| | |
|---|---|
| **From:** | Nikos |
| **To:** | Oliven, Kent |
| **Cc:** | Hamilton, Shawn; David F. Schmidt; Daniel Knight; M Mazzuca; Martin Maloney |
| **Subject:** | Fwd: Flooding / Advisory Referendum |
| **Date:** | Friday, June 13, 2014 9:16:26 AM |
| **Attachments:** | AAA MMD.xlsx |

Kent,
Please review the attached information by resident Shawn O'Leary, a municipal bond professional, who I believe you are familiar with. Please analyze the information's accuracy, value and reliability. I will be forwarding a couple of more emails from Shawn containing more information which I would like you to also analyze. I would like the emails and attachments included in Monday's packet for discussion under the flood referendum question segment. Please be prepared to discuss them. I am including the Mayor and chairmen of finance, P&R and Public Works.
Thank you for your help.
Nicholas Milissis

Sent from my iPhone

Begin forwarded message:

**From:** "Shawn O'Leary" <soleary555@gmail.com>
**Date:** June 5, 2014 at 9:46:57 AM CDT
**To:** dave@parkridgemayor.com, Daniel Knight <knightdanielj@yahoo.com>, MilissisForAlderman@gmail.com, parkridgeward6@gmail.com, shubert4alderman@gmail.com
**Subject: Flooding / Advisory Referendum**

Hello Mayor Schmidt and Council Members:

Due to my work travel schedule I have been unable to attend recent council meetings, but want to be sure to share my thoughts about the proposed flood referendum. I did my best to search for email addresses for the entire council but could only find a handful of them. If you are allowed to forward on to one another please do so.

While I am a second ward resident I have been spared from flooding, so this is not a self-interested email. I'm writing because I find it disturbing to see the city's elected officials - many of whom in the last few years have been so diligent and thoughtful about safeguarding the city's financial future - effectively abdicate their responsibility to maintain critical city infrastructure.

I want to speak plainly here - the motives behind the proposal to punt on moving forward with sewer improvements in favor of an advisory referendum are quite transparent. As these projects are concentrated in one area of the city there is a hope that the rest of the city will vote to decline the projects. It's a craven attempt to avoid a tax/fee increase, while making it look like the council is merely deferring to the voters. It has the ugly consequence of pitting parts of the city against each other

and will lead to future tit-for-tat behavior among residents and elected officials alike. This is both bad politics and bad public policy. I am sure there will be capital needs in other city wards in the future; don't think this will be forgotten when those projects are brought up for consideration.

As an aside, when I've volunteered to assist the city in the preservation of its credit rating (working with the city manager and finance director to prep them for meetings with Moody's analysts) and to be the citizen representative on the TIF board it has not been as a 2nd ward resident; it has been as a Park Ridge resident. It is very disheartening to know that a significant portion of the city council is now taking an "us versus them" view of Park Ridge residents. This is not how city government should function.

As a home rule city the city council is empowered to consider capital needs and incur debt as needed to fund such projects. I understand that the Uptown TIF debacle looms large as an example of prior councils/mayors abusing this authority, but that is not comparable to critical infrastructure investments that support the healthy, safety and welfare of the city's residents. We should not compound the error of the Uptown TIF by allowing it to prevent Park Ridge from engaging in the basic functions of government. If the city council is not interested in exercising its home rule authority, perhaps the citizens should seek a home rule repeal referendum. It is an idea worth pursuing in light of this course of action and I am certain I could quickly amass the necessary signatures just in the second ward alone. Just ask your counterparts in cities like Rockford how citizen repeal of home rule has impacted their ability to manage their city.

Finally, I would encourage you not to be penny-wise, pound-foolish. I've attached a spreadsheet showing the history of AAA-rated GO yields for June 1 of each year from 2003 through 2014. The AAA yield curve is the index used in the municipal bond market for pricing. Park Ridge, being a AA-rated credit, would be priced at a spread to this curve but it is useful in terms of seeing the directionality of yields in recent years and the impacts on pricing. For the period the average yield on a 20-year bond is 3.84%. Today the yield on a 20-year bond is 3.02%, or 82 basis points cheaper to the issuer than the average. On a theoretical $25 million 20-year term bond (using a term rather than a serial bond for the sake of simplicity), that 82 basis point reduction from the average yield generates nearly $204,000 in annual debt service savings. When compared to the high point in rates, the spread to current rates generates $457,500 in annual savings. At some point, if this council doesn't act, some future council will approve these projects - but likely in a higher rate environment. Is your resistance to these projects worth sticking Park Ridge citizens with anywhere from $200,000 to $450,000 (or more) of added annual costs?

This email is not meant to be an attack by any means; rather, a plain-spoken and hopefully informative email from a resident that loves living in Park Ridge and is committed to working with the city to bring about the best possible outcome for all of the city's residents. And while I

generally hate appeals to authority, I would hope you would take note that I am actively involved in the municipal bond market and am astonished that any city with significant capital needs is not jumping at the opportunity to take advantage of this rate environment. If any of you would like to discuss this in more detail please don't hesitate to email me or call me at 312-965-2768 (cell) or 847-720-4772 (home). In the meantime, I plan to share similar thoughts and analysis with local media outlets. The opportunity cost of inaction is not easily seen, but once revealed, is in my view very persuasive.

Best,
Shawn O'Leary
2060 Manor Lane

| | Yield | Ave. Yield 2003-14 | Spread to Historical Average | Annnualized Spread Savings From Ave on $25MM of 20-Yr Term Debt | High Yield | Annnualized Spread Savings From Max on $25MM of 20-Yr Term Debt |
|---|---|---|---|---|---|---|
| **06/01/2003** | 3.94% | 3.84% | | | 4.85% | |
| **06/01/2004** | 4.85% | | | | | |
| **06/01/2005** | 4.00% | | | | | |
| **06/01/2006** | 4.37% | | | | | |
| **06/01/2007** | 4.22% | | | | | |
| **06/01/2008** | 4.32% | | | | | |
| **06/01/2009** | 4.21% | | | | | |
| **06/01/2010** | 3.66% | | | | | |
| **06/01/2011** | 3.87% | | | | | |
| **06/01/2012** | 2.67% | | | | | |
| **06/01/2013** | 2.90% | | | | | |
| **06/01/2014** | 3.02% | | 0.82% | $203,958 | | $457,500 |

**From:** Nikos
**To:** Oliven, Kent
**Cc:** David F. Schmidt; Martin Maloney; Hamilton, Shawn; Dan Knight; M Mazzuca
**Subject:** Fwd: Debt Information
**Date:** Friday, June 13, 2014 9:19:42 AM
**Attachments:** Park Ridge Debt Affordability.xlsx

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See previous email.
Thank you
Nick

Sent from my iPhone

Begin forwarded message:

> **From:** "Shawn O'Leary" <soleary555@gmail.com>
> **Date:** June 5, 2014 at 6:07:14 PM CDT
> **To:** Nicholas Milissis <milissis@aol.com>
> **Subject: Debt information**
>
> Hi Nick:
>
> I wanted to give you more information, particularly as it pertains to two of the arguments made in that meeting Monday: (i) this could bankrupt the city, and (ii) if the city does $25-50MM of new projects it could prevent the city from doing future capital financings.
>
> As for bankruptcy, that's just pure and simple baseless rhetoric. Park Ridge is in no danger - whatsoever - of bankruptcy. All cities have their financial challenges, but the vast majority of them would trade their situation for Park Ridge's troubles in the blink of an eye.
>
> As for debt, analysts and investors look at debt not as a single number, but in context to the taxable resources and capacity of the taxbase to pay the debt. This is done by looking at debt to total valuation of the taxbase, debt per capita and debt to income (per capita income x population). There are other measures, but these are rather standard ways of looking at debt.
>
> The attached analysis shows Park Ridge's debt profile in the context of these metrics, and also adjusts the metrics to reflect $25MM and $50MM of additional debt. It then compares these metrics to Moody's medians for those metrics for all U.S. cities. The median rating for those cities is Aa3. There are wide variances around these medians (the numbers are midpoints for thousands of cities), but it is very instructive.
>
> Park Ridge's debt, even with the Uptown TIF, is very modest as compared to other US cities. Direct debt burden of 0.8% as compared to 1.1%. Debt per capita of $1,158 as compared to $1,252. Debt to income (the measure of debt to economic resources and paying ability) of 2.7% as compared to 4.8%. The analysis also shows the impact of $25MM or

$50MM of new debt on these metrics - we remain close to the medians and well within the range of the median by any measure. There would be no impact on the city's ability to finance future projects. Moreover, I tossed in Bridgeview, IL, as a counter example. It is BBB+ and just yesterday sold new debt in our market. It has a much larger albatross in the Toyota Stadium, smaller population, smaller taxbase, weaker income levels, etc, etc, etc and went to market and sold bonds. The idea that new sewer debt hinders Park Ridge's financing capacity in any way is absolutely without merit.

The analysis is attached for your review. Please use as you see fit.

Best,
Shawn

| | Park Ridge | Moody's Median Issuer - All U.S. Cities (Aa3) | Bridgeview (BBB+) |
|---|---|---|---|
| GO Debt | $ 43,665,000 | $ 21,931,549 | $ 233,050,000 |
| $25MM Debt | $ 68,665,000 | | |
| $50MM Debt | $ 93,665,000 | | |
| FY12 Valuation | $ 5,178,374,577 | $ 1,958,174,000 | $ 1,364,090,492 |
| Debt Burden | 0.8% | 1.1% | 17.1% |
| $25MM Debt | 1.3% | | |
| $50MM Debt | 1.8% | | |
| Population | 37,721 | 17,514 | 16,521 |
| Debt Per Capita | $ 1,158 | $ 1,252 | $ 14,106 |
| $25MM Debt | $ 1,820 | | |
| $50MM Debt | $ 2,483 | | |
| Per Capita Income | $ 43,003 | $ 26,115 | $ 20,907 |
| Total Income | $ 1,622,116,163 | $ 457,378,110 | $ 345,404,547 |
| Debt to Income | 2.7% | 4.8% | 67.5% |
| $25MM Debt | 4.2% | | |
| $50MM Debt | 5.8% | | |

**From:** Nikos
**To:** Oliven, Kent
**Cc:** Hamilton, Shawn; David F. Schmidt; M Mazzuca; Dan Knight; Martin Maloney
**Subject:** Fwd: Additional Sewer Financing Analysis
**Date:** Friday, June 13, 2014 9:23:10 AM
**Attachments:** Financing Costs.xlsx
ATT301201.htm

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Last one.
Thank you
Nick

Sent from my iPhone

Begin forwarded message:

**From:** "Shawn O'Leary" <soleary555@gmail.com>
**Date:** June 11, 2014 at 11:22:17 AM CDT
**To:** Daniel Knight <knightdanielj@yahoo.com>, martymaloney@gmail.com, parkridgeward6@gmail.com, smith.3rdward@gmail.com, milissis2ndward@gmail.com, Roger Shubert <shubert4alderman@gmail.com>, bhennema@parkridge.us, jfsweeneycouncil@sbcglobal.net, dave@parkridgemayor.com
**Cc:** journalnews@mail.com, bmeyerson@pioneerlocal.com
**Subject: Additional Sewer Financing Analysis**

Hello all:

Since my last email to you I had the opportunity to watch the video of the city's special meeting on flooding. There are a few statements made by council members during that meeting pertaining to the proposed project's impact on the city's finances, future financing capacity and solvency that simply aren't supported by any reasonable analysis. In particular, those comments were:

(1) The issuance of additional debt could push the City to bankruptcy.

(2) The projects represent additional Uptown TIFs that could further pressure the city's finances.

(3) Assumption of debt from the projects could limit the city's ability to finance future projects.

I'll take each of these assertions one at a time, and also have included some analysis of the opportunity cost of delaying these projects any longer.

**-- Issuance of additional debt could push the City to bankruptcy:**

Park Ridge is in no danger - whatsoever - of bankruptcy. All cities have their financial challenges, but as a career municipal credit analyst (and the analyst for truly fiscally distressed entities such as Puerto Rico and

Detroit) I can definitively say the vast majority of local governments would trade their situation for Park Ridge's troubles in the blink of an eye. Moreover, as a practical matter, cities must show that they are eligible for bankruptcy. These tests include, but are not limited to: (i) showing that the municipality is insolvent, defined in Chapter 9 Municipal Bankruptcy Code as generally not paying debts or inability to pay debts when due, and (ii) the municipality must have, among other things, attempted to negotiate with, but come to an impasse with its creditors, or there must be a finding that such negotiations would be futile. Park Ridge is nowhere near insolvent and is light years from approaching that point. There is simply no merit to claiming these projects could bankrupt the city, and the use of such unfounded rhetoric seriously undermines the credibility of anyone that would say such a thing.

**-- The projects represent additional Uptown TIFs that could further pressure the city's finances:**

This is a very deceptive way to compare the Uptown TIF to legitimate capital projects. This argument can be reduced to: "The sewer projects could cost as much as the Uptown TIF, and the Uptown TIF is really squeezing the budget!" But this is a false comparison. First, the Uptown TIF (and full disclosure, I rated portions of the Uptown TIF when a Moody's analyst) identified two payment sources for the bonds: TIF increment from the projects and, if that was insufficient, a citywide property tax levy. When the TIF increment proved to be insufficient the city made the policy decision to abate the property tax levy for the bonds and make up the shortfalls from the city's existing budget. It's not that the debt - in and of itself - pressured the budget: it was the combined insufficiency of the increment coupled with a decision by the city itself not to make use of the other available, and reliable, revenue source (property tax levy).

This situation is not analogous to bonds issued for bread-and-butter capital improvement projects. Whether secured by sewer revenues and/or property taxes, to assume the debt would have the same impact on the city's financial picture is to believe that the city would see both a collapse in sewer payments and a spike in property tax delinquencies heretofore never experienced in Park Ridge. Barring such a collapse, why on Earth would this council or any future council ever abate a levy for duly issued capital improvement purposes and bring those obligations into the operating budget (such as has been done for the Uptown TIF debt)? It makes no sense at all and simply wouldn't happen under any reasonable scenario. This argument is completely hollow.

**-- Assumption of debt from the projects could limit the city's ability to finance future projects:**

Here again an argument is being made that is simply not supported by the facts. This is something that is subject to simple objective analysis by comparing the City's current and pro-forma debt levels to the market as a whole. The analysis shows no support whatsoever for the idea that financing these sewer projects could preclude the city from financing such projects in the future. Municipal analysts and investors look at debt

not as a single number, but in context to the taxable resources and capacity of the taxbase to pay the debt. This is done by looking at debt to total valuation of the taxbase, debt per capita and debt to income (per capita income x population). There are other measures, but these are rather standard ways of looking at debt.

The attached analysis (see "Debt Ratios" tab) shows Park Ridge's debt profile in the context of these metrics, and also adjusts the metrics to reflect $25MM and $50MM of additional debt. It then compares these metrics to Moody's medians for those metrics for all U.S. cities. The median rating for those cities is Aa3. There are wide variances around these medians (the numbers are midpoints for thousands of cities), but it is very instructive.

Park Ridge's debt, even with the Uptown TIF, is very modest as compared to other US cities. Direct debt burden of 0.8% as compared to 1.1%. Debt per capita of $1,158 as compared to $1,252. Total debt to annual citizen income (the measure of debt to economic resources and paying ability) of 2.7% as compared to 4.8%. The analysis also shows the impact of $25MM or $50MM of new debt on these metrics - we remain close to the medians and well within the range of the median by any measure. There would be no impact on the city's ability to finance future projects. Moreover, I tossed in Bridgeview, IL, as a counter example. It is BBB+ and just last sold new debt in our market. It has a much larger albatross in the Toyota Stadium as compared to the Uptown TIF, smaller population, smaller taxbase, weaker income levels, etc, etc, etc and went to market and sold bonds. The idea that new sewer debt hinders Park Ridge's financing capacity in any way is absolutely and completely without merit. We're all entitled to our own opinions, but not our own facts. There are no facts supporting this argument.

**-- Opportunity cost of additional delay:**

As a participant in the municipal financing market, it is astonishing to me that any municipality with capital needs would sit on its hands at this point in time. We are living in a period of near generational lows in terms of financing costs for state and local governments. This period won't last forever - we will revert to the mean at some point. I believe it is likely that if this council passes on this opportunity today the flooding issues will only continue and, at some point, a future council will move ahead with the projects. The problem is that interest rates (and likely construction costs as well) will be higher by that time. The balance of the attached spreadsheet looks at the opportunity cost of delay for projects with price tags of either $25 million or $50 million, financed over 20 years or 30 years. Like all models, there are assumptions. My assumptions include: level annual debt service, blended financing costs based upon yesterday's municipal market pricing scale, and comparison of potential future pricing based upon 20-yr and 30-yr blended mean and peak financing costs over the last decade. I also break down the annual financing cost to the monthly, per household, payment. This is likely an overstatement as I am only including households - not commercial and industrial accounts - as I only have ready access to the number of households in Park Ridge.

The results:

**$25MM/20-Yr. Bonds:**

Monthly, per household, cost at today's rate: $9.24
Monthly, per household, cost at mean rate: $10.88 (15% higher)
Monthly, per household, cost at peak rate: $11.88 (28.5% higher)

**$50MM/20-Yr. Bonds:**

Monthly, per household, cost at today's rate: $18.48
Monthly, per household, cost at mean rate: $21.75 (23.76 higher)
Monthly, per household, cost at peak rate: $23.76 (28.5% higher)

**$25MM/30-Yr. Bonds:**

Monthly, per household, cost at today's rate: $7.16
Monthly, per household, cost at mean rate: $8.67 (17.4% higher)
Monthly, per household, cost at peak rate: $9.75 (36.2%)

**$50MM/30-Yr. Bonds:**

Monthly, per household, cost at today's rate: $14.32
Monthly, per household, cost at mean rate: $17.34 (17.4% higher)
Monthly, per household, cost at peak rate: $19.51 (36.2% higher)

As a municipal finance professional, I was dismayed to hear such ill-informed and unfounded claims as those outlined above used as the justification for delaying (and ultimately killing) such basic infrastructure projects. Don't let dogma blind you to the mistake you are making with this course of action - and don't undermine your credibility as leaders by leaning on such hollow and easily disproved arguments. These projects are necessary, affordable and don't - by any reasonable analysis - present a threat to this City's financial future. Delay will only ensure that Park Ridge misses this prime opportunity to finance this projects at rates we are unlikely to ever see again. The added financing costs of 15-36% resulting from delay are significant and should not be ignored.

As always, call (312-965-2768 or 847-720-4772) or email if you wish to discuss in greater detail (I owe one of you a call back already - have been quite busy this week). I am happy to assist in any way I can.

Best,

Shawn O'Leary
2060 Manor Lane

//

| | Park Ridge | Moody's Median Issuer - All U.S. Cities (Aa3) | Bridgeview (BBB+) |
|---|---|---|---|
| GO Debt | $ 43,665,000 | $ 21,931,549 | $ 233,050,000 |
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| FY12 Valuation | $ 5,178,374,577 | $ 1,958,174,000 | $ 1,364,090,492 |
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| $50MM Debt | 1.8% | | |
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| $25MM Debt | $ 1,820 | | |
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| Total Income | $ 1,622,116,163 | $ 457,378,110 | $ 345,404,547 |
| Debt to Income | 2.7% | 4.8% | 67.5% |
| $25MM Debt | 4.2% | | |
| $50MM Debt | 5.8% | | |

| Assumptions ($000s) | Current | Average | High |
|---|---|---|---|
| Principal | $25,000 | $25,000 | $25,000 |
| Term | 20 | 20 | 20 |
| Cpn | 2.08% | 3.84% | 4.85% |
| Payment Frequency | 1 | 1 | 1 |
| Payment | $1,541 | $1,814 | $1,981 |

| | Current | | | Average | | | High | | |
|---|---|---|---|---|---|---|---|---|---|
| | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household |
| 2015 | $1,541 | $128.41 | $9.24 | $1,814 | $151.13 | $10.88 | $1,981 | $165.05 | $11.88 |
| 2016 | $1,541 | | | $1,814 | | 15.0% | $1,981 | | 28.5% |
| 2017 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2018 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2019 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2020 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2021 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2022 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2023 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2024 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2025 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2026 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2027 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2028 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2029 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2030 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2031 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2032 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2033 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2034 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2035 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2036 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2037 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2038 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2039 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2040 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2041 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2042 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2043 | $1,541 | | | $1,814 | | | $1,981 | | |
| 2044 | $1,541 | | | $1,814 | | | $1,981 | | |

June 10, 2014 Yield Curve

| | AAA |
|---|---|
| 2015 | 0.14 |
| 2016 | 0.30 |
| 2017 | 0.62 |
| 2018 | 0.98 |
| 2019 | 1.28 |
| 2020 | 1.56 |
| 2021 | 1.82 |
| 2022 | 2.03 |
| 2023 | 2.21 |
| 2024 | 2.33 |
| 2025 | 2.44 |
| 2026 | 2.54 |
| 2027 | 2.64 |
| 2028 | 2.73 |
| 2029 | 2.82 |
| 2030 | 2.90 |
| 2031 | 2.97 |
| 2032 | 3.04 |
| 2033 | 3.11 |
| 2034 | 3.16 |
| 2035 | 3.21 |
| 2036 | 3.25 |
| 2037 | 3.28 |
| 2038 | 3.31 |
| 2039 | 3.34 |
| 2040 | 3.36 |
| 2041 | 3.38 |
| 2042 | 3.39 |
| 2043 | 3.40 |
| 2044 | 3.40 |

| Blended 20-Yr. Yield | # Households (US Census) |
|---|---|
| 2.08 | 13,895 |

| Assumptions ($000s) | Current | Average | High |
|---|---|---|---|
| Principal | $50,000 | $50,000 | $50,000 |
| Term | 20 | 20 | 20 |
| Cpn | 2.08% | 3.84% | 4.85% |
| Payment Frequency | 1 | 1 | 1 |
| Payment | $3,082 | $3,627 | $3,961 |

| | Current | | | Average | | | High | | |
|---|---|---|---|---|---|---|---|---|---|
| | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household |
| 2015 | $3,082 | $256.82 | $18.48 | $3,627 | $302.26 | $21.75 | $3,961 | $330.10 | $23.76 |
| 2016 | $3,082 | | | $3,627 | | 15.0% | $3,961 | | 28.5% |
| 2017 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2018 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2019 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2020 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2021 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2022 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2023 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2024 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2025 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2026 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2027 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2028 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2029 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2030 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2031 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2032 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2033 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2034 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2035 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2036 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2037 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2038 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2039 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2040 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2041 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2042 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2043 | $3,082 | | | $3,627 | | | $3,961 | | |
| 2044 | $3,082 | | | $3,627 | | | $3,961 | | |

June 10, 2014 Yield Curve

| | AAA |
|---|---|
| 2015 | 0.14 |
| 2016 | 0.30 |
| 2017 | 0.62 |
| 2018 | 0.98 |
| 2019 | 1.28 |
| 2020 | 1.56 |
| 2021 | 1.82 |
| 2022 | 2.03 |
| 2023 | 2.21 |
| 2024 | 2.33 |
| 2025 | 2.44 |
| 2026 | 2.54 |
| 2027 | 2.64 |
| 2028 | 2.73 |
| 2029 | 2.82 |
| 2030 | 2.90 |
| 2031 | 2.97 |
| 2032 | 3.04 |
| 2033 | 3.11 |
| 2034 | 3.16 |
| 2035 | 3.21 |
| 2036 | 3.25 |
| 2037 | 3.28 |
| 2038 | 3.31 |
| 2039 | 3.34 |
| 2040 | 3.36 |
| 2041 | 3.38 |
| 2042 | 3.39 |
| 2043 | 3.40 |
| 2044 | 3.40 |

| Blended 20-Yr. Yield | # Households (US Census) |
|---|---|
| 2.08 | 13,895 |

| Assumptions ($000s) | Current | Average | High |
|---|---|---|---|
| Principal | $25,000 | $25,000 | $25,000 |
| Term | 30 | 30 | 30 |
| Cpn | 2.50% | 4.00% | 5.00% |
| Payment Frequency | 1 | 1 | 1 |
| Payment | $1,194 | $1,446 | $1,626 |

| | Current | | | Average | | | High | | |
|---|---|---|---|---|---|---|---|---|---|
| | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household |
| 2015 | $1,194 | $99.51 | $7.16 | $1,446 | $120.48 | $8.67 | $1,626 | $135.52 | $9.75 |
| 2016 | $1,194 | | | $1,446 | | 17.4% | $1,626 | | 36.2% |
| 2017 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2018 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2019 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2020 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2021 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2022 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2023 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2024 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2025 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2026 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2027 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2028 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2029 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2030 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2031 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2032 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2033 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2034 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2035 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2036 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2037 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2038 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2039 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2040 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2041 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2042 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2043 | $1,194 | | | $1,446 | | | $1,626 | | |
| 2044 | $1,194 | | | $1,446 | | | $1,626 | | |

June 10, 2014 Yield Curve

| | AAA |
|---|---|
| 2015 | 0.14 |
| 2016 | 0.30 |
| 2017 | 0.62 |
| 2018 | 0.98 |
| 2019 | 1.28 |
| 2020 | 1.56 |
| 2021 | 1.82 |
| 2022 | 2.03 |
| 2023 | 2.21 |
| 2024 | 2.33 |
| 2025 | 2.44 |
| 2026 | 2.54 |
| 2027 | 2.64 |
| 2028 | 2.73 |
| 2029 | 2.82 |
| 2030 | 2.90 |
| 2031 | 2.97 |
| 2032 | 3.04 |
| 2033 | 3.11 |
| 2034 | 3.16 |
| 2035 | 3.21 |
| 2036 | 3.25 |
| 2037 | 3.28 |
| 2038 | 3.31 |
| 2039 | 3.34 |
| 2040 | 3.36 |
| 2041 | 3.38 |
| 2042 | 3.39 |
| 2043 | 3.40 |
| 2044 | 3.40 |

| Blended 30-Yr. Yield | # Households (US Census) |
|---|---|
| 2.50 | 13,895 |

15

| Assumptions ($000s) | Current | Average | High |
|---|---|---|---|
| Principal | $50,000 | $50,000 | $50,000 |
| Term | 30 | 30 | 30 |
| Cpn | 2.50% | 4.00% | 5.00% |
| Payment Frequency | 1 | 1 | 1 |
| Payment | $2,388 | $2,892 | $3,253 |

| | Current | | | Average | | | High | | |
|---|---|---|---|---|---|---|---|---|---|
| | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household | Annualized Debt Service ($000s) | Monthly Debt Service ($000s) | Monthly Per Household |
| 2015 | $2,388 | $199.02 | $14.32 | $2,892 | $240.96 | $17.34 | $3,253 | $271.05 | $19.51 |
| 2016 | $2,388 | | | $2,892 | | 17.4% | $3,253 | | 36.2% |
| 2017 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2018 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2019 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2020 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2021 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2022 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2023 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2024 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2025 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2026 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2027 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2028 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2029 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2030 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2031 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2032 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2033 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2034 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2035 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2036 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2037 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2038 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2039 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2040 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2041 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2042 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2043 | $2,388 | | | $2,892 | | | $3,253 | | |
| 2044 | $2,388 | | | $2,892 | | | $3,253 | | |

June 10, 2014 Yield Curve

| | AAA |
|---|---|
| 2015 | 0.14 |
| 2016 | 0.30 |
| 2017 | 0.62 |
| 2018 | 0.98 |
| 2019 | 1.28 |
| 2020 | 1.56 |
| 2021 | 1.82 |
| 2022 | 2.03 |
| 2023 | 2.21 |
| 2024 | 2.33 |
| 2025 | 2.44 |
| 2026 | 2.54 |
| 2027 | 2.64 |
| 2028 | 2.73 |
| 2029 | 2.82 |
| 2030 | 2.90 |
| 2031 | 2.97 |
| 2032 | 3.04 |
| 2033 | 3.11 |
| 2034 | 3.16 |
| 2035 | 3.21 |
| 2036 | 3.25 |
| 2037 | 3.28 |
| 2038 | 3.31 |
| 2039 | 3.34 |
| 2040 | 3.36 |
| 2041 | 3.38 |
| 2042 | 3.39 |
| 2043 | 3.40 |
| 2044 | 3.40 |

| Blended 30-Yr. Yield | # Households (US Census) |
|---|---|
| 2.50 | 13,895 |