAA level. Now, this is just showing new issuance, but in terms of relative proportions, I think it represents not only the new issuance but the outstandings as well. The A and BBB sectors certainly dominate in terms of total available supply. It is something certainly that an investor should be aware of. You know, when you do limit your purchases to those higher ratings categories, on a credit rating basis it may be completely prudent, but on a supply basis, it is difficult to get invested there.

Looking at the bottom right, one of the things that we see is that the three maturity sectors that are most popular with issuers, at least in 2015, the one to three year, three to five year, and seven to ten year sectors. In longer-dated issuance, I think that some of that is due to the flat yield curve. When I say flat yield curve, I mean more on an absolute basis. The low absolute level of rates in the longer end of the curve I think is attracting some investors to issue and to fix and lock in very low costs of funding. What we would say certainly is that the one to five year space is one of the most active parts generally, you know, throughout market cycles of the corporate bond market in terms of trading as well as new issuance.

Linda Louie: I have a question going back, before you proceed, going back to registrations. Are there any private placement bonds that might be issued not under the 144A category?

Garret Sloan: So 144, I mean, there is a Section 144, 144A is generally – under 144, there's 144A and 144B. There are different exemptions for that private placement. So 144 in general is kind of that exemption for, you know, purposes of QIB/non-QIB. That's the registration for that. In the commercial paper market, which we would certainly consider another way of thinking about corporate bonds, in the commercial paper market, there's something called 4(2) private placement. Section 4(a)2, which actually allows commercial paper to be sold in the primary market to non-QIB buyers, but it cannot be resold thereafter to a non-QIB.

Linda Louie: That's a good example. Thank you.

Garret Sloan: Does that make sense? So 144A certainly covers almost all of it. That's a good point.

Slide 15 - Largest Corporate Bond Offerings (29:33)

Garret Sloan: The next slide that I wanted to show here is just an example of some of the largest corporate bond offerings that we are seeing in the market right now. I think it's kind of telling of the current state of the corporate bond market to see that three of the largest deals in corporate bond market history have occurred, you know, in the last two years. We had the Verizon deal when they were buying a portion of their ownership that they didn't already own in Vodafone. The Actavis deal, which is in the healthcare sector. And the AT&T acquisition of DIRECTV. Two just gigantic deals. And some of the things that's interesting here I think for the investors on the phone is how these deals are structured. One of the things you see when you get into sizes like this, they're offering maturities across the curve. So instead of just issuing in one maturity bucket, these deals were so large that they looked to sell into multiple maturities. That helps a company in a couple of ways. It helps them stagger their maturities. So obviously they wouldn't want $49 billion coming due in one year. They want to stagger those maturities across the yield curve. It also is a way to reduce yield curve risk. They're taking on interest rate risk at different points along the yield curve. And it also attracts different kinds of investors to the different maturities. So you may have natural 3-year investors and you'll have natural 30-year investors. The 30-year investor may be a pension fund. The 3-year investor may be a special district in the State of California. Very different types of investors that could participate, both participate in a Verizon deal, but just different maturities.

Slide 16 - Primary versus Secondary (31:31)

Garret Sloan: Moving on. So as we're talking about these very, very large bond deals, I think it's probably important to sort of dig into, you know, how do I participate in the bond market in a new bond deal versus just securities that are trading in the market generally. When I call my broker-dealer, he's got an inventory of securities. So that gets us into a conversation around the primary market versus the secondary market. In the primary market, we define that as a market where bonds are first sold to the public and the proceeds are given to the issuer. A single broker is chosen to price and offer the bonds and other brokers are chosen to help sell those securities in a distribution effort. Investors, at that point, they're going to place their orders with the dealers that they deal with. We call that the selling group. And then the bonds are allocated to the selling group and the primary underwriter according to the overall interest in the deal.

So a lot of times you'll hear in the market that the bond deal is oversubscribed or it's fully subscribed. In those cases, an investor may get all of the bonds they want or they may only get some of the bonds that they want, or they might not get any bonds. It really depends on the overall interest in the offering. Just to give you an example, if a client enters an order of say like

$100 million. They call up their broker and say I want to participate in that new Verizon deal. I want $100 million of the 3-year. They may be allocated the full $100 million or they may get something less than $100 million. If it's something less than the 100 million, the conversation is not quite as pleasant.

So once the bonds are sold into the market, it becomes a secondary market. So the only time that it's really the primary market is that initial issuance, when you're talking, we call it the syndicate desk. You're talking to the syndicate desk, you're talking to your salesperson and that person is talking to the syndicate. Everything beyond that goes through the trading desks. At that point, the dealers are going to be holding inventories at various securities that they've bought over time and they're holding in inventory. And these bonds are held in various amounts and various maturities and from different issuers. And the thing that's very interesting I think about this market is that different dealers are going to hold different inventories of securities based on the investors that they deal with and based on the companies that they deal with. And essentially that's based on what bonds that specific broker-dealer believes their specific clients may want to buy. So if you think about, you know, a foreign investment bank that has a lot of foreign investors, they may have certain types of investors that have an interest in certain securities that say, at Wells Fargo Securities, we might not have that same investor base. We wouldn't necessarily hold those same securities. Additionally, some corporate bonds trade more than others. You see some bonds just have a lot more interest than other corporate bonds. This is one measure of the liquidity of a bond. It's not the only measure, but it is one measure. For instance, let's say a bond trades very frequently. It might be considered more liquid than another bond that trades very infrequently. The difference in the price between what is being offered by the broker compared to what you as an investor are willing to pay for the bond is called the bid-ask spread. I'm sure you are already aware of that, but that's another measure of liquidity in the bond and if that bid-ask spread is very wide, it's going to be more difficult to trade that bond.

That's a strategy that some investors employ in the corporate bond market to find a deal. Certain investors do not have liquidity needs. So they're kind of on the hunt to find illiquid bonds because they know that they will pay higher yields. There are other investors that have very, very significant liquidity needs, and they will pay a higher price, meaning lower yield, for a bond because it's highly liquid. So there are different investors in the market that will sort of look at the secondary market a little bit differently. And traders will hold those securities for those different types of investors. One of the things that we've certainly found on the platform, is that the more information that we can have from a specific client about types of bonds that they look for, makes it much easier for the broker-dealers to hold those securities because they know that there is a market for that security and they can offer that out to clients.

Slide 17 – Coupon Structure (36:28)

Garret Sloan: Moving on to the next slide. I am – am I doing this right? Ok, there we go. Coupon structure. So we want to talk a little bit about different types of coupons in a corporate bond market. Any of you that are agency buyers are obviously, you know, very aware of the different structures that exist for coupons. And, in fact, in the agency market the coupons get kind of crazy. Actually, I think that the coupon structures in corporates are a lot easier to understand than in the agency market. But they are essentially fixed rate securities that pay a single interest rate over the life of the bond, just like an agency bullet. And there are floaters that pay an interest rate based on an underlying index, for instance 3-month Libor. And, any of you again that are agency buyers would know this very well. I don't think I need to get into that specifically. And then again, I think any of you that are, you know, active in the agency market would also know that there are zeros – zero coupon bonds that don't pay any periodic interest over the life of the bond, but they simply are issued at a discount, meaning that if they mature at par, which is generally $1,000, they would be sold at, you know, 900 and X number of dollars, whatever the implied interest rate is. So coupon structure in the corporate bond market, in my opinion, relative to the agency market, very, very basic. You don't run into all of the different structures that you would see in the agency market in the corporate bond market.

Slide 18 – Issuance Types: Features (38:15)

Garret Sloan: But you do run into some other things. You know, we mentioned commercial paper. I'm not sure that they're exactly replicable, but commercial paper is sort of a sub-segment of the corporate bond market in a way. I know that we have already done another session on commercial paper. It is different, but it is a type of corporate bond in some ways, but I'm not going to spend any time on that.

The second bullet here on the convertible bond section, convertible bond basically allows the issuer or the bond holder the option to convert the bond at a specific date for the company's equity. It would be my expectation that most of the public entity investors in California or any public entity investors at all would not be looking at convertibles. It's a very specific sub-segment of the market that would be considering a convertible bond, generally investors that can invest in multiple asset classes. I would imagine, and I'm not sure, later on maybe in the presentation, we may get into whether or not that would even be allowed. I would assume that it would not be under the state statute in California.

Yankee bonds, just wanted to introduce that. So Yankee bonds. There are so many different ways in which people characterize bonds and Yankee bonds is one way. And a Yankee bond is basically a foreign issuer issuing in the U.S. market. There are all kinds of funny names for different types of bonds that are issued around the world. There's bulldog bonds issued in Great Britain. There’s dim sum bonds issued in Hong Kong. There's Samurai bonds issued in Japan. There’s euro bonds issued in Europe. And kangaroo bonds issued in Australia, and the list goes on. Yankee bond is one type of those. So when you run into those names, you just kind of have to think about the geography, where is the bond being issued and where is the issuer from. That is going to give you the understanding. For domestic issuers in the U.S., the primary type of bond that you would be thinking about most would be these Yankee bonds, if a foreign issuer.

Slide 19 – Issuance Types: Support (40:46)

Garret Sloan: Moving on from those features, from those sort of general features, if we want to think about the types of support. And this is something that I think is very important when you're thinking about investing in corporate bonds. We need to consider whether, you know where the bond lies in the capital structure. We talked a little bit about debt versus equity and how the capital structure exists there. Even within just the debt, on the debt side of the balance sheet, capital structure is very important. And it really plays into the amount of credit support or, you know, how risky that bond is, you know, where you are in that capital structure.

On this slide we're illustrating very basically three types of support. There is a secured or covered bond, which is generally the senior level, meaning that they're generally the first to receive repayment. There's unsecured senior, which again is sort of first in line, and then there's subordinated or junior. So how are those three different? If a bond is a secured or a covered bond, it is collateralized or backed by some sort of specific pledged asset. It may be a piece of real estate; it may be a piece of equipment; it may be a guarantee from a parent. So for instance, after the financial crisis one of the things that we saw in Europe was a lot of issuers get backed by their governments. So that would be covered in a way not by assets, but covered by a government guarantee. And that helps, you know, that obviously provides additional support and pricing and obviously the rating of those securities is going to be commensurate with the amount of support that is available. And there, you know, within the capital structure there are other types of debt that may not show up as a bond necessarily, but they may sit senior to an unsecured senior position. So for instance, there may be loans or possibly other cross guarantees that exist amongst entities or loans to banks that aren't necessarily bonds, but might sit senior to a bond. So it's important to understand where you as an investor sit in the capital structure and how well you're protected in the event of a default or even a breach of a debt covenant. So there may be a loan covenant that's breached that may not show up in your offering documents and it may not show up as a bond on the balance sheet, but it’s a loan and it’s got covenants. Those covenants are important to understand as well if you're a bond holder that sits below another type of investor.

You can think about it in terms, in my opinion, from the perspective of the mortgage market. You know, you can understand certainly the concept of a first and a second mortgage. And the first mortgage always sits in front of the second mortgage in terms of priority of payment. As a result, the second mortgage generally pays a higher rate of interest. But anything that affects the first mortgage holder is also going to affect the second mortgage holder. So that’s something you always want to understand is where you sit in the capital structure. And there is a term that you'll hear sometimes from those of us that like to use jargon, something called pari passu. These two bonds are pari passu. What does that mean exactly? It means that they're equivalent. If there is a liquidation event, those two bonds would be treated equally in the disposition of assets. So you either sit senior, you sit junior or you sit equivalent. And equivalent sometimes is called pari passu, so you’ll see that sometimes.

Slide 20 – Issuance Types: Call Options (44:50)

Garret Sloan: Another type of structural feature that we want to talk about more in depth on this side are calls. And again, as we know what callables are, you have the option to call a security before its actual maturity date. That may be, you know, if it’s in the agency market we talk about Europeans, which are one-times. We talk about Americans, which are continuous We talk about Bermudans, which are calls of specific dates but multiple calls. In the corporate bond market, generally, they're generally more structured like Bermudans. Or they give more than just one specific call, generally speaking, more than one call option date to the issuer. But the concept that I think that I really want to hit home here is not necessarily the call itself, but what kind of call it is. So an agency market generally the callable is going to be called at par. And that's kind of a concept that we understand. In the corporate bond market, the call is generally not at par. It's at something called a make-whole call price. And the make-whole call price, it's going to change over time. And that make-whole call is dependent on – or the exercise of that make-whole is going to be dependent on how that bond is trading in the market. So we're going to get into that a little bit more in-depth here.

Slide 21 – Issuance Types: Make-Whole Call Options (46:38)

Garret Sloan: So on the next slide. So what are we talking about when we're talking about make-wholes? One of the things that I think Bill is going to get into in the next slides, in the next section, is the concept around credit spread. We haven't got into credit spread or pricing of credit risk yet. But the idea is basically the need for an investor to get paid more than a Treasury security or, you know, in some cases more than an agency, if we're comparing it to an agency. If we're accepting a certain amount of additional credit risk or liquidity risk for owning a corporate bond, so that's what we call the credit spread or just the spread.

The make-whole call is defined by that credit spread. So it's not defined by being paid back par. It's defined by the credit spread. And that specific credit spread, you back into an actual price. And generally that price above par. So you're not just going to get par. Generally, that price is above par. So that's why they call it a make-whole. The idea is to make the client or make the investor whole. And that spread is set – we call it the make-whole spread – is set over a similar maturity Treasury. And that is outlined in the offering documents. So if you buy a security with a make-whole call, the make-whole call spread will be disclosed in those documents. So I'll give you an example. If you think about a corporate bond that was issued as a five-year corporate, it's been outstanding for a year. So now it's a four-year corporate bond. The make-whole call looks now at the four-year Treasury and calculates the price of the corporate bond based on a credit spread specified in the offering documents relative to the four-year Treasury. So if they would have called it right after they issued it, they would have calculated the price based on the five-year, but now that it's a four-year, they'll price that spread based off the four-year Treasury. If they want to call it a year later, then it would be priced off of the price using the same spread but off the three-year Treasury.

So for instance, if the make-whole call spread is Treasuries plus 20 basis points for a certain bond, and the bond is currently priced in the market at Treasuries plus 18 basis points, we would say that the call is in the money, or it's economically valuable for the issuer to call those bonds away from you and reissue at a lower credit spread. If the bond is trading at Treasuries plus 30 in the market right now, we would say that that bond is trading out of the money because the make-whole call is at Treasuries plus 20. It's trading at Treasuries plus 30, so it would not be economically advantageous for the issuer to call the bond at Treasuries plus 20 and reissue a Treasuries plus 30, which is the market rate.

Slide 22 – Corporate Bond Ratings (49:51)

Garret Sloan: If we, you know, if we move into corporate bond ratings, very quickly, we touched on that previously in terms of dividing up the market between investment grade and high yield. Getting more granular into that, what we see here, and I have listed out Moody's, S&P and Fitch, and the ratings here are the bifurcation between investment grade and high-yield is that BBB level. And anything below BBB is generally considered to be high-yield. Anything above BBB is generally considered to be - well, not generally, is considered to be investment grade. And in the - you know, beyond just investment grade and high-yield, there's also short-term bond ratings versus long-term bond ratings. And the short-term bond ratings take into account more closely the liquidity profile of a company. Because short-term debt has a much shorter time frame in which, you know, which they mature and reissue. So there's kind of a different analysis that goes into that.

Slide 23 – Corporate Bond Ratings (cont.) (51:07)

Garret Sloan: On the next slide, let's dig into that a little bit further. So beyond the letter grade, so one of the things we saw in those letter grades was AAA is the highest credit rating down to BBB for the investment grade universe. In an attempt by the rating agencies to be a little bit more granular with their ratings, they've placed modifiers alongside each of the letter grades. So for Moody's ratings, they're numbered 1 through 3, With 1 being the strongest, down to 3 being the weakest. So for instance, for a BBB, Moody's would use Baa1 as the highest BBB rating and Baa3 as the lowest. On the S&P side, S&P and Fitch they use a plus/minus system. So the BBB level, the BBB+ would, you know, be more highly-rated than the BBB-. And then one of the things that I wanted to mention is the ratings watch and ratings outlook modifiers as well. One of the things that I think that the rating agencies don't want to do is spook the market with just a sudden change in rating. The agencies, as such, have introduced watch and outlook characterizations for their bond ratings as well. A bond placed on watch is actively being reviewed. And it can either be on positive review or negative review or an evolving view. Generally, a bond on watch is a change within 90 days. We’ve seen it take much longer, but generally a 90-day window is how long that takes. On the outlook side, a bond with an outlook, with a specific ratings outlook, either stable, positive or negative, as you can see here, is a more longer term trend. And it's generally based on larger macroeconomic, geopolitical or competitive factors impacting the industry or the bond specifically.

Slide 24 – Corporate Bond Ratings (cont.) (53:19)

Garret Sloan: One final thing before we jump to Section 2, I want to sort of go back to the concept of looking at corporate bond ratings within a family. And this is something that happens a lot. Because, you know, generally most large corporations aren't just one company. They have a number of subsidiaries, either operating domestically, they operate in different businesses. And each one of those businesses may be funding itself in the corporate bond market. And those bond ratings may be interconnected, they may be tied to the parent or they may not. So that's something that you really want to understand I think when you're thinking about it. You know, we talked about Berkshire Hathaway, but many companies that issue bonds have this situation.

So, you know, Wells Fargo is a good example of this. I'll just use us to give you some understanding of what I'm talking about. So I work for a company called Wells Fargo Securities. Wells Fargo Securities is rated by Standard & Poor's. I also go out and visit clients with bankers that work for Wells Fargo Bank. Wells Fargo Bank is the bank. I do not work for the bank. The bankers work for the bank. Wells Fargo Bank has a long-term issuer rating of AA to AA- by Moody's and S&P and AA by Fitch. The broker-dealer has the same ratings that Wells Fargo Bank does. Now, there is another entity that's called the holding company, and that's called Wells Fargo & Company. Wells Fargo & Co. has a rating of A2 by Moody's, A+ by Standard and Poor's and AA- by Fitch. Why are those ratings different? There are a number of reasons behind that. It essentially comes down to how each one of those different companies is funded. So for instance, the broker-dealer and the bank work very closely together. The bank has a very, very large deposit base. Wells Fargo & Company, which is a holding company, does not have a large deposit base because it is not a bank. So it funds itself more through commercial paper, it funds itself through equity, it funds itself through wholesale markets. So all of those are considerations. So when you're looking at companies similar to say like a Wells Fargo, another example within that Wells Fargo example is, you know, I used to work - I live in Charlotte. I'm in North Carolina. Obviously, I worked for Wachovia before Wells Fargo bought Wachovia. Well, there are still Wachovia bonds outstanding. When you're looking at corporate bonds, you may be offered a Wachovia bond. Well, does that Wachovia bond have the same support as a current Wells Fargo bond? If it does, you know, then obviously it carries the same credit support, but those are questions you need to ask. So in the Wells Fargo/Wachovia transaction, did Wells Fargo assume all the debts of Wachovia? That is a question you need to know because that bond can be standing out there. You might assume that because it's a Wachovia bond that it's supported by Wells Fargo. It may or may not be. And, you know, from someone, you know, that's -- for someone that's kind of considering this market as a potential, you know, alternative to agencies, those are certainly the questions and risks that exist when you are looking at corporate bond rating. So I'm going to turn the time back to the folks at Chandler to talk about Section 2.

Slide 25 – Section 2 (57:10)

William Dennehy: Hello, this is Bill Dennehy again. In Section 2, we are going to focus on maturities, yield and the duration risk of corporates. And really we're going to use a recently issued note from both John Deere Corp. and CVS Corp. to really understand some of the different dynamics of both maturity spread and the credit spread that are available in the market.

Slide 26 – Maturity, Yield, and Duration Risk of Corporates (57:37)

William Dennehy: This next slide is a little repetitive from some of the notes that we've already discussed today, but I really want to focus on the bottom two bullet points. And the important thing to remember as an investor is the longer the maturity, the more you should get paid from a spread perspective. And in general, the lower the credit quality of the issuer, the more spread that you should get paid over a similar maturity Treasury. And that applies to both the primary market and the secondary market.

Slide 27 – Corporate Bond Terminology (58:08)

William Dennehy: This next page I would really term as a cheat sheet for novice investors. And it just kind of goes down what are some of the important tenets of a corporate bond that you should being aware of prior to making an investment decision. Really, I'm going to focus on about half of these, and I apologize for being a little detailed-oriented. But certainly it's very important to understand who the issuer is, and for California investors, some of the most important tenets are going to be is that corporation domiciled in the United States and does it have a credit quality that meets the requirements of both California code and your individual entity's investment policy. The next most important is certainly the ticker. And Garret already spoke a lot about Berkshire Hathaway, and that's a great example where they have multiple entities that potentially roll up to the same ticker. And you don't want to have any outsized exposure to any one individual ticker, so it's important that you manage your exposure to individual names and individual tickers when building a diversified portfolio.

The next one I really want to focus on is maturity, and that's the fourth line down. As a California investor, the maximum final maturity of any corporate bond that you can purchase is five years. So we're not seeing that much today, but in previous cycles, we've seen some more esoteric securities where it might have a maturity but that has some optionality to it. So that final maturity might be greater than five years, and that's something as an investor you want to watch very closely. The next important element is certainly the option-adjusted spread. And that's certainly a way to compare like rated bonds to make sure that you're being compensated for the risk that you're taking. The new issue spread is also very important, and we'll go into it in greater detail in a few slides. And also very, very important is the Treasury benchmark. You need to make sure that the spread that you're getting over the bond, a like duration and like maturity asset, that you're getting compensated for that additional risk.

Slide 28 – Relative Valuation of Corporate Bonds (1:00:21)

William Dennehy: When we think about relative value, the credit quality and the bond maturity is very important. In almost all scenarios, and I say almost, credit curves are going to be upward sloping. What that means is that this additional spread for a three-year note is going to be lower than the spread that you're going to get for a five-year note. And it's also always important to consider that the market is dynamic and it's going to change, but as the credit quality of a bond changes, you're going to be paid either more or less depending on how those trends evolve.

Slide 29 – John Deere Capital Corp vs CVS Health Corp (1:01:01)

William Dennehy: So really, what we did was we focused on recently new issued bonds in July of this year for both John Deere Corp. and CVS Health Corp. Now John Deere Corp. is rated A2, you know, it's a very high, mid A rated bond and CVS Corp. is actually rated Baa1, so not an eligible investment for California code investors. We still thought it would be a very good example to show some of the spread differences from both a maturity standpoint and a credit quality standpoint.

Slide 30 – Maturity, Duration and Yield of Corporates (1:01:34)

William Dennehy: So this next slide shows the description page for the John Deere Capital Corp. bond that was issued in July of this year. We've circled some of the things that are certainly very important for a California code investor. And on the upper left-hand side, the country of domicile is the United States. That is a requirement, and this bond certainly meets that requirement. You can see the bond ratings. And this bond is not rated by Fitch, but it is rated by Moody's and S&P. And you can see that it’s A2/A, so comfortably in the quality requirements of California code. And then in the bottom right, you can see the amount outstanding. And in this case, this three-year bond was issued for $500 million with a spread of 68 basis points over Treasuries.

Slide 31 – Maturity, Duration and Yield of Corporates (cont.) (1:02:24)

William Dennehy: On the same day that this bond was issued, John Deere also issued a five-year bond. And you can see again, country of domicile is the United States. Solid credit ratings. Additionally the amount outstanding was $500 million with a spread of 83 basis points over the five-year Treasury note.

Slide 32 – Maturity, Duration and Yield of Corporates (cont.) (1:02:45)

William Dennehy: If we look at this page, this is the John Deere three-year note. And you can see this is how investors sort of price up a bond. On the upper left-hand chart, you can see the spread. So at new issue, this bond was offered at 68 basis points over the three-year Treasury note. You can see the three-year Treasury note at time of issuance had a yield of 93 basis points. The additional spread for owning the John Deere note was 68 basis points for a total yield of 1.61%. And those two left-hand circled notes. On the right-hand side, you can see the duration of the bond is around 2.92. So consistent with a three-year bond.

Slide 33 – Maturity, Duration and Yield of Corporates (cont.) (1:03:30)

William Dennehy: If we flip to the next slide, these are all the same characteristics, but we’re really emphasizing the five-year note here. You can see that the spread was 83 basis points over the five-year. The Treasury note was yielding 1.56%, for a total yield of 2.39% at issuance. Again, you can see because of the longer maturity, you have the additional duration component, with the duration of the portfolio being around 4.69 for this particular bond.

Slide 34 – Maturity, Duration and Yield of Corporates (cont.) (1:04:00)

William Dennehy: If we flip to the next page, it just really summarizes in a clean format the differences between these two issuance within the same name, within John Deere Corp. So by owning a three-year versus a five-year, you can see the credit curve in John Deere is worth about 15 basis points at new issuance. But because of the steepness of the Treasury curve between three-year notes and five-year notes, you can see you take an awful lot of additional yield for owning a five-year note versus a three-year note. So as an investor, you want to focus on both of these elements. Depending on what cash flows or liquidity needs I have upcoming, and depending on the total structure of my portfolio, it may make sense to own the three-year or the five-year depending on what’s going on. But the important thing is again, the absolute spread and the additional spread by extending your risk from three years to five years.

Slide 35 – Maturity, Duration and Yield of Corporates (cont.) (1:05:03)

William Dennehy: If we flip to the next page, we have an example of CVS Health Corp. And again, some of the tenets meet the requirements of California code and some do not. So the country of domicile is the U.S., which is good; however, the credit rating, and again this bond was only rated by Moody's and S&P and not by Fitch, but because of the high BBB credit rating at Baa1 and BBB+, it does not meet the requirements of California code. We do have a large amount outstanding. Keep in mind both of the John Deere tranches or issuers were only $500 million. In this case, CVS is issuing a three-year bond for $2.25 billion.

Slide 36 – Maturity, Duration and Yield of Corporates (cont.) (1:05:45)

William Dennehy: If we flip to the next slide, this is the CVS five-year note. And again you can see the country of domicile U.S. and the lower credit ratings, and then the amount outstanding is actually just under $3 billion, at $2,750,000,000. So much larger than the John Deere deal.

Slide 37 – Maturity, Duration and Yield of Corporates (cont.) (1:06:05)

William Dennehy: If we flip to the next page, we can see the same YAS or yield and spread charts, where we have the spread of the three-year note of 85 basis points over the three-year. We have the three-year note at the time of issuance yielding 1.07% for a total yield of 1.92% for owning a three-year bond of CVS Healthcare. And you can also see that duration is 2.90, so very close to the John Deere three-year note.

Slide 38 – Maturity, Duration and Yield of Corporates (cont.) (1:06:32)

William Dennehy: On the next slide we have the CVS five-year note, so you can see that additional spread of 110 basis points for owning a five-year. The five-year note at time of issuance was yielding 1.715 for a total yield of almost 2.82%. You can also see that the duration is a little bit shorter than the John Deere deal. And this is because the coupon is a little bit higher, which tends to reduce the duration, although these amounts are very modest.

Slide 39 – Maturity, Duration and Yield of Corporates (cont.) (1:07:01)

William Dennehy: If we flip to the next page, we can see comparing the CVS Corp. between the three-year and the five-year. We can see that that additional spread between three years and five years is 25 basis points. So because of both the amount issued and the lower credit quality, you're getting paid more for taking additional risk in CVS Corp. I think this is a very important point because markets are not static. They change on a day-to-day basis. And depending on different trends that are happening in industries as well as individual issuers, these spreads are going to change. And as investors, we really want to have a process that enables us to identify undervalued spreads, or spreads that are too wide relative to fundamentals and those are bonds that we want to put in our portfolios. And we also want to have a process that enables us to determine which bonds or notes are expensive or rich relative to peer group and those are bonds that we want to avoid.

Slide 40 – Maturity, Duration and Yield of Corporates (cont.) (1:08:03)

William Dennehy: If we flip to this summary slide, this really shows the difference. So between John Deere and CVS Health Corp, the additional spread between three years is 27 basis points of additional spread for taking that additional credit risk. And then at the five year point, you can see that difference in spread between 83 basis points to 110 basis points. So pretty compelling. However, because of that credit quality differential, that is not an eligible investment for California code. One thing I would as an investor in the market, when you think about the amount issued, in this case, we have $500 million for each of the John Deere tranches, and well over $2 billion for the CVS Health Corp. tranches, as that deal size gets pretty small, some of the secondary liquidity can also become quite challenging. And that's both on the bid as you're trying to sell bonds as well as on the offer side when you are trying to acquire bonds. We would certainly encourage investors in the corporate space that any deal that's smaller than $250 million is not index eligible. And that you should definitely think of that as an andosol line, as far as do I really want to take this additional illiquidity risk to own a bond that isn't even index eligible. You could be paid an additional yield for that, but just be cognizant in the corporate market you always want to have some liquidity as well to be able to exit positions in case your credit opinion of a bond deteriorates.

Slide 41 – Section 3 **(1:09:38)**

William Dennehy: With that, I am going to turn it back over to Garret to talk about public investments and corporates.

Slide 42 – Selected State Requirements for Corporates **(1:09:49)**

Garret Sloan: Hi, so this is just a very brief section. What we wanted to do here is really just introduce some context around the California code. This slide here is only designed to give you some understanding of what you are able to do in the context of what other public entity investors around the country are doing with respect to corporate bonds. And one of the things you certainly notice here is that on a flexibility basis, certainly California public entity investors have much more ability to execute, you know, across the curve, out to five years, down to single A in the corporate bond space. The other states that we --and I've just listed a handful here. But I would say that California has a very flexible code this way to look at corporate bonds as an alternative asset class. If you think about, you know, a state like Utah that can only go out to 15 months on a fixed rate basis, the state like Ohio that can go out to two years, Illinois six months. Oregon 18 months, in most cases in Oregon. You know, you recognize that they are certainly much more limited in terms of diversification and the types of issuers that they can execute with. And so I think that that puts California in a great spot and relative to other public entity investors. That's all I have to say there. I'll turn it back over.

Slide 43 – Section 4 **(1:11:22)**

Martin Cassell: This is Marty from Chandler. I wanted to go over some of the California government code issues that are important to corporate investors.

Slide 44 – Government Code 53601(k) – Issuer Restrictions and Rating Requirements **(1:11:38)**

Martin Cassell: So very important, we mentioned before, but very important to keep in mind that the maximum final maturity for a medium-term or corporate note for a California investor is five years or less. And that is the state – or measured by the legal final of the security. So one of the things to keep in mind is that public entities are allowed to purchase, with approval of their governing body, securities longer than five years. But the way code is written, it excludes corporate notes from that provision. So regardless of if your governing body has allowed your entity to purchase Treasury, agency or municipal securities longer than five years, it does not allow you to make that same exception for corporate notes. And then again important to keep in mind is that the corporations must be organized and operating within the United States with a slight variation of that for depository institutions. So they may be organized, the parent company may be organized outside of the U.S., but the depository institution that you're buying the security or investing the security in must be licensed in the United States to do that. So it's a fine reading of the legal organization of the entity to make that determination.

And then as we've talked about, credit rating requirement is that the securities must be rated A or better by a NRSRO, a nationally recognized statistical rating organization, and the main ones as Garret mentioned earlier are S&P, Moody's and Fitch, but there are others. Most entities are going to rely on those three major rating agencies to make that determination. And then the maximum amount you can purchase of corporates within your portfolio is 30% of your investable assets, so that is the absolute maximum. It cannot be extended. However, it does not include other types of credit type products, such as commercial paper, which is measured differently. And other asset classes that have their own provisions within state codes, such as asset-backed securities. And then CDIAC has written a very good paper regarding the country of origin or the issuers' legal status, and so there is a link on this presentation to that briefing paper, which I would suggest is a good read for further information regarding that.

Slide 45 – California Code 53601(k) – Issuer Restrictions and Rating Requirements (cont.) (1:14:26)

Martin Cassell: And then just to -- similar to Garret's slide earlier, but the delineation line is in a different place. So the dark gray area on this side is the high-yield or junk bond category. The light gray area is categorized as investment grade but does not qualify for California state code. So that A and above is the permitted investment range. An important thing to point out is that the letter grade is the category of the rating, the A, AA or AAA. And the 1, 2 or 3 or plus or minus that's attached to that is called a modifier and is not part of the category rating, but it's just in a further sub-delineation of how securities rank within that rating category. And California code refers to the rating category.

Slide 46 – California Code 53601(k) – Issuer Restrictions and Rating Requirements (cont.) (1:15:28)

Martin Cassell: So with regards to the issuer requirements, it is based on, when you're purchasing the security it is all based at the time that you make the purchase of the security. So at the time you make the purchase of the security, it must be within the five years and you must have the rating criteria at that time. Code does not address if a security has a split rating, which would be described as having two different ratings from two different rating agencies. For example, a security that is rated A by one rating agency and BBB by another, code does not address that specifically. But in our opinion, it really is in the spirit of state code that you would have the qualified rating across all three of the major issuers. The other thing that's important to remember is that the code does not address what should be or needs to be done if a security is downgraded after a purchase. And this is something that is important to address in your investment policies and have a policy in place as to how you plan on addressing that. That can range from anything from deciding to sell a security immediately if that happens or what may be a more prudent approach is to evaluate the circumstances of that and take into consideration the reasons for the downgrade, the potential for further downgrade, and how much longer until the security will mature as to if it’s appropriate to hold in your portfolio We always recommend, even though technically it is still within your California state code, that the downgrade be reported in your regular reports to your governing body, and they should be monitored very carefully. And then again, with regards to the 144A securities, they are inconsistent with California state code. CDIAC, again, has written an issue brief regarding this. Again, the link is on the page there that you can read that.

Slide 47 – California Code 53601(k) – Issuer Restrictions and Rating Requirements (cont.) (1:17:49)

Martin Cassell: But the important things to keep in mind with the 144A securities is that they're not registered with the SEC, not subject to the same disclosure requirements, and the rule states that you have to be a qualified institutional buyer. And if you read the SEC's rule on that, it does allow certain entities, public agencies that are specifically investing for the benefit of its employees or as an employee benefit plan, that they can qualify as a QIB under the other requirements. But it does not address the public entities, it specifically does not include public entities for investment of operating funds. So very important to keep in mind there have only been a couple of tests of that. One of them was the Florida State Board of Administration, and their legal counsel had advised them that they were not eligible to invest in 144As. They did anyway. The SEC did investigate, but they never came out with a ruling regarding that. So we feel that it is important, or in the spirit of how that code is written, that they are not eligible or should not be utilized for California public entities. And certainly, if you are going to consider that, I would highly recommend reviewing that with your counsel.

Slide 48 – California Code 53601(k) – Issuer Restrictions and Rating Requirements (cont.) (1:19:24)

Martin Cassell: So some of the things to look for on a Bloomberg screen to give you some of that information. Importantly, the red circle on the left side of the screen, the country of origin and this particular case for this Shell International Finance bond, the country of origin is the Netherlands. And although it's issued in U.S. dollars, it is a foreign bond. One of the things to keep in mind and one of the reasons why that is an issue is that any legal claims that could arise would be handled in the foreign country. So it would not be dealt with under U.S. law. And then the Moody's, S&P ratings, you can see that on the right side, we’ve seen that on a couple of screens, and the amount outstanding is there. A couple of other things that you might look for here, right above the country of issuance, you can see there the market issue, it says “global” in this case. If that were a private placement, or 144A, most likely it would say private placement under that market issue, and underneath currency where it says "series" is also where it would be designated as a 144A.

Slide 49 – California Code 53601(k) – Issuer Restrictions and Rating Requirements (cont.) (1:20:40)

Martin Cassell: So here another issuer here, PepsiCo. And here the key element and differentiator from the previous slide is the country of origin, which is the U.S. here, circled in the red on the left side of the screen.

Slide 50 – Section 5 (1:20:59)

Martin Cassell: With that, I'm going to give it back to Bill to talk about safety, liquidity and yield in public investment portfolios.

William Dennehy: Thank you.

Slide 51 – Diversification (1:21:10)

William Dennehy: When we think about investing in corporate notes, it's tantamount that you really have a diversified portfolio. Diversification can certainly reduce risk, but not eliminate risk. And diversification also reduces volatility of your returns, and this is something that's very important when you think about the additional risks that you're taking by investing in corporate notes. When you think about diversification, you want to think about it from a quality standpoint. So you should have a mix of securities that are rated – some that are rated AA, some that are rated A. You should also think about the mix of some of those qualifiers in your portfolio. You should also be diversified by sector. You should have a portion of your portfolio in the finance sector and a portion of your portfolio in the industrial sector. And within those specific groups, you should further diversify between banks, insurance companies, finance companies on the finance side, and in the industrial side to have some capital equipment companies, some consumer goods companies, some retail companies, some energy companies. You want to have your overall mix of securities to have a lot of breadth to it.

Slide 52 – Diversification (cont.) (1:22:19)

William Dennehy: This is a chart that anyone who took a finance class or portfolio management class in college is likely familiar with. Really, what we want to do is push out the number of securities on the bottom line of the graph to get beyond 30. So we're really reducing the non-systemic risk of the portfolio. And at Chandler, we often think about if we have a 25% allocation to corporates and each of those is a 1.25% position, that's 20 names. And I think that's probably a good place to start. When you have a full allocation of corporates to have at least 20 names that again are diversified between a finance and industrial space, that you don't want to have all of your bank exposure at the five-year point and all of your industrial exposure at the two-year point. You want to have those interspersed and mixed up within your portfolio. And you also want to use that different maturity spectrum as an opportunity to uncover relative value.

Slide 53 – Diversification (cont.) (1:23:20)

William Dennehy: So again, systemic risk cannot be diversified away. That's the overall market risk. But idiosyncratic risk we can definitely remove from the portfolio by having a well-diversified portfolio, and that is something again that is very important with corporate securities.

Slide 54 – Diversification (cont.) (1:23:39)

William Dennehy: Again, by having a diversified portfolio of corporates, you can really meet the tenets of safety, liquidity and return and hopefully enhance the overall long-term results of your pool of assets.

Slide 55 – Section 6 (1:23:54)

William Dennehy: With this, I am going to turn it back over to Garret to talk about some of the analysis required for corporate bonds.

Garret Sloan: Thank you. So the next slide.

Slide 56 – Corporate Bond Analysis: Credit Outlook (1:24:11)

Garret Sloan: Let me just see. Is it advancing? Okay, good. So I think the thing that we don't probably want to get into today is a laundry list, and I know that these next slides kind of do look like a laundry list of every single thing that you could possibly think about. But really what we're trying to achieve here is give you some sense of developing a process. A process is required when you're thinking about investing in corporate securities. Having some sort of review, having some sort of due diligence process in place. And I think one of the takeaways should probably be that, you know, investing just on rating is not enough. And I don't think that in, you know, kind of one webinar session we could potentially, you know, go over every single type of nuance and everybody has a different credit approach. So really what we want to highlight here is have a process in place. Have some sort of screening process in place. And you know, I don't, again, think that we can really tell you what that screening process should be. In fact, I think by compliance reasons we can't tell you what that screening process should be. But we certainly can tell you some of the things that professional investors look at, you know, starting with this slide, you know, one of the ways in which clients, investors, professional money managers look at a company or at sort of an investment process is either from a top-down approach or from a bottom-up approach. This is an approach that, you know, certainly it takes place on the equity side, but it also takes place on the fixed-income side. From the top-down approach, you're really kind of looking at the broadest themes in the market today. And what are the broadest themes in the market today? What's going on in the global landscape? What's going on in foreign markets? How is that affecting domestic markets? What's going on in short-term interest rates with the Federal Reserve? And then narrowing down from there. What are the macroeconomic implications at the industry level? What industries are going to be impacted by these macroeconomic changes first and sort of moving down from there. The bottom-up approach kind of goes in reverse order, sort of is more technical in nature and is looking, you know, at securities at a very security-specific and a very ratio-specific level and then moves out from there. One way is not necessarily superior to the other. But they both kind of achieve the goal of relative value. I think beyond that, you know, even before we get to relative value, one of the things I think that is important is that there are kind of two processes in place here. One is an approved credit process and one is a relative value process.

So you could certainly have from a credit perspective a list of securities that from a credit perspective, or maybe an outright default risk perspective, you may be comfortable with. And that is something that we see in a lot of cases on an approved list. So the credit process is where you start. And then from that credit process, you know, those names that get on your approved list, be they 20 or 30 names or, you know, starting out smaller, but developing that approved list of names from a credit approach standpoint, and then within that list of approved credit names coming up with, you know, which securities you consider to be the best relative value. That's the second process. That's kind of more where the portfolio manager of the, you know, of the portfolio comes into play. The first step obviously, and I think that's kind of primarily what we're going to be looking at here is the credit process and giving you some thoughts about that.

Slide 57 – Credit Research & Analysis (1:28:12)

Garret Sloan: So, you know, thorough research is certainly important I think as the first screen, obviously, you know, the rating agencies are certainly a good resource. There is a lot of street research, i.e. Wells Fargo Securities and all of the other broker-dealers have securities analysts that monitor all of these credits. And for their clients, they will provide opinions on what's going on in each of these markets for the markets that they cover. Those are all good screening processes for helping you develop ways of thinking about the credits that you want to put on an approved list. But then beyond that, some of the best practices that I've seen from corporate investors and from public entity investors is, you know, having sort of one-page tear sheets of some of the credit metrics that clients look at or some of the ratio metrics that clients look at.

Slide 58 – Issuer Specific Research & Analysis (1:29:06)

Garret Sloan: And the ratios in a lot of ways don't necessarily matter in a vacuum as much as they matter in - from the approach of trends. You know, is the industry improving? Is the industry contracting? And where is the positioning of this specific corporation within the industry and, you know, is that corporation deteriorating relative to the industry? So those trends are certainly important. When we think about ratio analysis and we're looking at a number of these metrics, looking at them in isolation doesn't necessarily make sense. But looking at them and comparing them to either peers or comparing them over time is really I think where we want to go and how you want to think about it because you need some sort of comparable benchmark against which to measure the current numbers versus historical numbers or versus peer numbers. So what are some of the things that we think about? We obviously think about earnings because earnings is one way in which as a credit or corporate bond investors you're getting paid. If you're not making money, the bond is obviously higher risk of defaulting. We look at sales and revenue apart from earnings because sometimes companies might manipulate earnings to achieve a specific result. Sales and revenue are harder to manipulate. They are obviously accounting things that they potentially do, but looking at the earnings trend as well as the sales trend are important because one is on the bottom and one is on the top. Are they moving in tandem or are they moving in different directions? If they are moving in different directions, that's maybe a red flag.

Looking at specific balance sheet items, obviously that's going to be very industry specific. Some companies have very large balance sheets. Some companies have very small balance sheets relative to their earnings and relative to their cash flows. You think of a software company, you think of the capital intensiveness of, you know, software versus the capital intensity of an oil refinery – you know, the oil refinery, gigantic capital, very, very capital intensive, whereas a software company has a lot of intellectual property. So thinking about things from that concept. Cash flow analysis, earnings are certainly one way in which you can kind of measure performance, but cash flow, cash is king. And certainly your ability to sort of look at, you know, where those cash flows are coming from. Are those cash flows coming from new debt issuance? Are they repaying me by just continually refinancing and leveraging up or are they actually spinning off free cash flow from their operations? Those are things to consider.

Slide 59 – Issuer Specific Research & Analysis (cont.) (1:31:55)

Garret Sloan: Ratio analysis, you know, and the next couple of slides, we have a number of ratios that we can look at. Obviously, ratio analysis in general is a way to look at things. Management and corporate governance, one of the things we have certainly learned is that certain people in key positions make companies much better or make companies much worse. Are there changes going on within management or the level of corporate covenants? Are there whistleblower things that are going on and litigation going on within the company? Those are certainly important things to watch. One of the things we've seen in the past couple of weeks that is certainly related to California is, you know, the litigation that's going on with respect to some of the fracking of offshore oil wells. Well, spreads in a lot of the companies that are related to that industry right now have widened out significantly because of that litigation. So that's something along those lines that might be certainly important that you would be watching.

Equity analysis is important. Is the company valued properly on the equity side? If it's not, then potentially the debt load that that company is carrying might be greater than it actually looks. So that's one way to think about, you know, the amount of leverage on the balance sheet. Bond covenants, we talked about this a little bit earlier. Maybe some of the bond covenants don't exist in the bonds that you own. But maybe there are bond covenants in other bonds that you don't own, but that could impact the bonds that you do own. That shows up also in loans. It might not even be bonds that are trading in the market, it might be loans. But those covenants certainly have a spillover effect sometimes. Looking at that, if those types of things might exist.

Slide 60 – Issuer Specific Research & Analysis (cont.) (1:33:48)

Garret Sloan: Ratings at the top there obviously are important. Like we've said multiple times here, capital structure, we've already mentioned. Liquidity, we've mentioned. Event risk I believe that we've mentioned.

Slide 61 – Ratio Analysis (1:34:02)

Garret Sloan: And then we get into, you know, some of the ratio analysis here. I think I'm going just going to leave the ratio analysis section as more of a – you can have that to look at just as kind of a reference point. I don't know that I necessarily need to go into each one of these ratios here and how they work. But certainly I think the takeaway here is that different industries are going to have different ratios which are meaningful to that industry. So when you're looking at the ratios for a bank and you're comparing them to the ratios for a credit card company or looking at a bank versus, you know, a copper mining company, the meaningful ratios for that industry are going to be very different. And so looking at ratios across, you know, sectors is less meaningful rather than, you want to look at ratios within industries and look at trends within industries and across peers.

Skipped Slide 62

Slide 63 – Section 7 (1:35:06)

Garret Sloan: And so I think I'll leave that section at that. And we move on to Section 7 and talk about types of risks. And I believe, I will - actually, this is my section. Sorry. Okay. So sort of ending with Section 7, what are we thinking about here and types of risk associated with the corporate asset class versus other asset classes.

Slide 64 – Investment Benefits and Considerations (1:35:40)

Garret Sloan: You know, just put together a slide here looking at the benefits and considerations. You know, the benefits are numerous. Diversification and supply, you know, one of the things that I think that we don't necessarily hear enough about on the side of the market is supply. You know, can I get invested? You know, certainly, professional money managers, that is a huge concern and I think that it is a growing concern across investor types, is can I get invested. I think diversification not just from a credit standpoint, but diversification from a supply standpoint. I think having the ability to buy corporate bonds, even if you're not looking at buying tomorrow, is important because, you know, as we saw at the very beginning of this presentation, you know, other asset classes are diminishing and corporate bonds are increasing. Being able to be invested at all I think is an important consideration.

Steady income, I think that goes without saying across different asset classes. And certainly the coupons that you receive in the corporate bond space are higher. And we saw that again at the beginning. Bill introduced that concept. Attractive yields and liquidity. Liquidity certainly I think in my mind is underestimated for certain investors. For other investors, liquidity isn't as important, I would say that the concept of liquidity is always important. But there are certainly some investors that have much higher needs of liquidity than others. You can opportunistically take advantage of that or in situations where you need significant amounts of liquidity, you obviously need to be mindful of that. But certainly the corporate bond market, especially five years and in, is a very liquid market for the most part. Now, certainly the financial crisis did show that liquidity can dry up very quickly, but I would say generally speaking, liquidity and very strong names even during moments of crisis, there is liquidity that exists in the securities that, you know, trade at the higher end of the credit risk spectrum.

Considerations, certainly economic and market risk. You know, we talk about the concept of flight to quality. Flight to quality exists, you know, in Treasury markets, but it also exists in very highly-rated corporate bond markets. We see that during periods of crisis, where people want to own certain types of corporate bonds because they're very, very highly-rated. But certainly considerations on this side, I think that was more of a benefit than a consideration. But consideration is credit risk exists. Interest rate risk exist as it does in Treasury and agency markets. Liquidity risk exist. I don't think that there is any market more liquid than the Treasuries, so there is incremental liquidity risks certainly in this market. And then call and inflation risks I think exist across fixed-income markets.

Slide 65 – Investment Benefits and Considerations (cont.) (1:38:53)

Garret Sloan: Benefits and considerations, I think we've covered most of those so I'm going to skip that slide.

Slide 66 – Managing Risk (1:39:01)

Garret Sloan: And then move on to managing risk. I think that really the approach is of making sure you're diversified. Making sure that you have a process in place, not only pre-purchase process, but a monitoring process as well, are key because as Marty and Bill pointed out, there can be credit risk, there can be deterioration in a credit over time. That does occur. We know that that occurs. And so monitoring is certainly a key component to properly building a corporate bond portfolio.

Slide 67 – Corporate Bond Spread Indications (1:39:42)

Garret Sloan: This is just another slide that I wanted to put in here, showing not at the security level, but across the market to show you, you know, the types of increased yields that you can receive on an aggregate basis at the BBB level, at the single A level, you can see here over U.S. Treasuries. This is a pretty current indication based on the, you know, the Bloomberg one to five year index at the A level, 82 basis point. It's attractive pickup when you're talking about absolute yields, certainly in the Treasury markets around that level.

Slide 68 – Monitoring Corporate Issuers (1:40:27)

Garret Sloan: I'll turn the time back over to Bill and Marty to close.

Martin Cassell: Alright, we're going to bring it on home here with some important elements to keep in mind. And that is that in investing in corporates, it is critical that you monitor them on a daily basis to keep track of and anticipate potential changes in credit quality. So we've got a list of some of the key elements here to use, tools to use in that process with quarterly earnings, annual earnings, revenue cash flow reports that come up from the corporate issuers. Monitoring those credit ratios, you can utilize the slides that Garret had earlier for looking at a variety of those. But keeping track of those as to how they change not just relative to other peers, but how they change over time for an individual company. The bond covenants and changes in the issuer's capital structure are very important to keep track of. Equity performance, which may seem a little bit odd being that you're investing in bonds, but they can provide clues as to the financial strength of the issuer. Event risk, that is certainly one of the more difficult elements to anticipate, but being very aware of information about the firms and potential risks that lay out there are critical. And the rating agency potential changes, you potentially have some heads-up on a slow changing rating through the watch and outlook flags that they may issue there. And then, overall industry trends, economic cycles, those can impact both the credit curve as well as the overall value of an individual issuer. And certainly, watching the news flows that are coming out with regards to the issuer industry and economic cycles. So the theme of investing in corporate securities requires expertise, knowledge, experience and time. It can be difficult, but done correctly, it can add diversification, it can help manage liquidity and enhance returns, which are all consistent with the tenets of safety, liquidity and yield.

Slide 69 – Resources (1:42:49)

Martin Cassell: The last page here is a list of resources that are available that will be useful in analyzing and monitoring corporate issuers. And with that, I'm going to turn it back to Linda.

Linda Louie: Thank you. That was an outstanding job by Wells Fargo and Chandler.

Slide 70 – Key Terms (1:43:08)

Linda Louie: The last several slides work very well as a summary. We're getting close to the mark, but let's take a moment to address some of the questions.

Skipped Slide 71

Slide 72 – Questions (1:43:15)

Linda Louie: So if you have some questions, please type them in. We do have a couple here currently. Let me go over those. The first one here I think maybe we'll have Garret – it seems that it’s an area that Garret had addressed. The question is will demand reduce the spread in the secondary market day-to-day?

Garret Sloan: I'm sorry. Can you repeat that?

Linda Louie: Will demand reduce the spread in the secondary market, you know, on a day-to-day basis?

Garret Sloan: Absolutely. Yes. You know, certainly, the economics of just supply and demand definitely move the market. And it moves the market differently for different bonds and in different sectors. So depending on how much actual supply is outstanding, we'll move different bonds in different ways. If you think about some of the largest issuers out there, maybe $100 million trade will not move that specific issuer, but if you have a bond that maybe only has a couple billion dollars outstanding or even less, $100 million trade would absolutely move that market more significantly because as a percentage of the total bonds outstanding, demand has gone up significantly. So yes, the way that that is, you know, expressed in the market is through spread movements. So absolutely.

Linda Louie: Good, thank you. The next question, maybe this is directly towards Bill since I think he went through some of these examples. How do you know if the issuer of a bond meets the requirement of being issued by a corporation acquired or operated within the United States, specifically with large companies with holdings with many subsidiaries?

William Dennehy: Sure. So I think the Bloomberg screens that Marty and I were pointing out where you saw the country of domicile and it said U.S., that is a good first place to look. If you look at some of the indices that are utilized by Bank of America Merrill Lynch, they also have a code on there that indicates country of domicile. And I think a good example for that would be HSBC, the bank. If you look at HSBC PLC, that is not domiciled in the U.S. and will not be an eligible investment, but if you look at HSBC USA, that is their New York branch that has a high single A credit rating, and that is eligible for investors in California under California code.

Linda Louie: Good explanation. Alright, and I think Garret talked a little bit about the genealogy of the company and its prior history and ownership, too. That's something else that I think can be traced back. Alright. Any other questions coming in from the audience? Alright. There are no new questions. That gives us an indication that this has been a very comprehensive and in-depth presentation that was put together by our three great speakers. So we want to thank you.

Slide 73 – Public Investment Webinar Series (1:46:32)

Linda Louie: So before we close, I'd like to draw your attention to the remaining slate of webinars in this investment series. The agendas and registration instructions for each of the webinars are currently posted on our website. And the next webinar will be the September 2nd offering where CDIAC will examine pooled securities and collateralized mortgage obligations. And then on Wednesday, September 9th, we'll proceed with the broadcast on CDs and deposit placement services and collateralized bank deposits. That was rescheduled for this later date. So if you’re pre-registered for the CD webinar, you should receive a new meeting notice that keeps you registered. And also, other programming that CDIAC will include will be in the classroom is our municipal securities regulation program, which is disclosure, and then we'll offer two webinars on disclosure that have to deal with disclosure policies and what issuers need to know now after MCDC.

So in finishing our close, I'd like to thank, on behalf of CDIAC, our expert speakers, Marty Cassell, Bill Dennehy and Garret Sloan for outstanding presentation here today. We would also like to thank you for your dedication of time and your practice here in the industry and your expertise to making this webinar informational and educational. And a big thank you to our CDIAC education team, Sandra Kent and Susan Mills, for their work in producing this webinar. Thank you everyone in the audience for participating, and we hope that you'll join us in the next two weeks for our next broadcast. So with that, thank you again speakers for great work, and everyone for your attendance. Have a great week.