Intelligence Community Analysis Project

June 2008

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Executive Summary

The Intelligence Community Analysis Project is an investigation into analytical and evaluation best practices of the business community. This report, conducted at the request of our government partners, is the product of individual interviews with the senior leadership of 20 diverse firms that conduct analysis in a manner analogous to our nation's Intelligence Community agencies.

The interview questions centered on three main issue areas which explored best practices for the evaluation of analysis techniques, management, and personnel. The most distinctive trend that emerges in this report is the lack of distinctive trends. Put another way, the surveys of these analysis-heavy firms reveals that there is no one "right way" to evaluate performance. Each firm strives for "quality," but how that's defined, how teams are structured, how feedback is collected, and how metrics are built and applied all vary from firm to firm.

The principal findings, along with a brief description of the focus of each section, are outlined below. Per the agencies' request, this report does not make recommendations for future action.

Section 1: Organization of the Analytic Programs

BENS found that each organization had developed a unique, self-styled structure to foster a productive work environment for their analysts. Several important issues arose about maintaining an operation that supported clear communication networks, knowing when and how to initiate coverage in new areas, and how to insulate analysts from possible customer pressure or bias to achieve pre-determined results.

1. Respondents noted that flat operational structures - rather than siloed configurations - ensure necessary and effective communication channels among junior and senior staff. This approach allows for better control over the analysis process and product, and enables firms to adjust quickly to any challenges or changes presented to an analytic team.

2. The factors that influence a company's decision to initiate or shift coverage into a given area include client demand and the internal monitoring of news and trends. In order to structurally adjust to a change in coverage, companies either hire new analysts, contract with outside firms, and/or shift existing staff into new areas.

3. In order to insulate an analyst from client bias, respondents cited peer reviews of analysts' work, strong leadership and internal controls, and the selection of individuals with a specific type of personality and skills.

Section 2: Characteristics of Quality

In order for us to evaluate how firms measured and assessed their analysts and their products, we had to first gain an understanding of how these companies define and categorize "quality".

1. As we found through the interview process, valued analysts are not, exclusively or even primarily, subject-matter experts. Rather, when hiring new analysts or evaluating old ones, respondents focused more on qualitative characteristics such as the possession of a wide world view, a competitive drive to succeed, and confidence in one's abilities.

2. Similarly, when evaluating "quality analysis," for most firms, the emphasis was on the methods by which an analyst came to those conclusions more than accuracy itself. Firms stressed that both tradecraft and accuracy were imperative, but the common refrain was that if an analyst did it "our way, using our method," then more often than not, the results would be accurate.

Section 3: Performance Measurement and Evaluation

We found that companies establish their standards for quality internally, but ultimately, that level of performance must meet the needs of their clients. To gauge these needs, firms use a wide variety of methods to collect customer feedback, which in turn is used to assess analyst and analytic performance overall. Significantly, companies tend to examine a series of qualitative factors, more so than surgical quantitative metrics, in order to translate performance into compensation and promotion for employees.

1. Every company interviewed is interested in feedback from their clients. While a couple of companies said that they generally do not solicit feedback (because it naturally comes to them), most firms have developed mechanisms for a two-way loop. The difference among companies was not related to the type of analysis or size, but rather it was simply an individual preference for formality and frequency.

2. While all respondents review the work of their analysts, only a few firms do systematic assessments of their products. Interviewees stated that the question of whether completed analysis was right or wrong is important, but the effort to identify the bad reports (and their causes) varies among firms.

3. As with feedback and analysis retrospection, there are differences among companies regarding the frequency and method of individual analyst evaluations. The only true constant among firms is that reward-focused employee appraisals do occur on at least an annual basis.

4. Nearly every firm interviewed reported that qualitative factors were as significant as quantitative factors even where metrics are extensively used. Ultimately, an analyst's evaluation will contain subjective components. The value of an analyst cannot be broken down into strict formulaic equations.

Introduction

For more than a quarter of a century, Business Executives for National Security (BENS) has served as the principal channel through which senior executives can help to build a more secure America. As a national non-partisan, non-profit organization, BENS and its members focus on assisting our government partners in the adoption of successful models and practices from the private sector. Our solitary goal is to strengthen our country's security.

In June 2007, the Office of the Director of National Intelligence (ODNI) issued a set of Analytic Standards to serve as the analysis guidelines for the entire Intelligence Community (IC). Directive Number 203 included a requirement that the individual analytic offices within the IC build or maintain analytic evaluation programs to ensure that the standards were adopted. The intent was to create a series of metrics and data that would allow the ODNI and the IC agencies "to assess trends in analytic performance and to shape new initiatives for educating and training individual analysts."

To assist with its efforts to incorporate the Directive into its analytic programs, the Department of State's Bureau of Intelligence and Research (INR) determined that it would be useful to consider how similar private-sector organizations structure their evaluations systems. The BENS Intelligence Community Analysis Project (ICAP) is a response to that inquiry, examining the best practices of companies that perform comparable types of analysis under similar conditions.

The Central Intelligence Agency (CIA) and the Defense Intelligence Agency (DIA) had been working on similar initiatives when the ODNI guidelines were announced. For that reason, INR invited the analytic divisions of CIA and DIA to join in this project. Although their evaluation programs are at different stages of development, all three agencies have worked with BENS in guiding the report's progress.

Significantly, the ICAP report is not an inward-looking investigation into our U.S. Government partners' current analytic practices or organizational structures. Rather, its objective is to develop a better understanding of the private sector's approach to conducting analysis and the subsequent evaluation of analyst performance and analysis-based products. The conclusions put forth in this report are meant to inform our partners about methodological and strategic models that have been successfully employed by diverse organizations across the business community. It details trends that emerged through a series of interviews with private sector firms, and it also highlights notable variations and anecdotes from a number of our participants.

Background and Methodology

As we move further into the 21st century, the United States finds itself engaged in a rapidly changing environment that presents novel and unfamiliar challenges to our nation's best and brightest security specialists. A new playing field has shifted our attention from traditional state-centric concerns to broader and more numerous transnational threats that require innovative approaches in the field of analysis. At the same time, thanks to the communications revolution, the global pool of raw data is growing exponentially, requiring our 16 IC agencies to optimize the collection and digestion of this information from an ever-increasing variety of sources. As our intelligence experts tackle these issues, it becomes more difficult to ensure a consistently high level of analytic performance that is critical to the creation and dissemination of timely and accurate analysis.

The ODNI also released the June 2007 series of Analytical Standards that defined five target points (and a subset of eight specific standards) for analytic quality: Objectivity, Independence of Political Considerations, Timeliness, Utilization of All-Source Intelligence, and the employment of Proper Standards of Analytical Tradecraft. In addition, the ODNI required the agencies to also establish and maintain evaluation programs to appraise the effectiveness of their implementation efforts – a critical element designed to achieve more consistent and effective collaboration within the IC.

The information gathered will be used to improve methods within each agency and to inform other analytic teams about successful practices that might be adopted directly or through training programs. Additionally, the data will enable IC leadership and their oversight officials to establish metrics for future performance, where appropriate.

The evaluation efforts of the three agencies engaged on this project are in various stages of development. Thanks to earlier initiatives, like the OMB Program Assessment Rating Tool (PART), the CIA and DIA had previously begun work to design and implement their respective evaluation programs. Despite the differences, all of the agencies determined that it would be useful to their progress to review what the private sector is doing on the topic.

Significantly, this report was designed to look outward – not inward – at firms whose structure and function are analogous to that of our intelligence partners. Although "analysis" may mean different things in different operational contexts, we found that despite these variations, there are a number of significant yet surprising similarities which were identified. Using the lessons-learned from those with prior professional experience, the agencies might conserve time and effort as well as uncover new program ideas.

In collaboration with our government partners, we determined that companies invited to participate via an interview should include those that:

- Have robust research and analysis operations that drive the success of the firm (i.e., the "lifeblood" of the organization);
- Create written products utilizing a variety of information sources;
- Produce their analytic products on a regular basis and within limited timeframes or under tight deadlines; and
- Present the results of their products to outside consumers, whether within their own firms and/or for use by non-firm customers.

Among the 20 companies that participated were financial firms of all types and sizes (e.g., insurance companies, hedge funds, venture-capital funds, investment banks, diversified multinationals), from an array of divisions (e.g., equities, sovereign risk, risk management). Interviewees also included Fortune 500s, consulting firms, and other research firms with similar functions. Participants ranged from CEOs, Principals, and Managing Directors to Directors of Research or Analysis, Chief Security Officers, and other corporate leaders. Some of the interviewees also brought non-management analysts to join in the discussion. To encourage frank and open communication, it was determined that no attribution, to either individuals or firms, would be included in this report.

BENS assembled a small group of members and other subject-matter experts to serve as the ICAP Project Team. Together with BENS staff and the government partners, these private-sector executives wrote the Scope of Work for the venture and generated the diverse list of companies to be interviewed. They also helped to write the survey document itself and this report.

The survey questions were divided into three broad areas. Borrowing from that structure and based on the comments received, this report addresses the responses in similar categories:

Organization of the Analytic Programs

- What is the type of operational structure most suitable for analysis?
- What are the indicators that trigger coverage in a given area and how do you position resources to do so?
- What mechanisms do companies employ to ensure that an analyst is insulated from potential customer bias/pressure to achieve a certain result?

Characteristics of Quality

- What characteristics are inherent in high-quality analysts?
- What is high-quality analysis and what are the roles of tradecraft and accuracy in determining the overall quality of an analytical product?

Performance Measurement and Evaluation

- How do firms gauge customer satisfaction with quality in analysts and analysis?
- How often do you go back to determine whether your analysis was right?
- What methods are employed to conduct the evaluations and how is staff involved in that process?
- How are qualitative and quantitative measurements used in the evaluation of analysts?

From the beginning, the survey document was intended to be simply a guide to the interviews, thus allowing BENS to initiate an engaged discussion with the interviewees. The organic format also enabled each interview to incorporate relevant hypotheses or scenarios derived from the context of earlier conversations. These findings could be tested with subsequent interviewees to determine their validity and to help in distinguishing anomalies. Most interviews lasted 60 minutes, with some extending into multiple sessions and hours. (The survey document can be found at Annex I.)

By using quotes from the interviews throughout, this report aims to capture the tone and character of the interviewees and their organizations. Unless otherwise noted, the individual quotes have been selected because they are representative of a segment of the interviews as a whole. References to a particular industry or sector prior to specific quotes are meant to provide additional context in circumstances where it was deemed valuable.

Going forward, it is important to define several key terms used in the report. First, when using the word "customer," BENS is referring to any individual or organization that is a consumer of a given analytic product. These customers can be either internal or external to the interview subject (e.g., another division within the same firm or a paying customer from outside). For the report, the terms "client," "consumer," and "customer" may be used interchangeably, unless otherwise noted.

Second, the term "analytic product" refers to any product created by an individual or team of analysts that provides some degree of value-added for the customer. This value-added element must be something of use to the client and may take the form of, for example, a situational report about a given development from an emerging market, a projected political crisis, or a prediction about the direction of an economic indicator. It had been suggested that any product labeled as "analytic" must provide a forecast or predictive element. For our purposes, however, BENS is including any product that the interviewee determines is appropriate within the guidelines of the survey and his/her own operations. (I.e., This report does not judge whether the company is correct in considering its products to be worthy of the "analysis" label.)

Key Findings

Section 1: Organization of the Analytic Programs

While this project was not designed to study methods of analysis, it was critical to understood the scope and purpose of each company's analytic program before we could delve into later questions regarding how those methods had been evaluated and improved. BENS found that each organization had developed a unique structure to foster a productive work environment for its analysts. Several important issues arose during these preliminary questions, including concerns about maintaining a structure that supported clear communication networks, knowing when and how to initiate coverage in new areas, and how to insulate analysts from possible customer pressure or bias to achieve pre-determined results.

1.1 What is the type of operational structure most suitable for analysis? Respondents noted that flat operational structures - rather than siloed configurations - ensure necessary and effective communication channels among junior and senior staff. This approach allows for better control over the analysis process and product, and enables firms to adjust quickly to any challenges or changes presented to an analytic team.

While the sizes of the surveyed analytic divisions differed among firms, ranging from a single analyst in one location to thousands across the globe, nearly all of our interviewees noted the value of a hierarchy that is accessible throughout its levels. Considering how to optimize analytic product through the structure of the related operations, respondents said that it is essential to establish clear and unobstructed communication channels among the analysts themselves, as well as between junior and senior staff. As one financial firm shared, "the managers are in constant contact with the line people, and in fact, often, every manager has a line job. They will be working side by side with other line people."

Companies stated that a strict chain-of-command structure tends to create a siloed configuration that makes it difficult for analysts to know what fellow analysts are doing on related issues – impeding either the adoption of their resources and analysis or their correction of the same. Emphasizing divisional collaboration as a way to ensure quality throughout the analytic process, one consulting firm said, "The idea is that my information goes to five or six other people who give me feedback, and then it is published. We have an entire process in place to ensure the quality of the deliverables and that there are other skilled people looking at our products and checking them before they go out to our clients." Another consulting firm shared: "You are trying to build your network to develop a concentric set of circles that you can reach out to. It is that kind of virtual connectivity and network and continued vetting of the system that allows us to do what we do."

Constant, multi-level communication is also used as a training mechanism. Firms stressed that the collaborative process promotes the development of both innovative ideas and analytic skills. It also keeps the analyst focused on the goals and ethos of the organization. This is demonstrated at some, if not all, stages in the creation of an analytic product. As a consulting company noted, it "like[s] the analysts to question and challenge what you are doing, why you are doing it, and… what you will find is that when folks are starting off, they are intimidated to [challenge and question]… you have to actually draw people out to feel comfortable, to get to know the organization and to have confidence in their own abilities. So we try to create a culture where they feel comfortable pushing back or challenging."

Although the principle of open communication was shared, methods varied widely among firms. Several companies use circulations of weekly, monthly, or quarterly documents that inform the analysis team of the work being done by others within the organization. Other firms conduct meetings at the start of each day, organized by region or issue areas and led by senior staff. Others hold daily meetings, supplemented by weekly or monthly worldwide or regional sessions to inform the production of analytic products and to impart a cohesive picture of the organizations' work. Still others choose regular, electronic dissemination of statistics on completed reports, presentations, and customer contact for access by fellow staff. (e.g., details showing that an analyst's report had been accessed by outside customers more times than similar reports from fellow analysts). One interviewee goes so far as to publish client feedback on individual analysts' work so that the whole team knows what criticism (or praise) others are receiving. This research company stated that, "every customer criticism is seen by all analysts. The only way an analyst knows how he/she is doing is to hear the feedback from the clients. Do not allow your analysts to be insulated from the consequences of their analysis."

1.2 What are the indicators that trigger coverage in a given area and how do you position resources to do so? The factors that influence a company's decision to initiate or shift coverage into a given area include client demand and the internal monitoring of news and trends. In order to structurally adjust to a change in coverage, companies either hire new analysts, contract with outside firms, and/or shift existing staff into new areas.

Respondents also stressed that analysts should have regular exposure to working in teams, either in the creation of customer products and/or for reviews of those products. The interviewees agreed that good analysis requires an analyst to work with many sources and to receive frequent feedback from colleagues and management. (Working "in a bubble" was deemed to be too insulated and detrimental to the product.) A few firms create red teams and black-hat review teams to evaluate products before they are shared with customers. Less formally, most simply require that other analysts within the organization review a product before it is disseminated to clients. A consulting firm said that it "will bring capabilities from multiple perspectives to frame a problem and what the data requests will be. We will bring someone who has a deep industry perspective from whatever it is, and we will bring someone that has the right functional expertise, and perhaps from cross-industry, and then we will also bring into the room the expertise on how you do the research and how you frame it."

For another large investment company, review teams also ensure that analysts with out-of-the-box viewpoints do not go unheard. "It is useful to have two detailed analysts looking at a question from both sides and then have a small group of thoughtful people hear the analysis that is not necessarily expert on the topic. When we had [an analyst] say that [a commodity] was going to go [significantly higher] when it was [very low], everyone thought he was crazy. So it is important to look at issues from varying perspectives. A good research manager makes sure that individual analyst viewpoints are not getting shut out."

Overall, firms agreed that diversity among analytic staff was important. "You need to have people with broad experiences in life. You need a demographic mix: age, gender, ethnicity. If the group analyzing is all the same, then it will distort your perspectives." Another financial firm said that it chooses the team method because it's imperative given the nature of their industry: "Wall Street is a place where if you don't have a multigenerational view, if you haven't seen something three or four times, it's a very cyclical world. I've been working on Wall Street for about 30 years now so I would say that I've seen three or four cycles of behavior. A lot of people… have only seen a cycle one time…If you have only seen something once… you tend to assume that the world has always functioned in exactly the way that you have seen it."

Communication and teamwork are important not just for the analyst's learning curve and performance, but also for management, which told us that they value a flexible organization that can jump into new areas with little warning. "You cannot know what the next trigger point is going to be, but you do know that things happen quickly and you rapidly need to change your focus. What you do is you engineer into your system the ability to change direction quickly, and the ability to absorb new data sources."

Similarly, there was no clearly preferred trigger to this new coverage: some act solely at the behest of a client where others respond to changes in circumstances (e.g., a significant political event or natural disaster) or trends identified through research or the media. Often, the same analyst-team meetings that are used for training and knowledge sharing are also used to help managers determine whether time and personnel need to be reallocated internally. In many cases, the companies that track how often their reports are accessed by customers are also the ones that say that those statistics are used to determine whether to ramp up or remove coverage on a particular topic. For a few companies, the sales or business-development teams are tasked with forecasting trends among the customer base, allowing those firms to anticipate potential shifts in the marketplace.

The more significant concern seemed to be the maintenance of an operational structure that can rapidly reallocate resources under pressure. One market research company, for example, stressed the need for this flexibility, not just within a given analytic team, but within individual analysts themselves: "We hire for quality of mind, what we look for is learning curve. Our expectation is that the next issue that arises will be totally unexpected so I hire people that may not be as expert in any one place but have the ability to rapidly bring up their expertise in little time." As noted by another consulting firm, "it is very rare that we go out and hire a new analyst to cover a new country; we frequently just expand an already-employed analyst's coverage areas to include [whatever needs action]." Some companies keep contractors as a backstop on requests into new areas, but most stated that they select and train employees who are skilled enough and with a broad-enough knowledge base to meet any assignment that develops.

To test how these companies would respond in practice, we offered an analogy from the public sector. Daily news from Mauritania receives little attention in the mainstream U.S. media; nevertheless, U.S. government agencies assign analytic resources to it on the basis that there may be a future scenario that requires a comprehensive understanding of the country and increased coverage. We asked the companies to consider a similar issue in their industry and to share how it might be covered, if at all, and what, in their structure, makes the firms confident the issue could be appropriately tackled. Respondents repeated that in cases like this, they tend to utilize existing expertise from another area and shift those resources to that new issue. Firms again noted that they hire people capable of top-quality analysis first and foremost and not exclusively for their subject-matter expertise.

Illustrating this point, a consulting firm used the response to the 2005 London subway bombings as an example. This company said that until the attacks happened, neither the local authorities nor their own analytical staff had extensive experience identifying this type of criminal in this type of act using the stations' closed-circuit televisions. Nor did these analysts – pulled off of unrelated work – have detailed knowledge of the Tube structures themselves. Within hours, though, those tasked with tracking the terrorists' steps were able to piece together their movements and profiles. The respondent suggested that this exemplified the ideal, lithe structure and training that the firm values. Using a different scenario, an investment firm shared that similar flexibility allowed it to go "from covering zero companies in [a] sector to roughly 35% of the public companies in that sector in less than a year." Still another financial firm said that "it was a waste to write an update on [a Mauritania-type subject] if there was no use or demand for it. So we remain nimble, and flexible to address new requests in a short amount of time with our limited amount of staff support and expertise."

Furthermore, all firms but one disagreed with the strategy of covering everything imaginable on a just-in-case basis. "We don't have the luxury of a bunch of people if we don't have the demand for them… We could have the greatest analysis but if no clients care about it, that's not a good use of resources, even if we think that it's interesting." They commented that it was not their preferred use of resources, and some suggested that a better method would be to maintain a capacity to outsource research, as needed. Demonstrating the concept in practice, another company disclosed that it has over 10 times the number of vetted subject-matter experts within its information network than it does on payroll; it can call on these people to supplement their worldwide staff on an as-needed basis. A few firms added that the private sector's ability to choose to not cover something is itself a reason that their companies can respond quickly to changed circumstances and client interests.

At the same time, however, most also said that they understood why a government agency would choose to cover a "Mauritania" even if it's not a primary or even secondary focus of the customer base. "Your research team should be very aware of how you do things… in areas that might automatically blow up. If you're not plugged in to even a small degree, you will have an extremely difficult time dealing with this explosion. For example, we have people continuously in ASEAN countries to account for the rises in importance that this group might experience and to make sure that we would be able to effectively cover that region if something were to explode there." Another interviewee from Wall Street added, "I don't think that our model entirely is the right one for government… clients [and their expectations] are different so we need to find a way to be more nimble and impactful."

1.3 What mechanisms do companies employ to ensure that an analyst is insulated from potential customer bias/pressure to achieve a certain result? In order to insulate an analyst from client bias, respondents cited peer reviews of analysts' work, strong leadership and internal controls, and the selection of individuals with a specific type of personality and skills.

When asked about how to deal with the potential issue of customer bias to achieve a particular result from the analysis performed – including pressure from other divisions within a firm or upper-level management – some of the respondents flatly stated that they do not experience this problem. "No, we don't bow to that pressure. We never change our research, nor do we bend our analysis. We don't say things that are always pleasant to the client. If that means at the end of the day that we are not asked back, then we are okay with that." These companies said that because their corporate culture insists on an independent, and perhaps defiant, approach to clients, analysts are confident that they would be supported for "doing it right" versus pleasing a customer in this way. "We have a kind of intellectual independence, and integrity in research is not only a central part of how we operate but it is also part of our sales pitch."

Most, however, said that this was indeed a frequently occurring challenge, but one which was deflected through effective and active management. To start, many respondents stressed the need to use the hiring process to select analysts who come in with a strong sense of integrity as well as "the backbone to speak to power." (More on the evaluations in Section 3.) Some of that confidence is also taught to analysts as a part of their entry-point training. Companies further noted that a major role of the manager of a research and analysis operation is to provide insulation from such pressure. Supervisors should be standing up to clients on behalf of their analysts to ensure that they aren't unduly influenced; where they don't, there is a greater risk of failure. "Leadership is important because I have to create the environment that it is okay to speak to power and have a backbone for doing so." Managers should also be watching for analysts who have "gone native" or who are taking sides: "[Quality analysis is] really the issue for team leaders. If you have someone in your team who is doing wrong analysis or it's biased, you flag that immediately and do not wait 'til the annual review… There is not a formalized process, but in research-analyst management teams, and also with their sub-directors, this is kind of issue number one, the quality of analysis – so it's a daily thing."

With respect to the process, most agreed that peer reviews are highly effective tools towards the elimination of potential bias. For example, one company noted that each analytic product created must go through a peer-review process before it can be published. A market research firm said that, "Everyone in the company reads [a report]. The other day our lady in Hong-Kong writes back nailing our Latin American analyst about something he got wrong." For this firm, this internal check ensures that an analyst not only keeps his audience in mind, but that he also strives for accuracy. If an analyst is aware of the constant cross-check with colleagues, then respondents say that they will tend to be wary of giving in to the customer biases. Whatever the method, these reviews ensure that the analyst (or team) is not the sole creator of the product, reducing the likelihood for distorted findings. "Our main issue is to try and limit occurrences of internal or individual bias. We check each other and we all have to sign off on certain publications. Everyone is accountable in some way. It is a collective accountability."

Section 2: Characteristics of Quality

To evaluate analysis, an organization must first determine how it defines "quality." Examining analyst performance and the product an analyst creates, is essential for the development of metrics, as well as to guide subsequent appraisal.

> **2.1 What characteristics are inherent in high-quality analysts?** As we found through the interview process, valued analysts are not, exclusively or even primarily, subject-matter experts. Rather, when hiring new analysts or evaluating old ones, respondents focused more on qualitative characteristics such as the possession of a wide world view, a competitive drive to succeed, and confidence in one's abilities.

Throughout the interviews, we heard descriptions of a "good analyst." These qualities included:

- A holistic education/mentality; general knowledge on range of subjects
- The ability to write clearly, succinctly, and persuasively – and under pressure
- A competitive nature that drives the analyst to go beyond what is required or industry standards
- A willingness to reach out to a number of outside sources for information/networking
- A strong backbone to defend conclusions, as well as the ability to think on one's feet when that conclusion is challenged
- A willingness to acknowledge one's limitations, to admit error, and to remain flexible in the face of criticism
- Adaptability to changes in assignments or coverage areas
- The ability to play the role of salesman in effectively packaging and presenting products and conclusions to customers

Very few firms included subject-matter expertise as a significant priority for hiring, particularly of entry level employees. There were exceptions, of course, e.g., hiring doctors for a healthcare-sector equities team or hiring those with language skills. ("It is unfathomable to me today that you could have a company covered by people who do not speak the [related] language or have any cultural affinity or a passport.") Largely, though, firms opted instead for a multitude of analogies to other hobbies and professions. For example, one firm likes to recruit former United States Secret Service (USSS) agents because their USSS training ensures that they are capable of "speaking to power:" "In the Secret Service, you become accustomed to interacting with high-level people, and it's your duty to protect them so there really are no issues in communication between staff and the upper levels of the company." Another company prefers to hire competitive athletes due to their innate drive to outperform their opponents, while yet another seeks out former journalists for their ability to gather and synthesize information under pressure and from a variety of sources. Musicians were cited for their ability to "go from abstraction to reality, and reality to abstraction; people who read music tend to have a better brain for the type of analysis that we do." Former archeology students were also cited as some of the best analysts because "they can take a single fracture of a clay pot and tell an entire history of the piece and the time in which it was used based upon the characteristics of the clay." We even heard from one firm that likes "people who majored in French medieval literature, etcetera. We hire for quality of mind, not qualifications."

Firms also emphasized communications skills as equal to or even surpassing the analysis skills themselves. "[Writing] is everything in this business… When we get feedback, it's usually based upon the clarity of a judgment or coherence of a given report." Another said that, "we like to have a full-time writing coach come in and help analysts with their writing and the format of their reports."

We heard repeatedly that the analysis has little value without the ability to deliver an analytic product in a format that is useful and understandable to the client. "[Analysts] absolutely have to [interface with clients and represent the firm publicly]. They also have to effectively communicate their ideas to the salespeople… Most of our sales force has gotten their start in research so they have their own analytical outlook. So part of the process here is educating the sales force so they feel comfortable they've got the knowledge and can understand, accept, and promote an analyst's idea to the customers. They are absolutely not locked in a room. They speak with salespeople throughout the day."

Of significance, too, is the ability of an analyst to think on his feet, either to recognize and respond to the identification of shortcomings in his research or to counter such claims where error is alleged. According to one Wall Street firm, "A good analyst must be able to withstand being challenged by sophisticated investors. They need to be able to communicate their views as well as be good at analysis." In a similar example offered by another financial company, "One of our analysts may have to directly challenge one of the senior… analysts of our firm so you have to have the flexibility and the backbone. We had a late-night conference with our business leaders in China where they wanted us to give [it] the highest possible rating for a country, saying that China was a special case for almost every indicator, because they wanted to bring business there. We were able to hold our ground and defend our model and rating."

2.2 What is high-quality analysis and what are the roles of tradecraft and accuracy in determining the overall quality of an analytical product?
Similarly, when evaluating "quality analysis," for most firms, the emphasis was on the methods by which an analyst came to those conclusions more than accuracy itself. Firms stressed that both tradecraft and accuracy were imperative, but the common refrain was that if an analyst did it "our way, using our method," then more often than not, the results would be accurate.

Based on preliminary discussion with our government partners and the BENS ICAP Project Team, going into the study, it was expected that the standard by which analysts and analysis are judged would be based on the success of the outcome. Early into the interviews, however, it became apparent that while accurate outcomes are a priority, e.g., a prediction that a government will react in a certain way or that a stock will move in a certain direction, managers told us that they generally judge their analysts on their methodology and process more than the results. (More on the evaluations in Section 3.) Every firm stated that they are being paid by clients to develop accurate results: "We obviously have to be more right than our competitors to be commercially successful… If he/she is consistently wrong, we are no longer going to listen to them." Almost all of those responses, though, came with the additional statement that, "if you are using the right process, then you will, more often than not, get it correct."

As one might anticipate, there was variation in that balance along the spectrum from equities firms and venture capitalists (where the industry ranks firms based on the number of accurate calls) to those doing market or security consulting (where analysis often produces ranges of options); but the importance of the methodology still appeared to be paramount for most firms. As a financial firm told us, "it is very important that the analysts are doing the analysis fundamentally correct. If someone is doing this, they are going to get better results; the quality of the analysis is in the method. There will be stocks that we get wrong, but it is important that we have high quality results and work." Another Wall Street company said, "If you do the method right and you have a set of variables that are kind of understandable, you are always hoping to end up in the right place. It's almost like you're always better doing it thoroughly and accurately than just guessing and ending up in the right place."

In fact, a number of firms went on to say that their achievements were not based on the recommendations themselves but whether a client found value in the advice. "At the end of the day, what I would judge as a success is what we recommend, did the client actually accept it and did it drive action." Another investment firm added, "You will get no credit as an analyst or a division for doing more reports than everybody else or just a bunch of reports. You are measured on your impact and your usefulness."

Many companies stressed, too, that quality analysis is not about providing specific answers: "This company will never tell [a client] we think that you should do X, Y, and Z, and if you don't do it, you're idiots. What we'll say is that we believe the following A, B, and C, and should you choose to take this action, this is what may be the consequences. Your job as an analyst is to present the best facts that you can, like the consultant, and then step back at that point."

A consulting firm expanded on the departure from accuracy as the ultimate measure of success, asserting that almost more important than getting it right was not getting it wrong. Equating its work with that of our government partners, the company offered: "When you are in government looking for terrorists, the costs of false-positives are tremendous. When you look at the cost and the extra time it takes to follow-up on these false-positives, you really use a lot of resources." The company went on to note that "you often find something valuable that you were not originally expecting: finding other terrorists when you are looking for bin Laden, for example. So you have to gauge your success in this way: measure it on your output, but adjust your starting goals as you go along. You report will say, well, I cannot guarantee we have found Osama, but nine out of 10 chances, what we have found is something bad regardless of whether it is Osama or not."

There were dramatic exceptions to this approach, with a handful of the twenty firms stating that accuracy was the one and only component that mattered. "I am very interested in the craft of intelligence, but it never takes me past the goal line… If you achieve accurate results by hanging upside down in your closet and dreaming up something, then I don't care." Another Wall Street firm said that "I think that there's something to [the tradecraft versus accuracy argument], but I do think that there is an incredible correlation over time to the real 'quality analyst' getting it right more than not." Similarly, one financial company used a sports analogy to assert that getting it absolutely right, even rarely, was more valuable than getting it partially right with frequency. "Batting average is not important; slugging percentage is important. If a young associate uncovers a hundred potential company deals, of which 90 we act on and 70 of those have pretty reasonable outcomes, I would trade that person in a heartbeat for a person that went through a hundred companies and found Google. The other 99 were dogs. Our business premium is based on finding that game-changing thing..."

It should be noted that a couple of firms said that the value of that accuracy is not in being right or wrong, per se, but as a check to bias. These firms were among the few that stated that their analysts are rewarded based on getting it right (and fired for getting it wrong), and thus, the built-in incentive is for the employee to aim for correct results rather than pleasing a particular customer who wants a particular result.

2.3 Beyond accuracy and methodology, respondents noted a number of other desirable qualities for analysis products. Many of these characteristics were the same or complemented those included in the ODNI's June 2007 Analytic Standards guide.

To better understand the characteristics of "quality," respondents were asked to think about what they valued in an analyst's product. They were also presented with some of the ODNI's June 2007 Analytic Standards which included timeliness, coherency, the explanation of rejected conclusions, and objectivity among other requirements. All of the ODNI's characteristics received approval, but there was clear emphasis on the issues of timeliness and clarity in presentation. "In the type of environment we are operating in, I can't have someone ponder a subject for a long time and then write a 28-page paper... They need to write quickly and see in between the lines."

Firms also noted the need to identify the limitations of the analyst's sources and to make it clear when a conclusion or a recommendation was based on a best-guess (low probability of a correct prediction of an outcome) versus a certainty (high probability). "A good report is timely, well written in the sense that somebody would want to read it, bereft of hedge words. Tell them what you think is going to happen. Tell them what the odds of that happening are. Tell me what you know, and if you don't know, that's fine, too. Say you don't know it and don't lead me down the garden path." Noting the importance of explaining the underlying assumptions going into the creation of a product, this research firm added, "What did you assume was going to happen and why did you assume it? That's the guts of tradecraft… Did you ultimately ask the right questions?"

Similarly, firms agreed that if the product declares a shift away from a previous position, the analysis must explain the reasoning for it, whether it's a change in a buy recommendation on a stock or a comment on the likelihood of the escalation of a military conflict. Other firms, noted, too, that the product should reflect the role of the analyst as a support and not the final word. For a Wall Street firm, "[Upper management is] really the 'yes' or 'no' in the whole decision-making process. We just provide for them the facts that are the reasons behind their decisions. For that reason, we strive to explain all sides of each issue." Providing all of the facts bearing on the issue, including those that are currently unknown or have changed, will ultimately allow the decision maker to have a clearer understanding of the situation and the analytical process.

About half of the firms also added that providing a prediction with the conclusions of the analysis is one significant element of quality. Several respondents stated strongly that "summarizing a given subject is merely reporting." For one financial company, "All of our work is forward-looking, and so every report has estimates of future earnings, what we expect to happen, etcetera. If you are not providing that then you are useless." A market research firm said that "the purpose of intelligence [market or otherwise] is not just to describe what is happening now, but what is going to happen. Intelligence buys the decision maker time, and it allows them to view a situation and make a decision. We orient ourselves around the forecast. Without it, we do not have any framework for our analysis."

These companies were insistent that if the analyst isn't forced to go out on a limb and commit to a prediction, then they are not being challenged in a manner that produces accuracy. According to these firms, without predictions, there is no value added. Noting that forecasting is what sets quality private-sector analysis teams apart, one research company said "What we are paid to do is to make forward-looking analytical forecast and while there are many good analysts…[some organizations] have a bureaucratic bias against them making clear calls."

Others, however, qualified that statement, asserting that the need for forecasting was dependent on the type of analysis: if you are providing market intelligence to assist a client in purchasing a rival firm, for example, the analysis does not need to be predictive in nature. Similarly, explaining the meaning behind a political assassination or parsing the comments of a foreign leader does not necessarily require a forecast. "Analyzing the dynamics of the contemporary is essential, but it is not that useful for policy makers if you cannot [indicate] why it matters and what the implications are."

Section 3: Performance Measurement and Evaluation

Companies establish internal standards for quality, but ultimately, their level of performance must match the needs of their clients. The firms interviewed use a wide variety of methods to collect customer feedback regarding quality, and that information is used to assess analyst and analytic performance overall. Significantly, companies tend to examine a series of qualitative factors, more than surgical, qualitative metrics, to translate performance into compensation and promotion for employees.

3.1 How do firms gauge customer satisfaction with quality in analysts and analysis? Every company interviewed is interested in feedback from their clients. While a couple of companies said that they generally do not solicit feedback (because it naturally comes to them), most firms have developed mechanisms for a two-way loop. The difference among companies was not related to the type of analysis or size, but rather it was simply an individual preference for formality and frequency.

Customer feedback is a desired part of the analysis cycle. It is used to gauge whether the firm's ideal of quality is matching that of its customers. It also assists the analyst team in determining whether its end product is useful to the client and addresses their communicated requirements. Feedback, if done throughout the analysis process, can also minimize consumer dissatisfaction by ensuring that the customers' expectations are managed and that if their goals change, the analyst team changes, too. For these firms, the feedback loop is a required part of the natural business cycle.

Firms collect information in a number of ways and with a range of schedules, but all companies use feedback to improve the analysis process. For some, that happens at the end of the cycle, after the product is completed; for others, it occurs throughout the development of the analysis. The feedback can come in a form as indirect as a client failing to an renew existing contract. ("Our ultimate report card is our client's commission dollars: if they pace in our stocks then our commissions go up and if they pace less, then we know that we are doing something wrong.") or it can be as detailed as daily contact via customer-interviewee teamwork on the analysis squad.

A few of the firms seek feedback on a fixed basis, tied directly to the process of completing performance evaluations of individual analysts. These companies use the feedback to motivate the analytic team, in addition to contributing to decisions regarding compensation, promotion, and dismissal. As one financial firm shared, "About half of our clients vote each quarter for the analyst or salespeople that they want to give commission dollars to. How much we are getting paid is directly tied to those votes… We also have an annual soliciting of our tier-one and -two clients and ask them how we could do better on their accounts, etcetera. There is also a biannual sales-force pool when they rank all of the analysts and rate them on a scale of 1-10... We take an average of their scores and publish it. The people who are at the bottom of the list, we basically tell them, 'If you don't get better, then you might not be here.'" Client opinion is so important to this firm that the customers themselves determine bonuses for those who produce their analysis.

A handful told us that they make minimal effort to solicit comments, saying that the feedback comes to them naturally, due to the personality of the industry. "Companies that are followed will write in and say 'we don't agree'…That is going on constantly, and there is a tremendous amount of feedback up the organization. Nobody is more vocal about being displeased with something than an equity salesman. They have zero hesitation if they think that an analyst is wrong in going to their department head and saying 'so and so is completely wrong.' Information is literally shared real time, all the time." Another investment organization said, "We don't do any type of surveys, although we do solicit internal feedback from clients which is verbal and informal. It's mostly all unsolicited, though, and it just comes up in general conversation." The companies using this feedback method might also rely on their salespeople as vehicles for comments collection: "The business development team is very well aware of what the customers are saying and that gets back to the research leadership and analysts."

Most of the companies interviewed, however, do solicit client feedback on a constant basis. One consulting firm shared that the best source of client feedback for them comes through their company website:

"We have a website where people go in and access our research. We look at how many times a product is downloaded and viewed. We ask clients to renew their subscriptions, and this tells us how good a product is. We also send out surveys to them asking whether or not our research was useful." Another market research firm puts its feedback mechanism out front: "All of our articles have a comment button on it. For every article, you can basically hit a button to come right back to us, and if you think that article is full of crap, you can say so, right then and there."

Some firms even structure their analytic teams and overall operations in a way that allows for consistent feedback throughout the analytic process. This group of companies told us that the customer involvement at all stages of the analysis was necessary to produce the quality product desired by its consumer and the firm itself. "We will get a data analysis request, we will think about it, we will go back to the client, and we will make sure that we understand what you want and then this is how we will go back getting you an answer. We usually have a preliminary result review, and say 'this is what we are learning and finding.' Then we will ask the client 'does this seem that this is meeting what the needs are and the intent?' Very often what will happen is that we will get a mid-course correction on that and then we will go finish it and create some final report." Added another company, "we do allow short-term, medium-term, and long-term feedback and I think that continuous loop is crucial. You need to know your customer."

One consulting company takes this further, requiring that all clients embed subject-matter experts from staff directly within the analysis team. "In having people who understand the business on the team, you waste less time by pin-pointing exactly what the company is looking for and if your results are even useful… The worst thing that you can do is lock yourself in a room for six months and then come out and say 'we are fine, doing well' to a company that is paying through the roof, and then at the end of the work, there is nothing there…Where projects go wrong in the process is that there is no personal relationship with the customer… You need have people on the team from the customer's organization." (This firm stated that it will refuse analysis projects if the client is not willing to provide them with appropriate representation). That company went on to say, "The to and fro of the feedback is the thing that creates good analysis, not the raw science of it all… We see where we went wrong, put that back into methods, and we won't make that same mistake again."

Some respondents held reservations regarding too frequent and direct analyst-client interaction when working on a given project. The concern was that there is a potential for bias or influence from the client brought upon the analyst. Other companies defended this model, however, noting the necessity in hiring analysts with a strong backbone who can stand up to client pressure and recognize when a client is pushing them toward a certain conclusion. They also stressed the role of the manager and the overall quality that they strive to build into the foundation of the company's work.

On a whole, companies noted that while feedback was important, it was also essential to parse that commentary on its arrival. Before a firm acts on what it receives, it must first determine whether the objection is one of opinion or fact. "More often than not, people who are hearing what the analyst says are really just disagreeing with the analytical conclusion rather than factual error." A market research firm offered, "Probably nine chances out of ten, we got it. Or if we have a different viewpoint than them, that's another thing, as well… As long as we have proof or some feeling of substance about it, then we are willing to back it because everybody is willing to have different opinions about these things." Interviewees said that distinguishing between the two types of criticism was crucial: "At the end of the day, it really takes human quality to make something unique or true… our analysts speak to thousands of clients a year and are on target in separating the hype from the truth."

3.2 How often do you go back to determine whether your analysis was right? While all respondents review the work of their analysts, only a few firms do systematic assessments of their products. Interviewees stated that the question of whether completed analysis was right or wrong is important, but the effort to identify the bad reports (and their causes) varies among firms.

Some companies said that they have rigid systems in place to check and double check their work post-issuance, but that was a minority. One respondent, for example, brings in an outside consultant to conduct a thorough review of its complete archive of reports every two or three years. Another multinational said that for "every single assessment that we put out, we go back a few days later after the event and evaluate it: How could we have done this better, and what did we do right? A lot has to do with the kind of feedback that we may get from the customer." Others do annual or semi-annual reviews – but often of only a select number of products chosen, in part, through negative feedback from customers. These companies also shared that the feedback itself is the natural trigger that forces the firm to look outside of the formal review process. "If you have someone on your team who is doing wrong analysis or it's biased, you flag that immediately and do not wait 'til the annual review."

A larger number of respondents stated that they do not concentrate on reviews of old analysis. This was attributed to the nature of their industries, with those firms commenting that their markets move too fast for such introspection. "Given the forward rush of the firm, [formal company review] is not something that we spend huge amounts of time on. We also have too much to do, and we are not a big enough company to have a staff solely dedicated to look at back data." We also heard that the, "Cost-benefit is not there. There is a limit to how much we can standardize for the product that we provide to the client, and it seems to work from our standpoint that we have a good reputation in the market and we continue to grow our business. From the direct feedback, we get that we are doing more right than wrong." A Wall Street company attributed their lack of focus on hindsight to the checks and balances built into producing the analysis itself: "In terms of measuring how well those judgments hold up over time, we really don't have quite the same need or enough time to do a lot of post-analysis on the pieces. Everyone sees everything before it goes out so we are all familiar with each other's work. Our quality control is that we know the judgments we are taking; it is a rolling target for us." An additional financial firm noted that "we don't spend much time doing this. We rely on a client's feedback to tell us if a prediction was incorrect."

Most companies, though, said that it was an ongoing process without a beginning or an end, without an evaluations director or program. "Research analysts get tested on their accuracy of their analytics and the usefulness to the firm on literally a real time, daily basis." This approach was shared by another investment company that offered, "For us, it's an ongoing and continuous process. Things are never really a "case closed." We always go back and look at reports…sometimes within the hour after it was written, to ensure accuracy." As explained by a multinational, "you should think of the whole process as a never-ending baseball game: there is no halftime to pause and talk about what just happened. You only have a short time between innings to make improvements. Sometimes a manager will go out to the pitcher during the inning and talk to him if he feels he needs some sort of adjustment or encouragement, but other than that, the adjustments just occur automatically."

3.3 What methods are employed to conduct the evaluations and how is staff involved in that process? As with feedback and analysis retrospection, there are differences among companies regarding the frequency and method of individual analyst evaluations. The only true constant among firms is that reward-focused employee appraisals do occur on at least an annual basis.

Most firms conduct annual performance evaluations. "It's a very detailed process that starts around October or November of every year and ends the last week of January. It involves all sorts of forms that get filled out by the sales personnel who deal with the analyst, by the department managers, by the analysts doing 360-degree reviews of other analysts, doing reviews of themselves… It all gets funneled into the department manager who distills it down to bonus recommendations." Some, however, do the analyst evaluations more frequently: "We do formal performance reviews twice a year, and the reason that we do that is because our folks typically will work on multiple things at the same time… If you wait a year, you find that the feedback tends to be disproportionately weighed to the last few things you did because people forget what they did at the beginning of the year… The person who is your supervisor synthesizes all project feedback and then solicits how you think you did, and then tries to weave that story together."

All agreed that bonuses and promotions are determined based on the evaluations: "The way that we divide the bonus pool is that the partners sit in a room and then we discuss all of these self-assessments and these individuals' contributions to the organization, and literally debate back and forth the relevant merits of each person." Another respondent from a financial firm said that, "For analysts, there is a mid-level or senior person who is the Professional Development Coordinator (PDC) for that analyst… The PDC, in turn, solicits feedback from other people whom that analyst has worked with, those people above and below them, and that's collected on a confidential basis. The PDC then tries to create a composite view of that particular analyst's performance. All of this gets committed to writing, which is reviewed with that analyst as a year-end process that impacts title, promotion and compensation."

Methods of review vary among companies but most rely on a review or compensation committee. Many firms also mentioned their use of self-appraisal by the analysts themselves. "Each member of the team had to write personal self-assessments of their goals and aspirations, how they did this year, and what they could have done better as a part of the review process. We will sit down with them and their reviews and their teams so they get feedback." A market research interviewee cautioned, though, that the self-evaluation process must be firmly managed: "Never lie to yourself or in front of your colleagues. My job at the company is to make liars pay for it. Potentially, we will fire an analyst if they can't get it right or if they lie in their evaluation."

Firms also employ 360-degree reviews, basic peer review, as well as comments from clients: "[Feedback] is a part of the review process. And if there has been a concern [about bias], then that's a central issue because the independence, integrity, and quality is the product. So that's item number one before the performance review." In part for its usefulness during the appraisal process, a smaller number keep detailed records of all communications with the product consumer "so we know which analysts are doing what and for whom so we know how much we get paid for that. [We also include] informal notes to the clients, phone calls, client meetings, and written reports." (Countering that a bit, at least one firm that keeps detailed archives of its reports and tracks how many times they are accessed by clients warned about collecting too much data: "We have tried not to burden the system with accounts of every time you talk to a portfolio manager, etcetera. Every day, we receive a hard copy document of what was published in the system that day, and that is handed out for managers to read. Due to its simplicity, it's been tremendously successful and effective.")

Most companies talked about bringing the analyst back post-review to discuss the findings. About half published the final rankings for all analysts to see, but more common was simply a meeting or series of meetings where the analyst could receive criticism and direction from the manager. One respondent representing an investment firm, echoing the oft-used flat-operational approach, said that the highest levels of management get involved: "We even make sure that the chairman has a sort of breakfast session with all the employees at different points in time to get their direct feedback about what they are feeling about the firm and how it looks from his perspective. We are trying to create an open environment where people are aware that their input matters and performance matters."

Ultimately, while there was no standard for all companies, most of the characteristics upon which an analyst is rated overlap from firm to firm. These traits, reflected in what we heard about definitions of quality for both the analyst performance and analyst product, include:

- an analyst's willingness to admit failure;
- the effort required to manage or approve an analyst's product;
- innovation demonstrated by the analyst to identify new areas of business or concern;
- a flexibility to shift into new areas as needed by the company;
- the usefulness of the analyst's products;
- the relevancy of his/her products;
- timeliness;
- the honesty of the analyst;
- an accounting of repeat business that seems to be generated by the analyst and his/her work;
- self-assessments;
- peer review;
- reviews by customers;

- the accuracy of an analyst's product;
- how often the analyst has identified the "game-changing play;"
- a demonstrated willingness to work with and mentor others;
- whether the analyst enhances the firm's image;
- whether the analyst is willing to go the extra mile to find sources, work with clients, and to complete assignments.

Specifically on the question of innovation, all firms stated that they value originality from their analysts. Only a few, however, could enunciate a specific measurement by which they incorporate that into their evaluations process. "If we produced 5 products in the early days and now we produce 50, and that's the people that innovated who created new products, they are rewarded very substantially. In fact, there is a whole premium based on that. There is a big push and reward for people that are willing to think outside of the box. The value on that innovation is measured based on the new client and contact that has been brought in."

3.4 How are qualitative and quantitative measurements used in the evaluation of analysts?
Nearly every firm interviewed reported that qualitative factors were as significant as quantitative factors even where metrics are extensively used. Ultimately, an analyst's evaluation will contain subjective components. The value of an analyst cannot be broken down into strict formulaic equations.

The expectation, at the outset of the project, was that firms would use a series of quantitative criteria to surgically dissect the performance of an analyst. The impression was that firms – especially those on Wall Street – would be utilizing formulas to determine which analysts had won promotion or bonuses. This process might eliminate favoritism by those conducting the evaluations and even the field for all analysts. Following the 20 interviews, however, only one financial company reported that it had strict quantitative measures by which analysts were judged.

The interviewee from that firm noted, "We literally have a metrics system that gives 'X' points for customer polls, internal feedback, whether your investment predictions were right, or whether research management thought that it was quality… Their compensation is tied directly to it." This firm also "separate[s] the analysts into top and bottom halves or quartiles. The bottom 5-10 percent, you just get rid of. The middle section, you try to strengthen their weaknesses: if they were not good at research calls, try to help them on the market; if they were poor at customer relations, you try to help them in that." (For proprietary reasons, that firm chose to not share the specific breakdown of its appraisals.)

Far more common, however, is a mix of quantitative and qualitative pieces that made up the review. This varies along a spectrum with some firms using large numbers of defined metrics and others using almost none. For example, one investment company said, "I can tell you that there are 15 or so metrics that we're looking at. For example, we do a lot of stack-ranking in which we require analysts to make a minimum of 120 outgoing calls a month, and we require them to submit those calls to us. Our good analysts are making 250 and 300 calls a month and our not-so-good ones are making the minimum. We also look at the number of notes they produce, the number of days they spend out marketing to clients, and we look at the sales force survey. There is a qualitative factor, though, that is basically my feeling on the quality of their product and all of these factors determine compensation…. It's much more subjective than you might think. I don't know of any other firm where it's purely quantitative judgment."

Even those firms that told us that they keep detailed records to track performance and feedback cautioned on relying too heavily on quantitative measurements, such as accuracy percentage: "If you have a purely quantitative evaluation, it misses the significance of several of the measurements. If you have a person who has made some bad calls but has uncovered the "second coming of Christ" event for us, those other failures don't matter." This was confirmed by a consulting firm that said that conducting purely quantitative evaluations encourages the production of shoddy analysis: "[In that case], the analyst is measured in yield: how much time they spend on something based on the results they achieve… [The analyst wants] to find valuable things in that [hay]stack. We would say 'process all of the data and look for anomalies and whether or not there is unusual activity, then you can go on and proceed to investigate.' Humans will become desperate to something; this is a human failing universal across analytics."

For many, the evaluations approach is more heavily subjective in nature. "The process is primarily qualitative. There is a firm process that has set goals and criteria on which they are judged, but we will put forth our views with them and discuss it… We never have criteria that says, 'Well, you need to do at least five country reports, etcetera'. We look at your feedback, how much effort it takes for us as editors to get your product through, etctera. It would be very difficult to start attaching numerical measurements to evaluate our analyst's work." An additional respondent from a consulting firm explained, "I don't think that it is at the end of the day that your project manager goes into his computer and checks five boxes and says, 'ok, well [the analyst] today performed at level five and yesterday, she was a three.' It's not as technocratic as that. I think it's heavier on the bigger picture story about that analyst's value to both the client and to the firm. That's a bigger piece of the evaluation."

Another market research company reiterated that "touchy-feely" nature to the review process. When asked how bonuses and promotions are determined, this interviewee stated, "There really is no scoring or rating system that uses any sort of process whatsoever. I would never have someone working for me that didn't fit my criteria. I know that sounds extremely subjective, but it's how I operate here. It's my "feel" for an analyst that really gets them their job or not."

Conclusion

Following the guidance of our government partners, the objective of this report was to gain insight into how similarly-oriented private-sector firms organize analytic programs, determine quality, and measure and evaluate performance. The business community is not a perfect parallel to the IC, however, a better understanding of these objectives from the private-sector perspective may offer instruction for federal agencies as they build or improve their own internal evaluations programs.

The most distinctive trend that emerges in this report is the lack of distinctive trends. Put another way, the surveys of these 20 analysis-heavy firms reveals that there is no one "right way" to evaluate performance. Each firm strives for "quality," but how that's defined, how teams are structured, how feedback is collected, and how metrics are built and applied all vary from firm to firm.

Ultimately, the single constant, even among firms that relied heavily on quantitative measures in their evaluation processes, is the incorporation of subjective factors. By customizing their unique structure, each company, from a small equities firm to a Fortune 500, has developed their optimum way to assess their analysts' work. Subjective elements provide leadership with a holistic comprehension of the analyst's worth and allow it to better manage individual or overall performance. Capturing that commonality, one firm shared, "It's not as technocratic… [The determination of quality] is heavier on the bigger picture story about the analysts' value to the client and to the firm."

This flexibility was illustrated in every area queried in the surveys. For example, all firms view the hiring process as a significant aspect of their quality control of the analysis process, but what that means for each firm is different. Some stress certain characteristics more than others, recruiting entry-level analysts not for their subject-matter expertise but for softer, qualitative traits such as a competitive drive to succeed, general knowledge, and confidence in one's own abilities. Each, too, had adopted a model of their definition of a "quality" employee, whether that was a musician or an athlete or a specialist in French medieval literature.

As the government agencies look ahead at potential improvements in their own evaluations programs, they can be confident that there is not a single required method utilized by the private-sector. What is axiomatic is that analytic organizations must determine for themselves the right balance between qualitative and quantitative – and they should recognize that at the end of the cycle, there will always be some subjective component, however small, that will fall on the shoulders of the leadership.

Annex I

Survey Questions

Please provide a brief description of your firm and the types of analysis that you produce.

Section One: Organization of the Analytic Programs

How do you organize your research and analytical operations? How does this structure impact the quality and efficiency of the analytic product/service?

What factors/information do you use to assess whether an adequate degree of expertise exists in the organization to meet current or anticipated demand?

How do you know when your scope of analysis services is optimized? How often do you look at this issue?

- How do you make decisions about issues/geographies/companies to initiate coverage?
- How do you make decisions around the level of intellectual rigor required for an analytic product? On what information do you base these decisions? Can you describe an instance in which you changed a product or process based on this information?
- How do you balance near-term needs with maintaining broader analytical coverage for when events/markets shift? How do you know you are in balance? What information supports this?

Section Two: Process and Methodology for Quality Assurance

What resources have you committed to collecting and analyzing your performance measures, and what influence does that effort have on your workforce?

- Are metrics integrated into the formulation of analysis (e.g., peer review), or only retrospectively?
- At what point(s) in time do you measure quality of an analytic product?
- How do you define “quality?” (e.g., timeliness, accuracy, details explaining rejected conclusions)

What processes do you have in place to measure customer feedback? What are the primary metrics used to gauge customer satisfaction?

- How do you maintain the balance of meeting the needs of the few “top tier” customers and performing at a high level across customer segments?
- What is the process through which you understand customer “pull” on your analytic service/products? Under what circumstances do you “push” analysis the customer hasn’t asked for? How do you balance/prioritize these?
- How far are you willing to go to address individual customer needs? How do you prioritize customer “add-on” responsive activities?

What discoveries have you made in your efforts to track the quality of your analytic product that were surprises—either positive or negative—and what lessons have you learned as you developed your current system?

- To what degree do analysts play in the evaluation process?

How does your organization ensure that the performance data collected is focused on the critical few data points required to effectively manage the enterprise?

Section Three: Performance Measurement

What metrics/measures do you use to evaluate the quality of your analytic product?

- Do you maintain a database to track production? And, if so, does it track only concrete analytic product, or do you have mechanisms in place to track "services," to include oral briefings, participation in meetings, etc.?
- Do you make use of web metrics in tracking/evaluating analytic products?

What mechanisms does your organization employ to communicate the status of the company's performance results?

- Are organization performance measures and results communicated to senior/mid/entry level staff?

Are employees rewarded for positive contributions to the attainment of organization performance goals? If so, how?

- Are employee performance assessments tied to the achievement of measurable performance goals?

Do you have mechanisms for measuring the impact of your analytic product?

- How do you measure innovation, and how does that factor into overall qualitative measurements?
- Do you conduct evaluations internally only, or do you utilize external evaluators as well?
- How much time is spent evaluating the quality of analytic product/services?

Do you feel that we've missed anything, and would you like to add any additional comments?

** Note that throughout the questions, the term "customer" means "user of the analysis product."

Annex II

Additional Comments by the Interviewed Firms

We collected a handful of quotes that didn't fit into the body of the report but which we felt were salient to the topic. Some of the comments are simply interesting, and BENS wanted to capture them for our partners. Because several of the respondents have had experience working with or within the Intelligence Community, several statements below reflect their personal, professional impressions.

❖ ❖ ❖

"In some ways, [the process of analysis] is a permanent loop. [The analysts] are thinking about what they need to do and they're pinging their system saying 'hey, what do you think about X, Y, and Z.' What's lacking in the [Intelligence] Community is that loop. [From the outside of the IC], you see the sourcing and go back, question it and ask 'why are they thinking that.' On our side, there isn't compartmentalization. You have every reason in the world for these guys to say 'I heard something from one of my friends in Kazakhstan… what do you think about it?'…You have 10 or 15 of your experts and they say 'it's not really that interesting of a story… it was just the financial times… or not only is that an interesting story but let me tell you how that ties back to the government.'"

❖ ❖ ❖

"The Intelligence Community is too credential-driven, and this narrows their scope too much. We want people who can see unusual connections, and we need them to be able to operate this way. So we like people who have had a range of experiences, being able to understand Keats and fire a weapon, for example. We also hire local journalists, and for our regional areas, people native to that area…. We also require periodic rotational assignments in different regions in order for them to embed themselves fully in the global system."

❖ ❖ ❖

"If you compare us to the IC, they are enormously better than we are at finding small facts: the relationship between this political leader and the other, etc. However, they miss the big stuff: they are not allowed to make intuitive guesses because they are always required to show the evidence and methodology for their assessments. We will go for some probabilities and some evocative forecasts that are of low probability and high consequence."

❖ ❖ ❖

"We have been talking a lot about the micro form of analysis: finding a needle in a haystack. My type of analysis, large-scale data analysis, has a large number of positive things about it: it allows you to cover much more ground than any individual. The world's data is growing exponentially; the Stasi of East Germany ran into this problem because they had more tapes than they could listen to. So the true value of IT is not in finding the needles but in trying to remove the hay. IT is useful to find out what is normal and within boundaries and to find out what those boundaries are…"

❖ ❖ ❖

"Both in industry and the IC, you are looking for that "big outlier." So the things we normally rate analysts on in the IC is in "not screwing up," which leads to very conservative thinking, and this works against you in finding that low-probability, high-consequence outlier.

❖ ❖ ❖

"We don't have a good process dealing with intuition-based capabilities. So instead of encouraging this intuition, the IC evaluates based on number of products produced, etcetera. If you have low-probability events but you are in the atmosphere where you are afraid to pull the trigger until you have perfection, then you don't have enough bullets in the chamber to be able to come up with the right answer. You have to have high frequency of failure in order to come up with the right answer.

❖ ❖ ❖

"The area that [the US IC is] weakest in is the 'high-consequence, low-probability events' area. This is where the real opportunity for intelligence lies. Your main adversaries all live in that space, and currently, the IC is not doing enough to address this area. My recommendation would be to go and define your current processes and review your systems. We need new approaches within the IC to deal with areas of surprise and these potential adversaries are there. We just have to be willing to find them.

"You need to make a quad chart to realize this visually: have a 'probability of occurrence' going up the vertical and 'consequence' going across the horizontal. You need to do the upper right hand quadrant very well since this is traditional intelligence, this high-probability, high-consequence area. However, the quadrant that we do not do well in and have not developed tradecraft for would be the lower right-hand quadrant, where the probability is low but the consequence is high. This is where you will truly find the big giants in your analysis, the real surprises."

Probability	High		✗
	Low		✓
		Low	High
		Consequence	

❖ ❖ ❖

"The IC is practicing what I call 'defensive intelligence' which is significantly ambiguous enough when it is delivered to a customer that they can interpret it in a number of different ways that allows the analysts to skirt responsibility. The IC has become risk averse and I understand why they are, but they are not going to address the problem by handing off failure to the process. Few analysts are awarded for success, many of them are penalized through failure and this is why they are risk averse. This is why we generally do not hire from the IC: their expectations are very different from what our expectations are and they find it difficult to adjust."

❖ ❖ ❖

"I commiserate with government agencies that the burden of proof [on their analysis] is higher than it has ever been. Even when evidence is presented very clearly to someone, they do not believe it. Iraq has led us to a "boy cries wolf" mentality that makes intelligence very difficult. I find it absolutely alarming that the mantra of conspiracy has become so prevalent, with government agencies that are filled with many qualified analysts that are just not trusted by clients. Evidence-based analysis is under attack."

❖ ❖ ❖

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