

Taming the Animal Spirits: How Financial Conditions Indices Could Shape Monetary Policy

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What are FCIs?

“I used to think that if there was reincarnation, I wanted to come back as the president or the pope or as a .400 baseball hitter. But now I would like to come back as the bond market. You can intimidate everybody.” – This 1994 affirmation by James Carville, an American political strategist advising Bill Clinton at the time, still holds true today, as financial conditions (including, but by far not limited to bond yields) strongly affect economic activity by swaying individuals’ and firms’ decisions. Textbook examples of these conditions being restrictive for the economy include high interest rates, low equity prices, or a strong local currency relative to trading partners.

To measure financial conditions, economists developed Financial Conditions Indices (FCIs), which aggregate various kinds of data and perform *economic magic* to get to a value that depicts how “tight” financial conditions are. There is a multitude of options to choose from, with each issuer

using their own calculation method, data, and time frame. Prominent indices are constructed as follows:

- **Chicago Fed’s National FCI:** Weighted average of 105 measures of financial activity in debt, equity, and money markets, as well as both traditional and “shadow” banking.
- **Bloomberg US FCI:** Z-score from 10 equally weighted indicators from bond, equity, and money markets, including volatility measures.
- **Goldman Sachs FCI:** 5 indicators (policy rate, 10-year T-note yield, BBB spread, equity valuations, and a trade-weighted exchange rate) weighted based on the Fed’s dynamic FRB/US model to measure their relative impact on GDP.
- **Federal Reserve Board’s Financial Conditions Impulse on Growth:** Similar to the Goldman Sachs FCI, it additionally includes mortgage rates and housing prices, and considers past financial market changes instead of only current market conditions.



Figure 1: Standardised FCIs over 01.11.2021-31.12.2023. Source: Bauer (2024)

The indices are all vaguely correlated and suggest similar results, regardless of the calculation method, meaning that there is an underlying phenomenon being measured. Figure 1 demonstrates a tightening of financial conditions (positive values imply “tighter” conditions), reflecting the increase in the Federal Funds rate and the decline in U.S. equity prices throughout most of 2022, stabilising towards October. It is noteworthy that FCIs are strongly driven by stock market values (Davies, 2023). In a simple world, all else being equal, higher equity prices lead to more consumption through the wealth effect¹.

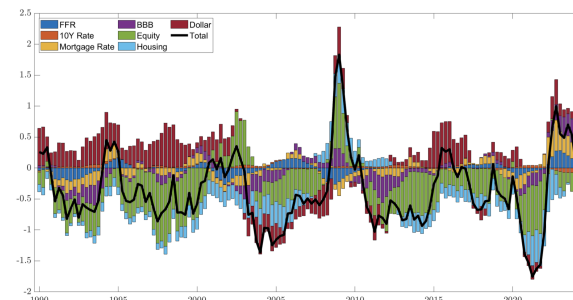


Figure 2: The Fed’s FCI-G index and its drivers over 1990Q1-2024Q2 (Equities in green). Source: Ajello et al. (2023)

Relevance for Policymakers

Central bankers consider financial conditions when making policy decisions. When asked about the adverse macroeconomic impact of higher long-term Treasury yields in a late-2024 press conference, Federal Reserve Chairman Jerome Powell (2024) explained, “We do take financial conditions into account. If they’re persistent and they’re material, then we’ll certainly take them into account in our

¹People increase spending as the value of their assets rises.

policy”, adding that they are not a primary target currently, rather “just something that we’re watching.” Translating from *Fedspeak*, “persistent and material” implies that volatile financial conditions distort the bigger picture and are uninterpretable for the Fed, as clarified by its chairman a year ago: “Things are fluctuating back and forth—that’s not what we’re looking for. With financial conditions, we’re looking for persistent changes that are material.” (Powell, 2023).

This stance is exemplified by the Fed’s decision not to react to recent turbulences in technology stock prices driven by fears of being outcompeted by cheap Chinese AI, as Powell has commented yet again that what matters is “macro developments and that means substantial changes in financial conditions that are persistent for a period of time.” (Powell, 2025).

Similarly, Swiss National Bank (SNB) governors brought up the rising self-calculated Swiss FCI to attention at a Money Market Event last April, hinting that it is also a policy-relevant metric in the land of the Alps (Martin and Moser, 2024). Even Ben Bernanke, who argued throughout his career that the central monetary authority cannot identify asset bubbles and should only care about financial conditions in the context of inflation targeting, has since acknowledged that they deserve significantly more attention (Wigglesworth, 2024).

Looking at the models, the Federal Reserve and the European Central Bank use similar frameworks, the FRB/US and the ECB-BASE respectively, as core tools for policy analysis. Similar to the DSGE model, they are large-scale general equilibrium models, simulating optimisation decisions of forward-looking households and firms (Lane, 2023). The

SNB also uses a tailored version of a DSGE model for its forecasts (Rudolf and Zurlinden, 2014). These models are influenced by financial conditions in various ways: the short-term policy rate is a key component, as it feeds directly into household consumption and corporate investment formulas; longer-term government and corporate bonds are modelled to represent expectations, with their term premia being negatively correlated with future output gap, portraying investors demanding higher risk premia if they expect the economy to deteriorate; stock market wealth influences consumption through the wealth effect; and so forth.

As aforementioned, financial conditions can be viewed as a vehicle that transmits monetary policy decisions to macroeconomic dynamics. However, this vehicle is inherently unstable due to financial markets being prone to emotion-driven volatility, a concept that Keynes labelled *Animal Spirits*. This instability is particularly evident in equity markets, a key driver of FCIs. By reducing the variability of markets, policymakers can enhance the efficiency of monetary policy, ensuring a more stable and predictable transmission of its effects to the broader economy. In turn, this would also curb fluctuations in inflation, interest rates, and the output gap, leading to a smoother business cycle with less pronounced booms and busts and, thus, less uncertainty for economic actors². Models have demonstrated that reducing the volatility of asset prices, and thus of the FCIs, will significantly increase general economic welfare (Farmer, 2013; Caballero et al., 2024).

To achieve those goals, taming the *Animal Spirits* is key. In more formal economic models, they are referred to as “noise” and are part of a feed-

²*Economic Policy Uncertainty* by Alessandra Vollmer

back loop: “noise has a greater impact on aggregate asset prices when return volatility is higher. This happens because higher return volatility makes arbitrageurs more reluctant to trade against noise. The larger price impact of noise leads to an endogenous increase in return volatility, which further amplifies the price impact of noise, and so on.” (Caballero et al., 2024). Simply put, as rational actors retreat, markets spin out of control – the inmates start running the asylum.

The key actor here is the “arbitrageur”, who corrects market inefficiencies by returning all assets to their fundamental values, thereby mitigating noise shocks and instating the EMH³. Arbitrageurs are sophisticated, risk-averse investors and leave a market that is too volatile and irrational. An example is the few hedge funds that were unlucky to find themselves on the losing side of the GameStop frenzy, which was clearly noise-driven⁴. To quote Keynes once again: “Markets can remain irrational for longer than you can remain solvent.”

There can be different approaches to utilising this concept to achieve the objective of minimising noise. Roger E. Farmer argued back in 2014 that the central bank should take on the role of arbitrageur directly: “The FPC (Financial Policy Committee)⁵ can and should buy shares in the stock market when the PE ratio⁶ is low, and sell them when it is high. These trades will be profitable for the Treasury and they have the potential to smooth out the financial cycles that are the consequence of financial market

³Efficient Market Hypothesis

⁴*The GameStop Frenzy Showed How Desperately We Need A Narrative Finance* by Felix Mao

⁵Department of the Bank of England; UK’s macroprudential authority

⁶Price-to-Earnings ratio

irrationality.” (Farmer, 2014). After all, the Treasury can remain solvent for longer than markets will remain irrational. This is different from traditional quantitative easing (QE), as the primary purpose is correcting market irrationalities rather than decreasing long-term yields and increasing liquidity. Central banks have previously used QE as a tool to stabilise financial conditions, particularly in times of crisis such as the GFC or the COVID-19 pandemic; however, this was primarily done through the mortgage backed securities (MBS) or fixed income markets rather than picking undervalued stocks. Of course, Farmer’s proposal may appear radical, and it is well-documented that consistently timing the market is exceedingly difficult. Delegating this task to government officials seems unrealistic, but the idea is worth noting.

FCI Targeting

A less extreme methodology going in a similar direction was recently proposed by Caballero et al. (2024) in an NBER working paper. The authors suggest a framework in which the central bank announces a soft and temporary target for a given FCI and adjusts the policy rate to keep the actual FCI close to target, therefore going beyond targeting inflation (and unemployment⁷). By declaring such a target and demonstrating commitment to upholding it, the central bank breaks the aforementioned feedback loop by stabilising the market, thereby “recruiting” the arbitrageurs to eliminate noise further.

If investors are confident in the central bank’s ability to minimise volatility (at least to some extent), the Sharpe ratio⁸ of various investments would

increase, prompting sensible bets, such as buying undervalued assets and (short) selling overvalued ones, instead of opting for risk-free alternatives. As prices realign with fundamental values, volatility continues to decline, leading to further improved Sharpe ratios. This initiates a virtuous cycle and brings all the previously announced benefits of stable financial conditions. Another benefit is that private investors and traders function in real-time (as fast as a millionth of a second in the context of high-frequency algorithmic trading), whereas monetary policy carries a substantial time lag in its decisions.

The strategy is similar to providing forward guidance about the FCI and is strictly superior to traditional interest rate forward guidance according to the authors’ calculations. Their empirical analysis assessed data from 1990 to 2020, isolating the impact of noise with a VAR⁹ and simulating FCI targeting by the Fed throughout these years. In this hypothetical scenario, there are decreases in the variance of the FCI itself (55%), the output gap (36%), inflation (2%), and the interest rate (6%). This can be achieved without requiring the central bank to distinguish between bubbles and legitimate growth, which is a dangerous game to play, as explained by Bernanke (2015).

Criticism of FCI Targeting

Adding another target, while keeping the number of tools the same as before, would breach the Tinbergen rule, which states that at least n independent policy instruments are required to successfully achieve n independent policy targets. As reaction to pure economic shocks (which reverberate through

financial conditions) is the primary objective, enforcing a secondary FCI goal would not necessarily conflict with the former, but flexibility would be limited. The authors argue that this is a worthwhile trade-off: “We show that starting from a perfect-flexibility (discretionary) benchmark, implementing some degree of FCI targeting is always optimal. This is because the reduced flexibility with respect to macroeconomic shocks entails only a second-order loss, while the substantial reduction in the impact of noise induces first-order gains in terms of stabilizing the output gap.” (Caballero et al., 2024). To simplify, one can apply the idea of convex preferences – “a bit of both”, although with a strong preference for one, can be more advantageous than relying on a single target alone.

Ultimately, this is all fine and dandy on paper; however, the effectiveness of such an instrument in the field is yet to be tested. Lastly, one must remember Goodhart’s law, which is highly pertinent here – “When a measure becomes a target, it ceases to be a good measure.”

⁷for the Federal Reserve, the Reserve Bank of Australia, the Reserve Bank of New Zealand...

⁸Most common measure of risk-adjusted returns

⁹Vector autoregression

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