California Debt and Investment Advisory Commission

Webinar Transcript
Local Agency Investment Guidelines 2018 Update
May 16, 2018

[Editor's Note: This transcript has been prepared by the California Debt and Investment Advisory Commission (CDIAC) and it believes it to be a fair and accurate reproduction of the comments of the speakers. Any errors are those of CDIAC and not the speakers.]

Title Slide – Local Agency Investment Guidelines 2018 Update

MARK CAMPBELL: Okay, here we go. This is Mark Campbell, executive director here at CDIAC, in our soundproof booth in the State Treasurer's Office. We're going to be talking, as you well know, about the Local Agency Investment Guidelines 2018 Update. I'm going to take a minute just to cover the administrative details of our program today, and then to introduce the speakers, and then step back and let them take over.

We've got copies of the slides are available in the handout sections on the control panel, if you don't have them. Our Local Agency Investment Guidelines, which was just recently released, can be found on the CDIAC website using the link available on your screen. Captioning is provided during the program. Participants may click on the link in the Chat section at the bottom of the control panel to access the remote captioning. If you have any questions throughout the program, please send them to us using the comments or question tag, and we'll try and cover them during the course of the discussion. Finally, if you need a certificate of attendance, you must be registered and logged into the webinar under your own name, and a certificate will be emailed to participants within a week. That's the general summary of all of the administrative things. Again, if you have any questions, feel free to send them to us, and we'll respond either electronically or on the audio portion here.

I want to take a minute to recognize the uniqueness of the Local Agency Investment Guidelines. As most of you know, CDIAC's portfolio includes both the debt and investment side of public municipal finance. We don't have a corollary on the debt side to what the Local Agency Investment Guidelines offers to investment officers and treasury staff. And it is, to be honest, a unique product and something we think we may add to our debt side because it really does answer the applied questions that treasury staff and investment officers have. And it deals very practically with the work at hand.

Slide 2 – Local Agency Investment Guidelines 2018 Update 02:36

MARK CAMPBELL: So it is unique and in that, I want to recognize the contribution of our public sector – private sector folks, I'm sorry, that make this possible. Some of them are on the line with us today to fill in some of the detail behind the changes in the 2018 update.

Our speakers today include Bill Blackwill, managing director, Stifel Nicolaus & Company. Bill is a managing director. He joined Stifel in July 2014 and specializes in covering public agencies and assisting them meeting their goals for safety, liquidity, and return. Bill's been an institutional fixed income specialist since 1987.

Deb Higgins, president, Higgins Capital Management, is a founder and president. She's provided institutional pricing and services to California public agencies for 31 years and is an active member of the California Association of County Treasurers and Tax Collectors, the California Municipal Treasurer's Association, and the Society of Municipal Finance Officers.

John Johnson, assistant auditor/controller/treasurer/tax collector and everything else that the County of San Bernardino does. John joined the County Treasurer's Division in 2004 as the assistant investment officer, where he managed the trading of the investment pool's fixed income short-term desk. In 2008, he became cash manager and investment officer.

Laura Parisi, city treasurer with the City of Laguna Beach, first elected in 1999, and has been re-elected in each election cycle since. Her responsibilities are the receipt, deposit, and investment of city funds, banking, assessment district finance administration, and the transient occupancy tax reviews.

Last, Rick Phillips, president and chief investment officer, FTN Financial Main Street Advisors. Rick is president and chief investment officer at FTN. Prior to starting with FTN Main Street, Rick managed the Clark County, Nevada, portfolio between the time 1998 to 2004. He was also the investment officer for the City of Las Vegas from 1989 to 1998.

So with that, I'm going to turn it over for a minute to Angel Hernandez, our manager over the Research Unit here at CDIAC. She's going to provide a quick summary of what we're going to discuss and the work that goes into developing the Local Agency Investment Guidelines.

ANGEL HERNANDEZ: Thank you. Welcome. This is the first webinar that we have hosted to go over the Local Agency Investment Guidelines update. We thought because of the issues that we addressed in the guidelines for the 2018 update, we thought it would be beneficial to discuss those changes in a public forum and to provide opportunity for questions and answers. So we hope that this actually becomes an annual update. The webinar will be an annual event to accompany the updates. So we're going to go ahead and get started. Laura Parisi is going to give us a little background on the Local Agency Investment Guidelines.

Slide 3 – LAIG: Background 06:20

LAURA PARISI: Thank you. The Local Agency Investment Guidelines is a terrific tool. It was developed to assist local officials in implementing new laws related to the investment of public funds. After the Orange County bankruptcy in 1994, there were a whole host of new laws, and so this publication was first made in October of 1996 in helping agencies comply with the various regulations that had been passed. And since 2000, it is updated annually. Next, we're back to Angel.

Slide 4 – LAIG Annual Review Process 07:08

ANGEL HERNANDEZ: I wanted to follow up a little bit on that. A lot of our audience probably is not aware that a lot of changes were made to the statutes following the Orange County bankruptcy. So the environment that we operate in now was not the same as it was then. Most important is there were three bills, SB 564 and SB 866 and SB 864 in 1995 and 1996, that really set up the environment we are in today, establishing our investment priorities of safety, liquidity and yield; and establishing treasury oversight committees; and then also implementing our reporting requirements where we bring our investment policy annually to our boards as well as quarterly reports on our portfolios.

So L.A.I.G. – some people call it L.A.I.G., some people refer to it as the LAIG – was developed to help public agency investment staff operate in this new time. So Laura was instrumental in helping us develop this publication. So that's really the importance of it then, and now it's a good guide for anyone who is new to public investments or someone who needs a refresher because I know I refer to it all the time. So let's go to the next slide and talk about our annual review process.

So our review process covers the four basic chapters of the Local Agency Investment Guidelines, which are: The Annual Investment Policy; Fund Management, which includes Figure One, which is most often referred to – it lists the permissible investment per the investment code; Chapter Three, Reporting Requirements; and Chapter Four, The Treasury Oversight Committee. So when we say we're doing an annual review, we are looking at anything that applies to those four main areas of the investment of public funds.

So our annual review covers activities as are shown on the slide which the Research Unit at CDIAC incorporates into their daily routine. So we are already following legislation, but for LAIG we make sure that we're citing every bill that covers the investment of public funds. We follow all federal actions, regulations, anything that may impact investment processes. And then we do on a regular basis field technical assistance requests from both public and private investment professionals. So we use all of this as part of the foundation for updating LAIG. So one of the main pieces of this review is the convening of the work group.

Slide 5 – LAIG: 2018 Working Group **10:14**

ANGEL HERNANDEZ: So for 2018 our work group consists of the members who are listed on the slide. So the work group is a cross section of the professionals that work in the investment industry, so not only your private advisors or legal counsel, but also your public agency officials. And our public agencies, again, are a good representation of the cities and counties in California. We have small, large, city, county. And that's done purposefully so that we can represent the processes of all public agencies in California.

Slide 6 – LAIG Annual Review Process (continued) **11:00**

ANGEL HERNANDEZ: Okay, so let's talk about our review process. So like I said, a lot of the activities that we do as part of the review process occur on a regular basis throughout the year. In October, we begin in earnest to set up a draft of LAIG for the next year. We begin in October because it coincides with the end of the legislative session and the governor's bill signing period. Once that happens, we know the changes have either been yes, put into law, or no, they haven't, and we are free then to move forward with updating the LAIG.

So we use our review group to, one, review to make sure that we have accurately reflected what was included in the legislative changes, but it also begins the opening of a dialogue about anything that needs to be changed that's currently included in LAIG or [lost audio] or that we may want to add new sections to LAIG. So that begins a real conversation at this point in time. So as we go through our discussions on what should be added or amended, all of us, all the members of the review group, including CDIAC, have to come to an agreement. So I think that becomes really important – we will go over consensus building in a little bit – but that's one of the main points I want to emphasize is that changes made to LAIG are not made willy-nilly. They are made with an agreement of all the members of this working group.

Slide 7 – LAIG: Legislative Changes 12:51

ANGEL HERNANDEZ: Okay, so as I said earlier, legislation is a primary driver of our update. And if you look at the format of LAIG, a summary of legislative changes is actually the last page before the body of the Local Agency Investment Guidelines. And in this section, we will even address if there were no legislative changes. So basically that's the section to go to that says what the legislative changes were. It will also identify other non-legislative changes. It will, in years where there are no legislative changes, indicate that. So that section is really where if you need a summary of what's going on, you go to that page of LAIG. It will explain what changes were made.

And as the slide indicates, legislative changes can be very simple, straightforward. They could be extensions of sunset dates, or they can be more involved. We recently had an addition of a new permissible product, the supranationals. That was in addition to the guidelines. Changes, like I said, they can be complicated or not complicated, but the LAIG will address them.

Slide 8 – LAIG: Consensus Building 14:12

ANGEL HERNANDEZ: Okay. Consensus building. The bulk of the information in LAIG comes from this consensus recommendation. So as I stated earlier, there's four chapters in LAIG, and each chapter is set up the same way. It's a question and answer format. So we will identify either an issue or a question; we identify the minimum legal requirements, which derive back to the Government Code; and then the bulk of the response is contained in our consensus recommendation. And this recommendation, again, involves the experience of those on the working group, of those members of the working group. It reflects best practices. It reflects current market practices. It really is guidance. It's not legal counsel – it's just guidance. We do get a lot of inquiries that are looking for a legal opinion and that is not our role.

Our consensus recommendation is just that. It is a consensus of a working group, which represents a cross section of the industry, and here are their recommendations of how to address the issue. Consensus building is not always easy. We have a great group that we have been working with for many years and so when we don't have a consensus, that usually raises the red flag. And we just recently had an incident – not an incident, we had an issue in which we could not all come together on an agreement, and so we had to work through that issue. The issue actually resulted in legislation, which was effective January 1st, 2017.

So prior to January 2017, rating requirements in Government Code Section 53601 were inconsistent. Some sections referred to a minimum rating criteria in which they were referring to a minimum letter rating. Other areas referred to a minimum rating category. That was left open to interpretation. How CDIAC interpreted it was that instances where the code stated the minimum rating criteria shall be "A" or better, securities rated "A-" would not meet this minimum rating criteria in our view. In other sections, the code referred to a rating category in which all variations of the rating would be permissible, including "A-" or "A+". So at this point all the members of the group couldn't come to an agreement on how we could move forward with the recommendation on interpreting rating criteria.

So the consensus was there was no consensus. So in this rare instance, CDIAC was able to work with committees of the Legislature to make sure the ratings criteria was uniform. We were not changing any of the rating criteria. Those were still intact. It was the wording that is in 53601 that was inconsistent, so we were making that wording uniform. So the changes made were very minimal, but you will notice now in 53601, sections which require a minimum rating standard all have standard language now.

So, for example, if you're looking to buy – I think a medium term note was one of them – it now says "shall be rated in a rating category of ______," insert what is required there, "or its equivalent or better by a NRSRO." That is now the standard language contained throughout 53601 when there's a rating category requirement. So having that consensus recommendation, having us all on board, is really what contributes to the credibility and quality of the guidance that is contained in LAIG.

Okay. So I'm going to turn it over to Deb now who is going to talk about what's new with the 2018 update.

Slide 9 – LAIG: What's New for 2018 **18:38**

DEBORAH HIGGINS: Thank you. We had no statutory changes for 2018 to update. However, we did have some additions and updates to the consensus recommendations. And keep in mind consensus recommendations sometimes are very simple. Other times, it's like making sausage: you don't want to see it until you get the end result. This year we had three. One was duration, which is the measure of a bond's price sensitivity to interest rate changes. However, there are three common types – Macaulay, modified and effective – and the problem is how do you use which one and where would you use which one. So Section III-D is going to be reviewed by Rick Phillips and he'll go over what we did with duration. Short selling was in addition to the discussion, and how to use reverse repo and securities lending. This is Section II-J. Bill Blackwill is going to go over that. And then futures and options. This is a new section that was added this year. That's Section II-P and that will be gone over by Rick Phillips as well. Next slide.

Slide 10 – LAIG: What's New for 2018 **20:01**

JOHN JOHNSON: Okay, this is John Johnson. First of all, I'd like to thank CDIAC for the many years of hard work on the LAIG. As an investment manager, I just want to let you know there are two things that are always on my desktop, and that is, first and foremost, my investment policy, and secondly, the most recent copy of the LAIG so that I can make references in the heat of the moment, and I suggest that all listening do the same. It's just a great resource. So again, I want to thank Mark and all the staff over the years for the great work that CDIAC has done.

So what prompted these changes that we've made to the LAIG this year? We did not have any legislation that was effective as of January 1, 2018. So what brought about some of the changes that were made in some of the updates to the recommendations?

Well, first of all, market conditions are always changing. This is an industry where change is the norm and not the exception. And from the perspective that we've had 10 years of virtually zero interest rates, and we've had a lot of new folks that have come into the investment management space on the public agency side who may have never managed in a rising rate environment. We noticed – some of the committee members noticed questions that we were getting about how to manage money in a rising rate environment. You know, we saw a lot of interest in how to…what tools to use, cash flow management, how to calculate duration, and how to apply that in order to manage the risk in our portfolios in a rising rate environment. Again, a lot of folks retiring, passing the baton to younger staff members. We've got a new environment to manage in, and so Rick is going to discuss some tools that we can use in later slides to assist us in that task.

Also, you know, things come up that we become aware of. Things happen throughout the state. I will not name any names to protect the innocent, but we heard that there was an agency who had funds being managed by a discretionary manager that actually sold securities short in the portfolio and used the reverse repo section as their justification. Of course, that is not allowable and it's something that we will discuss, that Deb will discuss as well, and Bill. But I believe that was settled, but the agency suffered losses, and this was due to a misinterpretation of code language. And so sometimes code language is very gray, and we feel that it's important when we hear about these things, you know, to address those in the consensus recommendation. Like how is this section applied and what does it apply to and how do we interpret that.

And along the lines of that discussion, you know, we internally had discussion about futures and options. Believe it or not, 53601.1 allows the use of options in California portfolios, and that can be a very dangerous tool when misused. So Deb is going to go over some of the slides with respect to futures and options, and I believe Rick as well, and chime in on when is the best time to use those and when not to.

So what is the process for adding a new topic to the LAIG? In other words, we hear about things that are happening out there in agency money management land, and we try to address those. But CDIAC, again, is a great resource. Pick up the phone and call them. If there's something that you have questions about, please communicate with CDIAC. They've been a great partner to not only to the local agencies, but to the associations – CSMFO, CMTA, CACTTC. We all work together to better 53601 and improve practices across the state. And so pick up the phone and call LAIG members or the CDIAC staff and just say, “Hey, I'd like the LAIG committee to look at this and give us some advice.”

DEBORAH HIGGINS: Hey, JJ? Deb. Just to give the audience an idea – at the CMTA conference, I was approached by a dealer asking about a particular investment in the LAIG, and so asking if we would review it. So that's another way, just if you have your broker and you have a question or you want to call CDIAC, people are out there. They know that we review these every year, and so now they're coming up and saying, “Hey, I think there's a misinterpretation here. Would you guys discuss it?” So that's something I will be bringing up. So just an FYI, if you feel like you need to approach somebody and ask about it, that's a great idea, too.

JOHN JOHNSON: Okay, next slide.

Slide 11 – LAIG: What's New for 2018 **26:25**

RICK PHILLIPS: Are you ready for me now?

JOHN JOHNSON: Yes. I apologize. Yes.

RICK PHILLIPS: Good afternoon, everyone. Pleasure to be with you. As mentioned on the slide, I'm going to discuss the concept of duration today. When managing fixed income portfolios, there are two main risks taken, interest rate risk and credit risk. For most municipal operating portfolios, the risk that is the largest driver of return is interest rate risk, and also known as duration. Now, in California code, it also allows a government agency to legally have over 50% of the portfolio in credit instruments. Those instruments have to be highly rated and have had an extremely low historical default rate. So credit risk is important to study as well, and you can increase credit risk and most likely increase returns. Again, duration usually is the biggest driver and factor of income generated.

In our consulting work we do for some of the large counties in the state, we've created a chart that includes many of the county pools that plots the duration on the X-axis and the purchase yield on the Y-axis. And there's an extremely high correlation from the bottom left to the upper right of the graph between yield and duration. The higher the duration, the higher the purchase yield, usually. This, of course, is because the normal yield curve is upward-sloping, with longer-dated bonds having higher yields due to the greater uncertainty of future inflation, eating away at the purchasing power of that bond. So it's, of course, very valuable to understand interest rate risk of your portfolio and, as mentioned, as interests rates are going up most recently.

Let's talk about the different ways to measure that interest rate risk. The most basic way to do this is to calculate the weighted average maturity, or WAM, of the portfolio. The most common way to calculate WAM is to weight the final maturity in years or days of each security by the par, book, or market value of each security. This can be easily done in Excel.

If you have a portfolio bullet or non-callable fixed rate bonds, WAM is a very good indication of your portfolio's interest rate risk. The more advanced way to look at your interest rate risk is to use duration. There are three main forms of duration: Macaulay, modified, and effective duration.

Macaulay duration was developed in 1938 by economist Frederick Macaulay. This form of duration measures the number of years required to recover the true cost of a bond considering the present value of all the coupons and principal payments received in the future. Thus, it's the only type of duration quoted in years, and most of us often do that – you know, duration of 1.3 years. When you use Excel's formula to calculate duration, Macaulay duration is what's being calculated.

Next is modified duration. This measure expands, or modifies, Macaulay duration to measure the responsiveness of a bond's price to interest rate changes. It is defined as the percentage change of a price for a 100 basis point change in interest rates. For example, if a bond's modified duration is two and if interest rates rise by 2%, the bond's price will fall approximately by 4%. The formula assumes that the cash flows of the bonds do not change as interest rates change, which is not the case for callable bonds or floating rate securities. And that's where effective duration is very valuable.

Effective duration, sometimes called option adjusted duration, further refines the modified duration calculation and is particularly useful when a portfolio contains callable securities. Effective duration requires the use of complex model for pricing the bonds and adjusts the price of the bonds to reflect changes in the value of the bond’s embedded options based upon that probability of the option if it's going to be exercised or not. Effective duration incorporates a bond's yield, coupon, final maturity, and call features into one number that indicates how price sensitive the bond is or the portfolio is to changes in interest rates.

So if you have a bullet bond – that's the current two year Treasury note – the duration calculation for all three methods will be really close, within .01, but if the bond has optionality, effective duration is most likely very different than Macaulay and modified duration.

If there's a large allocation to callables in the portfolio, the interest rate risk of the portfolio can change dramatically if interest rates are volatile, like they were in 2016, with China economic worries the first part of the year, and Brexit in June pushing interest rates down both times. And then interest rates jumped after the election, the later part of that year. 2016 was a very volatile year for effective duration of callable bonds.

I've read many investment policies over the years and often see WAM or a duration limit on portfolios, which is a good thing I think. If effective duration is used it could be problematic if interest rates are volatile. In fact, after discussing these nuances of duration with a new client, they recently changed their investment policy to WAM instead of effective duration because of that volatility.

Also, if a portfolio has more complex securities such as floating rate notes, step-ups, and pay down securities, such as asset backed securities, the recommendation from CDIAC is to use effective duration.

So in conclusion, it's very important to understand the concept of duration, mostly because it's usually the largest driver of a governmental agency's investment income over the long run. I think Bill is up next.

Slide 12 – LAIG: What’s New for 2018 **32:21**

BILL BLACKWILL: I'm going to talk about three things really: outright short selling, reverse repurchase agreements, and then also securities lending agreements. And there are commonalities amongst all of these, but they're also very different from each other. Short selling, outright short selling, which is not an appropriate strategy for a public agency, is simply the selling of a security that the seller does not own, or any sale that's completed by delivery of a security that has been borrowed by the seller because they don't own it. The objective is that the seller would be able to buy the security back at a lower price and make money if the price goes down. But the seller's risk of loss is unlimited if the price goes up. So this is clearly a strategy that has risk and a strategy that is not appropriate for public agency.

There is a sort of a derivative of this that a public agency, in theory, can do. It's called shorting against the box, which is the act of selling a security that you already own with the hope of buying it back at a lower price. Typically this is used if the seller thinks that the security is due for a temporary drop in price, during which time they would be able to buy it back at a lower price. But again the success of this strategy would hinge on the ability to buy it back at a lower price. Otherwise, it's simply an outright sale and the public agency selling the security might live to regret it if, of course, the market continued to perform in a way that they wished they owned that security.

So then I'm going to talk about reverse repurchase agreements. And all of these things, short selling, reverse purchase agreements are sort of part of that short-term portfolio management, but, again, short selling and short-term portfolio management are two completely different things.

In a reverse purchase agreement, they're typically used to meet the short-term cash need. It's when a customer, in this case a public agency, in a simultaneous transaction sells a security to a broker-dealer under the provision that the customer will buy it back at a predetermined date for a specific price. So the difference between the price that the customer sold it to them at and the price they bought it back at represents the return. And that is all established at the onset of this transaction. When there are specific securities that are in great demand in the marketplace, in other words, maybe the street is short these securities and is trying to borrow them, they are said to be on special in the repo market. So if a public agency owns a security that is on special, they might be able to do a reverse repo and temporarily loan them out at a very advantageous rate, at a low rate that they could then reinvest and make the difference on. So if a security is on special, that creates an opportunity to make an above-market return on this type of transaction.

So the rules regarding reverse repos, 53601(j) which Deb referred to earlier, in 1995 the Legislature imposed some restrictions on local governments because they were concerned about how the use of reverse repos for enhancing yield. And obviously, much of this stemmed out of the Orange County situation. So reverse repos, and including securities lending agreements, cannot constitute more than 20% of the market value of an agency's portfolio. In addition to that, reverse repos are limited to 92 days unless the minimum spread between the rate of the investment and the cost of funds is guaranteed in writing, and securities used in the reverse repo must be held for at least 30 days prior to initiating the reverse repo transaction.

Now, I want to talk a little bit, take that reverse repo concept and talk a little bit about securities lending agreements. In a securities lending agreement, this is an agreement between a lender, which in our instance is the public agency, and the counterparty, or borrower, which is typically a financial institution, in which the lender agrees to loan its securities to a borrower – the public agency agrees to loan its securities to the financial institution in exchange for collateral – and the collateral can come typically in the form of cash, but in some cases also in the form of securities or even a letter of credit. Once this agreement has been fulfilled, the securities which are held by a separate third party are returned to the lender, the public agency, and the collateral returned to the borrower, the financial institution.

The securities lending agreements are instead of providing a short-term cash flow to the public agency, they're essentially used to earn additional income. Even though the ownership of the loaned securities is legally transferred to the borrower, the local agency is still entitled to all of the interest payments from the collateral that they're using. Securities lending agreements cannot exceed 92 days unless the agreement states in writing that it guarantees a minimum spread for the entire period between the loan of the security and the final maturity date of that security. In this case, if it is put in writing and a guaranteed spread is maintained, these lending agreements can exceed 92 days. They can go longer than 92 days.

The funds obtained from a securities lending agreement cannot be used to purchase a security with a maturity longer than 92 days unless the securities lending agreement includes a written codicil which guarantees a minimum spread for the entire period. This requirement prevents using short-term borrowing to invest in long-term investment, which could lead to liquidity problems or which can also lead to losses. So these agreements, securities lending agreements, are typically only suitable for agencies with at least $200 million in lendable securities, and oftentimes I think for it to be functional and of interest to the financial institutions that are doing this, needs to be in excess of $200 million in lendable securities.

Some of the requirements in these securities lending agreements is that the securities to be loaned must be owned and fully paid for for a minimum of 30 days prior to lending them out. The aggregate of all reverse repos and securities lending cannot exceed 20% of the portfolio. And the term of the reverse repos or the loans of the securities and the securities lending agreement cannot exceed 92 days, and funds shall not be used to purchase another security with a maturity longer than 92 days unless those specific requirements we talked about earlier are met.

There are really three types of risks in securities lending: credit risk, collateral risk, and operational risk. Credit risk is sort of the risk that the borrower of the securities or the financial institution for some reason might not be able to meet its obligation to return the securities. That would be rare, and there are ways of mitigating that risk, but it is a risk. Collateral risk involves the reinvestment of the collateral. In other words, if you get cash and reinvest it, there's always some risk associated with that reinvestment. And certainly there is risk if a securities lending agreement is set up where you're getting things other than cash, like securities or an LOC, that brings into play some other risks. The third form of risk associated with securities lending is operational risk, and this is simply the risk of processing errors, poor internal processes, human error, system errors, or even external events that impact the transaction. So that kind of wraps it up for what I had to say about those.

Slide 13 – LAIG: What's New for 2018 41:38

RICK PHILLIPS: Next slide. Alright, this is Rick again. So I must have drawn the short straw to talk about this easy topic. Let's talk about futures and options. First, futures. It's thought that futures trading started in biblical times when olive growers would look to sell their future harvest. In more modern times, in 1848, the Chicago Board of Trade was established, and then a standard futures contract was created a few years later in 1865 for corn, again for farmers to hedge those future prices.

Today, there are over 100 different types of futures traded worldwide on exchanges. In fact, many of you have probably seen on CNBC or other media the probability of a Fed hike being discussed. The probability comes from the Fed funds futures contract traded at the Chicago Board of Trade. California code Section 53601.1 states, as JJ talked about earlier, "the authority of the local agency to invest funds pursuant to Section 53601 includes, in addition thereto, the authority to invest in financial futures or financial option contracts in any of the instruments…" – sorry, "…investment categories enumerated in that section."

So therefore, according to code language, the only viable futures market for those instruments allowed under 53601 is for Treasuries because there aren't any other futures for the other "allowable investments" that I know of. The futures contracts that can be used are the two year and five year Treasury notes and there are also Treasury futures for the 10 year Treasury note and the long bond.

When you purchase $100,000 of a five year T-note for your portfolio you have to pay $100,000, if it's at par with no accrued interest. Future contracts involve leverage. Lots of leverage. For example, to purchase one contract at a five year Treasury note future there, which is $100,000 notional value, you only have to pay $600 for that $100,000. That's about 165 times the leverage or margin. So you see what I mean by lots of leverage.

Also, if you trade futures, you would have to go open a margin account with a futures broker on behalf of your entity. CDIAC's consensus recommendation states, "…future strategies are complicated and should only be used to hedge matched positions currently held by the portfolio in order to limit the risk of adverse price movements of a given security." So what's an adverse price movement? Well, we've seen that recently. That's of course when rates go up, prices go down. The way to use futures to hedge an existing position is to sell or, in other words, short a Treasury futures contract. That's how you would hedge interest rates going up for your portfolio at the Treasuries that you own.

As code in your investment policy probably states, the investment program's third objective after safety and liquidity is to earn a market rate of income or yield. Futures produce no income or yield. So my personal opinion is that futures have no place in a governmental agency's portfolio. If you want to hedge your portfolio's interest rate risk, shorten the duration. If you want to learn more about futures, I suggest you go to CME Group's website.

Okay. Now, options. There are two types of options, calls and puts. These are derivative instruments that derive their value from an underlying instrument such as the stock or a Treasury note. A call option is an agreement that gives an investor the right but, not the obligation, to buy a stock, bond, or other instrument at a specified price within a specified time period. The seller of the call has the obligation to sell that instrument to the call buyer at that specified price, called the strike price. The put option is just the opposite. It's an option contract that gives the owner the right but not the obligation to sell a specified amount of the underlying security at that specified price within the time period again. The seller of the put has the obligation to buy that instrument from the put buyer at a specified price.

Now, many of you are involved in the options market and may not know it. When you buy a callable bond from, let's say, Fannie Mae, you're actually selling a call option to Fannie Mae. Fannie Mae has the right to call the bond from you, and you have the obligation to transfer it back to them. You're compensated for selling that call option in the form of a higher coupon, higher than you would receive on a non-callable bond of the same maturity and same issuer.

For options that are allowable by code, there are again just those two futures options on the two year and five year Treasury notes at the CME group's exchange. There are also what are called over-the-counter options, which are not standardized like those traded CME. And besides the normal risk of options, buyers and sellers of over-the-counter options also may take on counterparty risk since there is no exchange or standardized contracts.

You can liken buying an option to buying insurance, which, of course, is one way to mitigate risk by paying that premium, that insurance premium. Options are complex and their prices are influenced by the price of an underlying security, the volatility of that security, and the timed expiration. Think of it this way: if you buy car insurance for a year, you're going to pay a lot more than if you're buying it for just one month. That works the same with options.

Now, I trade options and futures for my personal account but, however, to my thoughts on futures, if you're wanting to hedge your portfolio's interest rate risk, shorten the duration, and don't do it with Treasury options. Okay, I think next up is Deb.

Slide 14 – LAIG: Recent Legislative Changes 47:29

DEBORAH HIGGINS: Thanks, Rick. I wanted to go over some of the recent legislative changes for you guys to know kind of what we've been working on. So back in 2013, we were able to broaden the use, well the Legislature was able to broaden the uses, of placement services to include deposits. What happened is back in January of 2007, placement services were an eligible investment type but only for certificates of deposit. So in 2013, they went in and broadened the use of a private placement service to include not only certificates of deposit, but to also include deposits themselves. And so what they did was they basically came in and said they would do 30% in CDs and deposits. But at this point what they actually did, the unintended consequences of the 2013 legislation, is negotiable CDs are also part of the code and they lump that into the 30%.So you could do CDs, deposits, and negotiable CDs at a combined 30%. So that's what the legislation did in 2013. And at the time, the private placement entity, you were only limited to 10% of your money in that particular entity. An example would be CDARs, at the time it was 10%.

Then in 2014, there was the addition of the supranationals as a permissible investment. And prior to 2014, what was interesting is the State of California had already gotten approval to buy supranationals for LAIF. So they wanted to level the playing field to allow cities, counties, special districts to also be able to. And so the supranationals came into play and those are institutions of two or more governments that come together and create these entities. In California, you are approved to do three different ones: the International Bank of Reconstruction (IRBD), the International Finance Corp. (the IFC), and the Inter-American Development (IADB). But supranationals were added in 2014.

Then in 2015, to kind of create and correct what happened with the 2013 Legislature allowing private placements in both deposits and CDs, a couple things happened. One, the private placements were now at 30% combined on CDs and deposits, and the negotiable CDs were put back in their own category and back to being able to do that separately at 30%. And also they increased the single service where the entity used to be, I believe, 10%. Now, you could go in and do 30% in one particular private placement entity.

So your private, your placement services CDs, certificates of deposit, and deposits were now combined at 30% and negotiable CDs were separated at 30%, and then you could increase your allocation to, for example, CDARs from 10% to 30%.

And then in 2016, as we alluded to in the beginning of the presentation, was the clarification of the rating criteria. And like we said before in the beginning, it talked about "shall be rated 'A' or better" and that created some confusion. And the reason being like they said, it's not easily interpreted. Prior to January 1, 2000, medium-term notes were actually defined as "Notes eligible for investment under subdivision shall be rated in a rating category of 'A' or its equivalent." And then during 1999 to 2000, Assembly Bill 1679 amended or deleted parts of the code.

And then the current language became "Notes eligible for investment under subdivision shall be rated 'A' or better" by a nationally recognized rating service. And that's what happened from the standpoint of when we talked about consensus recommendations where there was a great deal of discussion on how we interpreted that and how to correct it. And so the corrections were made throughout the code. I think that's substantially better. People understand now that it's the rating category, and that's what we did on the changes, and that's the last that we have done on changes to the actual legislation for LAIG. Next slide.

Slide 15 – LAIG: Legislative Tracking **52:48**

JOHN JOHNSON: Okay. John Johnson here. CDIAC monitors both federal and state legislation with respect to anything that might affect public agency either banking or investing in California. As stated, there were no additions as of January 1, 2018, but there have been some proposals, and we do have a bill that is moving through the process in the Legislature currently. Not addressed on the slide, but AB 3253 was a proposal from the Bankers Association to make some changes to 53601.8 and 53635.8. That particular proposal has been withdrawn and is no longer active, but if you pull it up on LegInfo you can still view it.

The active bill pertaining to 53601(o) which is AB 1770 has passed the Assembly and is currently in the Senate, with the Senate Banking and Finance Committee. AB 1770 was authored by Assemblymember Marc Steinorth. Actually, San Bernardino County worked with CACTTC. This is a CACTTC-sponsored bill. I want to thank CACTTC as well as Assemblymember Steinorth for helping us out with this. Again, 56301(o) is a delightfully confusing subsection of the code pertaining to the investment in mortgage-backed securities and asset-backed securities. In other words, pass through investment types.

Very frankly, very few agencies utilized this section of the code simply because these instruments are complicated. They're complicated to follow. They're complicated to research and understand. They have cash flows that are variable and are oftentimes unpredictable. They react to market changes and so you get principal and interest back in dimes and nickels in some cases, and your duration can vary with these instruments. But nonetheless, these are allowable by code. CDIAC issued an Issue Brief 16-05 which talks about securitized investments and structured investments, and they identified a problem that we have struggled with this section of the code and the fact that there is some language that we believe is just outdated. This code section goes all the way back to 1992, and I believe it became effective in 1993. The marketplace has become much more sophisticated with respect to mortgage-backeds and asset-backeds, and so the language is not really currently applicable. And the two problems with the existing language are this: there's an issue with the placement of a comma in the list of allowable investment types that some perceive as allowing the investment beyond a five year maturity. Where the comma is placed, it could be interpreted that only consumer-receivable backed bonds are limited to a five year max final maturity.

I know that the Treasurers Association believes that since all of these securities are assumed to be privately-issued, in other words, having credit risk and not government-backed, that a five year maximum maturity we believe should be very clear and stated in the code so that it can be consistent with the medium-term note section in the code.

So one change that AB 1770 will make is to clarify that all of the investment types, all the mortgage-backeds, collateralized mortgage obligations, pay-through bonds, equipment lease certificates, and consumer-receivable pass-through certificates are all subject to a five year final maturity.

The other issue that needs addressing is that the code talks about a two ratings requirement: an issuer rating, which is a category of “A” or better, equivalent or better; and the actual security, the debt needs to be rated “AA” or its equivalent or better. This is confusing because with this section, especially with asset-backed securities, it's very difficult to determine what is the issuer in the transaction. Is it the manufacturer? Is it the finance arm of a corporation? Is it the buyer of the securities? Is it the seller of the securities? Is it the securitized trust? This confusion and concern was highlighted in CDIAC's Issue Brief 16-05, which I suggest that you look at, and it highlights the confusion with the application of the rating.

So the thing that AB 1770 does to address that issue is to simply drop the issuer rating, and only the debt has a requirement to be rated and that is “AA” or higher. And so again kind of a cleanup piece of legislation. It will lessen the confusion with buying asset-backeds and mortgage-backeds for those agencies who wish to purchase them. Actually, it’s more restrictive than the current language, makes the maturity limit five years or less, and that is a hard final. And so the Treasurers Association believes firmly that that's a good idea. And also it eliminates any confusion again about the application of the ratings. And so far we are again in the Senate with the bill, and we are probably going to have some committee hearings coming up shortly. And those are the only items that we are aware of for the 2018 legislative session.

Slide 16 – LAIG: Q&A 59:59

ANGELICA HERNANDEZ: Okay, so it appears that we've come to the end of our slides. If you’ve submitted a question, we will go ahead and submit it to the panel and we will post those answers on our website after the webinar. At this time, we would like to conclude the webinar. I would like to thank all the panelists and thank everyone who logged in and listened. If you have questions following the webinar, please contact us. You have our website here. You can submit questions through that. Thank you very much.