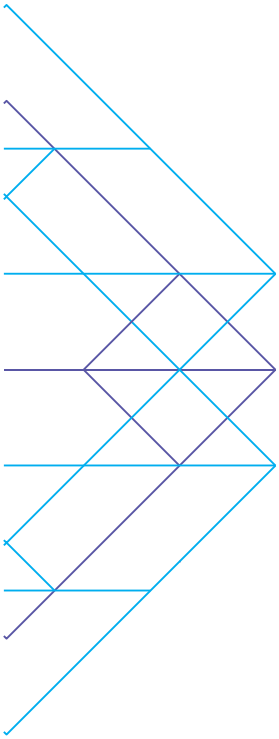
August 2025

Equity Market Focus: Subjective Expected Returns

Understanding Return Expectations, Part 7



Executive Summary

Earlier papers in the series introduced some key insights regarding subjective return expectations, but Part 7 finally explores this under-studied topic in detail. While *objective* expectations are typically inferred from *market* prices or yields (with the help of some model or assumptions), *subjective* expectations are best inferred from *survey* data. I highlight interesting differences across investor groups in their tendency to overextrapolate or to be overoptimistic.

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I thank Thomas Maloney for helpful dialogues and comments; Thom is a coauthor of half of the papers in this series and has a significant influence also in the other half. I again thank Dahlquist-Ibert (2025), Graham-Harvey (2018), Greenwood-Shleifer (2014), and Hillenbrand-McCarthy (2022, 2024) for permitting me to use their data in my exhibits.

Introduction

Many academics used to frown upon survey data ("talk is cheap, show us how they invested"), and simply assumed rational expectations. Over time, surveys have attracted more attention, due partly to the growth of behavioral economics, partly to greater availability of survey data, and partly to new evidence that survey participants do "put their money where their mouth is" (i.e., tend to act consistently with their survey responses).[1]

Surveys can also help separate expectations of future fundamentals from required risk premia, whereas market-based expectations blend those together. For example, high equity market valuations reflect some mix of optimistic growth expectations and low required equity premia, just as a steep yield curve reflects some mix of rising-rate expectations and high required term premia.

Subjective vs Objective Expectations

The "expected returns" commonly analyzed by academics and capital market assumptions providers are objectively feasible expectations rationally held by investors. High asset valuations (low asset yields) tend to predict low future returns, so market yield- or valuation-based expected returns are considered objective. Objective equity market return predictions tend to be lower after a decade of strong returns and rising valuations (think 1990s, 2010s).

In contrast, some subjective return expectations are particularly optimistic after such a bullish decade, and pessimistic after bad times like the Global Financial Crisis, just when objective estimates rise. We'll show evidence of such procyclicality in individual investor surveys of return prospects and equity analysts' expectations of multi-year earnings growth. The 2000 tech boom peak is justly characterized as a period when many market participants' subjective return expectations were high while objective return prospects were low (see Exhibit 1 in Part 1 of this series). That was an extreme example of subjective and objective expectations divergence. Some other subjective expectations, notably institutional investors' capital market assumptions (CMAs), are more contrarian and align better with objective return estimates. Such apparent rationality hardly means that they are always right, but the long-run odds are on their side.

Arguably the most important bias in subjective expectations is multi-year *overextrapolation*. Extrapolating past earnings growth and past returns are distinct but overlapping behaviors. Some degree of extrapolation (directionally at the market level or in relative terms across single stocks) is rational when asset returns exhibit some continuation tendencies (as they do, up to about one year look-back), or when, say, earnings growth exhibits some persistence (as it does, up to 2-3 years for abnormal growth across stocks).

The problem – the irrationality – arises when investors or equity analysts overextrapolate

[1] See for example the Handbook of Economic Expectations (Academic Press, 2022) and Gennaioli-Shleifer (2018). I am glad about this growth since I've encouraged the use of surveys and used them actively in my own books (Ilmanen (2011, 2022)). This may be repentance after my cowardly non-use of survey data as a PhD student (see the Gene Fama anecdote with a crumpled paper in Part 1 footnote 11). I truly believe we have much to gain in reviewing evidence "directly from the horse's mouth" instead of inferring expectations from asset prices, empirical regressions or theoretical models – even when some survey expectations are not just irrational but also biased in ways that need to be adjusted for.

beyond these horizons. Such overextrapolation seems common based on survey data on analysts' growth expectations, and predictive regressions of future returns on market valuations suggest the same. Indeed, value strategies (from directional market timing to stock selection between "value" and "growth" stocks) tend to outperform in the long run precisely because eventually cheap assets tend to outpace their low growth expectations while expensive assets tend to disappoint their high growth expectations.

While this happens on average, there are sometimes lengthy periods when the overextrapolators "get it right." The follow-up danger – as noted in Part 1 – is that these investors then become overconfident and overextrapolate even more, so we get a market bubble and/or a growth-stock bubble – like 1999-2000 and 2020-21.[2]

Here is one way to intuit why growth overextrapolation is such a common mistake. There is some evidence that survey respondents confuse good companies with good investments, or cyclically good growth prospects with high expected returns. Subjective expectations then equate expected returns with the numerator (expected cash flows) rather than the denominator (required discount rate) of the present-value equation, not recognizing that any growth edge may already be (over)discounted in the market price.

Conversely, one could criticize academics for a poor choice of words. Objective expected returns are driven by investors' risk preferences rather than by their subjective expectations on fundamentals. For example, higher risk aversion in bad times makes investors demand a higher risk premium for equities; then market prices must fall to make it rational to expect higher prospective returns (not because we began to like stocks more, but because higher risk aversion pushed down equity valuations). This terminology is counterintuitive to many laypeople, which is why I sometimes argue that objective ''expected returns" should be more appropriately called "required returns."

Apart from overextrapolation, other costly expectational errors include *underreaction* and *money illusion*. Initial underreaction to (market-level or company-specific) news is common but tends to be at most a multi-month phenomenon, while overextrapolation is a multi-year phenomenon. Together they explain the pervasive predictability patterns in long-run empirical data: one-year momentum and multi-year reversal. Money illusion refers to investors confusing nominal and real variables. One incessant example is the so-called Fed Model, where (real) equity earnings yields are compared to nominal Treasury yields. Discounting real equity cash flows with nominal yields may have contributed to lower market valuations during the inflationary 1970s. Both investor surveys and predictability patterns based on market prices are consistent with underreaction and money illusion.[3]

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[2] Larry Summers highlighted this danger in direct communication. His observation echoes analysis of currency markets in Frankel-Froot (1990), when dollar-bullish chartist expectations became ever more popular after they trounced dollar-bearish fundamentals-based predictions for several years up to the 1985 dollar peak.

[3] Other costly habits are related to investor risk preferences rather than biased expectations. Apart from general overconfidence, more specific examples include liking lotteries and disliking leverage. Both contribute to the (from CAPM perspective surprisingly) low objective expected return of the riskiest stocks and relatively high expected return of defensive stocks. See chapter 6 in Ilmanen (2011) and chapter 17 in Ilmanen (2022) for a fuller treatment on behavioral finance and investor bad habits.

Do Patterns Vary Across Investor Groups, Investment Horizons, or Asset Classes?

Whose expectations are we talking about here?[4] Surveys at best reach a subset of market participants and it is not clear how different respondents or investor types should be weighted – presumably by their wealth or their marginal role in setting market prices. We will highlight some interesting differences among investor group behavior. As noted, individual investors tend to be more extrapolative than institutional investors, likely also more overoptimistic, more short-termist, and more subject to sentiment – overall, less rational.

Exhibit 1 displays the conventional wisdom from the survey literature by juxtaposing individual investors' and institutions' opposite expectations formation patterns.[5] Early evidence summarized in Ilmanen (2011), Amromin-Sharpe (2014) and Greenwood-Shleifer (2014) highlighted the extrapolative tendencies in individual investors' return forecasts. There was a strong whiff of irrational exuberance when these surveys showed peak optimism in 2000, when the rearview mirror looked great but high market valuations gave an objective warning signal about prospective returns. Similar surveys revealed much gloomier expectations in 2009 after the market falls which made valuations appear cheap. In contrast, later research by Dahlquist-Ibert (2022, 2025) and Couts et al. (2024) found that institutional investors' multi-year capital market assumptions tend to be contrarian, more rationally aligning with objective expected return measures like the cyclically-adjusted earnings yield.[6]

So, it looks like retail investors are more extrapolative and institutional investors more contrarian. Or is it that short-term forecasts are more extrapolative than long-term forecasts? The two effects are confounded because there seems to be a natural division of labor in that retail surveys focus on near-term prospects and institutional investor surveys on long-term prospects. It is hard to say whether the different degree of extrapolation is due to horizon length (short vs long) or to investor type (retail vs institutional). Maybe a bit of both.

Fortunately, the US CFO survey (conducted since 2000) asks respondents for both 1-year and 10-year forecasts, so it gives us the most direct evidence. After a strong year for the S&P 500, the 1-year CFO forecasts tend to be above average and the 10-year CFO forecasts below average (see **Exhibit 2**).[7] This finding supports the idea that short-term forecasts are more extrapolative and long-term forecasts more contrarian, broadly in line with empirical

[4] In general, market expectations represent different investor groups; participants across them and within them can be quite heterogeneous. Too often, investors ignore the accounting identity that all net flows and overweights/underweights must add to zero (for every buyer there's a seller). Likewise, if surveys reveal that "everyone is bullish" (or running to the exit), this cannot influence net flows but market prices. One must decide which groups' views are worth following and which ones are contrarian market indicators. More color in chapter 8.4 of Ilmanen (2022).

[5] Exhibit 4 in Part 1 showed a similar juxtaposition using published charts, here I create my own charts based on other researchers' data, but the story remains the same: highly extrapolative retail investor expectations. Panel A is inspired by Greenwood-Shleifer (2014) but uses Hillenbrand-McCarthy (2022) data for a longer history. The short history (1998-2003) when investors were specifically asked about their next-year return expectations matches tracks so closely the bull-bear spread that it seems reasonable to use the latter as an expected return proxy since 2003.

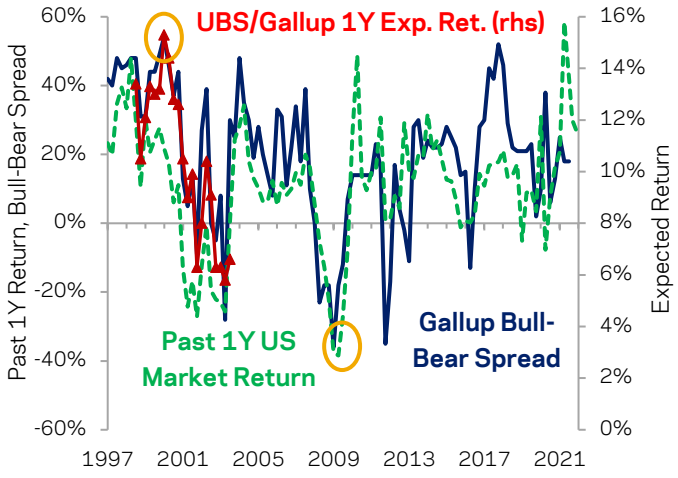
[6] Even institutional investors may not always follow their contrarian-leaning CMAs. For example, Ang-Goyal-Ilmanen (2014) and Jones (2017) document procyclical behavior – multi-year return chasing – among institutions and exhort them to do better.

[7] New research highlights CFO overconfidence on their (1-year) forecast quality – and CFOs display no learning over time to reduce overconfidence; see Boutros et al. (2025).

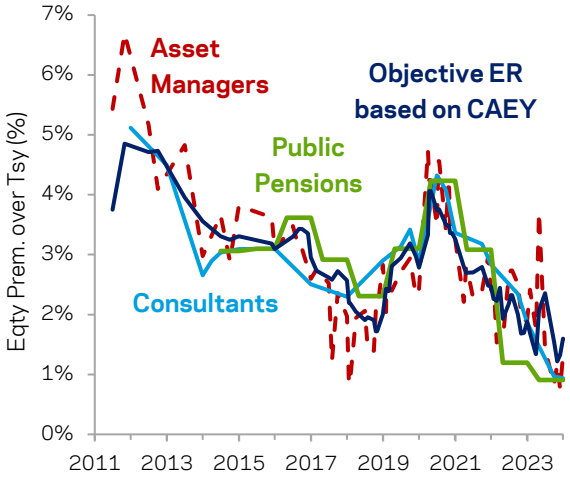
return patterns. On the other hand, we find that equity analysts' long-term (3- to 5-year) EPS forecasts have an extrapolative tendency, while bond investors are long-term contrarians (as discussed in Part 3).[8]

Exhibit 1. Individual Investors Extrapolate, Institutional Investors Act Like Contrarians

A. Individual Investors' (Near-Term) Expectations Follow Recent Returns
Dec 1996 – Dec 2021



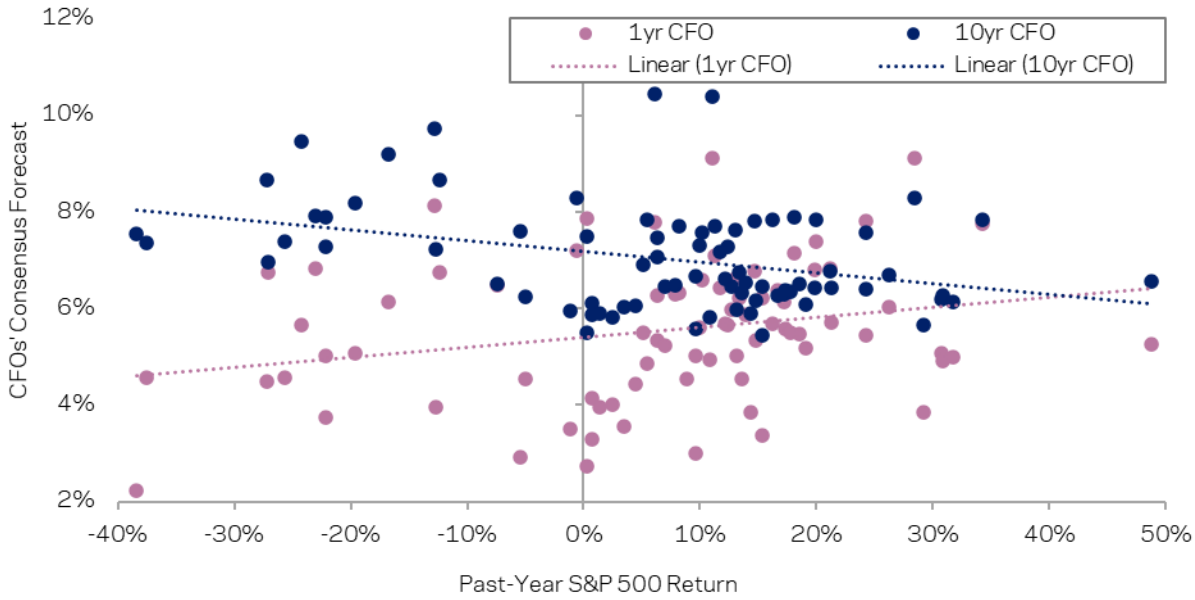
B. Institutions' (Long-Term) Expectations Are High When Market Valuations Are Low
Jun 2011 – Dec 2023



Sources and Notes: Chart A uses UBS/Gallup survey data in Greenwood-Shleifer (2014) and Hillenbrand-McCarthy (2022). Chart B uses CMA surveys among asset managers, consultants, and public pensions in Dahlquist-Ibert (2025). CAEY is cyclically-adjusted earnings yield. Surveys do not specify whether expected returns are gross or net-of-fee. All expectations and returns are for the S&P 500 index.

Exhibit 2. Short-Term Extrapolation and Long-Term Reversal Biases in CFO Surveys

Jun 2000 – Dec 2019



Sources: Graham-Harvey (2018) and direct communication, Philadelphia Fed. Surveys do not specify whether expected returns are gross or net-of-fee.

[8] If we used analyst forecast earnings growth as one input in our predictive regressions or CMAs, its procyclic pattern (say, peaking in 2000 with high CAPE) would offset the countercyclic predictive ability of CAPE.

The relative weights of individual and institutional investors could determine the overall extent of extrapolative action in financial markets. Again, there is heterogeneity: a subset of individual investors is surely contrarian, while a subset of institutions is extrapolative. Each investor's or group's tendency to lean either way may also *vary over time*. Focusing on institutional investors like pension funds, the increasing use of constant-notional targets like 60/40 stock/bond weights or age-dependent asset class shares in target-date-funds point to rebalancing behavior (soft contrarianism). Common use of yield-based CMAs since the 2000s may have prompted even stronger contrarian behavior (underweighting asset classes or countries with higher valuations and lower forward-looking returns). However, many investors' disappointment with CMAs in the past decade (being caught underweight the outperforming US equity market) may have more recently prompted less adherence to those CMAs (i.e., letting the US weight in a global portfolio rise with its valuation). In Part 2, we argue against overextrapolating the past decade's trends.

Let's look more closely at long-horizon equity market forecasts by presumably rational investors. **Exhibit 3** presents such forecasts for US equities (compound total returns over the next decade) from CFOs, economists, and CMA providers – and compares these to objective estimates based on equity market yields. All series show a general decline in prospects during the 1990s and the 2010s, in line with the objective measures. More recently, CFOs and economists turned more optimistic after the Covid crisis, while objective expected returns stayed flat given unchanged high equity valuations.[9] So, the adherence of subjective expectations to objective measures seems mixed, at best – perhaps because these measures turned out too conservative during the post-GFC roaring bull market.

Exhibit 3. Prospective US Equity Market Returns Based on Surveys, CMA Composites, and Objective Market Yields

Jan 1992 – Dec 2024

Sources: Dahlquist-Ibert (2025) (for their composite among CMA providers), Horizon Actuarial (for their survey among CMA providers), Philadelphia Fed (for the Survey of Professional Forecasters economist survey), Graham-Harvey (2018) and Richmond Fed (for the Duke University CFO survey), Professor Shiller's website and Consensus Economics (for Objective ER). Notes: Surveys and CMAs refer to next-decade returns of the S&P 500 index. The Objective ER is a sum of the average of three expected real return proxies in Part 6 of this series and the consensus forecast next-decade inflation.

[9] Equity premia over bonds became compressed when real riskless rates rose from negative (-)1-2% to positive (+)1-2% between 2021 and 2024, while the US equity market valuation was unchanged. This math in objective expected return measures seems obvious to CMA providers but not to the surveyed CFOs or economists. The main rational explanation would be if their growth expectations rose more than discount rates. It is also possible that some respondents simply add a constant equity-bond premium over observable bond yields (Maloney (2024) shows that empirically this is not a good idea).

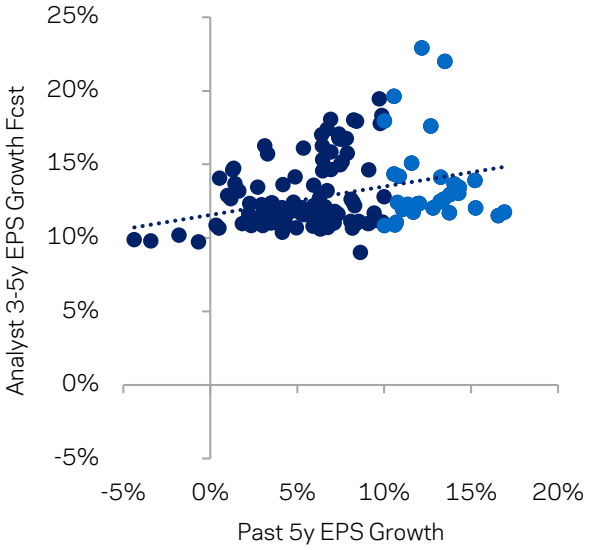
The most compelling evidence of irrational expectations is found in equity analysts' earnings growth forecasts and retail investors' return forecasts. *Equity analysts* keep offering overoptimistic and extrapolative EPS growth forecasts (10-20% expected growth when reality is half that, with procyclic peaks in 2000 and 2021).

Earlier papers in this series summarized the evidence[10] so here we just add **Exhibit 4**, which illustrates both the over-optimism and the over-extrapolation in a different way. Analyst consensus has different-sign slope to past growth than reality, and the light blue circles illustrate opposite responses when past EPS growth has exceeded 10%.

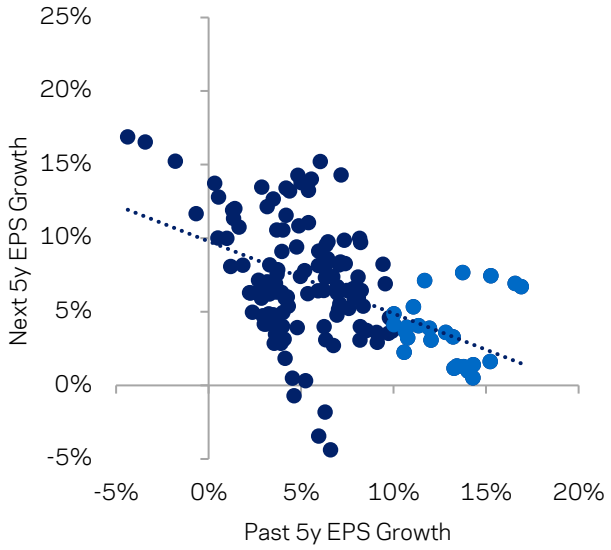
Exhibit 4. Equity Analysts' Long-Term Forecasts Are Untroubled by the Evidence

Dec 1984 – Dec 2024

A. Extrapolating Past Growth With a 10% Floor



B. In Reality, Low Growth Has Followed High Growth



Sources: AQR, Bloomberg, Citi, Credit Suisse, Hillenbrand-McCarthy (2024), IBES. Notes: Analyst forecast for nominal 3-5 -year earnings growth is compiled by IBES for stocks in the S&P500 universe until 2009 and the Russell 1000 thereafter. Light blue circles denote observations where past annualized EPS growth (of "street earnings") exceeded 10%

Evidence on *retail investors'* return expectations is sporadic, but it is interesting to contrast surveys of long-run return expectations by Natixis and Vanguard.[11]

- Natixis document classic overoptimism as their global surveys of individual investor long-term return expectations show average (real!) annual return near 9-10% in 2014-2018 and 12-14% in 2019-23, well above professional estimates. The US investor subset has become even more optimistic, in 2023 expecting 15.6% real long-term return compared to 12.8% global average and professional estimates in high single digits. PS. The 2025 US investor expectation fell to 12.6% and global to 10.7%.
- Vanguard fund investors have faced their own polls since 2017, and the evidence supports the notion of Vanguard investors being their own breed – more knowledgeable or less excitable (take your pick). Their 10-year return expectations on US stocks are in single digits. Yet even these have risen from 6.5% per

[10] See Exhibit 1 in Part 1, Exhibit 2 in Part 3, Exhibit 3 in Part 4, and Exhibits A1-A2 in Part 6.

[11] For recent surveys, See Natixis (2025) and Vanguard (2025).

annum in 2017-18 to nearly 8% in late 2024, while rising market valuations pointed the other way.

The above patterns rhyme with investors embracing an ever-higher weight of US stocks in global portfolios despite ever-higher absolute and relative valuations (see Part 2). Together all this makes us suspect that many investors are giving up on objective CMAs which have implied underweights on US stocks. Extrapolating a past return advantage is even more appealing when it has worked for a while.

Explanations for Observed Expectations Formation Patterns

The evidence on predictable asset returns – over time or across stocks – led to academic debates about whether the main cause was rational reward for risk or investor irrationality. Time series predictability was rationally explained as time-varying risk premia – investors demanding higher risk premia in bad times than good. For example, the Campbell-Cochrane (1999) model with time-varying risk aversion could explain the countercyclic risk premia (high market valuations and low expected returns in 2000 and the opposite in 2009).

However, survey evidence challenges the above logic when it shows that many investors have high subjective return expectations in good times (2000) and low in bad times (2009). (Though as noted, institutional investor expectations are closer to empirical predictability evidence and countercyclic required risk premia.)

Academics then proposed another rational answer – growth expectations of rational learners may deviate from "full information" expectations due to fading memories or gradual structural changes (Nagel-Xu 2022, 2023, Farmer et al. 2023). These ideas could explain the growth optimism observed in 2000, even if it turned out to be unwarranted.

Although these rational explanations may play a role, the most compelling arguments come from behavioral finance. Irrational overextrapolation of past growth or past returns seems to fit the survey evidence and can explain the classic cross-sectional value-growth anomaly.[12]

At the root of overextrapolation bias is the representativeness heuristic, our tendency to judge likelihood by similarity.[13] This leads us to overweight in our judgment memories that come to mind quickly. BGLS (2019) propose a "diagnostic expectations" model where probability judgments are formed with a representativeness bias. In this model, expectations contain a "kernel of truth" in that they exaggerate true features of reality; they move in the correct direction but by too much. Just as doctors overestimate the probability of sickness after a positive test result, leading to

[12] Also see the review of academic debates in Part 4 of this series. We focus here on interpreting the time variation in expected returns, while the academic literature focused more on the source of cross-sectional predictability patterns. A close parallel to our discussion is the decades-old Fama-French vs Lakonishok-Shleifer-Vishny debate on whether the value factor reflected a risk premium or irrational mispricing. BGLS (2019 and 2024) provide evidence for the latter, with analysts overextrapolating past growth of single stocks (analysts use information about past performance but overreact by predicting too many Apples or Googles with extra-persistent growth). The Cochrane and Shleifer schools of thought in Part 4 cover both the time-series and cross-sectional predictability angles.

[13] Tversky and Kahneman (1974) identified heuristics like representativeness, availability and anchoring as evolutionarily useful rules-of-thumb which deviate from rational Bayesian decision making and mostly work well, but on occasion trip us.

over-diagnosis, so agents overestimate the probability of a good future state when the current news is good.

The key implication is *overreaction* to news, that is, excessive extrapolation of *recent* outcomes (and eventual reversals of related expectation errors).[14] "Recent" can be anything from minutes to years; current expectations may be estimated by assigning lower weights to more distant observations. Calibrations of survey-based growth or inflation expectations to past realizations suggest that multi-year memories matter. This fits the earlier finding that analyst growth expectations are related to past-decade growth, overshooting after a strong decade. For more, see Gennaioli-Shleifer (2018) and BGLS (2019, 2024).[15]

Turning back to the diversity of expectation formation patterns, I highlight two fresh working papers[16] which drill into the contrasting mindsets of extrapolators and contrarians.

- McCarthy and Hillenbrand "Heterogeneous Beliefs and Stock Market Fluctuations": Stock prices aggregate the beliefs of different investors. This paper models a market with three investor types: extrapolators of past earnings growth (equity analysts), extrapolators of recent returns (individual investors), and rational somewhat-contrarian investors (CMA-followers). Using the model to estimate the fraction of stock market investors holding each type of beliefs suggests that 42% of investors hold beliefs matching those of equity analysts and 25% hold beliefs as observed in individual investor return surveys, while only 33% of investors hold objectively rational beliefs. These three groups' cash flow expectations explain respectively 29%, 23%, and 13% of stock market fluctuations over time, and together with a common time-varying risk aversion feature (22%) these diverse beliefs explain 87% of stock market fluctuations.
- Andre-Schirmer-Wohlfart "Mental Models of the Stock Market": *Investors' return expectations are pivotal in stock markets, but the reasoning behind these expectations is not well understood. This paper studies economic agents' mental models -- their subjective understanding -- of the stock market by conducting surveys with the general population, retail investors, financial professionals, and academic experts. Respondents forecast and explain how future returns respond to stale news about the future earnings streams of companies. While academic experts view stale news as irrelevant, households and professionals often believe that stale good news leads to persistently higher expected future returns. Relatedly, academic experts refer to market efficiency to explain their forecasts, whereas households and many professionals directly equate higher future earnings with higher future returns, neglecting the offsetting*

[14] Selective memory recall is not only about recency, though. Overreactions might also be associated with salient easy-to-access news and extreme experiences (also on the downside, like Crash 1987 or the Global Financial Crisis). Overweighting certain episodes is likely reinforced by familiarity (own portfolio gyrations are more vivid than read experiences; Japanese recall the Nikkei boom and bust better than Americans), perceived similarity to the current situation, and merely memorable stories.

[15] The diagnostic expectations model is mainly about extrapolating multi-year fundamentals and thus relevant for the long-horizon focus of this series. In contrast, Greenwood-Shleifer (2014) and BGJS (2018) are mainly about short-term return extrapolation which is more relevant for bubbles and crashes where positive-feedback loops dominate (taking markets "too far", above or below fair values, leading to eventual reversals). Such positive-feedback dynamics are most common in the advanced stages of bull or bear markets, while the early stages are driven by true fundamental news where *underreaction* to news is more common. Both features contribute to prevalent short-term momentum patterns (not my focus here). Researchers keep trying to understand when overreactions and underreactions matter more as expectations errors (e.g., see Coibion and Gorodnichenko (2015) and Gennaioli-Shleifer (2018)). My partial takeaway: stronger underreaction to less salient news, and also stronger amid regime changes than within regime.

[16] "Heterogeneous Beliefs and Stock Market Fluctuations" is summarized and "Mental Models of the Stock Market" is directly quoted.

> *effects of endogenous price adjustments. The latter respondents are unfamiliar with the concept of equilibrium pricing. We use panel data on household expectations to show that this neglect predicts previously documented belief anomalies such as return extrapolation and pro-cyclicality.*

Bond investors may be more rational than equity investors, perhaps because the asset's expected return is better anchored by observable yields or because a less speculative asset class is less likely to inspire animal spirits. Parts 8-9 will cover rate expectations and inflation expectations, showing that 'expert' expectations tend to be adaptive, broadly reflecting the past decade's experience in actual inflation and aligning with market estimates.

- These expectations may turn out wrong for long and look ex-post irrational if there are persistent surprises like the post-WWII inflation and subsequent multi-decade disinflation. However, recent research can explain the repeated forecast errors as rational learning when economies experience gradual structural changes.[17]
- On the less rational front, individuals' inflation expectations have been higher than expert views, and surveys reveal interesting patterns across investors (age, gender, politics). The Appendix reviews some empirical highlights which take us away from our core themes.

Concluding Thoughts

While surveys can be useful inputs for capital market assumptions (objective expected return estimates), one must carefully consider which surveys fit this purpose. Economists' inflation forecasts are an easy yes, while analysts' growth forecasts are an easy no. Logically the latter would be a natural real-time input for "G" but in practice they are distorted by analysts' overoptimism and overextrapolation biases so badly that they could only be used as inverse predictors.

New research provides both empirical evidence and theoretical insights regarding different extrapolation versus contrarian tendencies across investor groups. Let's watch this space!

[17] Farmer-Nakamura-Steinsson (2023) show that a rational Bayesian learner would have made very similar forecast errors on interest rates as economists if it had been faced with a pernicious gradual structural change which characterizes recent decades. As opposed to the full-information rational-expectations assumption often made in economic models and econometric analyses (whereby observers have all relevant information and make same rational predictions as the relevant economic theory), this analysis treats observers as boundedly rational without foresight on full-sample outcomes; instead they do their best as rational Bayesian learners of structural changes. For equity market applications, see Nagel-Xu (2022, 2023).

Appendix: Detour on Economic Survey Expectations

This section draws heavily on the *Handbook of Economic Expectations* (2022). While survey data is a valuable source of information for better understanding investor behavior, it would be wrong to uncritically use any survey-based expectations as inputs for market expectations. We have touched on different expectations formation patterns across investor groups as well as on outside influences such as equity analyst incentives (which may bias their survey responses away from their true expectations). It is also clear that the best proxies of market expectations would be somehow "wealth-weighted" or represent the most relevant market participants. In this sense, it is comforting to see that the New York Fed's surveys on interest rate expectations find broadly similar consensus forecasts from primary dealers or market participants as are found in the typical economist surveys.

Here I highlight some "fun results" (ok, fun is in the eye of the beholder…) on inflation expectations and other economic concerns:

- Expert views on inflation have been quite well anchored to market expectations (e.g., inflation swap rates) and on central bank projections. However, consumer responses can differ a lot from these, and apparently in quite systematic ways.
- Consumers tend to expect higher inflation than the typical expert's 2-3%. There is also a clear gender pattern – on average, women predict 0.5% higher inflation than men. This bias has been traced back to the idea that seeing repeated price changes raises inflation expectations and the fact that women still (sigh) do more of the "grocery shopping."
- Age matters, but the sign depends on the lived inflation experience of each cohort. In many contexts, the evidence suggests that our lifetime experience influences our expectations. Pioneering studies by Malmendier-Nagel (2011, 2016) showed that so-called "depression babies" tended to be frugal and conservative through life, with lower equity market allocations. Turning to inflation, the cohorts that lived through the 1970s-80s inflation had higher inflation expectations even in the 2010s than their children born in the 1990s who grew up in a low-inflation environment. Notice that such wedges are found at a given point in time for cohorts of different age.[18] Such lifetime memories matter even among experts – a similar pattern is found in the hawkishness of Fed monetary policy voting behavior between older and younger cohorts.
- Politics matters. US inflation expectations – and broader economic sentiment – varies predictably on whether "your side" (a Democrat or a Republican) is in the White House. When the "other side" is in power, the economy is expected to do worse (including higher inflation) The observed sign-flips around presidential turnover events are eye-catching and have increased over time – a bit depressing sign of growing polarization.
- Education matters. Very broad surveys are democratic but may not have too much market relevance. Financial literacy is not great when many respondents assume that

[18] Strong enough personal memories last beyond one lifetime in collective memory. Braggion et al. (2025) show that German households living in regions which experienced worse hyperinflation in the 1920s still expect higher inflation today, a century later.

the Fed's inflation target is above 10% (the most common answer is the better "I don't know"). On average, inflation expectations are inversely related to education level.

- Lastly, on a slightly different topic, we must be grateful for the overoptimism and overconfidence among our entrepreneurs, a key ingredient in US exceptionalism. When entrepreneurs launching a new business are asked to assess the likelihood of business failure for *any* firm in similar circumstances, they are way more optimistic than objective facts. And when they are asked about their *own* chances compared to that generic firm, the odds of success are even higher. It seems likely that people extrapolate salient success stories rather than true averages.

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