

Communicating Forecasts to the C-Suite: A Six-Step Survival Guide

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PREVIEW Todd Tomalak, Vice President for Research and Head of Building Products at John Burns Real Estate Consulting, writes that most forecasting practitioners have extensive training in technical skills but end up having to "learn the hard way" about discussing forecasts with CEO/CFOs. Here, he offers quidance on how to talk forecasts with the C-Suite.

Six Tips for Explaining the Forecast to Execs

- 1. Articulate what the CFO needs to believe to use the forecast. Do you face knee-jerk reactions to a surprising forecast? Articulate what the executive needs to believe for your forecast to work. Even better, think through what understandings are necessary to believe other forecasts that have a different outlook.
- 2. Remember: accountants and statisticians think differently about data. Keep the conversation around totals, not detailed segments. Unlike accounting ledgers, statistical estimates become less reliable as minutiae are scrutinized.
- 3. Don't talk about complex diagnostic statistics. Statistics are a tool, not the deliverable. The CEO expects you to do your job well, as evidenced by a reliable forecast, which is different than great-looking diagnostic statistics.
- 4. Know the skewness of consensus forecast participants. Do forecasts of firms that have "skin in the game" cluster differently than forecasts of broader group of firms? Your CEO will be thinking of those peers.
- 5. Explain sensitivities in thumb-rules, not coefficients. Thumb-rules are easy to remember and make CFOs look smart in front of investors.
- 6. Your forecast is wrong. Have an opinion on whether the error is upside or downside. Your model should have equal upside/downside bias, but thinking through possible direction of error will make you more valuable to the executive team. They will have more confidence in you if you can articulate what other factors are on your radar.

INTRODUCTION

 $oldsymbol{V}^{ ext{hich}}$ is harder: building your forecast, or getting aligned with the CEO/CFO? Developing a reliable forecast is a different skill than communicating the forecast to the C-Suite. And while forecast practitioners typically have extensive training in various technical skills, they only "learn the hard way" about discussing forecasts with the CEO/CFO. So here

are some observations and tips on how to bridge the gap when talking forecasts with the C-Suite.

ARTICULATE WHAT THE CFO NEEDS TO BELIEVE TO USE THE FORECAST

Clearly explain what needs to happen for your forecast to materialize. Even better, think through what beliefs are necessary to buy into other forecasts. When

you share the growth forecast, be sure to concisely explain the "why" behind the number. The underlying logic is more important than the outcome.

Remember, not everyone in the room always has the goal of an unbiased best-estimate forecast (Mello, 2009). Game playing happens when the *implication* of the forecast gets more focus than the *accuracy* of the forecast.

Sales execs are typically graded on exceeding their sales goals, not forecasting accurately. Some compensation structures reward execs for exceeding revenue targets, which means the exec has every reason to sandbag to a lower forecast. Taken to an extreme, this can lead to problems from insufficient inventories, headaches in production planning, or even more serious consequences.

An insightful working paper from researchers at the Atlanta Federal Reserve (Foote, Gerardi, and Willen, 2012) examines the underlying forecasts used by issuers of mortgage-backed securities (MBS) before the 2008 financial crisis.

Table 1. Home Price Forecasts from Lehman Brothers

Name	Scenario	Probability	Cum Loss
(1) Aggressive	11% HPA over the life of the pool	15%	1.4%
(2)	8% HPA for life	15%	3.2%
(3) Base	HPA slows to 5% by end-2005	50%	5.6%
(4) Pessimistic	0% HPA for the next 3 years, 5% thereafter	15%	11.1%
(4) Meltdown	-5% for the next 3 years, 5% thereafter	5%	17.1%

CONDITIONAL FORECASTS OF LOSSES ON SUPRIME INVESTMENTS FROM LEHMAN BROTHERS. This table shows that investors knew that subprime investments would turn sour if housing prices fell. The "meltdown" scenario for housing prices above implies cumulative losses of 17.1 percent on subprime-backed bonds; such losses would be large enough to wipe out all but the highest-rated tranches of most subprime deals. The table also shows that investors placed small probabilities on these adverse price scenarios, a fact that explains why they were so willing to buy these bonds.

Source: "HEL Bond Profile Across HPA Scenarios" from Lehman Brothers: "U.S. ABS Weekly Outlook," August 15, 2005.

Table 2: Home Price Forecasts from J.P. Morgan

Date of	Data from	Title
12/8/06	10/06	"More widespread declines with early stabilization signs"
1/10/07	11/06	"Continuing declines with stronger stabilization signs"
2/6/07	12/06	"Tentative stabilization in HPA"
3/12/07	1/07	"Continued stabilization in HPA"
9/20/07	7/07	"Near bottom on HPA"
11/2/07	9/07	"UGLY! Double digit declines in August and September"

VIEWS ON HOUSE PRICE APPRECIATION FROM JP MORGAN ANALYSTS. Even as housing prices began to fall from their elevated levels, many analysts believed that prices would soon stabilize. The table provides further evidence that investors were optimistic about house prices during the boom. Source: Flanagan et al. (2006b)

It points to the dangerous role that bad forecasts of home-price appreciation had on the housing crisis. Even if a subprime homeowner defaulted, rising home prices on the underlying home were assumed to offset the default risk. The most expensive, risky MBS could still make sense if the buyer had the "right" assumption on home prices (right in this case meaning aggressive rather than correct).

This is a clear example of gaming the forecast to achieve the desired outcome. MBS issuers get paid when they issue mortgage-backed securities, not based on the accuracy of their home-price forecasts.

Below are tables from Lehman Brothers and J.P. Morgan, which candidly show the dangerous forecasts of home-price appreciation (HPA) underwritten into MBS. Lehman assigned very low probabilities to downside scenarios, which made bonds look more appealing to investors. Right before home prices plummeted, J.P. Morgan communicated that home prices were stabilizing and near bottom.

Rosy forecasts made otherwise terrible investments look promising. The consequences were dire: home prices fell even

faster than the "least likely" meltdown scenario that Lehman forecasted. Lehman filed for bankruptcy just three years after making this forecast, partially due to losses that could have been avoided if a more balanced forecast scenario had been used. To give credit to where it is due, I am showing both tables, including excellent footnotes that point to the poor forecast, exactly as they were presented in the

Atlanta Federal Reserve Working Paper.

[Note that prices of bonds on the secondary market would already have traded at a discount, as they've priced in losses due to higher rate of defaults (compared to bonds issued to primary markets). Therefore, the Aggressive scenario still would look profitable to secondary market investors despite the 1.4% cumulative loss from the original bonds. Loss

rates refer to defaults of underlying loans within the mortgage backed security.]

Most organizations run into some form of forecast gaming, albeit less severe than the financial crisis. Discussing what you need to believe changes the tone of the discussion from "Who is right?/What number is right" to "What beliefs about demand seem the most plausible?" If you think your forecast is going to be surprising to the C-Suite, communicate early, and focus on the reasons. Spoon-feed executive leadership about the changing outlook before unveiling a big forecast surprise.

ACCOUNTANTS AND STATISTICIANS THINK DIFFERENTLY ABOUT DATA

Most CFOs are trained to believe that diving deep into the granular details is always a good thing to do. Accountants are accustomed to working with factual records, which are just as reliable at the individual record-level as when totaled up. In contrast, statisticians are trained to distrust small sample sizes and overly granular estimates. They recognize that each piece of information has some noise. Unlike accounting ledgers, statistical estimates become less reliable as minutiae are scrutinized.

This fundamental difference in how to think about detail can make your forecast discussions difficult. One CFO that I worked with exclaimed, "If I can't believe the detailed segment forecast, I can't believe the total!" To keep the conversation from falling into a downward spiral, do the following:

- 1. Keep the conversation around totals, not overly detailed segments. Don't go into individual subsets unless absolutely necessary.
- 2. Articulate the limitations of your forecasting procedure (limitations, not "weaknesses," is the operative word).
- 3. You might remind the executive that other data they trust such as estimates of GDP growth or other Census estimates all break down into meaningless numbers if looked at under a microscope.

The Census and Bureau of Economic Analysis post abundant warnings about the dangers of relying on the "underlying detail" tables within GDP or other statistical estimates.

It is OK to say that a forecast is only reliable at a high level of aggregation. Show your confidence in the strengths of your forecast process, and be modest and honest about the limitations.

DON'T TALK ABOUT COMPLEX DIAGNOSTIC STATISTICS

Remember that your forecast model is a tool, and not the deliverable. The CEO cares a lot more about the driving factors than the fit of your model. If you are desperate to prove the credibility of the model, make a simple graph of your forecast and the actual data (the rest of us know this is oversimplified). Keep all those complex diagnostic statistics in your hind pocket if you need them (as an appendix). The CEO doesn't care if you've run a stationarity test, and you will lose relevance if you make a showy display of statistics without any serious need to go

Inexperienced forecasters focus on selecting and fitting a model, and then act like the forecast is finished. I think this stems from the fact that many econometric programs focus on curve-fitting, but spend less time on other aspects of forecasting. As a result, some forecasters are much better at fitting curves than they are at digging into the independent impelling factors driving demand.

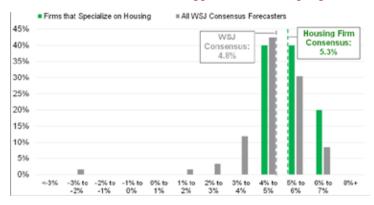
EXPECT A SKEW IN CONSENSUS FORECASTS

I dislike the term "consensus forecast." The word consensus means "general agreement"-however, if you dig under the hood of most consensus forecasts, the first thing you notice is that the forecast is far from a general agreement.

The histogram presented in Table 3, on the following page, illustrates the challenge of using a consensus forecast.

Shown are forecasts of 2017 home-price appreciation, these compiled by The Wall

Table 3. Consensus Home Price Appreciation Buildup: April 2017



Street Journal in April 2017. The fore-casters come from a diverse group of companies, including housing-focused companies, sell-side equity research from Wall Street, and economists at companies completely unrelated to housing (but asked, nevertheless, to contribute their forecasts across all WSJ forecast categories).

The firms that focus on housing skew about 150 basis points higher than the so-called consensus. It is common for companies that have the most skin in the game to develop a different outlook than the broader consensus of companies. The impact of these differences can be significant, and can change the thrust of the outlook-planning discussion. In this example, the difference between the housing firm consensus and the broader WSJ consensus could drive an additional \$2 billion dollars of building-material spending at the large home-improvement retailers like Home Depot and Lowe's.

Anytime you talk to your CEO about consensus forecasts, you should know the key players and their respective forecasts. The CEO will especially want to know if other firms in the same industry are guiding higher or lower. Wall Street analysts will question CEOs on the outlook compared to competitors. In the example above, home-improvement retailers who built their forecast using only the WSJ consensus would likely be planning for slower growth than their competitors: a big deal to your CEO/CFO when speaking with investors.

A word of caution is in order regarding peer-group consensus forecasts. Peer-group forecasts are not necessarily more accurate. I am not advocating that you limit your consensus forecast to only companies like yours, since biases may well exist within the peer group. I'm suggesting that spending time understanding the particular players in the consensus forecast will make your discussion with your CEO go easier.

EXPLAIN SENSITIVITIES TO CHANGES IN INDEPENDENT VARIABLES AS THUMB-RULES, NOT COEFFICIENTS

No matter how complex your actual analysis is, it's worth dumbing down your analysis into *thumb-rules* of demand that are easy to remember and make the CFO look smart in front of investors.

Carol Tome, CFO of Home Depot, does an exceptional job communicating with Wall Street analysts. Tome was questioned by a Wall Street analyst about the effect of an aging housing stock. (Housing stock is a slow-moving, structurally shifting driver with imperfect historical data, since homes in prior spending cycles were generally younger.) A tough question, with a lot of analysis.

This is how she used some of our work (emphasis mine) in their Feb. 23, 2016 earnings call: "As you know, 35% of the homes in the United States are older than 30 years, and there's external research that shows that spending on older homes is higher. John Burns would suggest it's something like 7.5% higher, our own internal research suggests 8% higher. So this aging housing stock bodes very well for us."

In the above instance, the actual analysis that we conducted was much more nuanced and caveat-riddled. However, we boiled the takeaway into a "close enough" thumb-rule that could directionally answer the questions investors were asking about. Her communication of a very complex and nuanced piece of research occurred in just a few words, because the thumb-rule was clear and easy to remember.

Arm your CEO/CFO with useful thumbrules, and they will be able to pull those learnings out during important meetings with other execs or investors. Your relationship with the C-Suite will improve as your insights become easier to remember.

YOUR FORECAST WILL BE WRONG— BE READY TO EXPLAIN IF ERROR LOOKS MORE LIKELY TO THE UPSIDE **OR DOWNSIDE**

Your model should have equal upside/ downside bias, but thinking through possible direction of error is worth your time. The CEO will have more confidence in you if you can articulate what other factors are on your radar that may be blind spots in your model. It also is good practice to think through how the relevance of your independent variables may be shifting.

Here is an example of a directional blind spot that I am facing today. We monitor home equity loan activity (HELOC) as one indicator of remodeling spending. However, new financial innovations are starting to appear right now that offer consumers equity financing rather than a loan. Here's the catch: technically, none of these new dollars count as HELOC because they are not a loan. For example, for Unison Home Owner Loans, Unison will write a check to homeowners for up to 20% of the value of their home, in exchange for 30-75% of the home-price appreciation when owners sell years in the future. No payments are made, and the money is not counted as a loan. This means that data we rely on to monitor home equity lending, which we use in our forecast models, are not capturing financing dollars from UNISON. If consumers begin to use this new type of financing, our forecast model will systemically underestimate demand. Because the relevance of our independent variables is changing, capturing less information than they used to, our forecast may have a blind spot.

When communicating our forecast, I often mention the Unison issue and candidly explain the possibility of underestimating demand based on home equity lending. The bias may not be large enough to warrant a change in our forecast, but a CEO will be comforted to know that we are always thinking about those factors we need to be thinking about.

The predictive value of demand drivers can change over time. If you make sure you deeply understand the limitations of your model, you will not shy away when you are asked if your risk is to the upside or the downside—you will readily admit a possible blind spot, even if you can't quantify the exact impact quite yet.

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