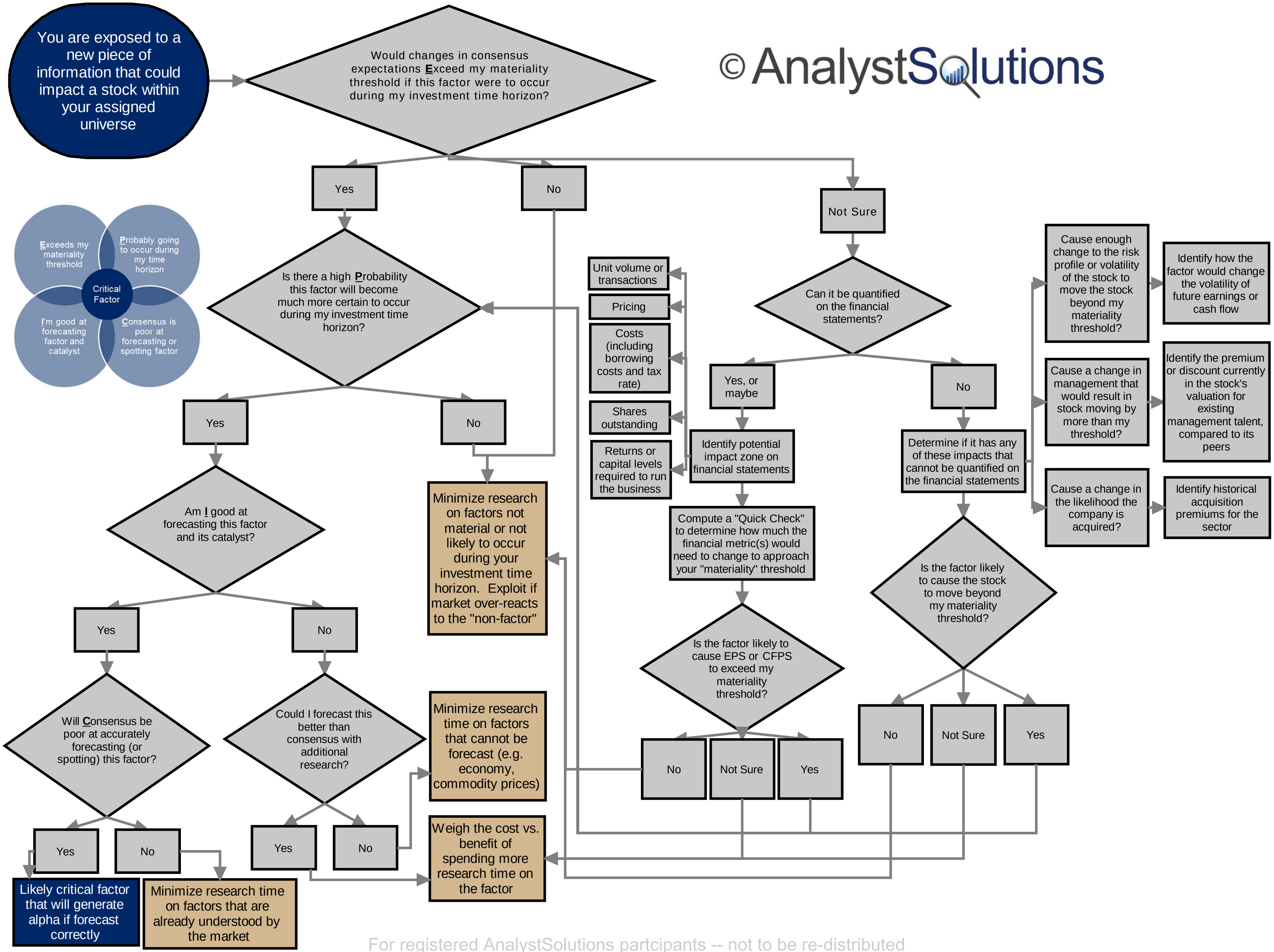
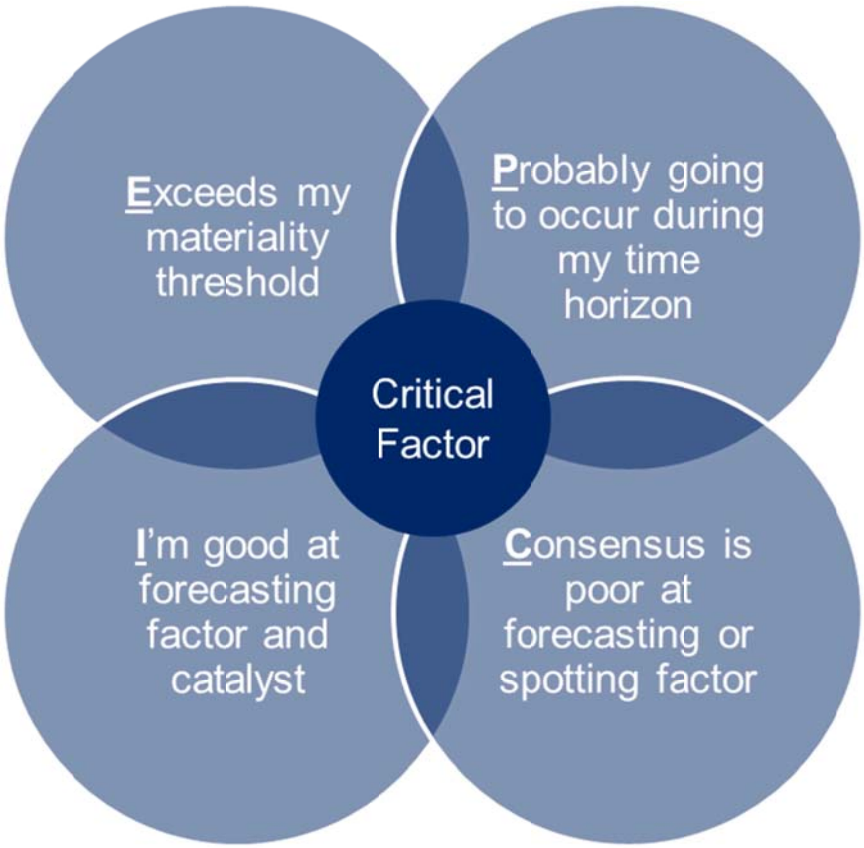


© AnalystSolutions
You are exposed to a new piece of information that could impact a stock within your assigned universe
Would changes in consensus expectations Exceed my materiality threshold if this factor were to occur during my investment time horizon?
Yes
No
Not Sure
Exceeds my materiality threshold
Probably going to occur during my time horizon
Critical Factor
I'm good at forecasting factor and catalyst
Consensus is poor at forecasting or spotting factor
Is there a high Probability this factor will become much more certain to occur during my investment time horizon?
Yes
No
Am I good at forecasting this factor and its catalyst?
Yes
No
Will Consensus be poor at accurately forecasting (or spotting) this factor?
Yes
No
Likely critical factor that will generate alpha if forecast correctly
Minimize research time on factors that are already understood by the market
Could I forecast this better than consensus with additional research?
Yes
No
Minimize research on factors not material or not likely to occur during your investment time horizon. Exploit if market over-reacts to the "non-factor"
Minimize research time on factors that cannot be forecast (e.g. economy, commodity prices)
Weigh the cost vs. benefit of spending more research time on the factor
Unit volume or transactions
Pricing
Costs (including borrowing costs and tax rate)
Shares outstanding
Returns or capital levels required to run the business
Can it be quantified on the financial statements?
Yes, or maybe
No
Identify potential impact zone on financial statements
Compute a "Quick Check" to determine how much the financial metric(s) would need to change to approach your "materiality" threshold
Is the factor likely to cause EPS or CFPS to exceed my materiality threshold?
No
Not Sure
Yes
Determine if it has any of these impacts that cannot be quantified on the financial statements
Is the factor likely to cause the stock to move beyond my materiality threshold?
No
Not Sure
Yes
Cause enough change to the risk profile or volatility of the stock to move the stock beyond my materiality threshold?
Identify how the factor would change the volatility of future earnings or cash flow
Cause a change in management that would result in stock moving by more than my threshold?
Identify the premium or discount currently in the stock's valuation for existing management talent, compared to its peers
Cause a change in the likelihood the company is acquired?
Identify historical acquisition premiums for the sector

Detailed Reference Card (DRC)

Identify a Stock's Critical Factors

Seek Factors That Meet All Four Criteria Below



Use These Four Steps to Identify Critical Factors

1. Identify <u>when</u> historical anomalies occurred →
2. Identify <u>why</u> historical anomalies occurred →
3. Identify <u>current</u> investment controversies

4. Using the information above, communicate with industry and market participants to answer these questions (the EPIC™ framework):

- Would changes in consensus expectations <u>E</u>xceed my materiality threshold if this factor were to occur during my investment time horizon?
- Is there a high <u>P</u>robability this factor will become much more certain to occur (or deviate materially from the expected trend) during my investment time horizon?
- Am <u>I</u> good at forecasting this factor and its catalyst?
- Will <u>C</u>onsensus be poor at accurately forecasting (or spotting) this factor?

When the answer is "yes" to all, it is likely a critical factor that can add alpha

Identifying a Stock's Critical Factors is Very Important But Not an Exact Science

Mastering the skill of identifying just the few critical factors most likely to move a stock will help you generate more informed insights, forecast with greater precision, make better stock calls, communicate your calls more powerfully, and (if you are a sell-side analyst) increase your client votes. The process described below includes identifying critical factors that have occurred in the past, possibly over one or more decades. To avoid getting sucked into a black hole of time, don't get too detailed in this analysis – remember you're looking for the factors that have caused the stock to significantly out- or under-perform its peers – not learn everything that has occurred during the company's entire history.

Step 1: Identify When Historical Anomalies Occurred For a Stock and Sector

The purpose of this step is to identify the periods in the past when a stock substantially out- or under-performed its peers and the sector out- or under-performed a broad index. This process is also extremely helpful in identifying a stock's optimal valuation multiple (discussed fully in a separate QRC and workshop).

A. Obtain the Data

- Depending on your preference and the ease of using your market data service (e.g. Bloomberg, FactSet, Thomson One, Zacks, etc.), determine if it's more efficient to download the data into a workbook that can be automatically updated or work within the market data application. The goal will be to build this analysis so that it can be easily repeated often in the future for your existing stocks and new stocks added to your coverage.
- Obtain the data series below, going back as far as possible. (Most data collection services will not have forward consensus estimates prior to 1990.) In terms of time intervals (between the data points), requesting weekly data may result in too much information (especially if you can obtain data going back 25 years) while requesting only quarterly data may not capture important anomalies. You'll need to weigh these two issues to strike the right balance.
    - Company-level (if the stock hasn't traded for more than a year, you may want to do this step for 2 or 3 of its closest competitors)
        - Required:
          (1) Stock's closing price, adjusted for historical stock splits. Avoid using data where the service has adjusted the closing price to include reinvestment of dividends over time because most of the broader or sector indexes (which will be used in this analysis) do not do this (e.g. the S&P 500 is conventionally shown as a price return index which excludes appreciation from dividends). If the closing stock price from your provider includes reinvested dividends, this may not reduce the ability to spot periods of significant out- and under-performance of the stock, which is the goal of this step.
          (2) Rolling next 12 month ("NTM"), also referred to as 12-month forward ("TMF"), consensus EPS, sales or CFPS estimates (ensure the data is not "current" or "trailing" results). Some services will provide a rolling 12-month forward consensus estimate at any point in time, while others will provide only "current fiscal year" ("FY1") and "next

fiscal year" ("FY2"), which will require an additional step to create a rolling 12-month average.

(3) The most important company-specific metrics that drive earnings or cash flows (e.g. quarterly sales, margins, volume, pricing, etc.)

- Sector-level
  - Sector stock index (such as consumer staples) closing price.

    (1) Some sectors have good representative indexes such as the GIC's 24 industry groups, 68 industries and 154 sub-industries.[1] Check to ensure the index has a good representative sample of companies. If it's limited to a small sample (only 2 or 3 companies) that doesn't represent your assigned universe of stocks, look for a broader index or build your own.

    (2) To build your own, obtain the market capitalization for the sector at each point in time, by adding the market capitalization of the all the companies in the universe. This is not an exact science but it's the fastest way to identify the value the market places on the sector. This still requires adjustments to be made for company-initiated events that impact market cap but do reflect a change in value from the market's perspective (such as a large stock offering or when a company goes private or bankrupt).

    (3) It's also possible to use sector ETFs as a proxy, but they will not likely go back prior to 1998 when ETFs became more popular.
  - Broad stock index (such as S&P 500) closing price
  - Optional:

    (1) Sector demand: Sales/volume and average selling price (ASP) for the sector's major businesses lines that can be compared across companies in a sector (e.g. auto sales, mobile handset sales, airline revenue per seat, etc.), which are sometimes available through industry associations

    (2) Sector supply (capacity factors): Resource utilization rates or any data that measures the degree of sector supply (e.g. airline industry load factor, retail revenue per square foot or meter, etc.)
- Macro-level:
  - A macro factor can impact two sectors in opposing ways and potentially have no impact on a third sector. Complicating matters, a macro factor can have a positive correlation with a sector's stock performance during one business cycle and a reverse for the next. As such, before drawing a sweeping conclusion such as "high oil prices always drive this sector down," it's important to validate cyclical trends over a number of cycles and not just the most recent.
  - To identify if macro data is impacting a specific stock or sector, it's important to display the data in a manner that illustrates the rate of change rather than just a raw number. For

[1] http://en.wikipedia.org/wiki/GICS

example, 10% unemployment is a disappointing number in isolation but not if it is coming down from 12%. When possible, illustrate the data below in terms of how it is changing over time. Examples of macro factors that impact stocks include:

(1) Economic volumes such as industrial production (monthly), manufacturing and service levels (reported monthly by the ISM in the U.S.)
(2) Unemployment (in the U.S. it can be the Employment Situation Report or Weekly Claims for Unemployment Insurance)
(3) Inflation (consumer and producer prices)
(4) Interest rates for longer-term borrowing (can include government or corporate bonds)
(5) Sector-specific macro factors such as global trade, oil prices, seasonal temperatures, currency exchange rates

B. Clean Up the Data

- Smooth artificial spikes caused by special events such as a spin-off or missing data
- Eliminate data for companies when earnings drop to near zero (the P/E will move to infinity); or if there are large periods when companies are not generating earnings, use an earnings yield ratio (E/P)
- For macro data, attempt to use data series that remove monetary inflation if being compared to relative performance of a stock. Almost every data series conveyed in a currency (such as the dollar value of retail sales or GDP) will have an inflation component, whereas most non-currency data (such as relative stock performance and P/E ratios) do not have this element. For data such as retail sales and GDP, the *nominal* number that is reported is the actual dollar amount spent, whereas the *real* number backs out the impact of inflation.
- Put data into its corresponding weekly, monthly or quarterly format so it can be charted

C. Chart the Data to Find Times of Out- or Under-performance

- The objective is to build a chart (preferably automated) to identify the specific time periods when:
  - An individual stock materially out- or under-performs its peers
  - A sector index materially out- or under-performs a broader index
- Chart each company to show how its stock performed relative to its peers and how its index performed relative to the broader market over an extended period of time (10 to 30 years if available). Measuring "performance" is the cumulative change going back to the beginning of the data series. If the stock (or sector index) has had a massive move (such as Apple's stock growing ten times over a relatively short period of time) the fluctuations in the older data in the series may be difficult to see, in which case it may be helpful to break down the series into two or more time periods.
- **Identify the periods where the stock substantially out- or under-performs the index and when the sector index substantially out- or under- performs a broad index. Look to see if the stock moves are unique or common across the sector.**

Step 2: Identify Why Historical Anomalies Occurred For a Stock and Sector

The purpose of this step is to identify why a stock substantially out- or under-performed its peers and why a sector index out- or under-performed a broad index

- To identify if material out- or under-performance is due to changes in consensus expectations (which is usually the case), overlay onto the company-specific and sector index relative performance charts above (which should be on one axis), a chart of the stock's forward consensus EPS or P/CF (on the other axis).
  - This will quickly identify those periods when the stock is clearly moving due to changes in growth expectations for EPS or CFPS – the key at this point will be to identify what caused the changed expectations.
  - Unfortunately, not all stock moves are driven by immediate changes in consensus expectations and therefore, it's important to also investigate when a stock (or sector index) substantially out- or under-performs and there are no (or minor) changes to consensus expectations.
- To quickly identify if relative performance is macro-related, create charts that overlay the stock's and sector index's relative performance onto key macro data, such as the type discussed above
- Identify the periods of the most significant out- and under-performance from the prior step
- After the initial conclusions are drawn from the charts above (the stock's relative performance influenced by changes in forward consensus EPS or CFPS expectations as well as macro factors), review the following published documents covering the time period when the anomaly occurred. (If the stock move occurred in January of a given year, and you are reviewing company filings, you will likely need to review those from the first quarter, which may not be published until May for that year – don't make a common mistake of looking at the documents filed in January, which are for the prior quarter):
  - The MD&A section of the company's regulatory filing
  - Quarterly call transcript
  - Financial news
  - Industry trade journals/blogs (trade journals often have a "year-end" wrap-up that might be the first place to look when researching longer-term trends)
  - Sell-side analysts' reports (for Buy-side analysts)
  - Internal documents written by you or colleagues following the stock at the time of a major stock move
- While reviewing these documents, record information that will be helpful in forecasting this factor's potential influence in the future, specifically:
  - The probability this anomaly occurs in the future
  - The materiality this anomaly causes on the individual companies

Step 3: Identify Current Investment Controversies

The purpose of this step is to identify current investment controversies that may potentially be critical factors but have not influenced the stock in the past

- Before speaking with market participants, look for potential current critical factors in the most recent version of the following documents:
  - The MD&A and risks sections of company regulatory filings (Use one of the services that show the specific items that have changed in the current regulatory filing vs. its immediate predecessor filing)
  - Transcripts and related material from recent company presentations
  - Trade journals/websites
  - Notes from colleague(s) who have participated in recent company calls and meetings
  - Sell-side reports (for Buy-side analysts)
- From these documents, record information that could be helpful in forecasting:
  - The probability this factor will impact the company during your investment time horizon
  - The materiality this factor would cause on the company
- Review a valuation comp table to:
  - Identify where there are discrepancies between each company's current valuation and its historical valuation
  - When a company is trading at a significant premium or discount to its peers, determine the cause (It may be due to an impending change to a critical factor)
- Review a full range of sell-side earnings estimates to identify where earnings or cash flow expectations are the widest (Critical factors are often the cause when there is a large dispersion among sell-side estimates)

Step 4: Using the information above, communicate with industry and market participants to answer these questions (from the EPIC™ framework):

- Would changes in consensus expectations **E**xceed my materiality threshold *if* this factor were to occur during my investment time horizon?
- Is there a high **P**robability this factor will become much more certain to occur (or deviate materially from the expected trend) during my investment time horizon?
- Am **I** good at forecasting this factor and its catalyst? (Do you have everything you need to reliably forecast this factor?)
- Will **C**onsensus be poor at accurately forecasting (or spotting) this factor?

When the answer is "yes" to all, it is likely a critical factor that can add alpha.

A. Identify if *Historical* Factors (from Step 2 above) Are *Current* Critical Factors

If possible, begin this step by rank ordering the list of historical factors (from Step 2 above), by the magnitude of impact on the stock's performance. To answer the four EPIC™ questions above for this list of historical factors, speak with the information sources that were closely involved with the stock or sector at the time when the prior anomalies occurred, with the goal of confirming or refuting the critical factor that appeared to have caused the anomaly. Some of the best information sources for explaining historical anomalies can be found in Exhibit 1 below (see column labeled "Confirm or Refute Historical Factors").

Detailed Reference Card (DRC)

Identify a Stock's Critical Factors

B. Identify if Current Investment Controversies (from Step 3 above) Are Truly Critical Factors

Speak with the information sources that are currently closely involved with the stock or sector as found in Exhibit 1 below (see column in table below labeled "Assess New or Emerging Critical Factors"), with the goal of answering the four EPIC™ questions for your list of potential critical factors. Specifically, attempt to put parameters around the future *materiality* and *probability* of each factor. Also speak with market participants to assess the market psychology to determine if the factor is currently being correctly assessed in the consensus expectations (see column labeled "Assess Market Psychology").

Exhibit 1: Helpful Live Information Sources

Source for Information	Pros	Cons	Confirm or Refute Historical Factors*	Assess New or Emerging Critical Factors	Assess Market Psych.
Buy-side analyst or portfolio manager (as source for buy-side or sell-side)	Best place to gauge investor expectations	May not be representative of the larger investor base	□		■
Company's competitor (publically-traded or privately-held)	Knows the sector and the competitive dynamics	May not be familiar enough with other company's factors to speak with authority. May try to bash the competition	■	■	
Company's executives (including investor relations)	Usually forthcoming about opportunistic factors	Usually downplay or ignore potentially negative factors	□	□	□
Conference speaker or author of book/academic paper	Usually willing to speak with others	May not fully understand implications for company or stock			
Consultant, expert, or company retiree	Very close to the issue	Can be difficult to find	■	■	
Customer of, or supplier to, the company (publically-traded or privately-held)	First-hand knowledge of the company's value proposition	Contact may not be representative of the larger customer base	□	□	
Government officials or staffers	Often the closest to regulatory or legislative changes	Often won't speak on the topic. If so, may not provide accurate forecast	□	□	
Industry association or forecasting service representative	Understands complex industry issues	May be biased in the sector's favor and may not fully understand implications for company or stock	□	□	
Industry journalist/blogger	May understand complex issues and provide direction to other sources of information	May not fully understand implications for company or stock	■	■	
Sell-side analyst (for the buy-side) considered among top 3 in sector	May be the only place to gauge consensus thinking and to obtain proprietary research	Subjectivity or low-quality work can result in incorrect output	■	■	■

Sell-side salesperson (with deep knowledge of specific stock)	Close to many buy-side investors	Generalist salespeople may not have full understanding of any single stock	□	□
Trader of stock (with deep knowledge of specific stock)	Usually familiar with short-term psychology of stock	May not fully understand company or long-term issues	□	□

Legend: ■ = best first source, □ = good source

* Source must have been active with the stock/company at time of historical anomaly

If you have time, meet/speak with company management to:

- Understand if it is aware of those items on your list of potential critical factors; and
- Determine if management has a plan to exploit benefits or mitigate risks of potential critical factors

Step 5: Prioritize Your Factors List to Find the 1-4 Critical Factors Per Stock

- Create a table that allows you to rank-order all of your factors on the four elements of the EPIC™ framework, as show in Exhibit 2 below. Add up the score of each row in the right most column
- You may want to put more weighting on the first two factors because they often are the most important
- If you have trouble assessing a ranking for a factor, and it's probable the factor could rise to the top if you get clarity, it's probably a place to spend additional research time
- **Once you feel comfortable with your ranked list, spend your alpha-generating research time on those items at the top of the list which are critical factors and disregard or spend minimal time on all of the other items. (The second part is the most difficult to do and the one that will save you the most time.)**
- Add to the list and re-rank on a regular basis (monthly to quarterly) because the importance of some factors will change over time

Detailed Reference Card (DRC)

Identify a Stock's Critical Factors

Exhibit 2: Example Table of Rank-Ordered Factors (for FDX in 2006)

Factor to Potentially Be Researched	If this factor were to occur or change from trend, it would cause changes in consensus' expectations to Exceed my materiality threshold	This factor will Probably deviate materially from consensus expectations during my investment time horizon	Based on my research on the factor, I'm good at forecasting this factor and its catalyst (it's not just a guess)	The overall Consensus will be poor at accurately forecasting or spotting an anomaly for this factor	Total
Cost management/ productivity/ improved network efficiency	5	4	4	5	18
Level of fuel surcharge collected	5	4	4	4	17
Acquisition(s)	5	3	2	5	15
Ground package volume growth	3	4	4	4	15
Domestic Express package pricing/yield	4	3	4	3	14
Ground package pricing/yield	4	3	3	4	14
International Priority package pricing/yield	3	4	3	4	14
International Priority package volume growth	2	4	4	4	14
Service levels other than during the holiday season	3	2	4	5	14
Change in senior management	5	2	2	4	13
Electronic documents reducing need for overnight envelopes	2	4	3	4	13
GDP growth	5	3	2	3	13
Labor cost trends	3	3	3	4	13
Service levels at holiday season	2	2	3	5	12
Domestic Express package volume growth	2	3	4	3	12
Asia-Pacific volume growth	2	3	4	2	11
Change in level of tech shippers vs. non-tech shippers	4	2	3	2	11
Purchase of new aircraft	1	3	3	4	11
Depreciation rate	1	2	2	4	9
Level of major weather disruptions	1	3	2	2	8

Detailed Reference Card (DRC)

Identify a Stock's Critical Factors

Exhibit 3: Example Table of Critical Factors for Select Stocks (as of early 2015)

Sector or Stock	Critical Factor	Assumption #1	Assumption #2
Amazon.com	Market share shift from traditional retailers	Adoption rate of e-commerce within emerging markets	Adoption rate of mobile apps for retail purchases
Ford Motor Company	New car pricing in North America	Change in capacity in the North American market	Changes in lending standards
Time Warner Cable	Growth of competing content providers such as Netflix, Amazon and HBO	Customer loyalty for the cable bundle vs. new entrants	Potential growth of cable-provider broadband offering (which is required to access new entrants)
Interpublic Group (advertising)	Changes in ad spending for traditional channels (e.g. TV, print)	Adoption of advertising on mobile devices	Adoption of online video advertising
Nike	Top line growth rate keeping up with historical trends	Changes in demand from international markets	Changes in broad athletic activities
Union Pacific	Freight railroad customer pricing	Changes in freight railroad capacity	Changes in competing mode (trucking and barge) capacity
SolarCity	Growth of renewable energy revenue	Changes in energy storage costs	Impact from changes in oil and natural gas prices
The Gap	Apparel pricing deflation	Adoption of off-price and low-price fashion	Use of mobile devices for price discovery
VMware (software)	Growth of Open Source software vs. traditional vendors	Open Source providers going public	IT leaders selling services that rely on Open Source solutions
T-Mobile	Competitive pricing among the wireless carriers	Timing when domestic smartphone becomes saturated	Changing regulations
Walgreens (drug retailer)	Generic drug price inflation	Changes in FDA regulation of non-generic drug manufacturers	Distribution channel consolidation

Quick Reference Card (QRC)

Utilize ADViCE™ Template to Maximize Message Delivery Impact

Answer the following questions before proceeding to "Level 1" of the table on page 2

1. Do you have a price target for the stock? If so, proceed to the next step. If not, ask how your intended communication will add value to investment professionals seeking to generate alpha.
2. Complete the table below to illustrate the unique elements of your price target (based on the FaVeS™ framework):

	Example	Your Stock	Item #
1. Current data			
Current stock price	$96.00		A
Next 12-month ("NTM") consensus EPS forecast at present (we call this "Year 1")	$5.80		B
Stock's current valuation multiple based on Year 1 EPS	16.6		C
Current market multiple	15.0		D
Stock's current premium or discount to the market multiple	10%		E
2. Change from consensus EPS between Year 1 and Year 2			
NTM consensus in Year 2 (i.e. forecast at beginning of Year 2 for Year 2)	$6.20		F
Difference between Year 2 and Year 1 consensus forecasts	7%		G
Item #2 above is due to passage of time while #3 and #4 below are influenced by the analyst			
3. Change due to analyst's financial forecast differing from consensus			
Analyst's NTM EPS forecast in one year (i.e. forecast for Year 2)	$7.00		H
Premium or discount of analyst's EPS estimate in Year 2 compared to consensus'	13%		J
4. Change due to analyst's future valuation multiple differing from current multiple			
Analyst's estimate of market multiple at beginning of Year 2 (typically keep same as present)	15.0		K
Analyst's estimate of stock's premium or discount to market multiple at beginning of Year 2	10%		L
Valuation multiple used for price target at beginning of Year 2	16.6		M
Difference between analyst's future multiple and stock's current multiple	0%		N
5. Price target	$115.86		O
Change from current price	21%		P

3. Using the letters in the right-most column above, review your answers in rows J (a unique forecast) and N (a unique valuation method/multiple).
   a. If either of the figures exceed your materiality threshold (e.g. 10%), then proceed.
   b. If not, ask yourself how your intended communication will add value to investment professionals seeking to generate alpha (if J and N above are in-line with consensus, then why bother communicating your message?).
4. If J or N exceed your materiality threshold:
   a. What is the critical factor(s) that drives your out-of-consensus thinking?
   b. What research do you have to show that your view is more than a guestimate?
5. What is the catalyst that will cause consensus to come to your view and when will it likely occur?
6. What are your upside and downside scenario forecasts and valuation multiples and the assumptions driving those scenarios?

After you have completed the table and answered the questions above, proceed to the table on pages 2 and 3

Quick Reference Card (QRC)

Utilize ADViCE™ Template to Maximize Message Delivery Impact

Element	Wording	Why important	Portion of ADViCE™ framework
Level 1 (email, page 1 of report, slides for brief presentation or voicemail script)			
Brief Conclusion	We are or I am… • recommending the purchase of… • upgrading/downgrading… • more bullish/more bearish towards… • raising/lowering our estimate/price target for… • reinforcing/revisiting our positive/negative view towards… [AND] …[stock name(s) followed by ticker(s)] because… • our work shows/suggests… • we can now conclude… • we have discovered… [AND] …[the critical factor(s)] is/will likely… • be better/worse than consensus/we expected • not in consensus expectations • occur sooner/later than consensus/we expected	Allows others to decide if they want to spend more timing consuming your message	Conclusion-oriented
FaVeS™ element that is being changed (be brief)	Our/my view about [critical factor] compels/allows/motivates us/me to… [here is where you briefly discuss the change in your superior view, as defined by at least one of the following 1) a superior forecast 2) superior valuation method/multiple; or 3) superior short-term read of sentiment] • …raise/lower our/my earnings/cash flow/growth rate forecast for this year/next year from X to Y, which puts us/me XX% higher/lower than consensus. • …justify a valuation multiple of XX, which is XX% above/below its current/historical level. • …expect the stock to move XX% up/down in the near-term [only use this option if you have a superior view toward the short-term sentiment towards the stock]. [You may want to explain the FaVeS™ element you are not changing, such as "we assume the stock continues to trade at its current relative valuation multiple."]	Briefly highlights your a) superior forecast (vs. consensus); and/or b) superior valuation method/multiple; and/or c) superior read on short-term sentiment towards the stock	Aware (if you are disclosing a change in thinking) Differentiated
Price target math	Applying a X [valuation multiple] multiple on our/my XX.00 [EPS, CFPS, BV] estimate for 20XX [time period], results in a year-end/six-month/one-year price target of XX, which is XX% above yesterday's close.	Provides the elements of your price target and return	Conclusion-oriented
Research to support unique FaVeS™ element	[If there is more than one critical factor driving the story, you may want to communicate this element and the one directly below for each critical factor at a time] Our/my conclusion/above/below-consensus estimate is based on… • our/my analysis of… • discussions with… • data we/I collected from… • our/my unique modeling of…	Validates view based on fundamental research and not just a hunch or guestimate	Differentiated Validated
Quantify unique FaVeS™ element	Specifically, we/I believe this results in $XX/XX%… • higher/lower EPS/CF/BV… • faster/slower EPS/CF growth rate… …for 20XX [time period] than… o current consensus expectations** o our/my prior estimate AND/OR • expansion/contraction of the stock's relative/absolute valuation multiple from X to Y	Answers "materiality" question by quantifying how your view differs from consensus	Differentiated Conclusion-oriented

Quick Reference Card (QRC)

Utilize ADViCE™ Template to Maximize Message Delivery Impact

Element	Wording	Why important	Portion of ADViCE™ framework
When and why will consensus adopt your view?	We/I… • differ from consensus because… • believe consensus does not understand/appreciate… [reason why consensus hasn't come around to your way of thinking yet]. [AND] We/I believe consensus will adopt/understand our/my view by [specific quarter or time of year] due to [catalyst that will drive the market to your way of thinking].	Explains how view of the catalyst(s) differs from the consensus thinking and when it will become clear to the market	Differentiated Conclusion-oriented
What could go wrong?	We/I have a high/low/modest degree of conviction/confidence in our/my call because [explain why your analysis above is valid or uncertain]. Our/my downside scenario results in a stock price of XX (XX% below yesterday's close) and our/my upside scenario is XX (XX% above yesterday's close).	Conveys your conviction level and provides alternative scenarios to demonstrate you're not oblivious to where you could be wrong	Aware
Level 2* (page 2 of report or additional slides for detailed presentation)			
More detailed discussion to support unique FaVeS™ element	Further support to justify your assumption that a critical factor will be (or is) different than consensus expectations • Without divulging proprietary sources, provide information/data from at least one informed, independent, and reliable source (preferably two or more if it's critical to your call) to validate your out-of-consensus thesis • Quantify the materiality of your out-of-consensus view • Provide a historical context, but only if it helps to understand the future	Shows the level of work conducted to draw the out-of-consensus conclusion	Validated
More detailed quantification of scenarios	Quantification and discussion about the upside/downside price targets, specifically: • The critical factor(s) impacted by your assumptions • Assumptions under each scenario • Valuation multiple used for each scenario • Future price under each scenario • Conviction level for the major assumptions	Provides more details to understand your way of thinking, which can be more valuable than your rating or price target	Aware

* For the "Level 2" portion above, you may want to organize the information in an alternative manner; by having a discussion around the research you've conducted to justify your scenarios followed by a discussion to quantify valuation and price targets.

** For the "Quantify unique FaVeS™ element" above, it is often much better to show comparisons of new estimates vs. prior estimates or vs. consensus in a table format such as below:

Company	Our Former Estimate for 201X	Our New Estimate for 201X	Change in Our Estimate	Current Consensus for 201X	Our New Estimate vs. Consensus for 201X
ABC	$1.00	$1.35	35%	$1.10	23%
XYZ	$2.00	$1.80	-10%	$2.10	-14%

Quick Reference Card (QRC)

Best Practices for Eliminating Psychological Biases

Bias	Manifestation	Example	Increasing Self-Awareness Tactic
Fear of Failure			
Sunk Cost Fallacy	Investing considerable time or capital into a given stock prevents you from looking at it objectively	When analysts initiate coverage on an entire sector, they may mistakenly recommend many of the names, when in reality only one or two are likely to substantially outperform the market	• When conducting extensive research on a topic, periodically ask, "What will I do if I discover nothing new?" It reduces the amount of time sunk into any one effort • Resist the temptation to make changes to your financial forecasts or valuation multiples to "make it work," in an effort to show more upside/downside than you previously expected • Be willing to reverse your recommendation when you've made a mistake, or your thesis failed to play out • Set aside time (once a month or quarter), and ask yourself, "If I switched firms tomorrow, would my initial stock recommendations at the new firm match my current ones?" If not, understand why.
Loss-Aversion	Avoiding selling a stock at a loss	An analyst finds a new rationale to keep recommending a stock that hasn't been performing as well as originally expected	• Document your thesis for recommending a stock and the price target specifics before you make your recommendation. If key tenets to the thesis fail to play out, strongly consider reversing recommendation. • When faced with an underperforming stock, ask yourself, "If I switched firms tomorrow, would my initial stock recommendations at the new firm match my current ones?" If not, understand why. • After beating yourself up over a mistake, embrace it as a valuable lesson learned that will make you a better analyst
Anxiety	Allowing high levels of anxiety to lead to investment decisions that are not based on sound analysis and research	Feeling the need to change your view toward a stock on a weekly or monthly basis, even though fundamentals haven't changed	• It's important to watch the daily movements in your stocks to understand investor sentiment, but don't let stock price movements alter your view about the fundamentals • When uncertainty arises around a key stock call, do more work to either reduce anxiety or lead to a better decision • Conduct scenario analysis to put limitations around the "worst-case" • When considering a recommendation change, if possible, think about it overnight

Snakebite Effect	Categorically dismissing a stock as a bad investment due to bad performance in the past	Telling someone, "I can never own that stock"	• Resist drawing quick, sweeping generalizations about a troubled company's past, and instead research if their problems were:
			    ○ Within or outside of management's control;
			    ○ Industrywide or company-specific
			• Utilize the company's weakness as providing tremendous upside potential in its stock if you can identify and forecast the catalyst for change (e.g. examine changes in management or management's behavior)

Costly Psychological Shortcuts			
Familiarity or Availability Bias	Preferring stocks you're familiar with over those you're less familiar with	When asked for your favorite stock, you reply with the one you're most familiar with rather than the one that may have the most upside	• Don't make recommendations of stocks you're unfamiliar with, but conversely don't make a suboptimal recommendation, just because you know the stock better than the proposed alternatives • Ensure there are no "forgotten" stocks in your assigned universe, by setting aside time to ensure you are well-versed on all of them (even the more complicated ones)

Quick Reference Card (QRC)

Best Practices for Eliminating Psychological Biases

Bias	Manifestation	Example	Increasing Self-Awareness Tactic
Recency Bias (related to Familiarity/ Availability Bias)	Over-emphasizing recent information, with little regard for older information	Having a more positive bias toward a company you've recently met with, compared to one you haven't seen for months	• Avoid making recommendations where the stimulus is primarily based on a recent meeting or call with company management, especially if it's initiated by the company • Don't ignore (or fail to research) a stock's critical factors of the past as they often come back and become the critical factors that move the stock in the future
Rules of Thumb (Heuristics)	Blindly relying on or over-using mental shortcuts or heuristics to make investment decisions without checking to ensure they are reliably accurate	Recommending a stock or a sector every time its P/E ratio drops below 12x forward earnings, and selling every time it moves above 15x	• Ensure heuristics are derived from facts or historical trends that can be substantiated. When a heuristic is key to your investment recommendation, ensure its backed up with sound logic (and evidence, if applicable) • When someone tells you to follow a "simple rule" in forecasting or valuation, validate it with historical analysis before using (if the rule always works, a computer would likely have arbitraged it away)
Following the Herd (social psychology)			
Overreaction	Selling or buying at irrational prices with the herd, which in hindsight, was among the worst possible times	An analyst downgrades a stock in response to bad news even though his research suggests the concern is being overblown	• Before making a recommendation, document your thesis, price target and exit thresholds in an effort to remain disciplined in the face of market hype • If the media or sell-side appear to be overreacting, update your scenario analysis to identify realistic worst-case and best-case scenarios • Resist changing a stock recommendation mid-day or immediately after a company reports results (always try to "sleep on it" when it comes to major recommendation changes)
Momentum Bias	Assuming recent trends will continue, even if historical evidence and metrics suggest they are unsustainable	After a recommended stock has rallied to a realistic price target, the analyst raises the valuation multiple or financial forecast to unrealistic levels to justify an even higher price target that ultimately isn't achieved	• If you've missed a substantial move in a stock, be hesitant to chase it such as jumping on the bandwagon. If you're in the same trade as everyone else, ask "Who's going to take the other side of the trade when I want to get out?" • Research history for your companies and industries, specifically, the growth rates and valuation multiples. If your price target relies on one or both being well outside historical trends, make sure you have a sound reason for doing so. • When making a change to your thesis, ask where you are in the "greed vs. fear" spectrum compared with consensus. If you're in the same place, you may be following the herd. • When markets appear to be moving too far too fast for irrational reasons (not based on fundamentals), consider the contrarian view

Quick Reference Card (QRC)

Best Practices for Eliminating Psychological Biases

Bias	Manifestation	Example	Increasing Self-Awareness Tactic
Pollyannaish or Hopeful Thinking			
Confirmation Bias	Seeking out information that supports your view and rejecting, distorting, or ignoring information that conflicts with it	While conducting research on a stock you're recommending, you come across a new competitive threat but choose to downplay it as insignificant	• In making recommendations, wait until you've done all of the research before considering the rating. Deciding your rating early in the process will bias you toward finding insights that support your view and rejecting those that conflict with it. • Approach all new information with an open mind, regardless of your current view toward the stock • Build your upside and downside scenarios while conducting the research, documenting as you go along, which should be reviewed before changing a recommendation • If you're serious about making a recommendation, ensure that you know the opposing view
Over-confidence	Assuming you're smarter than everyone else, which prevents you from exploring the real risks or reasons that a stock is not currently at your price target	After a few good stock calls, you begin to let down your guard in terms of assessing risks for future recommendations	• Be humble by realizing that no professional investor is right 100% of the time • Fully understand the "other side of the trade" before making a recommendation • Ask a trusted colleague or investment committee to put your thesis under scrutiny • Any time you think *"I can't lose",* think through the downside or risks of the investment

Self-Attribution Bias	Taking full credit for wins and placing blame on others for losses	After a recommended stock goes the wrong way, blaming a colleague (or the sell-side) for conducting shoddy research. (Remember, part of your job is to validate your information sources.)	• When you have a big win, go back to the documents you wrote when you recommend the stock, and see if your thesis really played out. (Or was it some other factor?)
			• Before placing blame on others, or saying, "The surprise couldn't have been foreseen," ask yourself these questions:
			  ○ Did anyone else see this coming (sell-side or buy-side)?
			  ○ What could have been done to know about this surprise earlier?
			• Examine constructive or negative feedback provided by others. (Don't just internalize the positive praise.)

Optimism Bias	Being too optimistic about your stock's valuation and future earnings potential	Modeling a company's EPS growth at a 12% CAGR over the next 2 years, even though it has grown EPS at an 8% CAGR for the past 10 years	• Research history for your companies and industries, specifically the growth rates and valuation multiples. If you settle on a price target based on factors running well outside historical trends, make sure you have a sound reason for doing so. • Spend as much time identifying risks as catalysts • Ask a trusted colleague or investment committee to put your thesis under scrutiny

Best Practices for Eliminating Psychological Biases

Bias	Manifestation	Example	Increasing Self-Awareness Tactic
Falling in Love With a Stock	Becoming so emotionally attached to a stock that it can't be analyzed objectively	An analyst is hesitant to downgrade a stock that's hit its price target because it's a franchise name that the analyst is associated with	• Periodically review your universe of stocks to ask if you're less likely to change the status of any stock recommendation other than for risk and return considerations (such as concern over upsetting company management or disappointing those who rely on your research) • When reviewing your comp table, hide the company names and tickers and look only at only the numbers to see if you have the same view when the names are revealed

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Best Practices for Making Accurate Stock Recommendations Using the TIER™ System:

Target realistic price(s)

When forecast is reliable (discussed in preceding framework), derive a range of price targets by applying an objective and defendable valuation multiple(s) and method(s) (using our SHARE™ framework)

Identify & forecast catalyst(s)

If price target differs materially from current stock price, identify and forecast catalyst(s) most likely to lead to convergence

Ensure ideal entry point

Make stock recommendation, if:

- The out-of-consensus element (FaVeS™) is well-researched; and
- The catalyst is likely to occur during the investment time horizon; and
- The risk-adjusted return to the price target is better than alternative investments; and
- There are no clear near-term risks that will offer a better execution point

Review performance & thesis

Remove stock recommendation if:

- The risk-adjusted return to price target is below alternative investments; or
- Out-of-consensus view or catalyst is not likely to occur during investment time horizon

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

***Perspectives* for <u>G</u>enerating Informed Insights (these fall under the “G” of our GAMMA PI™ framework, and are critical *<u>before</u>* starting TIER™)**

Perspectives for: Generating Informed Insights

Accuracy vs. Speed: Successful research balances the need to collect enough insights to be reasonably accurate, without spending so much time that the new insights are ultimately discovered by the broader markets

Be unique: The key to developing unique insights is to have unique information sources (relying heavily on widely-available data will not lead to alpha-generating stock calls)

Focus on critical factors: Successful analysts narrow their research focus to a few (usually 2-4) critical factors per stock in an effort to develop uniquely *differentiated* insights not found in consensus (we recommend using AnalystSolutions’ 4-step process for identifying and monitoring a stock’s critical factors)

Don't drown: Some analysts are asked to cover too many stocks, which prevents them from developing *differentiated* insights required for successful stock calls

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

***Perspectives* for <u>A</u>ccurately Forecast (these fall under the first "A" of our GAMMA PI™ framework, and are critical *<u>before</u>* starting TIER™)**

Don't look for precision if it doesn't add value:

Minimal research time should be dedicated to forecasting:

- Required rate of return for equity or the risk-free rate. Nobody has the perfect number. There are experts who can provide great precision, but even these come with a list of caveats. Great stock picks come from identifying a critical factor missed by the market -- not from computing a DCF variable
- Factors that cannot be forecast with accuracy (e.g. commodity prices, the next recession, political unrest)

Analyze analysts: Buy-side analysts, who use sell-side analysts for financial forecasting, should check with third-party services to ensure that the ones they use have a good track record of high forecast accuracy

Perspectives for:

<u>A</u>ccurately Forecast

Avoid blind faith: Analysts should avoid the common rookie mistake of having forecasts higher than consensus, simply based on greater faith in an unproven or weak management team

Assume you're wrong: When analysts' financial forecasts differ materially from consensus, they should assume their forecasts are wrong until they can substantiate otherwise (the collective wisdom of consensus is often correct). Steps to find the most valid "consensus" estimate:

- If there is a material difference between the most accurate sell-side analysts ("informed" consensus) and the overall consensus number, put more weight on the accurate forecasters
- Ensure the published consensus estimate includes many estimates, and is not isolated to just a few who happen to have forecasts for the time period being reviewed (such as 2 or 3 years out)
- Ensure the individual estimates are not stale, and that there is no disagreement in terms of special items that may be in the number

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

***Procedures* for Target Realistic Price(s) (Step 1 of TIER™ which includes the SHARE™ framework):**

Create an accurate financial forecast(s)

Conduct research to develop informed insights about the few critical factors most likely to move a stock, following the ENTER™ quality framework (discussed in Chapters 8 and 23 of *Best Practices for Equity Research Analysts*), to derive a base-case financial forecast more accurate than consensus. Create plausible upside and downside forecasts to stress test the base-case scenario.

Select valuation method(s)

Identify the most common valuation method used for valuing the stock and potential new methods likely to be used at time of price target (driven by company or sector changes). Consider using an alternative valuation method only if it will help in identifying a mis-priced stock.

Historical & current sentiment

Identify if a stock's current valuation is 1) on trend compared to past; and 2) in line with stocks that have similar characteristics

Adjust for future time period

Adjust the current multiple for the future price target by assessing: 1) The future direction of strongly-correlated company-specific and macro variables; and 2) Comparisons with other stocks that have similar prospects

Range of multiples and price targets

Apply the appropriate valuation multiple(s) to the financial forecasts to derive a range of price targets, which provides an objective risk/return profile:

- Rather than set a single-point price target, set a range of targets, based on upside, downside and base-case scenarios above
- In advance of making a stock recommendation, set a range of exit thresholds (they may be within the "upside" and "downside" scenarios), which will reduce biases from creeping into decisions at a later date
- Help reduce anxiety by rigorously developing a "worst-case" scenario before recommending the stock (which may be worse than the "downside" scenario)

Evaluate as circumstances change

Update price target when:

- There is a new financial forecast, including as time passes, leading to new forward forecast period (e.g. "next 12 months" changes each month)
- There is a justifiable cause to revise the multiple (not just reverse engineering)
- There is a justifiable cause to revise the method (use this sparingly)

Perspectives for Target Realistic Price(s) (Step 1 of TIER™)

Perspectives for:

TARGET REALISTIC PRICE(S)

Momentum stocks can defy rational valuations: Rapidly growing stocks (e.g. technology) are often owned by momentum players, and can defy rational valuation levels until approaching more average growth levels

Avoid "incrementalism": Avoid raising your price targets in small, incremental steps while waiting for "further clarification" because it prevents others from seeing the true upside in your call

Beware of the temptation to use unproven valuation methods: Avoid new valuation methods, because it's not clear they are necessary. The "price-to-eyeballs" method used to justify valuations at the peak of the dot-com era is noteworthy.

Avoid hitching your recommendation to simplistic valuation arguments: Stock recommendations based solely on the expectation that a stock's valuation multiple will be re-rated (void of an impending financial forecast change), or that the market will change its preferred valuation methodology, are rarely successful. (Sell-side analysts may lose client trust and respect from buy-side clients when these calls lack support.) Major changes to valuation methodologies or multiples tend to occur only when companies or sectors are:

- At the peak or trough inflection points of the business cycle
- Moving from one phase to another of a company's or industry's life cycle (e.g. growth to maturity)
- Going through a major secular transformation or restructuring

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Procedures **for Identify & Forecast Catalyst(s) (Step 2 of TIER™):**

Identify & forecast potential catalyst(s)

For stocks being recommended (buy or sell), identify and forecast potential catalysts that would need to occur in order for the market to accept your out-of-consensus thesis. Be specific by estimating the future earnings or cash flow impact in areas such as:

- Pricing
- Volume
- Costs
- Margins
- Free cash flow
- Returns
- EPS growth rate

Focus on catalysts that meet the optimal criteria

Narrow down to the optimal catalyst(s) and ensure it meets all of these criteria:

- Pertains to a critical factor that is material enough to move the stock
- Likely to occur during the investment time horizon
- Not currently appreciated by the market
- Can be forecast with some level of certainty

Proactively prepare for next catalyst

For recommended stocks, proactively put dates in a calendar for the following types of events, with the expectation that information pertaining to a catalyst will emerge and move the stock:

- Company-sponsored analyst meetings and calls
- Earnings releases
- The company's annual pricing, volume, or earnings guidance or projection
- Deadlines for new legislation, regulations, or court case outcomes
- Prescheduled announcements by the company's customers, competitors, or suppliers (sometimes announced at major industry conferences)
- New product releases or significant product extensions
- Interim sales data for the company or the sector
- Non-deal investor roadshows

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

***Perspectives* for Identify & Forecast Catalyst(s) (Step 2 of TIER™):**

Ensure your catalyst has a defined timetable: Predict the catalyst before recommending a stock, or suffer the risk noted by John Maynard Keynes when he said, "Markets can remain irrational a lot longer than you and I can remain solvent."

Use "change in valuation" sparingly: Stock recommendations tend to fail when they are based solely on the analyst's expectations that: the stock's valuation multiple will be re-rated (void of an impending financial forecast change); or the market will change its preferred valuation methodology

Perspectives for step:

IDENTIFY & FORECAST CATALYST(S)

Don't equate a "cheap stock" to a "good idea": Avoid recommending low-valuation stocks simply because they are "cheap" – often stocks are cheap for a reason, otherwise known as a value trap. Identify a reliable and likely catalyst that will make them "less cheap."

Review "value" stock calls that no longer screen as "value": If a stock experiences a strong move and no longer looks cheap, identify a major catalyst that will justify higher valuations or attract a new class of investors (e.g., GARP or growth) before assuming the stock will move any higher.

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Procedures for Ensure Ideal Entry Point (Step 3A of TIER™), Validate Your View

Avoid costly psychological shortcuts	Avoid the mind traps we've identified as "costly psychological shortcuts" that tend to appear early in the process, including familiarity, availability, and recency biases as well as over-reliance on heruistics.
Ensure call is differentiated (FaVeS™)	Ensure the stock recommendation is differentiated from the consensus thinking in at least one of the areas below (the FaVeS™ framework discussed in Chapter 20 of *Best Practices for Equity Research Analysts*): Forecast of financial results, such as EPS or cash flow Valuation multiple or methodology Sentiment of the market toward the stock (void of an impending change to the forecast or valuation multiple/method)
Avoid Pollyannaish or hopeful thinking	Avoid the mind traps we've identified as "Pollyannaish or hopeful thinking" which include confirmation, over-confidence, self-attribution and optimism biases
Weigh risk as well a return	Among the universe of available stocks to recommend, ensure factors beyond just absolute return are given priority as part of the pending recommendation (i.e. risks). These often include: • Predictability of earnings or cash flow forecasts that drive thesis • Conviction in the catalyst occurring and moving the stock to the price target • Reliability that management will deliver on its goals • Timing for when the catalyst will occur (e.g. next month or 2 years from now?)
Ensure no imminent danger	Ensure there are no clear near-term risks that will offer a better execution point, such as the company falling short of current quarter expectations. This may seem like common sense, but too often an analyst will recommend a stock based on a long-term thesis and fail to appreciate that the stock will remain weighed down in the near-term. Examples include: • Current quarter's consensus expectations are opposite your long-term view • A large class of investors are still exiting (growth investors selling after a stock appears to be moving into the maturity phase) • The current economic cycle appears to be reaching its peak • A large management lock-up is about to expire
Document thesis	Avoid the "loss-aversion" mind trap by documenting the thesis and the price target specifics before making the recommendation. Also establish a stop-loss price to reduce the downside risk and as a place to re-evaluate if the unique insight isn't playing out as expected.
Sleep on it	Before changing a rating, reduce anxiety and the overreaction bias by contemplating it overnight (assuming time allows). "Sleeping on it" usually provides more objectivity than making a quick decision during a workday.

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Procedures **for Ensure Ideal Entry Point (Step 3B of TIER™), Assess and Influence the Market's View**

Monitor trading data

Monitor trading data to understand the motivations of the current stock holders

- Changes in the types of investors who own the stock (e.g. value, GARP, growth, momentum)
- Short interest
- Company insider buying and selling
- Movement of stock compared to company's debt yield or CDS spreads

Know consensus

Analyze the consensus estimate, specifically determining:

- How many analysts comprise "consensus" (more than 1 or 2 in outer years?)
- Are their estimates disparate or similar?
- Are any estimates stale?
- Does the consensus of the most accurate analysts differ from the overall consensus?

Survey market sentiment

Assess market sentiment about the stock and sector (which is done by the best buy-side and sell-side analysts) by surveying experienced buy-side and sell-side analysts, sell-side salespeople, traders, and investor relations contacts. Investigate:

- Biggest investor concerns (may or may not be a critical factor)
- Expectations that are above or below the published consensus
- The names and types of stocks receiving the most/least attention (where is everyone spending their time and what's being ignored?)
- General view toward the market (bullish or bearish) and risk (risk-on or risk-off)

Avoid following the herd

Avoid the mind traps we've identified as "Following the herd" which include overreaction and momentum biases

Monitor technical indicators

Monitor technical indicators to the extent they provide a better understanding of a stock's momentum (beware they will not predict inflection points).

Influence the market

In order to get the consensus' thinking to come around to the analyst's out-of-consensus view:

- Sell-side analysts should publish their view and influence key market participants
- If allowed by their firm, buy-side analysts should inform the most influential sell-side analysts of their thesis, but only after the buy-side analyst's firm has built a position in the stock

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Perspectives for Ensure Ideal Entry Point (Step 3 of TIER™), Part 1: General

General perspectives for: **ENSURE IDEAL ENTRY POINT**

Keep it simple: the more complex the investment thesis, the more things can go wrong or be misunderstood by the market.

Don't be a contrarian just to be a contrarian – the market tends to be right more than it's wrong. But when individual stocks or sectors appear to be moving too far too fast for irrational reasons (not based on fundamentals), consider the contrarian view.

Understand that shorting stocks has unique challenges: Shorting stocks (without a corresponding long) is a challenge because equities, as an asset class, rise over time.

Spending time to avoid the blow-up is useful: Don't waste time researching non-critical factors, but also understand conducting research on critical factors and then deciding not to recommend the stock can be very valuable. Namely, avoiding the blow-ups is often one of the best contributors to a successful stock picking record.

Understand that the "right time and place" for a stock call can be determined by the market's risk appetite: Avoid making individual stock calls in isolation of the market's appetite for risk (i.e. resist recommending weaker companies when the market's risk appetite is waning, such as near the end of an economic cycle). The market's relative appetite for risk can be gauged by monitoring:

- Treasury yields
- VIX
- The size of the deal calendar
- Recent stock performance of:
  - Weak companies versus stable companies
  - Emerging markets versus developed markets
  - Small cap versus large cap

Be adaptable to different investment styles: No single investing style will be successful over every time, period. Analysts should have a toolbox containing different approaches and know when to use them.

Know why you differ: If the upside to your price target is materially different than the expected upside in the broader market, determine which of your areas disagrees with consensus:

Financial forecast?

Valuation multiple?

***Perspectives* for E̲nsure Ideal Entry Point (Step 3 of TIER™), Part 2: Avoid Psychological Pitfalls**

"Avoid Psychological Pitfalls" perspectives for:

E̲NSURE IDEAL ENTRY POINT

- Avoid "over-confidence" biases by remaining humble and realizing that no professional investor is right 100% of the time
- Avoid the sunk-cost pitfall bias by being willing to reverse a recommendation if a mistake has been made, or a thesis failed to play out
- Avoid the "familiarity" and "availability" biases by not recommending one stock over another simply because it's the one most researched
- When there's hesitation to change a rating for reasons other than maximizing alpha, there may be emotions clouding the decision
- Don't force a rating: There may not be any substantially under- or over-valued stocks within an analyst's universe at a given point in time and so don't force a buy or sell rating just because you've sunk time into your research (Sunk Cost pitfall)
- Avoid following the herd (see next page dedicated to this)
- Avoid "recency" bias by not making recommendations where the stimulus is primarily based on a recent meeting or call with company management, especially if the contact was initiated by the company

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Perspectives **for Ensure Ideal Entry Point (Step 3 of TIER™), Part 3: Avoid Following the Herd**

"Avoid Following the Herd" perspectives for:

ENSURE IDEAL ENTRY POINT

Increase the urge to sell when everyone loves a sector or stock, and buy when no one wants to own it. Be especially cautious when a stock or sector has had strong relative performance for multiple quarters, by asking, "Who is left to buy?" A few telltale signs to sell are when:

- Valuation is reaching or exceeding peak levels
- All or almost all sell-side analysts have buys on a stock
- The general view in sell-side reports and the financial press is, "It's different this time," or, "Nothing can go wrong."
- The stock no longer reacts positively to good news

Observe when bad news no longer makes stocks go down, or when good news no longer makes them go up; it's a sign that market psychology is shifting

Observe when a stock continually overreacts in one direction to news flow during a relatively short period of time, because it could be a sign of irrational buying or selling.

To be successful in deep value investing, watch for investors to capitulate before building a position

Use a short squeeze as a short-term selling opportunity, due to the panic buying (these tend to be short lived, and as such, shouldn't be used as the rationale for setting a price target.)

If long a stock, avoid panicking when other investors who are short the stock attempt to over-blow the impact of negative news flow.

Before making a recommendation, determine where your psyche is on the "greed vs. fear" spectrum compared with consensus. If it's in the same place as consensus, the trade may simply be following the herd.

When a stock appears to have dropped too much due to new concerns, avoid waiting for the market to get "greater clarity" about the risk, because it will be too late. **The lack of clarity creates an opportunity to exploit!**

If a substantial move in a stock was missed, be hesitant to chase it such as jumping on the bandwagon. Making the same trade as everyone else begs the question, "Who's going to take the other side of the trade when you want to get out?"

Making impulsive stock calls usually leads to problems

Understand that human emotions cause markets to overreact on the upside and downside – nimble investors can exploit this

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Perspectives for Ensure Ideal Entry Point (Step 3 of TIER™), Part 4: Factors Influenced by Company Management

“Factors impacted by company management” perspectives for:

ENSURE IDEAL ENTRY POINT

The "cockroach theory" is not just theory: Don’t under-appreciate something otherwise deemed a “minor” issue with a company, that could foretell of bigger problems

Are you being objective or courting favor?: If there is concern about upsetting company management (or clients) based on a rating change, there’s likely a bias negatively influencing objectivity about the change

Be aware of companies that attack: Be leery of companies that ridicule sell recommendations or short-sellers, because they often have something to hide. (If the concerns were baseless, the company should remain quiet and prove the market wrong with impressive performance.)

Does management have enough skin in the game: To have a high conviction about a buy recommendation, the stock should be a large portion of top management’s net worth (or management is acquiring more stock). Conversely, question a high conviction buy-rating if management has been selling stock.

Management should focus on execution: Be cautious of management when it spends more time talking about its stock price or stock performance than running its business

Question management guidance when:

- Always bullish
- Product order lead times are coming down
- It says "It's different this time"
- It says higher revenue growth will offset declining margins
- It looks to cost cutting or assets sales to drive most of its earnings growth

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

***Procedures* for Review Performance and Thesis (Step 4 of TIER™)**

Dynamically rank and review

Review your comparison ("comp") table regularly (i.e. daily or a few times each week). To provide the best analysis, the table should:

- Update stock prices automatically
- Update your EPS (or CFPS) and consensus' forecasts automatically
- Include for each stock:
  - Valuation relative to an index
  - Valuation relative to stocks in other sectors with similar growth and return characteristics
  - Historical relative valuation parameters (on a forward-looking basis)
  - The upside/downside to price target, adjusted for risk
- Allow for quick sorting based on the metrics above

Avoid "fear of failure"

Avoid the mind traps we've identified as "Fear of failure" which include sunk cost fallacy, loss-aversion, anxiety and snakebite effect

Review original documentation

Periodically review your original thesis (as documented at the time of the original recommendation, such as in your model, report or presentation) for these reasons:

- When a stock call is going well, avoid the over-confidence and self-attribution biases by reviewing if the thesis is truly playing out or if it is more luck
- When a stock goes poorly, be disciplined about using the stop-loss thresholds created at the time of the original recommendation. Due to the "loss aversion" psychological pitfall, it's much more difficult to create objective stop-loss points when a stock has not played out as expected.

Re-think recommendation if thesis wanes

If new, reliable information comes to light that derails the basis of the stock call, do an about-face on the rating as quickly as possible. It will be painful, but not as bad as living with a stock thesis that's never going to play out.

Re-think recommendation if catalyst is ineffective

If the key catalyst for the stock recommendation occurs and the stock doesn't move to the price target, strongly re-think the recommendation and avoid the temptation to find another catalyst to justify the recommendation.

Review unbiased comparisons

Avoid sunk-cost, loss-aversion and other biases by periodically (once a month or quarter):

- Masking the company names/tickers within the comp table, looking only at the numbers to see if the ratings appear correct relative to potential risk-adjusted returns
- Ask, "If I switched firms tomorrow, would my stock recommendations at the new firm match my current ones?" If not, investigate why

Avoid placing blame or denying responsibility

When a stock call goes poorly, avoid placing blame on others for a bad stock call, or saying, "The surprise couldn't have been foreseen." Instead, ask yourself these questions:

- What could have been done to know about this surprise earlier?
- Did anyone else see this coming (sell-side or buy-side)?

Detailed Reference Card (DRC)

Best Practices for Making Accurate Stock Recommendations

Perspectives **for R̲eview Performance and Thesis (Step 4 of TIER™)**

Don't mistake good stock picking with a bull market: Always evaluate performance relative to a similar basket of stocks. (This also holds true when evaluating company management's comments about its stock performance.)

Perspectives for:

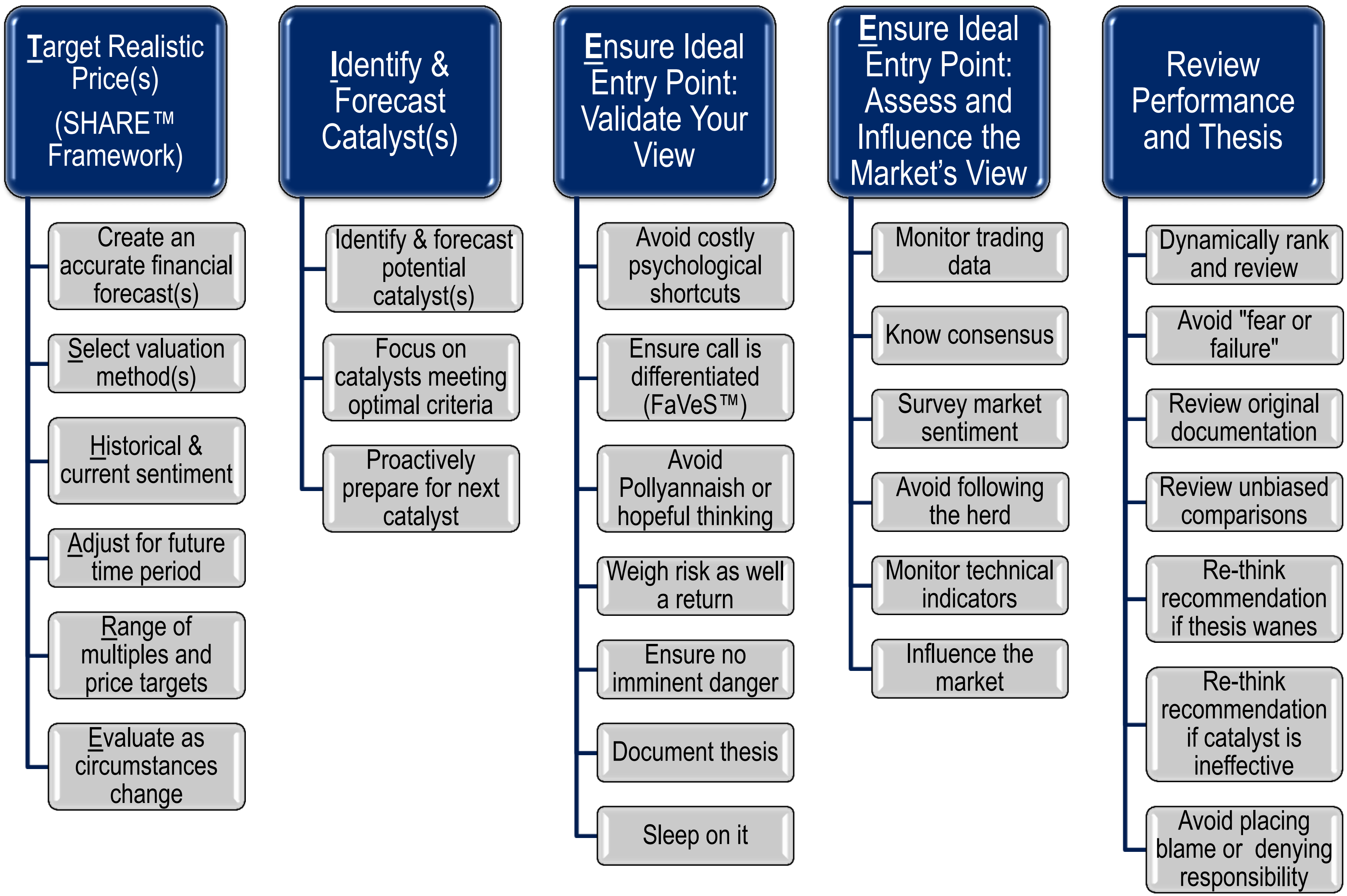
R̲EVIEW PERFORMANCE AND THESIS

Avoid "fear of failure" mind traps: Accept that past losses shouldn't impact future decisions

Mistakes can be valuable lessons: Stock calls that go bad can have some salvage value, as long as the shortcoming is analyzed and internalized to avoid a similar bad call in the future

Automation will lead to more frequent reviews: Automate your comp table by having it draw key data directly from market data providers (and possibly from your financial models). This will reduce the laborious manual entry process which increases the frequency that this valuable table is reviewed.

Overview of TIER™ Framework for Making Accurate Stock Recommendations



Quick Reference Card (QRC)

10 Questions to Ask Before Communicating a Stock Call*

Answering these questions helps fulfill the ADViCE™[1] quality framework
(Aware, Differentiated, Validated, Conclusion-oriented and Easy-to-Consume):

1. Does your communication begin with your upgrade/downgrade, becoming more/less positive or returning with support for a current recommendation? (**C**onclusion-oriented). If none of the above, ask how your communication will help others generate alpha.
2. How much does your price target differ from the current stock price? (**C**onclusion-oriented). If the difference is immaterial, ask how your communication will help others generate alpha.
3. How do the two elements of your price target differ from consensus (**D**ifferentiated), specifically:
    - Do you have a superior forecast vs. consensus?; and/or
    - Do you have a superior future valuation multiple/method vs. the stock's current consensus-based valuation multiple/method?
4. If you have a superior forecast vs. consensus, which critical factor(s) is consensus wrong about? (**D**ifferentiated)
5. If you have a superior valuation multiple/method, why is the market likely to change its view between now and your price target? (**D**ifferentiated)
6. How have you validated your superior forecast and/or superior valuation multiple/method with more than one independent and informed source (refraining from relying on company management)? (**V**alidated)
7. Why does the market not currently hold your view? (**A**ware)
    - What catalyst will need to occur to get the market to adopt your superior forecast or valuation multiple/method?; and
    - When will it occur?
8. Have you quantified the upside, downside and base-case scenarios for the assumptions surrounding the 1-4 critical factors where you differ from consensus as well as your conviction level around your assumptions? (**A**ware)
9. Have you identified where you could be wrong? (**A**ware)
10. Is your communication easy to digest in terms of quickly conveying the points above while also being concise and not overusing jargon? (**E**asy-to-consume)

* You may not need to answer all questions above for every stock call message, but consider answering as many as possible, if relevant to the call.

[1] Contact us at Info@AnalystSolutions.com if you do not have access to the ADViCE™ QRC