Challenges and Opportunities When Investing School District Funds

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Important Matters
Is the Economic expansion running out of Time?

Housing
Housing indicators have been mixed the last few months, rates have fallen from their recent highs.

Trade
Global trade remains a focal point of global economic leaders, the largest of the concerns is the relationship between China and the US.

Rates
A decade plus of easy monetary policy is being contested, some have outlined ways for it to continue.

Growth
Growth projections remain muted but positive overall, the trends in growth are being closely watched for signs of weakness.
What’s Happening

Today, stock holders sought safety in treasuries, treasury holders opted for hi-yield bonds, and bond holders fled to growth stocks.

Source: Harley Schwardon
Tariff Update

US and China’s tariffs against each other

US imports from China

<table>
<thead>
<tr>
<th>Tariffs already applied in 2018</th>
<th>Tariffs that took effect on 24 Sept 2018</th>
<th>Threatened additional tariffs</th>
</tr>
</thead>
<tbody>
<tr>
<td>$53bn</td>
<td>$200bn</td>
<td>$267bn</td>
</tr>
</tbody>
</table>

2017 total import of goods (most recent annual figure)

Chinese imports from US

<table>
<thead>
<tr>
<th>Tariffs already applied in 2018</th>
<th>Tariffs that took effect on 24 Sept 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50bn</td>
<td>$60bn</td>
</tr>
</tbody>
</table>

| $130bn                          |

2017 total import of goods (most recent annual figure)

Note: Data as of 24 September 2018

Source: US Census Bureau, BBC research
Anyone Need a Job?

Job Openings vs Number of Unemployed

Source: Federal Reserve Bank of St. Louis, March 2019
It’s a Good Time to be an Accountant
Will 2019 Look Different

![Map showing average tax refund in every state.](image-url)
Inflation

- One of the Federal Reserve’s mandates 2% inflation year over year
- US has only met for a very short period and has since fallen
- Not just confined to the US economy

Source: Federal Reserve Bank of St. Louis, December 2018
The Yield Curve and Recessions

Shaded areas indicate U.S. recessions

Source: Federal Reserve Bank of St. Louis

my.fred.stlouisfed.org/8M4
Recession coming up?

Probability of Recession Calculated from the Yield Curve

Note: Shaded bars indicate recessions. Source: Federal Reserve Board, FRB Cleveland, Haver Analytics
Time Will Tell

*Since 1978, there have been an average of 627.2 days between the first inversion of the 2Y10Y spread and the start of the next recession. Applying that average, and assuming the 2Y10Y spread were to invert today, it would imply a recession in November 2020.

Source: Bloomberg
Whose guess is it anyway?

Source: Harley Schwardon
Monetary Policy

- Over the past decade, the Federal Reserve has provided accommodative monetary policy to markets

- Over past few years, the Fed started to tightening monetary policy

- Higher interest rates are welcomed for some—but not everyone
Are the Futures Correct on the Future

Source: WSJ Daily Shot March 2019
## The Fed Scorecard

<table>
<thead>
<tr>
<th>Year</th>
<th>Predicted Raise(s) by Federal Reserve</th>
<th>Actual Raise(s)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>4</td>
<td>1</td>
<td>25%</td>
</tr>
<tr>
<td>2016</td>
<td>4</td>
<td>1</td>
<td>25%</td>
</tr>
<tr>
<td>2017</td>
<td>3</td>
<td>3</td>
<td>100%</td>
</tr>
<tr>
<td>2018</td>
<td>3</td>
<td>4</td>
<td>75%</td>
</tr>
<tr>
<td>AVG</td>
<td>3.5</td>
<td>2.25</td>
<td>64%</td>
</tr>
<tr>
<td>2019</td>
<td>2</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

Source: Federal Reserve
# US Rates are a Bargain

## The Negative Bond Yield Matrix

<table>
<thead>
<tr>
<th>Country</th>
<th>6-Mo</th>
<th>1-Year</th>
<th>2-Year</th>
<th>3-Year</th>
<th>4-Year</th>
<th>5-Year</th>
<th>6-Year</th>
<th>7-Year</th>
<th>8-Year</th>
<th>9-Year</th>
<th>10-Year</th>
<th>20-Year</th>
<th>30-Year</th>
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</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>-0.87</td>
<td>-0.66</td>
<td>-0.77</td>
<td>-0.72</td>
<td>-0.67</td>
<td>-0.60</td>
<td>-0.57</td>
<td>-0.51</td>
<td>-0.46</td>
<td>-0.39</td>
<td>-0.30</td>
<td>0.14</td>
<td>0.24</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.22</td>
<td>-0.16</td>
<td>-0.16</td>
<td>-0.17</td>
<td>-0.17</td>
<td>-0.17</td>
<td>-0.17</td>
<td>-0.14</td>
<td>-0.14</td>
<td>-0.09</td>
<td>-0.04</td>
<td>0.40</td>
<td>0.58</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.52</td>
<td>-0.55</td>
<td>-0.55</td>
<td>-0.53</td>
<td>-0.48</td>
<td>-0.37</td>
<td>-0.29</td>
<td>-0.21</td>
<td>-0.17</td>
<td>-0.08</td>
<td>0.08</td>
<td>0.46</td>
<td>0.75</td>
</tr>
<tr>
<td>Denmark</td>
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<td>-0.58</td>
<td>-0.53</td>
<td>-0.37</td>
<td>-0.21</td>
<td>-0.17</td>
<td>-0.09</td>
<td>-0.05</td>
<td>0.05</td>
<td>0.17</td>
<td>0.17</td>
<td>1.02</td>
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<td>-0.54</td>
<td>-0.46</td>
<td>-0.33</td>
<td>-0.26</td>
<td>-0.13</td>
<td>-0.04</td>
<td>0.08</td>
<td>0.17</td>
<td>0.28</td>
<td>0.57</td>
<td>0.80</td>
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<tr>
<td>Finland</td>
<td>-0.49</td>
<td>-0.46</td>
<td>-0.31</td>
<td>-0.19</td>
<td>-0.09</td>
<td>0.00</td>
<td>0.05</td>
<td>0.32</td>
<td>1.01</td>
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<td>Belgium</td>
<td>-0.52</td>
<td>-0.53</td>
<td>-0.50</td>
<td>-0.43</td>
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<td>-0.20</td>
<td>-0.05</td>
<td>0.15</td>
<td>0.29</td>
<td>0.37</td>
<td>0.54</td>
<td>1.24</td>
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<tr>
<td>Austria</td>
<td>-0.49</td>
<td>-0.48</td>
<td>-0.35</td>
<td>-0.26</td>
<td>-0.14</td>
<td>-0.03</td>
<td>0.12</td>
<td>0.19</td>
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<td>0.40</td>
<td>0.85</td>
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<tr>
<td>France</td>
<td>-0.55</td>
<td>-0.51</td>
<td>-0.46</td>
<td>-0.37</td>
<td>-0.27</td>
<td>-0.17</td>
<td>-0.05</td>
<td>0.02</td>
<td>0.20</td>
<td>0.34</td>
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<td>1.53</td>
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<tr>
<td>Sweden</td>
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<td>-0.41</td>
<td>-0.14</td>
<td>0.03</td>
<td>0.32</td>
<td>0.97</td>
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<tr>
<td>Ireland</td>
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<td>-0.03</td>
<td>0.13</td>
<td>0.67</td>
<td>1.31</td>
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<tr>
<td>Slovakia</td>
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<td>-0.06</td>
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<tr>
<td>Spain</td>
<td>-0.36</td>
<td>-0.31</td>
<td>-0.18</td>
<td>-0.12</td>
<td>0.03</td>
<td>0.14</td>
<td>0.39</td>
<td>0.60</td>
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<tr>
<td>Portugal</td>
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<td>-0.23</td>
<td>-0.08</td>
<td>0.11</td>
<td>0.25</td>
<td>0.62</td>
<td>0.80</td>
<td>0.97</td>
<td>1.17</td>
<td>1.31</td>
<td>2.10</td>
<td>2.41</td>
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<tr>
<td>Malta</td>
<td>-0.21</td>
<td>-0.18</td>
<td>-0.07</td>
<td>0.20</td>
<td>0.99</td>
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<td>Slovenia</td>
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<td>-0.35</td>
<td>0.04</td>
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</tr>
<tr>
<td>Bulgaria</td>
<td>-0.10</td>
<td>0.04</td>
<td>0.20</td>
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<td>Italy</td>
<td>-0.15</td>
<td>0.02</td>
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<td>0.65</td>
<td>1.16</td>
<td>1.44</td>
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<td>2.32</td>
<td>2.50</td>
<td>3.34</td>
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<tr>
<td>United States</td>
<td>2.51</td>
<td>2.52</td>
<td>2.44</td>
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<td>2.41</td>
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<td>2.60</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Source: Charlie Bilello, Twitter: March 2019
Interest Rates Outlook

Stay Away from Credit Cards
How to Avoid the Headlines

Checks and balances

Understand investment risk

Research background

Do your homework

Request references

Ask questions
Know your Risk Tolerance

- **Market Risk**: Change in Market Value
- **Credit Risk**: Commercial Paper
- **Liquidity Risk**: How quickly can I get my funds
- **Reinvestment Risk**: Investing in lower rates
- **Career Risk**: Unpopular investment decisions
Choosing an Investment Provider

**Local Bank**
- Can be limited on types of investment products offered
- Might be best option for those looking to keep everything in-house

**Broker/Dealer**
- Can offer many different types of investment products
- Transaction-based fee
- Suitability Standards

**Investment Advisor**
- Assist in developing an investment strategy for all district funds
- Transparent fee structure
- Fiduciary Standards
Due Diligence on Investment Providers

➢ Brokers
   ❖ Site
     • www.finra.org/brokercheck

➢ What you will find
   ❖ Employment history
     • Have they moved jobs frequently
   ❖ Securities Law exams completed
     • Broker qualifications
     • States registered to conduct business
   ❖ Disclosures
     • Customer disputes/findings
Due Diligence on Investment Providers

➢ Investment Advisors
  ❖ Site
    • www.adviserinfo.sec.gov and/or www.finra.org/brokercheck

➢ What you will find on the SEC site
  ❖ Information on firm
    • Owners
    • Types of clients
    • Assets under management
  ❖ Disclosures
    • Customer disputes/findings
  ❖ ADV Brochure
    • Investment process
    • Fee schedules
    • Information on key decision makers
Checks and Balances

➢ Require a 3\textsuperscript{rd} Party Custodian to hold investments
  • Adds additional layer of security
  • Receive separate statements to confirm investment holdings

➢ General Best Practices
  • Internal office controls
  • Annual review of investment providers
Investment Considerations

- FDIC Limits
- Commercial Paper
- Bank Balances
- Investment Strategy
FDIC Limits

01 Limit Per Bank
- $250K limit per bank
- Get the FDIC number

02 Cross Reference
- Do you own CD already?
- Do you have multiple investment providers?

03 Exclusion Forms
- STAR OH Plus
- ICS Money Market
- CDARS
# Commercial Paper

<table>
<thead>
<tr>
<th>Education</th>
<th>Current Market</th>
<th>Investing</th>
<th>AOS Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete training once in career</td>
<td>Maturities range from 30 days to 270 days</td>
<td>Purchased from brokers or directly from issuers</td>
<td>Confusing language</td>
</tr>
<tr>
<td>Own up to 40% of interim funds</td>
<td>Increase demand commercial paper</td>
<td>Understand balances and how to calculate properly</td>
<td>States calculation is based on fund balances after encumbrances</td>
</tr>
<tr>
<td>5% limit per issuer</td>
<td>Yields from 2.40% to 2.80%</td>
<td>% is based on time of purchase</td>
<td>2018 AOS questions</td>
</tr>
</tbody>
</table>

For informational purposes only. Not a recommendation of any particular security or strategy.
Bank Balances

- Clear understanding of bank accounts, fees, credits, collateral requirements
- What is optimal amount to keep at local bank
- Utilize other bank products, STAR Ohio for cash alternative
- Look at other investment options for longer term needs
What is Your Investment Strategy

- Have one!
- Every District approaches differently
- Think long-term in the short term
- Understand the value in different investment options
- Keep up with changing markets

“An investment in knowledge pays the best interest.” – Ben Franklin
Investing Funds

Pay attention to Federal Reserve and markets—constant change.

Understanding of future cash flows will allow to make better decisions.

If we are at top rate cycle, could be prudent to lock in interest rates.

Communicate results and plan to BOE.
I Have A Question
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Portfolio Manager
RedTree Investment Group
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Ryan@redtreeinv.com

thank you!
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