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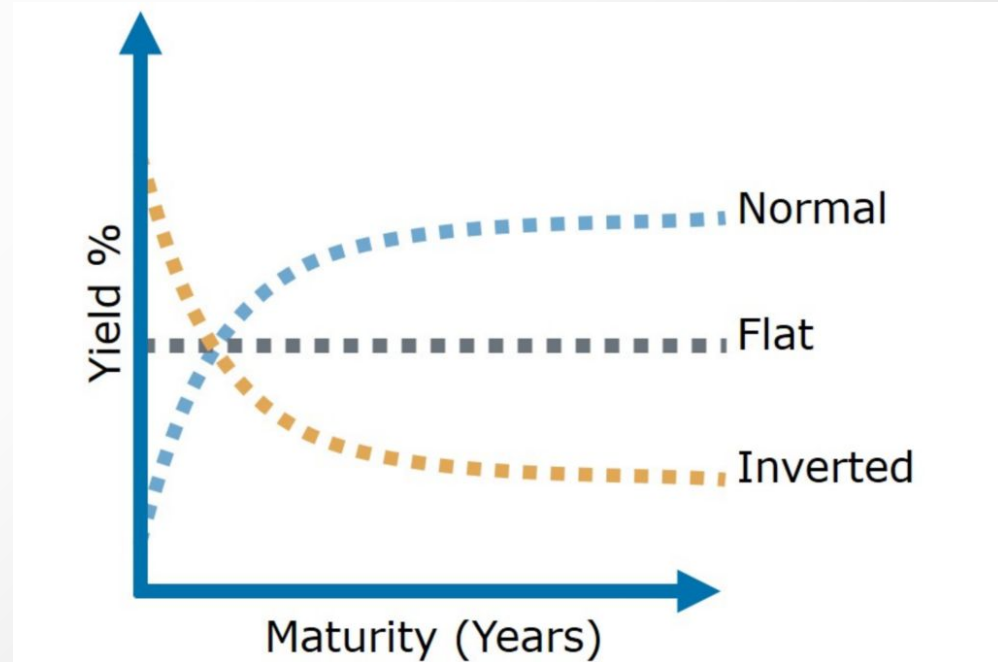
Yield Curve Report

Why do the recent Yield Curve inversions matter to GCI?

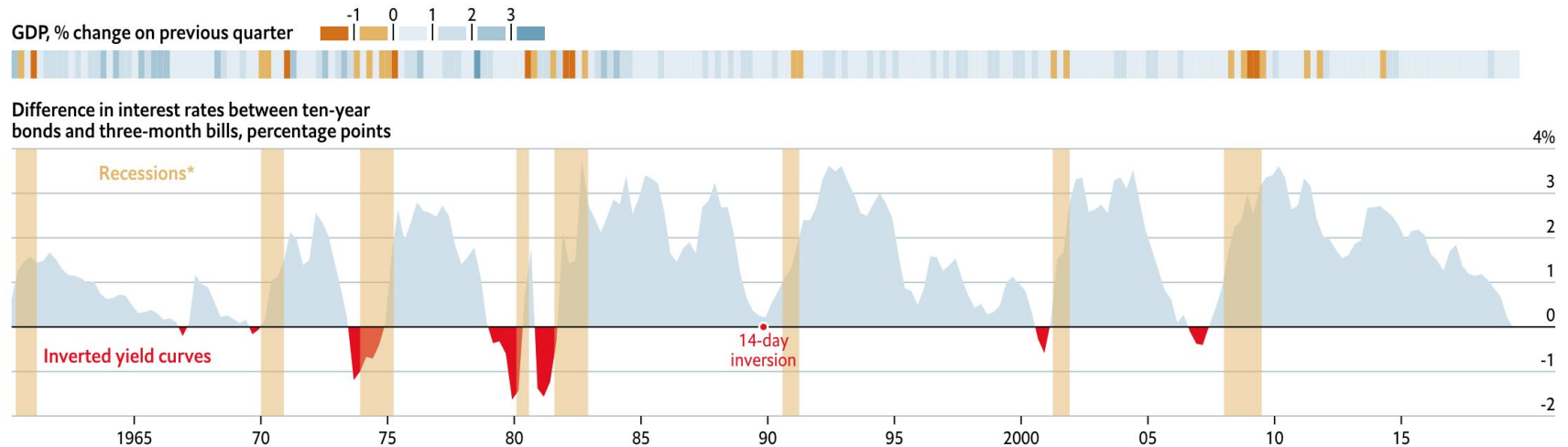
1. A Brief Overview of the Yield Curve
2. Recent Behavior of the Yield Curve
 - a. June
 - b. August
 - c. Present
3. Conclusions

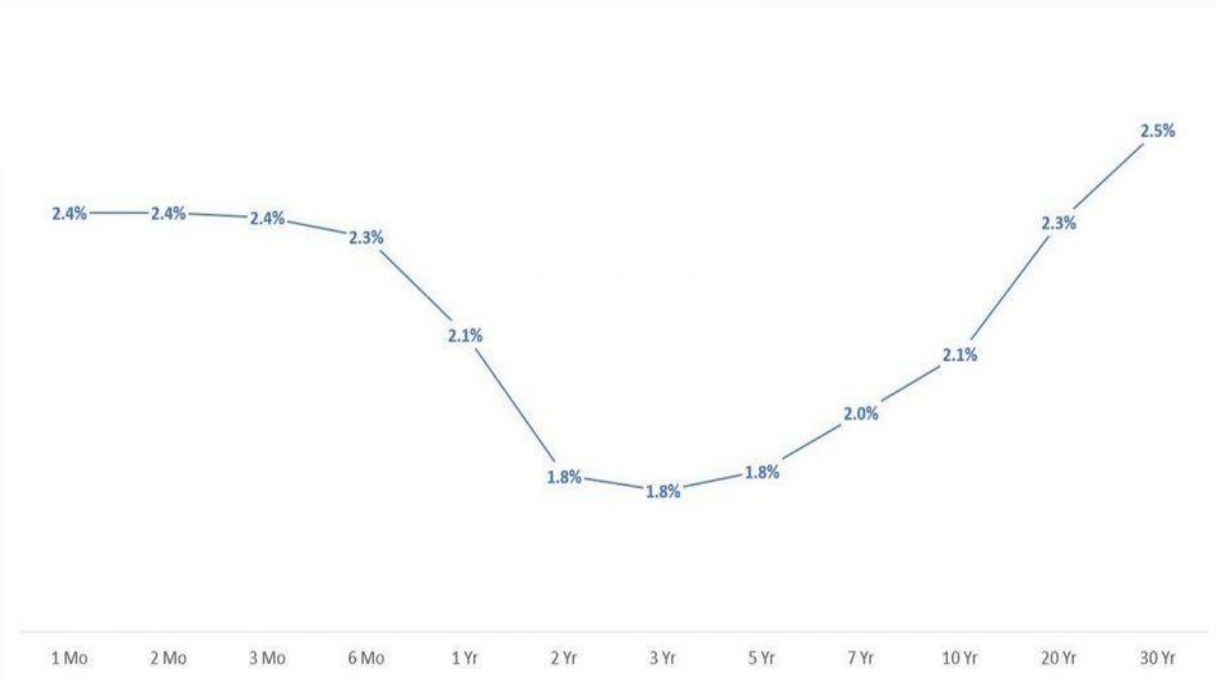
A Brief Overview of the Yield Curve

- Plots interest rate on various term bonds by one issuer (US Treasury Securities).
- Usually short-term IR are lower than long-term IR because long term investments contain more risk.
- In the inverted yield curve, long-term IR dips below short-term IR, signaling that investors believe that short-term investments contain more risk than long-term investments.



- Federal Reserve uses the 10-year to 3-year bond spread as a main indicator for inversion.
- The last seven US recessions have been preceded 12-24 months prior by an inversion of the 10 year-3 year bond spread (since 1968).
- During healthy economic growth, economists will look for a three point spread between the 30-year bond yield and the 3-month bond yield.



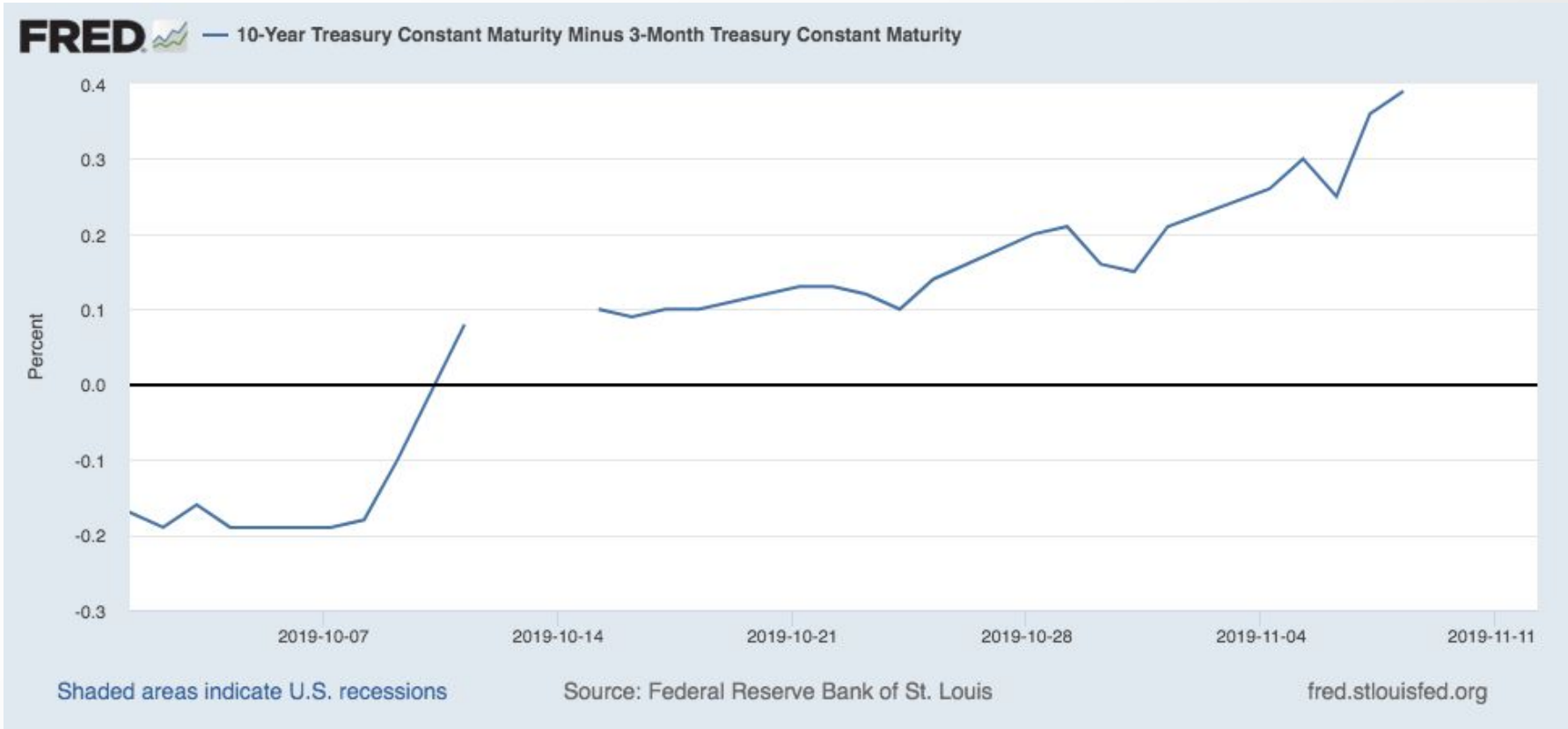


- Inversion between the 3m/3y
- Analysts claim this indicates a 33% chance of recession within 1-year
- This inversion began a 4-month stretch of almost constantly inverted 3m/10y interest rates

Treasury Yield by Maturity in months



- Peak inversion between the 3m/3y and 3m/10y (official Fed indicator)
- S&P generally peaks directly after the inversion before recession begins
- Last 5 recessions have followed inversions, but depth of inversion has no correlation to length of recession



The yield curve inverted several months ago. This presents two possibilities:

1. **The inversions are merely an anomaly**
 - Possibly a result of near-constant rate hikes by the Federal Reserve.
 - Since the 1960's, 2 'anomalies' have occurred, though they preceded more substantial inversions that signaled recessions.
2. **The inversions can be used as a reliable indicator of a coming recession**
 - If this is the case, a recession is likely to begin within the next 24 months.
 - While the curve is merely one of many indicators that can be used to predict economic cycles, it has historically been one of the most reliable and accurate.
 - All of the last seven recessions have been preceded by a yield curve inversion.



Source: FactSet, Federal Reserve, J.P. Morgan Asset Management. *From January 1962 to May 1976, short-term bond is U.S. 1-year note, and from June 1976 onwards the short-term bond is the 2-year note due to lack of data availability. Time to recession is calculated as the time between the final sustained inversion of the yield curve prior to recession and the onset of recession.
 Guide to the Markets – U.S. Data are as of June 30, 2019.

- During the recovery from the Great Recession, the Federal Funds Rate was relatively constant near-zero.
- Since 2016, in an attempt to normalize rates and policy, the Fed began constantly increasing rate expectations. The 3 reductions since August 2019 could be viewed as a necessary correction to the overwhelming pace of the previous increases.
- Chairman Powell has indicated that future rate reductions (that exceed 0.50%) are not extremely likely if economic conditions remain relatively stable.

2019

Date	Increase	Decrease	Level (%)
October 31	0	25	1.50-1.75
September 19	0	25	1.75-2.00
August 1	0	25	2.00-2.25

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2018

Date	Increase	Decrease	Level (%)
December 20	25	0	2.25-2.50
September 27	25	0	2.00-2.25
June 14	25	0	1.75-2.00
March 22	25	0	1.50-1.75

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Fed Rate Changes



A Coming Recession?



If these inversions are not anomalies and can be used as reliable recession indicators:

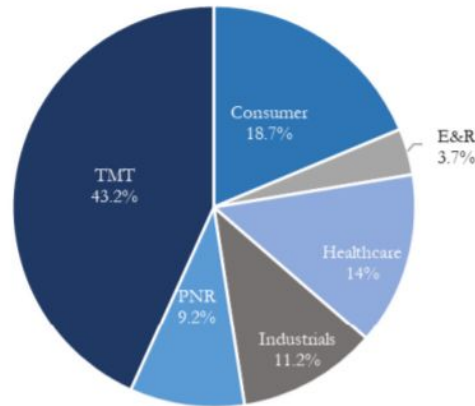
- Typically, an inverted yield curve is soon followed by a short-term bullish market.
- Within 18 (or 24) months, a recession begins.
- All of the last seven recessions have been preceded by a yield curve inversion.
- While the curve is merely one of many indicators that can be used to predict economic cycles, it has historically been one of the most reliable and accurate.
- Other recession indicators:
 - Purchasing Managers Index: 47.8 (September)
 - Job growth: volatile, but recently strong

- Areas that tend to perform well in recessions and downturns:
 - Healthcare & pharmaceuticals
 - Water and other utilities, food, beverages
 - “Sin stocks”: tobacco, alcohol, gaming
 - “Lipstick stocks”: affordable luxuries, small consumer goods
 - Discount retailers
 - In sum, anything that is associated with just generally getting by: **The Essentials**
- Also, noncyclicals- anything that does not follow overall market trends
- What's missing from this list?
 - Companies that depend on **major purchases and large amounts of consumer spending**
 - Growth stocks and, in some cases, technology stocks
 - Amazon lost 90% of its value in 2001
 - But Netflix performed well during the Great Recession

Our current holdings do not reflect this list.

- We are heavily invested in the tech industry and are somewhat growth-oriented.

The following chart illustrates sector breakdown of GCI's equity portfolio as of the first-half of 4/30/2019:



- Moving forward, we could reconsider our exposure to tech and growth stocks.

Thank You!

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Questions?