

Capitalizing on New Market Dynamics: Liquidity Insights for Public Finance Entities

February 4, 2019 | 2:00 PM ET

Operator: I'll now turn it over to Rob Dailey. Rob, you have the floor.

Rob Dailey: Great, thank you, Alicia. Good afternoon, everybody. My name is Rob Dailey. I'm an Executive Vice President at PNC and the Head of Public Finance.

Starting about a year and a half ago, we've been in a slightly higher interest rate environment. We've seen increased volatility in rates and in the markets generally. This period follows nearly 10 years of low and static interest rates without a lot happening. As a result of the increasing opportunity available to our clients, we've found that our conversations regarding short-term management of cash investments has become more extensive and complex. So we're hosting this webinar today in order to foster greater understanding about how to frame the decision-making in this new environment and how to evaluate investment opportunities for short-term cash investments.

We're excited today to have an exceptional speaker, Christine Shambach, Senior Vice President in Corporate Liquidity. She is also our Corporate Liquidity Strategist and the Head of Liquidity Management at PNC.

And just a discussion outline here — today's presentation is going to focus on the dynamic interest rate environment and objectives for cash management in short-term investments. We are also going to try to make this very relevant for everybody on the phone. We've got three case studies that delve deeper into the challenges faced with various investment challenges. At the end of the presentation, we'll offer Q&A, and we would, at that point, welcome your engagement and your questions.

So, Christine, let's start with an overview of your approach to liquidity strategy.

Christine Shambach: Certainly. Thank you, Rob, and welcome, everyone, to today's conversation.

So when I think about corporate liquidity strategy and the framework by which an organization can develop a corporate liquidity strategy, I think about a couple of different things. First is a very bespoke solution for your individual organization based on items such as your cash flows, your objectives in terms of cash management. And then coupling in the market environment and the rate environment at that time as well as all of the products, whether they be deposits or investment solutions that you might have for your entity.

And putting that all together to determine a solution that works for you, and then revisiting that set of products being deployed every six months to a year as dynamics change, either for your organization or within the market itself.

Rob Dailey: So, Christine, we had a general rise in rates over the past year and a half, call it. But the past few months have been pretty rocky with a lot of volatility. I would think the first place to start is what's available in the market, turn to the market conditions.

Christine Shambach:

Sure, when I think about the environment, it has been very a tale of two quarters, almost, in the fourth quarter. And I'll start by just talking about this, kind of, two very distinctive impacts that we have in the market. First, just from an economic environment standpoint. You know, the economic data has been very strong. So this is up to the end of the third quarter when we think about GDP being at close to five-year highs or peaking, really, earlier this year — or last year in five-year highs.

You think about employment data, which are really, you know, the market being fully employed and being at 50-year lows. Inflation being very close to the best target, and that was a key piece of input going back a couple of years ago, and then housing prices continue to rise. And it seems all very, very positive when you think about the economic environment.

But then in terms of the tale of two quarters, you turn to the market environment, and the end of the year was very choppy, to say the least. You had a situation that from the peaks that occurred in late third quarter in terms of the equity markets, generally losing about 20% of their value between that period and the end of the year.

And, with that, came a large change in interest rates. You had the 10-year bond moving up to about 3.25, and then moving down almost 70 basis points to its low. And that's a huge move in rates when we think about the overall market environment, and really told a very different story than the economic data. And, really, the market environment is very much looking at items such as long-term growth. So such as trade policies and the expectation of where trade policy will end, including at the end of the year, the government shutdown and what that would mean in terms of ongoing future growth that impacts the GDP.

And then looking forward in terms of what does it mean in the ending of — or the full realization, I should say, in terms of PACs policy and other items that have really been the benefit was realized in 2018, what does that mean for longer-term growth?

And when you put these two items together, you really have, in the bottom right-hand page of — right-hand chart — you really have where the market is saying, from a Fed tightening or monetary policy perspective, that the Fed is not going to move rates again. And, really, potential for easing as you go throughout 2019 and 2020. And that's the market's view.

However, the economist view is still very much another hike in 2019, maybe one to two hikes in 2019, maybe one in 2020, as they believe, from an economic data perspective, that they still support increasing in short-term rates.

So you really have two views here and a tale of two stories. Now, since the end of fourth quarter, some of the markets have turned around, especially on the equity side where you see equity is back about 50% to 75% of the way to where it was. However, on the rate side, especially looking at the 10-year, still very depressed and, really, to a point now where the curve is very, very flat.

So as I move on to think about, that's a lot of data and just thoughts and varied snapshots of the market. But what does this mean for public finance entities? I think we can break it down into short-term and long-term. In the short-term, and this is true whether you're a public finance entity or a corporate or, really, anyone looking at the investment horizon, is that you are not going to get an increase in yield or a material increase in yield as you further extend your investments out the curve. So for a longer-period investment, or longer-term investment, that extra yield is not there.

And that's generally what you see when you think about a yield curve increasing as you go out in tenor. But that's not the market environment today — very, very flat.

And then from a long-term perspective, I think it's very interesting to look at how both tax receipts as well as charitable donations have changed, over time, especially during a recessionary period. Now, I will say that most economists — and I will note that I am not an economist — but most economists do not believe that we are at a period where a recession is in the near term. When they're asked about recessions, it's generally 2020 and beyond.

However, as we start going through a cycle, and this has been a longer cycle. Through a recessionary period, there's generally a material drop in both charitable donations as well as tax receipts. And so that may influence how some of you start to think about how much extra or reserve or strategic cash do I want to have in hand versus deploying that into certain projects or other expenditures.

Rob Dailey:

And so, Christine, as people think about this, you've got a flat yield curve or is the push, then — it sounds to me like what you're saying is the immediate focus is on determining how you want to invest your funds according to the purpose of those accounts knowing that, at some point, you're going to get to a regularly slow yield curve and then decisions around pushing out the curve will get you a little bit more return. Is that kind of where we're — ?

Christine Shambach:

No, I agree. I think, really, my approach, or my view on corporate — or on liquidity strategy is to understand and do it and have a framework or a process by which you evaluate both your internal objectives, which we'll get to, as well as the market environment. And then couple those together to find the best solution for your firm. And really going back to the first page of recessing that every six months because you're right, Rob, if the market environment changes and as if the yield curve steepens, then you're going to have a different set of products and a different set of trade-offs to evaluate for each of your sources of cash.

Rob Dailey:

Yes. So it's less about chasing yield where it is than it is about structuring your products, your investments, your portfolio in a way that, over time, you're going to get to those better relationships of short versus long term.

Christine Shambach:

Right. And then you can reposition as the dynamics change.

So, with that, perhaps we'll move on to how I think about goals and objectives and where the different factors that you can consider. So when I think about factors to consider and how I think about delineating between my cash, it's really three different types of cash.

First is your daily operating cash; second is reserve cash; and third is strategic cash. So I'll start on the left and go through.

So daily operating cash — what do I mean by daily operating cash? It's really the cash you need to operate your entity on a day-over-day, month-over-month basis. So that may be, depending on your individual operating model, that could mean there's a certain amount of payments that you make every month and that you need to have the cash to satisfy those requirements. Or it could be a little more varied based on a seasonal perspective, again, depending on your organization.

But it's looking at your past cash flows, understanding what type of payments that you have historically made, understanding what type of cash you have coming in, and then determining from there what part of your cash balance is put towards daily operating. And, generally, those types of products that you use for daily operating is very much deposit-focused or there would be your "normally." But I think about it from a personal perspective — checking accounts, or PDA accounts or other types of suite products.

Reserve cash is the next layer of cash on top of it. I think about reserve cash a lot as rainy day money or what happens if I have a disruption in my operations? Maybe I'm expecting tax receipts and they're delayed. Or I'm expecting a grant to come in, and it's been delayed. How am I going to fund my daily operating if one of those unforeseen instances occurs? You know, what type of cash do I need to have on hand and how much visibility will I have for some of those delays?

So, really, what's reserve cash, you're generally thinking about how can I increase my yield? Maybe extend out a bit of that but still have the funds accessible in a reasonably short period of time so if something happens, I have access to liquidity. And then strategic cash is our last — and that's our — it's the most investment-focused bucket. And some organizations may have this; some organizations may not have this. Some organizations would think about strategic cash a little bit closer to an endowment or other entity or other larger investment strategy.

But it's really that long-term funds that may be put towards a specific use or its objective is there is for investment over the long term. So it could be for specific use if you are looking to fund a large, you know, say, a building or a scholarship or another item, and you're saving up to fund that over time. Or if you're looking to better support the overall objective of your public finance entity through longer-term investments that you have put away to overall support the strength of that entity.

Rob Dailey:

I distinguish between, you know, your, kind of, first bucket operating, this third bucket is really kind of capital, longer-term needs.

Christine Shambach:

Exactly. And, generally, for this, once given that your investment horizon is much longer, a lot of entities will think about using more securities type of investments, fixed income securities, CDs, and other items to be able to get that extra yield.

So once we think about how to delineate between the types of cash, the next part that I move on to is what are your objectives for that cash? And if we move to the next page, understanding our rate. So now I have delineated my cash into my buckets. For each of those types of cash, I've set my use in general use. And then also my duration. So what is my investment horizon?

For the reserve cash and strategic cash that can be a very entity-specific on what you determine your investment horizon is. But then for each types of cash, what is my view in terms of taking any principal risk? Do I want to invest solely in what I call "fixed asset value investment"? So that's deposits, or CDs, or government money market funds? Or am I willing to take a bit of principal risk and invest in fixed income securities where, over time, you may have unrealized gains and losses. So the value of those securities will change over time until maturity.

Rob Dailey:

Yes, so even if you're holding him, you may have a mark-to-market —

Christine Shambach:

You may have a mark-to-market in the interim. So even say a longer-term treasury bond will have a mark-to-market over time. Even if you feel very comfortable, you're going to get that final amount of principal back from an income statement, from a financial statement, you will have a mark-to-market on any longer-term fixed income security that you hold. And are you willing to do that?

This is something, perhaps, from a public finance standpoint is less of an issue given that you're not publicly disclosing, say, from a market perspective, but it is something — it's a large consideration that I feel a lot of my corporate clients taking it. Do you want to have any impact on your earnings over time?

Rob Dailey:

I think public finance is, sort of, a frequency of the time period might be a little bit longer. It might be an annual and perhaps not quarterly, monthly, but you think about some of the same issues.

Christine Shambach:

Some of it. It is a consideration.

Rob Dailey: Yes, and I would also remark, I think you're framing this according to, kind of, the way the investments are structured, the way the uses are structured, but the same framework applies for governments, for not-for-profits, for higher rate across the whole public finance spectrum — healthcare.

Christine Shambach: Yes. I think you can take this framework and use it for any of these items. Because you're really asking yourself a certain set of questions. And your answers may be very different depending on if you are a government or a higher education or a healthcare client. But the questions are still the same.

Rob Dailey: Yes.

Christine Shambach: And then the last part I'll mention is really management preference. And when I say "management preference," it's really thinking about your own team and who manages your day-to-day and longer-term liquidity. Do you have — does your team have enough time and expertise to manage a more complex structure? So that means in terms of managing, say, a standard deposit MMDA account. Do you have enough — does your team have enough time to manage, and expertise to manage — those six withdrawals you can make a month? Or going even more complex in terms of thinking about a portfolio of fixed income securities, do they have the appropriate amount of expertise to understand the risks between different securities? And that's, again, very organization-specific in terms of answering that question.

Rob Dailey: A lot of times do you have the bodies?

Christine Shambach: Right, it is. Yes, when I say "time," I really mean bodies. Do you have enough people to be able to execute that? Or are you looking for something more of a managed perspective where an organization, you know, such as PNC or others, could manage that cash for you?

And, really, this comes all together on page 11 where you see our full set of products. And it shows some of the products that might fit in each of these different categories. But, again, which product you pick here is very much based on your answers to the questions that we just discussed in terms of principal, in terms of use of cash, in terms of duration. And I'd also throw in there, in terms of types of securities or investments you're allowed to make, concentration limits, and collateral required to the extent that you are an entity that requires your funds to be collateralized or backed by the U.S. government?

Moving on, you know, we have a few case studies that we put together, as Rob alluded at the beginning of the conversation. And, you know, three different case studies, three different scenarios in which you may be able to increase your yield or considerations for all the organizations to think about.

But I think, again, are applicable to any type of public finance entity just really dependent on that individual entity's objectives.

So if we go, Rob, to the first case study — so the first case study, again, we have a lot of illustrative examples, and I'll say these are all illustrative as my disclaimer. But we have an entity that is generally using earnings credit rates and maybe some hybrid checking products as their type of deposit products. And are covering their fees, any of the treasury management fees with the earnings credit.

And they do not need, necessarily, all of the cash to — all of their deposit balances to cover their fees. So there's a couple of different options they could do. We've laid one out here, where in order to increase some of the yield, and having determined that not all of the funds are needed from a daily operating perspective, that you could move some of the funds from your safe hybrid checking account into higher interest-bearing accounts, which could include a full interest-bearing checking account or could include using a government

money market fund. And then we also included a product that we have at PNC that if you can extend out, again, your tenor and your investment horizon a bit longer, something that we call an “accelerated maturity option CD,” which is a one-year CD with the option to accelerate that maturity to 31 days.

And that’s a great product for, say, a reserve cash, especially if you have insight into your potential need for reserve cash or potential need that you have that 31 days to wait for that CD to mature. That’s a great type of use of funds that you really intend to have around for the longer period of time. So nine months, one year, but want to have the flexibility to have access to the funds in a shorter period of time if the need were to arise.

So just by extending out and shifting some of those product shares, you can see in this example you are able to increase your returns materially.

Rob Dailey:

So I’m going to jump in for a second. So, Christine, just to, kind of, go through the table here a little bit. We’ve got instrument availability, meaning we’ve got that access available to us same day, right, all the way through on each of these few products and the amounts at which they’re invested. And as you turn to the next one, the availability gets a little bit more complicated, right?

Christine Shambach:

Yes. So it does increase, kind of, the level of complexity a bit, and this goes back again to the time, the bodies, and the expertise and the ability to forecast some of those cash flows and forecast how much insight you might have into an operational disruption or any potential need of cash. But it shows you an example that if you can do that, here is how you can increase your yield.

Certainly, even just using, say, an interest-bearing checking account, or a government money market fund has that potential to also increase some yield here. Not quite as much as the accelerated maturity option CD we have, but it also provides another option to think about.

Rob Dailey:

But if we’re at a more normal rate environment, the spreads would be bigger, too, right? I mean, so isn’t this also kind of setting up structure-wise so that today it might only yield you, you know, “x” amount more but a year from now that could well be 3x?

Christine Shambach:

Well, for some of these products, for a money fund, I think there’s potentially some pickup on the yield. Probably slightly less than, say, if you were to use a short-term or an ultra-short type of fund as your investment as you go out the tenor. Because, generally, government money market funds are very short in effective duration, but if you go out of it further, historically speaking, that would mean you’d have more yield.

Rob Dailey:

Right. And so on the bottom, the example with the term CD, the availability of \$150 million of that is same day. That incremental \$100 million is available, I guess, on 30 days’ notice.

Christine Shambach:

On 31 days.

Rob Dailey:

That’s the structure of that product?

Christine Shambach: Yes. So you are, again, tying up some of your funds slightly longer, so you are extending your effective tenor of those funds a bit longer. So you have to be comfortable that you've done your forecasting so that you can make that type of more terms investment.

Rob Dailey: And so I might think of the \$150 million as being the operating cash, that \$100 million in the AMO CD is more along the lines of reserve cash, right?

Christine Shambach: Exactly, exactly. Shall we move on to our next example?

Rob Dailey: Good idea, yes.

Christine Shambach: Great. I'm going to advance the slide here. So the next case study is one that is really thinking about timing of investment needs. So this scenario here on the page — and I think this is applicable of many different situations, but we'll walk through the scenario on the page first — is when you may get a large inflow of cash at one time where your use of that cash or spending of that cash is spread over multiple different periods.

An example would be a large donation or a grant that could be brought bond proceeds, and they're all dedicated for either operating cash and spend down over a period of time or a particular use over multiple periods of time.

And what you can do, I think, depending on your entity, you may have normally put this into, say, an MMDA or a money market fund. But one scenario that you could look at doing is breaking that large donation into individual investment pools. So it's basically breaking that large donation into the individual timing in which that fund needs to be used.

So in this scenario here, we have 100 — it could just serve as an illustrative example — \$100 coming in, and we have five investments of \$20 over five different time periods. And what the strategy is, is to take every one of those individual \$20 investments and think about them as an individual investment and compare alternatives — investment alternatives — for that investment. Whether it be a CD or a deposit product, or a fund product, or a particular fixed income or government securities that match maturity to when you need the use of cash. And you do that analysis five times over to maximize the amount of yield for the individual investment.

With that, there is the opportunity to maximize your overall yield versus putting the lump sum into one more shorter-term investment and have that spend down. So, again, using this, what I call, a laddered portfolio allows you to think about that investment options as well as both options from a product perspective and yield a bit differently.

Rob Dailey: So these are funds — unfunded, they may be a commitment of a grant, over time, and when we see funds over five years, it could be contribution agreements that come in, over time.

Christine Shambach: Yes, so there's two scenarios in this. There's ones where you have funds coming one day, and you're investing each of those for a spending point. Or there's the opposite, where you have proceeds coming in over, say, five different periods, and you're all working towards an end of one large disbursement of cash. In either scenario, when you know those dates, you can break those investment pieces up into individual

smaller investments and try to term or increase your yield on that individual piece of the larger investment or the larger funds coming in.

Rob Dailey: So as we go down, if you go down at the bottom, Investment 1, Investment 2, 3, 4, 5, we go out in yield, we're probably, all things being equal, looking at from 1 to 5 you are reducing liquidity and increasing yield, right?

Christine Shambach: Right.

Rob Dailey: Credit staying equal, right?

Christine Shambach: Yes, yes. That is the underlying driver of this type of strategy. If you can term out some of these investments, you can increase your yield when you have known payments or known cash inflows coming in.

Rob Dailey: Right. And, you know, some of our clients have used investment agreements successfully in the past. It just strikes me that in that scenario, they may be entering into a single contract in which the provider is basically doing what you've described here.

Christine Shambach: Yes.

Rob Dailey: Right? I mean there's not a lot of magic here. I think what this allows you to do is see, you know, transparently how these things get constructed. It's really just a matter of nailing down the timing and the investments that correspond to the timing.

Christine Shambach: Yes, yes. It is — yes, it is taking on that type of role. And it's also — I think the other point to note — in today's market environment I think it's important to look at both bank products and fixed income. Normal T-bills, treasury bonds, and other type of securities as well, and compare the yield to process. Because depending on the individual day of investment, you might be able to get a similar yield from a bank product than you get from some of the fixed income security, just given where the market is today.

Rob Dailey: And with that, getting more liquidity in the —

Christine Shambach: Getting on a higher-yield end product — more cash in a higher-yield end product.

Rob Dailey: Yes, yes. With the same liquidity, got it. Okay.

Christine Shambach: The last scenario that we've put together is one that — and it couples two types of products. And this is really focused on folks that have seasonal cash flows, and this could be tuition payments for higher education clients. It could be tax receipts. But generally have a known historical view of how their seasonal cash flow needs or seasonal cash flows look. And I think traditionally, some of the entities have used the deposit heavy or cash heavy, very liquid products for these seasonal flows.

But I think you also have the ability to take a portion of that, especially the peak portions of some of those peak times of your cash and invest them again into longer-term products, whether they be CDs or in terms

of fixed income securities and then utilize a revolving line of credit to fund those trough periods in your seasonal cash flows.

And depending, again, and this is all, of course, dependent on your institution's individual rate to borrow at as well as what investments that you can make. But in doing that, you can potentially increase your yield by using your revolver for a very short period of time. Maybe it's two months. And increasing some of your investments of your peak cash with the objective here, again, optimizing return through both the peak and the trough periods of your seasonal cash.

Rob Dailey: So on the left side, it seems to be the challenge here from the investor or the client's point of view, is to establish that red line, the yellow lines, what exactly — how much money am I going to need?

Christine Shambach: Yes.

Rob Dailey: And this, it strikes me, as being, you know, we have a lot of shorter-term investment decision-making getting done. Effectively, walking in in the morning, see how much cash is available and needs to be invested and just kind of see where I can go with that, right? Whereas this really requires looking out a bit further to say if I look out 12 months, 18 months, what is my liquidity requirement? What kind of buffer do I need above that? And then you're really looking at a target.

Christine Shambach: Exactly. This is — in order to execute the strategy effectively, you have to have a good understanding of what the minimum amount of liquidity needs, what is your daily operating, and what type of buffer or reserve cash, kind of, above that, you want to hold? And so that you can understand what level of funds might I be able to invest in another strategy and utilize a line of credit for a short-term trough period?

Rob Dailey: And so over on the right, the green boxes are where you've invested.

Christine Shambach: Yes. Or the —

Rob Dailey: I'm sorry, where you borrowed.

Christine Shambach: Yes, the green boxes represent where you borrowed. So in this scenario it's a two-month period in which we have this illustrative organization borrowing to really get up to that reserve or that buffer area of cash that you need.

Rob Dailey: Right.

Christine Shambach: And then the gray on the right-hand side, the gray boxes represent the amount of cash that you've invested in a longer-term investment — or a higher-yielding investment.

Rob Dailey: That got you out to that one-year — ?

Christine Shambach:

Yes.

Rob Dailey:

And so — and this is the incremental is net of borrowing costs — you're going to do better on your investment return.

Christine Shambach:

Yes, because you've invested over one year and gotten the higher rate over that four-year period where you've only had to borrow for two months. So even though your investment rate is lower than your borrowing rate, given that the duration of your investment time frame or the amount of time you need to borrow against the revolver is so much shorter, you're still net-net over that year, better off.

Rob Dailey:

So this strikes me as being, you kind of get to a point where you're at true liquidity management both asset and liability side. You know, we don't always find among our clients that they've got the ability to do both sides in a single office. But a lot of these questions haven't really been looked at hard for 10 years, and so it may well be something that becomes an organizational issue strategically — is this something we ought to be talking about?

Christine Shambach:

I agree. And that's why, in terms of thinking — and we spend a lot of time talking about corporate liquidity strategy or liquidity strategy internally and with clients externally is because rates that were so low for so long, depending on the tenure of your individual staff, they may have not worked very long in a rate environment that was greater than zero.

Rob Dailey:

Never say *[multiple speakers]*.

Christine Shambach:

[laughing] So some of these products and some of these options are ones that they hadn't really assessed because at that point in time, in ECR rates and what you could get in the money funds or in other scenarios, were not that much different. But now there is larger differences between the different options and thinking about how you set your own goals and objectives from your organization and then looking at the market environment and comparing the alternatives and what do I — and I talk about trade-offs all the time internally and externally. What's my trade-off from one to another to another, whether it becomes in terms of liquidity, principal, value, management, time, and expertise and see what might fit best in your organization. In some scenarios, it may be the best fit is what I'm doing today. In others it may be, hey, I should think about these other products and let me investigate in how I can get sharper in terms of managing and forecasting some of my own internal cash so that I can extend out.

Rob Dailey:

Yes. Okay. Well, I found this particular page to be interesting. It took me a lot again to get my arms around the whole thing. But I like it because it does bring the whole issue to a head. It's not really just an investment question, it's how much do you need available at any time for what availability and how to manage on both sides of it.

Okay. Well, why don't we now thank you, Christine. Why don't we now move to the Q&A portion of the webinar. So I'll just say out to the audience you can ask questions using the Q&A window. If you don't see the Q&A window simply click on the Q&A widget found in the lower center portion of your screen. We do have a few questions that have come in, and so I'm going to get to the right page. And I'll start with those, but I would invite people to go ahead and enter questions if you have them.

Okay, so the first question is around investment policies. So a couple of related questions on this, "Do all organizations have investment policies?" And then it got to "What's the most common type of investment

policy or investment strategy have you seen used?” And so if you want to, kind of, address both of those.

- Christine Shambach:** Sure. So, you know, not all organizations have investment policies. I would encourage organizations now, again, since we are no longer in a zero rate environment to think about creating an investment policy. If you have any questions in terms of what normally goes into an investment policy, you know, that’s something that we can definitely provide some information on.
- Like I said, I would encourage all organizations to have investment policies. Generally investment policies start by doing some of the items that we just talked about in terms of identifying different types of cash your organization has in terms of daily operating reserve and strategic types of cash. And then setting parameters around what type of investments or what type of products can be used for each of those types of cash?
- So that may mean thinking about the principal risks that you’re willing to take in each type of cash. And then setting in terms of how much of — setting which investments I can use, whether it be deposit products or fixed income securities or managed accounts for that type of cash. And setting any other requirements, whether it be concentration limits, credit ratings, or those types of investments, and it really a lot of the questions that we just talked through, it’s really memorializing all of those answers to those questions in a document that is shared and distributed among your organization.
- Rob Dailey:** That becomes — this can be as informal as a staff document, a memo, memo to the file kind of thing, right?
- Christine Shambach:** Yes.
- Rob Dailey:** I would make one distinction between permitted investments and investment strategy. You know, many — most — probably all of our government clients have permitted investments. And that frequently becomes a document about on which a discussion takes place about what can we do.
- Christine Shambach:** Right.
- Rob Dailey:** And less frequently do we have written down, here is the way we’re going to think about it. Here is the way we’re going to think about investing operating cash and here’s how we designate it. Here is how we would think about reserve cash, strategic cash, et cetera. And I would also note that we got a template — investment strategies that are available through PNC, but they’re also industry groups that have them available, too.
- Christine Shambach:** So in terms of the most common type of investment strategy used, I would say, you know, there’s not a common type of — there’s not one size fits all. It really goes back to the beginning when I think about liquidity strategy and understanding your organization’s objectives and your organization’s requirements and putting the market layer over the top of that.
- Now, I will say there are common themes. Common themes are there’s generally use of deposits and deposit products in most strategies I’ve seen. I think given the market environment today, there’s probably a lower portion of fixed income securities that I’ve seen in the past. Again, what we talked about in terms of not getting a lot of pickup and yield for going out the curve. And so that has just — that’s really a market dynamic that has said, “Hey, I’m not going to tie up my funds longer. I’m not going to take interest rate risk given I’m not getting a lot to take that.”
- But, overall, there isn’t a one common strategy used. I think there’s common approaches, but that strategy should be individual for your entity given your objectives.

Rob Dailey: Okay, here's one. "Given the flatness of the yield curve, where are investors picking up yield today?"

Christine Shambach: Well, as we talked about, there's really — when you think about the yield curve — and when I say "the yield curve," and we talk about the yield curve, it's the government yield curve. So when you think about the government yield curve there's not a lot of places to go. There's a little bit of pickup here and there in the front end — the front end of the curve, and that's really it.

So where do you go if you want to pick up yield? It's really in terms of what your permissible investments are, because permissible investments, say, from a government entity, may not allow you to go outside of either government or government-backed type of securities. If you can go out, I've definitely seen some folks move out more towards either, say, the prime money market funds. So if you look at just prime money market fund flows or total amounts of invested that increase towards the fourth quarter a bit. Or you look at one of the investments within prime funds, which is commercial paper, which still has a little bit more of a shape for that curve than, say, a government fund.

But to be very honest, just given the flatness, there's not a lot of basis within the government perspective to go.

Rob Dailey: Okay, great, thanks. I've got here a question, "What are your thoughts on the number of times the Fed will increase rates?" I don't know if Christine Shambach, Ph.D. *[multiple speakers]*...

Christine Shambach: I am not an economist, but I think if you go back to our last publicly available report from PNC's Economist, I believe in 2019 they have two rate hikes in, though I will say that I believe this is published monthly, and we're probably due for another National Economic Outlook being published probably in the next couple of weeks. So I would look to that or contact your PNC contact if you would like to get an update of that report. That is published externally.

Rob Dailey: And, clearly, the Fed, you know, the last return was more dovish, so —

Christine Shambach: Yes, and the Fed-speak is very much about, kind of, a wait-and-see approach and being very data-driven. So it is looking at those individual reports and the tone of the Fed to be able to get a better view.

Rob Dailey: Here's one — "How can we implement strategies towards real potential economic downturn?" So I guess it's kind of a two-part question, right? Like at what level do you incorporate an economic forecast into your investment strategy? And then how do you position?

Christine Shambach: So an economic forecast is hard in terms of thinking about the future when none of us have a crystal ball in terms of what is going to happen. But I do think, as you hear commentary about if there may be a recession, what happens in terms of recessionary timeframe? What we've seen historically, and I'm going to go back to historically versus any kinds of advice going forward. But, historically, what we have seen is companies move more, companies and other entities move more into cash because in that economic downturn, generally, I've seen some type of volatility. Volatility means fixed income securities may have more of a mark-to-market type of change.

So more into cash and really holding more cash versus investing out or funding other items because they are waiting to see what happens. Again, if I go back to a page earlier in our presentation, what is going to happen

to my tax receipts? What is going to happen to my charitable donation and how is that going to impact my ability to operate through the cycle?

Rob Dailey:

Thanks. Okay, “Is the extra cost of utilizing an active manager that of a passive manager justified in terms of the additional returns that you may earn?”

Christine Shambach:

Well, that’s, again, harder. What I’m not going to speak from a one-to-one perspective, but I really think when you think about hiring a manager versus doing it yourself, is really going back to my comments around what is your management preference? Do you have the time and the expertise to be able to enact that strategy? And if you have the time and the expertise to enact that strategy, and you can replicate something very similar to what you might have in a managed portfolio, then albeit you have the ability to do that so there’s not a need to pay that extra management fee. However, I think most organizations within their treasury function overall, do not have the full set of folks needed to be able to execute those strategies or do things such as understanding the credit risk of an individual investment, managing the portfolio and watching it on a day-to-day basis, executing trades through a broker/dealer.

So with that there is the benefit of outsourcing it to folks that that is their daily job. So I go back, again, individual decision based on your company’s time and expertise in that area of investment.

Rob Dailey:

Yes. Back to staff, right? They have the bandwidth to do it. But I think as we’ve shown, it can be a pretty transparent exercise, you know, governed by time.

All right, okay. So here is one. “When should my entity think about moving cash into a more strategic portfolio versus holding it in an operating account? It strikes me that this has kind of helped me to understand better the difference between the operating cash and reserve cash.

Christine Shambach:

That’s exactly right, Rob. So when I think about the answer to this question, I think about very much of answering it with another question, in a way, is you should think about moving it once you can understand your daily operation requirements and monthly operating cash requirements as well as seasonal requirements that you are comfortable with taking that portion of cash and designating it from a strategic perspective. And then terming that out or tying it up from a liquidity standpoint. But, really, the key to making — to answering that question — is understanding those other items, to be able to identify that amount of cash. And once you’ve identified that amount of cash, then I think it does — you’ve done a thorough amount of vetting, then it makes sense to think about how I can best deploy that into a higher earning investment for products.

Rob Dailey:

Kind of think of it as just to projected cash flows into now it’s right and then begin to try to think about what’s that liquidity requirement versus, you know, a higher target liquidity.

Christine Shambach:

Exactly.

Rob Dailey:

Okay, I think that’s the last question I’ve got. Anything else, Christine, that you wish you had said that you haven’t said yet?

Christine Shambach: No. Just thanks very much for joining and, of course, you know, we have resources here if there are questions that you have about the presentation that come up after. Please feel free to reach out via your PNC contact, and they can reach out to me.

Rob Dailey: Great. Thank you. I will say to everybody, thank you very much for participating in the webinar. We will continue to do these webinars on timely public finance topics. We're looking to do them on a more or less quarterly basis.

I would ask you — you'll see, I think, in the page that we pushed out now, we've got a link to a survey, so please provide us your input on — with that tool. We want to make sure that we are delivering content and topics that are both timely and useful, valuable to people. So thanks for participating in that.

And, again, thank you, and that concludes our presentation today.

The webinar you will view was prepared for general information purposes only and is not intended as legal, tax or accounting advice or as recommendations to engage in any specific transaction, including with respect to any securities of PNC, and do not purport to be comprehensive. Under no circumstances should any information contained in this webinar be used or considered as an offer or commitment, or a solicitation of an offer or commitment, to participate in any particular transaction or strategy. Any reliance upon any such information is solely and exclusively at your own risk. Please consult your own counsel, accountant or other advisor regarding your specific situation. Neither PNC Bank nor any other subsidiary of The PNC Financial Services Group, Inc. will be responsible for any consequences of reliance upon any opinion or statement contained here, or any omission. The opinions expressed are not necessarily the opinions of PNC Bank or any of its affiliates, directors, officers or employees.

Bank deposit, treasury management and lending products and services, and investment and wealth management, and fiduciary services are provided by PNC Bank, National Association, a wholly-owned subsidiary of PNC and **Member FDIC**. Lending products and services, including the Working Cash Line of Credit Sweep services, require credit approval. Earnings Credit and Interest eligibility and rate are variable and subject to change at any time without notice or limit. PNC reserves the right to charge an Account Balance Fee on certain currencies. Foreign exchange restrictions may apply.

PNC Bank Offshore Deposits are not insured by the FDIC or any other government agency. PNC Bank Offshore Deposits are maintained with PNC Bank's Nassau, Bahamas, branch, and payment thereof may be demanded only at that office. Money Market Mutual Funds are offered by PNC Capital Markets LLC, a registered broker/dealer, member FINRA and SIPC. Investment management products and services are offered by PNC Capital Advisors, LLC, an SEC-registered investment adviser. Registration with the SEC does not imply any level of skill or training. PNC Capital Advisors, LLC is an indirect subsidiary of The PNC Financial Services Group, Inc.

Important Investor Information: Investment and brokerage products are: **Not FDIC Insured. Not Bank Guaranteed. May Lose Value.**

The information provided herein is not intended to be and should not be construed as "advice" within the meaning of Section 15B of the Securities Exchange Act of 1934, as amended.

Further:

- (a) PNCCM is not recommending an action to the municipal entity or obligated person;
- (b) PNCCM is not acting as an advisor to the municipal entity or obligated person and does not owe any duty pursuant to Section 15B of the Exchange Act to the municipal entity or obligated person with respect to the information contained in this communication;
- (c) PNCCM is acting for its own interests; and
- (d) the municipal entity or obligated person should discuss any information contained in this communication with any and all internal or external advisors and experts that the municipal entity or obligated person deems appropriate before acting on this information or material.

The following disclosures are required by Municipal Securities Rulemaking Board ("MSRB") Rule G-17, as PNCCM proposes to serve as an underwriter, and not as a financial advisor, municipal advisor or fiduciary to any person or entity, in connection with the issuance and sale of securities for the issuer to whom this is addressed:

- (i) MSRB Rule G-17 requires an underwriter to deal fairly at all times with both municipal issuers and investors.
- (ii) An underwriter's primary role is to purchase securities with a view to distribution in an arm's-length commercial transaction with an issuer; and an underwriter has financial and other interests that differ from those of such an issuer.
- (iii) Unlike a municipal advisor, an underwriter does not have a fiduciary duty to an issuer under the federal securities laws and is, therefore, not required by federal law to act in the best interests of that issuer without regard to its own financial or other interests.
- (iv) An underwriter has a duty to purchase securities from an issuer at a fair and reasonable price, but must balance that duty with its duty to sell those securities to investors at prices that are fair and reasonable.
- (v) An underwriter will review the official statement, if any, for those securities in accordance with, and as part of, its responsibilities to investors under the federal securities laws, as applied to the facts and circumstances of the transaction.

PNC Capital Markets LLC ("PNCCM"), member FINRA and SIPC, is a wholly owned subsidiary of The PNC Financial Services Group, Inc. ("PNC") and affiliate of PNC Bank, National Association ("PNC Bank"). PNCCM is not a bank or thrift, but rather, it is a separate and distinct corporate entity from its bank affiliate.

This document is for informational purposes only. No part of this document may be reproduced in any manner without the prior written permission of PNCCM. Under no circumstances should it be used or considered as an offer to sell, or a solicitation of an offer to buy, any of the securities or other instruments mentioned in it. The information contained herein is based on information PNCCM believes to be reliable and accurate, however, no representation is being made that this document is accurate or complete and it should not be relied upon as such. Neither PNCCM nor its affiliates make any guaranty or warranty as to the accuracy or completeness of the data set forth herein. Opinions expressed herein are subject to change without notice. The securities or other instruments mentioned in this document may not be eligible for sale in some states or countries, or suitable for all types of investors; and their value and returns may fluctuate and/or be adversely affected by changes in exchange rates, interest rates, or other factors.

PNCCM and/or its affiliates may either make a market or deal as principal in the securities mentioned in this document, or in options or other derivative instruments based thereon. In addition, PNCCM and its affiliates, shareholders, directors, officers and/or other employees may, from time to time, have long or short positions in such securities or in options, futures or other derivative instruments based thereon. One or more directors, officers and/or employees of PNCCM or its affiliates may be a director of an issuer of securities mentioned in this document. PNCCM or its predecessors and/or affiliates may have managed or co-managed a public offering of, or acted as initial purchaser or placement agent for, a private placement of any of the securities for any issuer mentioned herein within the last three (3) years and may, from time to time, perform investment banking or other services for, or solicit investment banking or other business from, any company or issuer mentioned in this document.

PNC Capital Markets is the marketing name used for investment banking and capital markets activities conducted by PNC through its subsidiaries PNC Bank and PNCCM. Securities underwriting, sales and trading services are provided by PNCCM. Foreign exchange and derivative products are obligations of PNC Bank, National Association.

©2019 The PNC Financial Services Group, Inc. All rights reserved.

CIB PF PDF 0219-0141-1145301