

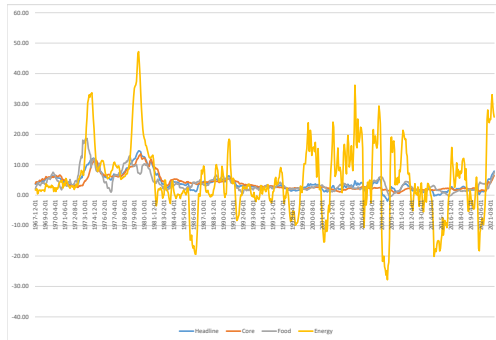
# Inflation Forecasting from Cross-Sectional Stocks

Claire Yurong Hong, Jun Pan, and Shiwen Tian

discussed by Michael Weber

May 2023

# Inflation Over Time



- After Volcker disinflation, headline inflation dormant for 3.5 decades
- Decade after Financial Crisis discussions center around how to raise inflation
- Low interest rate environment between 2008 and 2021
- End of Covid restrictions, increased savings cushion, pent up demand, fiscal spending, wage pressure, energy price hikes, meet supply-constrained economy
- BUT: also different cyclical properties of subcomponents

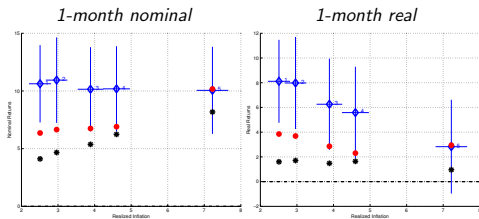
# This Paper

- Constructs inflation forecasts based on relative prices of stocks
- Exposure measured via loadings in headline and core CPI
- Paper argues that measure has novel predictive power for inflation
- Measure especially useful in rising inflationary periods
- Professional forecasters do not fully incorporate information

# What are inflation hedging properties of real assets?

- Common idea: stocks claim on real assets and immune to inflation
- Investing in real assets allow hedging of inflation risk
- Really?

# Incomplete Pass Through of Inflation into Nominal Returns

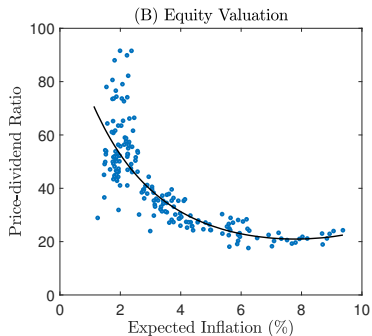
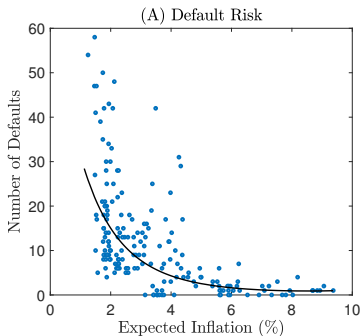


Notes: Portfolios of countries sorted by lagged inflation. We plot stock returns ('diamonds'), bond returns ('circles'), and returns on T-bills ('stars').

Source: Katz, Lustig, Nielsen (RFS, 2017)

- Incomplete pass through of local inflation into nominal returns
- Consistent w sticky discount rates or nominal cash flow extrapolation

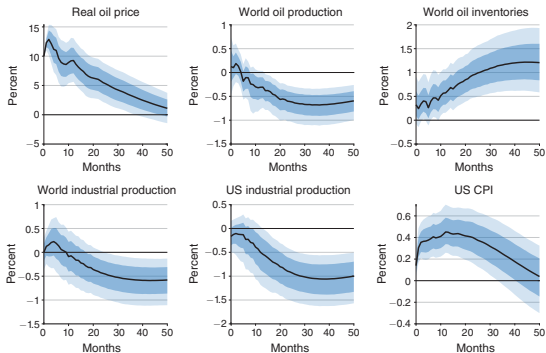
# High Expected Inflation: Low Defaults AND Valuation



Source: Bharma, Dorion, Jeanneret, and Weber (RFS, 2023)

- High expected inflation periods of low default and low equity valuation
- Due to sticky cash flows and leverage

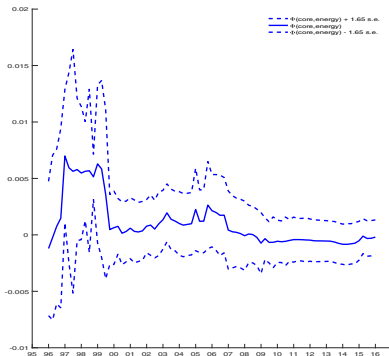
# Pass Through of Energy Inflation into Headline Inflation



Source: Kaenzig (AER, 2021)

- Oil news shock increases US headline inflation

# Pass Through of Energy Inflation into Core Inflation

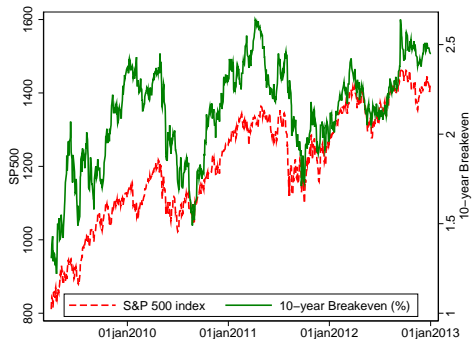


Source: Ajello, Benzoni, and Chyruk (RFS, 2020)

- Zero pass through of energy inflation into core inflation



# Is Higher Inflation Always Bad?



Source: Gourio and Ngo (2020)

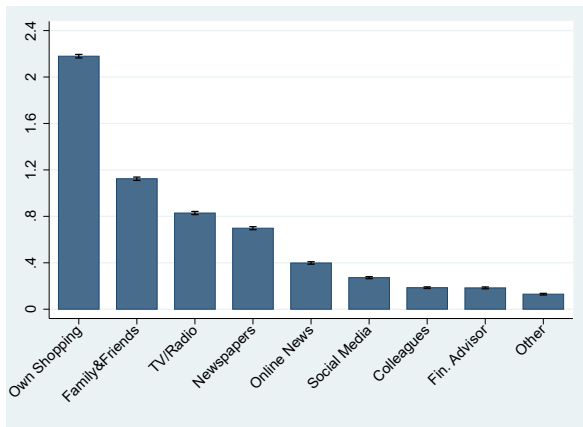
- Higher inflation expectations can comove positively with higher stock valuations
- During binding ZLB, higher inflation does not trigger increase in policy rates
- Higher inflation expectations hence lower real interest rates (Fisher equation)
- Lower real interest rates stimulate aggregate demand (Euler equation)

# Inflation and Monetary Policy

- Non-core inflation highly mean reverting
- Little predictive power for future inflationary pressure
- Monetary policy: focus on core inflation for inflationary pressures
- Higher core inflation → higher policy rates
- “Of course, if commodity and energy prices were to lead to a general expectation of a broader increase in inflation, more substantial policy rate increases would be justified. But assuming there is a generally high degree of centralbank credibility, there is no reason for such expectations to develop”

Charly Evans, President and CEO of Chicago Fed

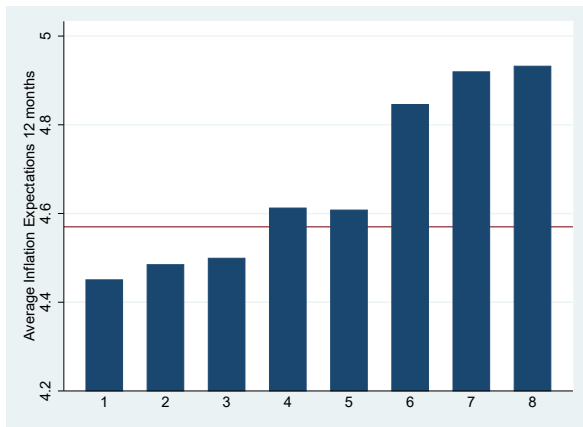
## But How Do Agents Form Expectations?



Source: D'Acunto, Malmendier, Ospina, and Weber (JPE, 2021)

- Shopping most important source of information for future overall inflation

## But How Do Agents Form Expectations?



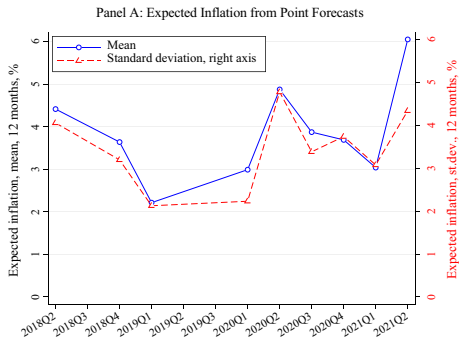
Source: D'Acunto, Malmendier, Ospina, and Weber (JPE, 2021)

- Variation in shopping bundle inflation → heterogeneity in overall inflation expectations

# Measures of Inflation Expectations

- Paper: strong case for traditional measures missing point
  - “collective failure in 2021 reflects limitation of existing forecasts”
- But focus only on central banks and economists
- Financial markets missed boat themselves
- FFF predicted 3 increases a 25 bps in November 2021
- Why do we care about them? They don't consume, set prices, etc.
- Households are very sensitive to salient price changes

# Household Expectations During the Pandemic



Source: Weber, Coibion, Gorodnichenko (IMF ER 2023)

- Households increased inflation expectations as early as Q12020
- Additional increase during summer of 2021

# Stocks vs Bonds

- Paper: bond prices affected by other aspects as well  
Fed interventions, TIPS liquidity, flight to safety
- BUT: same applies to stocks
- Sensitivity to expected inflation function of (Bhamra et al, RFS 2023)
  - Cash-flow stickiness  
Gorodnichenko and Weber (AER 2016)
  - Equity duration  
Weber (JFE 2018)
  - Capital structure stickiness  
Gomes et al (AER 2016)
  - Time Varying Inflation risk premium  
Boons et al (JFE 2021)
  - Elasticity of demand  
Weber(2015)
- Cross section of stocks likely useful but more realistic strawman

## Random Rants

- For information betas use intraday returns
- Lots of other news gets impounded on announcement days
- All stocks have positive loadings on headline inflation
- How persistent are betas at the stock level?



# Conclusion

- Great paper every one should read!
- Convincing new evidence on inflation exposure at firm level
- Few minor quibbles to address possibly in follow-up work