



**Q**UANTITATIVE  
**F**INANCE  
**S**OCIETY

# QFS – THE SECRETS OF ECONOMIC INDICATOR

*January 23, 2018*

# BRAINTEASER

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What is the expected number of heads if you flip 4 coins and can flip over a pair of tails?

## BRAINTEASER - ANSWER

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3.375. There are 16 different ways to flip four coins:

- $1/16$  HHHH
- $1/16$  TTTT -> **two H, two T**
- $4/16$  are one T and three H
- $4/16$  are one H and three T -> **three H and one T**
- $6/16$  are two H and two T -> **HHHH**
- $7/16*(4) + 8/16*(3) + 1/16*(2) = 3.375$ .

# GENERAL ANNOUNCEMENTS

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- Make sure to swipe in
- Let us know if you are not receiving our emails
- **Check last email for recruiting opportunities**
  - **Ballon.io/QFSGoldmanMM2018**
  - **IEX Shadow Day**
  - **GS Coffee Chats**
  - **Credit Suisse, DE Shaw, Columbia for women**
  - **Wells Fargo Diversity Freshmen**
- Next Week: Intro to Credit Investing???
- [quantfsnyu.com](http://quantfsnyu.com)

# MARKET UPDATE

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- Trump's Planned Tariffs on Aluminum and Steel
- Clarida's Nomination for Vice-Chair of the Fed
- Brexit Updates: Theresa May, still Beleaguered
- Crude: Inventories and US Production

# INFLATION INDICATORS

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- Consumer Price Index (CPI)
- Personal Consumption Expenditures (PCE)
- Producer Price Index (PPI)
- Real Earnings
  
- Yield Curve

# GROWTH INDICATORS

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- GDP Growth
- Non-farm Payrolls Report (NFP)
- Manufacturing Purchasing Managers' Index (PMI)
- Consumer Confidence
- Retail Sales
  
- Yield Curve

## CLIP FROM THE *25<sup>TH</sup> HOUR*

- Directed by Spike Lee; Starring Edward Norton, Philip Seymour Hoffman, Barry Pepper, and Rosario Dawson
- Barry Pepper's character is a trader
- <https://youtu.be/YVHY9nIPo6s>



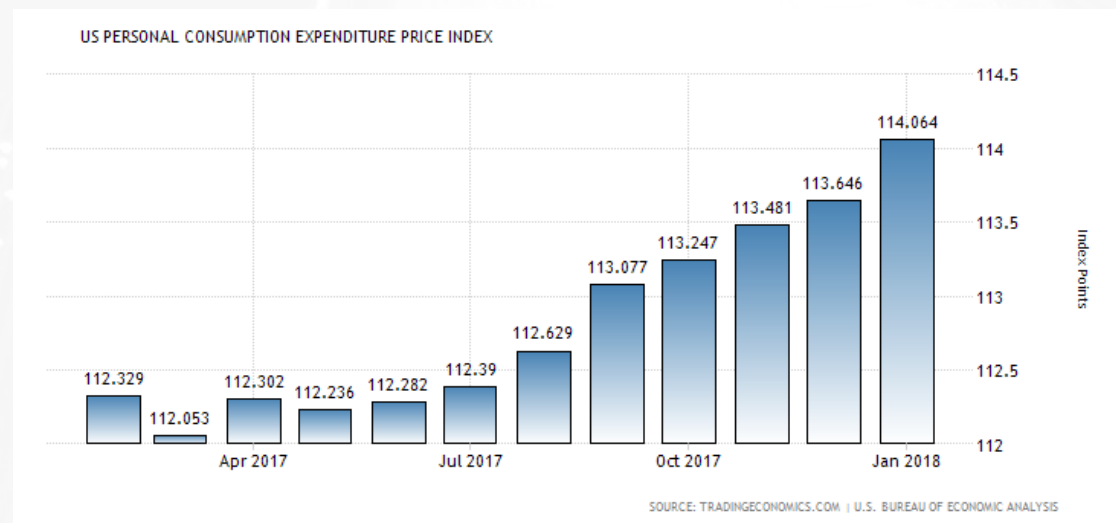
# CPI

- Market Sensitivity: Very High
- What is it: The most popular measure of price inflation in retail goods and services
- Released on: [bls.gov/cpi](https://bls.gov/cpi)
- Released at: 2<sup>nd</sup> week of the following month; 8:30 AM
- Frequency: Monthly



# PCE

- Same concept as CPI
- The Fed's preferred measure of inflation



# PPI

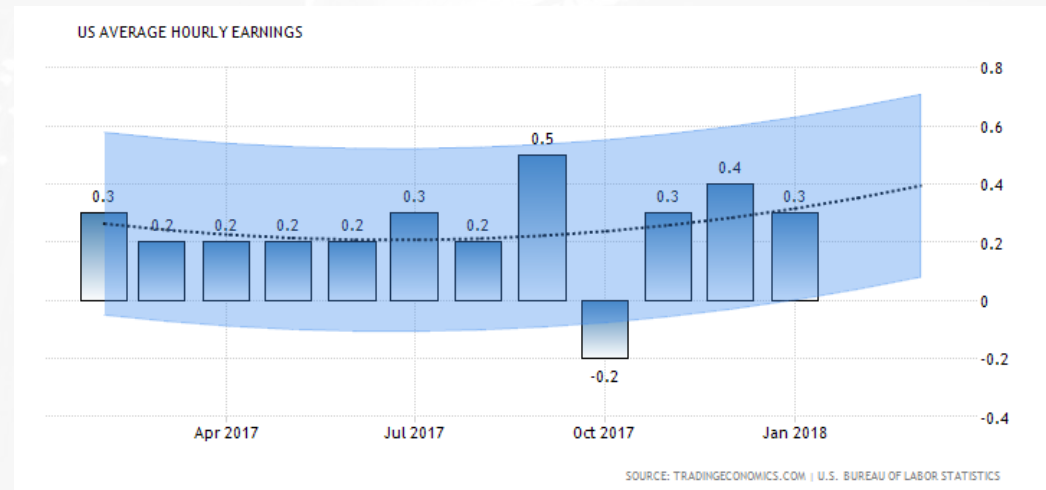
- Market Sensitivity: Very High
- What is it: Measures the change in prices paid by businesses
- Released on: [bls.gov/ppi](https://www.bls.gov/ppi)
- Released at: 2<sup>nd</sup> week of following month at 8:30 AM



SOURCE: TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS

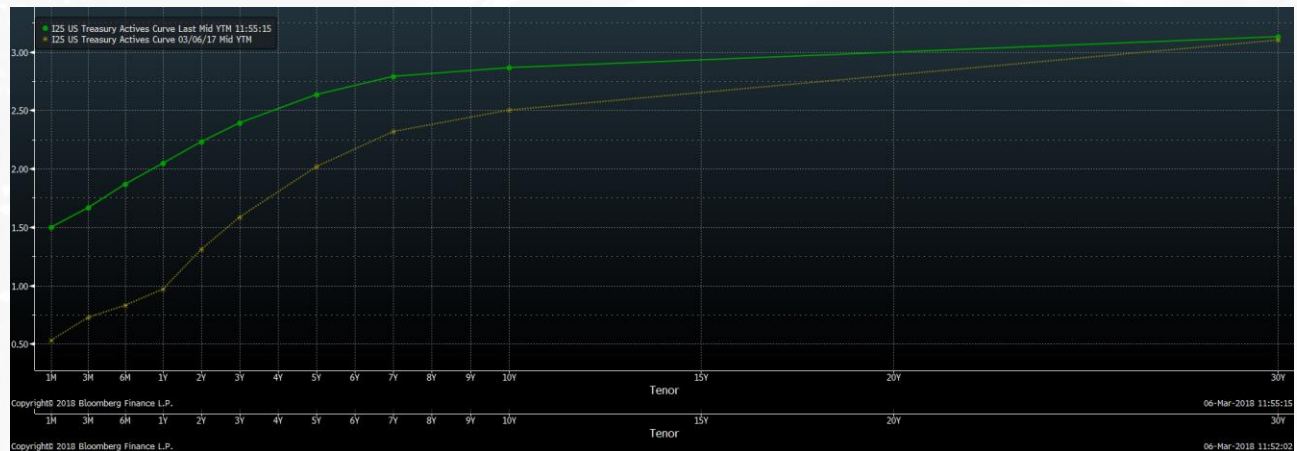
# REAL EARNINGS

- US Real Average Hourly Earnings Growth
- Market Sensitivity: Low to Medium
- Released on: bls.gov
- Released at: 2<sup>nd</sup> week of following month; 8:30 AM



# YIELD CURVE

- Market Sensitivity: Medium
- What is it: Spread between various treasury securities; typically 2s10s or 2s30s
- Currently: 2s10s ~60 bps, slightly flatter
- When: Always available via financial information services



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# COMMODITIES RELEASES

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- Inventories and production reports
- Clip from *Trading Places* starring Dan Aykroyd and Eddie Murphy, directed by John Landis
- <https://youtu.be/RLySXTIBS3c>

# GDP GROWTH

- Market Sensitivity: Medium to high
- What is it: The foremost report on a nation's economic health
- Released at: [bea.gov](http://bea.gov)
- Released at (US): Final week of January, April, July, October; 8:30 AM



# NFP

- Market Sensitivity: Very high
- What is it: The foremost report on America's unemployment situation; 6 rates U1-U6
- Released at: bls.gov
- Released at: 1<sup>st</sup> Friday of following month; 8:30AM



SOURCE: TRADINGECONOMICS.COM | U.S. BUREAU OF LABOR STATISTICS



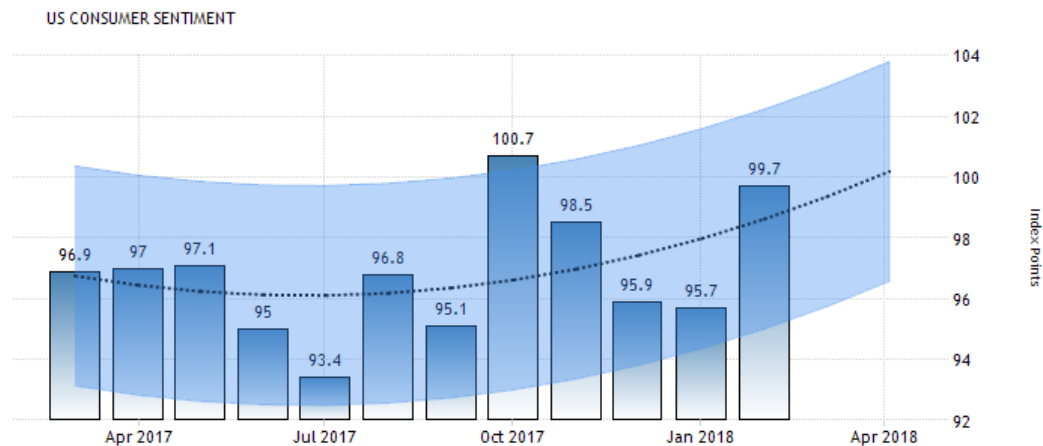
# PMI

- Market Sensitivity: Medium
- What is it: Reports on manufacturing activity in various regions
- Released at: [markiteconomics.com](http://markiteconomics.com); (US) [ism.com](http://ism.com)
- Released at: Varies by country



# CONSUMER CONFIDENCE/ SENTIMENT

- Market Sensitivity: Medium, unless there is uncertainty in the economy
- What is it: Determines how consumers feel about their jobs and the economy and thus their spending
- Released on: [conference-board.org](http://conference-board.org) or [umich.edu](http://umich.edu)
- Released at: Last Tuesday of current month; 10AM



SOURCE: TRADINGECONOMICS.COM | UNIVERSITY OF MICHIGAN

# RETAIL SALES

- Market Sensitivity: High
- What is it: The first report of the month on consumer spending; capable of big surprises
- Released on: census.gov
- Released at: 2<sup>nd</sup> week of following month; 8:30 AM



# THE TAYLOR RULE AND PRICING MODELS

General form of the Taylor rule:

$$i_t = 2 + \pi_t + \alpha(\pi_t - \pi^*) + b(y_t - y_t^*)$$

where

- $i_t$  is the prescribed value of the policy interest rate in a given period  $t$ ;
- $\pi_t - \pi^*$  is the deviation of the actual inflation rate  $\pi_t$  from its target  $\pi^*$  in period  $t$ ;
- $y_t - y_t^*$ , the “output gap,” is the deviation of actual real output  $y_t$  from potential output  $y_t^*$  in period  $t$ ; and
- $a$  and  $b$  are positive numbers.