Innovation’s Dilemma
Focal Points for Research and Collaboration

I was on the trading floor when the CBOE 250 Index contract was launched in 1988. It was an innovation at the time, and a collaborative effort between the futures and options industries. The futures traders went wild within their group; the options traders quietly assessed things and then traded amongst themselves. Within five months, trading was nonexistent.

Cultures vary, and maybe it was inevitable. On the other hand, the initiative got one thing right: it provided a focal point for the collaboration.

Collaboration between fintech, academics and the financial industry has similar issues. Cultures differ wildly. Any links are weakened by vested interests and, in some cases, a combination of tax, legal, and regulatory issues.

The capital markets industry fundamentally defines its focus as the types of products sought by buy-side clients that a sell-side firm can offer.¹ The sell-side needs to be an information source, and be able to educate with respect to broad macro movements, as well as on how individual products work. Where the world is going is one for the crystal ball, and my own tends to be murky at best; as for the rest, we are back to product, not research and content.

In this world view, the focal point for collaboration within the industry is fruitful commercialization. Drivers of innovation include control, cost, and capital. However compelling this may sound, the editors of Wall Street & Technology, for example, find that there is little technology innovation happening in the capital markets. They are regularly approached by companies, but believe that nine times out of ten, the supposed innovation isn’t innovative at all, merely a minor improvement on an existing technology or a new “strategy.”²

THE ELLIPSE

An ellipse has two focal points. Victor Hugo once characterized them as facts and ideas. Isn’t that enough?

The practical focal point for research collaboration is a moving target. It may be a flash crash at one time, and shifting technology such as the block chain ledger on another occasion. The buy-side wants research content to spur innovation. Quick assembly of facts to address ideas is often required to remain topical. The sell-side, and now so-called fintech, want to sell product. Traditional “business intelligence” provides the facts which must meet ideas. The gulf between research content leading to innovation, and product delivery, remains wide.

The very terms, “academic” and “practitioner,” are defining. Academics “do research,” while practitioners, well, practice. Fintech sits rather uncomfortably somewhere in between. Ideas in the format of research papers tend to be dense, and rarely revealing with respect to the day-to-day concerns of the investment and trading processes. Facts in the form of empirical work get lost in a blizzard of numbers.

Practitioners are viewed by academics as consumers of research, not providers. Practitioner writing, when read, is often considered an infomercial.

Lack of communication with practitioners also has lead to misinterpretation of data, which in turn results in a lack of trust in empirical findings. In other words, the facts don’t meet the ideas as advertised. Collaboration between parties requires factual honesty and transparency with respect to institutional developments in the marketplace. In the fintech world, when facts don’t correctly meet expectations based on ideas, commercialization fails.

The ellipse is not enough. We might, however, think constructively as to what it takes to get the ideas to face the facts.

ENGAGEMENT

There is a dream that the sell-side may broker research to the buy-side, in order to provide a better flow of information on outstanding issues. Industry-academic forums and research funding to universities and start-ups are typical responses.

Such initiatives are experiencing a revival. The organizers of Plato are advertising future research funding to the academic community. The TMX Group recently announced a collaboration with the Fields Institute for Research in the Mathematical Sciences. The effort is complemented by a sponsorship agreement with the Capital Markets Institute at the Rotman School of Management, supporting initiatives oriented towards the Canadian markets. NASDAQ underwrites the program on Law and Capital Markets at Columbia University. A new cycle of engagement is in progress.

On the business front, we see funding. Examples include Credit Suisse Next Investors and Deutsche Bank Labs. The Deutsche Bank project includes partnerships with IBM, HCL, and Microsoft. Santander and HSBC have set up fintech venture funds and they are not alone.

The challenge here is changing financial industry culture in order to prepare for future disruption. This is not an issue solvable by money alone. The problem is compounded by traditional vendor relationship management and compliance functions.

1 Les Miserables, by Victor Hugo, first published in 1862.
Forums as focal points tend to be fleeting and suffer from the same problems as the ellipse. The use of research funding is diffuse, depending on the researcher, who follows an incentive trail by digging an intellectual trench which is deep but narrow.

Any content marketer will tell you that interactivity, not ditch-digging, is the key to selling ideas. Any practitioner would prefer to react to something tangible, as opposed to digesting an abstraction. It is a small step from interactivity to collaboration. We just need a focal point.

“I’M SHOCKED, SHOCKED TO FIND THAT [RESEARCH] IS GOING ON IN HERE!”

The academic perspective that industry is a consumer, not a producer, of research and innovation is incorrect. The issue is transparency, and a lack thereof does not help perception. Some research is hoarded until it can be fashioned into product. Other work may have a distribution list limited to a firm’s client base. “Negative” results rarely see the light of day, even when they are informative.

The extent of industry research dissemination deteriorates further when it comes to software implementations, data, and content at the core of applications. These cost money, and are hoarded within profit centers. Raw data are expensive. Data vendors make redistribution prohibitive.

My modest proposal is to lift the veil on some industry research in all of these dimensions. Easier said than done, one might say. In this case, however, I offer a prototype, called the ITG Analytics Incubator. Despite a company name in the title, this is not an infomercial. The first necessary step in opening things up for interactivity and collaboration is a platform outside the typical firewalls, accessible to anyone for the asking, and free of charge.

The platform is divided into four sections, plus ancillary social media dissemination: mobile apps and research product prototypes; data; a research library; and a community space devoted both to commentary and information dissemination which does not fit comfortably within the other categories.

The Library contains a continuously updated set of research papers and videos from product and financial engineering groups. A searchable database of white papers is divided into sections spanning equities, market structure and regulation, and OTC markets. Research is not hoarded; it is disseminated. Recent contributions have focused on the implications of MiFID II for multi-asset class analytics and dark pool caps, and on the FX market, including empirical evidence with respect to the new WM/Reuters fixing methodology. Videos are devoted to broader themes, such as market transparency, mobile computing, and innovation.

The Apps section contains two broad categories of product. The first is devoted to mobile applications, which display information heretofore unavailable to the general public. A leading example is the FX Trading Cost Index, updated daily and inclusive of volatility information. The second category is populated by research prototype applications. This is the entrée into research-as-product, and typically comes straight out of our financial engineering group. Examples include a foreign exchange pre-trade prototype and a portfolio application devoted to the concept of swing pricing in the setting of net asset value.

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*A* Apologies to *Casablanca* and the back room of Rick’s Cafe.  
*B* Accessible at Analyticsincubator.itginc.com.
A global trading cost review is published quarterly, and merits its own section in the Data category. Aggregated information based on our comparative transactions database also appears in various forms, including non-performance organization and trading characteristics. There are sections devoted to FX-related analytics, or “value-added” data, such as empirical distributions of selected intraday statistics conditioned on currency pair, DST regime, time of day, and consolidation methodology. Similar data are available for equities. They are downloadable for research purposes.

COMMUNITY AND SOCIAL MEDIA

At first, the Community page looks like one might expect. We encourage postings based on the Apps, Data, and Library contributions. Topical work is highlighted, including a “question of the week.” There are sections on the buy-side, on Asia, on transaction cost analysis, and on topics concerning portfolio optimization and fair valuation.

The Community section also hosts ITG Analytics Incubator’s Twitter feed, @ITG_AI. A window displays messages on unusual volatility conditions in the FX market, as well as snippets of research content ranging from Asian trading costs to equity venue analysis. Research posts are tagged to relevant Library entries. Most recently, tweets relating to the direction and strength of Asian market openings appear, based on the prototype Market Compass predictive analytics in the Apps section.

Unlike most industry efforts with respect to social media, we are not consuming data; rather, we are adding to it. There is a method to this particular brand of madness, which relates closely to interaction, hence eventual collaboration. For example, the posts on volatility have had a substantive impact on the use of the FX mobile app in the Apps section. As of now, there are over 5,000 users of the application from 67 countries.

The Analytics Incubator itself has a digital community of 4,400 participants after only eight months in operation.6 A number are utilizing the ability to display the site not only on the desktop, but also on tablets and phones. It is time that the age of mobile-accessible information transcends the retail banking and brokerage sectors.

WAYS FORWARD

At a macro level, a motivator of my thinking is Europe’s proposed capital markets union. The proposition broadly is oriented towards stimulating the economy through the creation of efficient channels of idea generation and funding. A goal is innovation.

A common belief is that the major inhibitor, aside from money itself, is regulation.7 In a recent Aite survey, 46 percent of respondents said the biggest challenge for innovation in capital markets is the siloed nature of business lines and their resistance to collaboration. Only 13 percent cited regulation.

A successful capital markets union must embrace disruption, but, more importantly, provide transparency into the disruptive process. This is especially true for what appears to be the lynchpin of the commercial policy debate, fintech. If fintech is to increase its influence in capital markets, greater education and collaboration amongst investors, academics, buy-side, sell-side, and yes, start-ups, is needed.

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6 As of November 30, 2015.
7 See, for example, “Europe’s proposed capital markets union,” at www.voxeu.org/article/europe-s-proposed-capital-markets-union, a section of the CEPR’s policy portal.
I am suggesting that to grow collaboration, and thus innovation, we should consider setting up neutral ground governed by a very lean common framework. At least one prototype is available. The framework is an idea not far from that of the UK’s FCA, with its Innovation Hub and exploration into the idea of a regulatory sandbox to experiment with innovative products, services and business models.

Eventually, such focal points or hubs can become market centers themselves, as they help transfer SME-level capital markets problems to the best-in-class processes. Market centers in turn develop to provide cost effective solutions. This process drives the investment of resources to develop further capital markets opportunities—projects that create value. That’s what capital markets innovation is all about.