International Primary Bond markets in 2028

From a Sales and DCM Perspective

The best way to predict the future is to create it...

…and still it seems like the majority is caught up in their daily routines, missing what is happening just outside of their doors. This holds true to the same extent for individuals as well as for entire companies. We have seen it too many times throughout the history, with Blockbuster rejecting to buy Netflix in 2000 for US$ 50mio, noting this is only a "very small niche business" and Kodak refraining from investing in digital cameras as it will cannibalize their film business. Now, I do not believe banks are at the edge of their existence (we all have been over "too big to fail" way too many times!), but it strikes me how Amazon already ships the latest Simon Sinek book to your local distribution center, knowing you will order it at 7.35pm tomorrow evening, just after you finished Episode 3 of Amazon's *All or Nothing – Manchester City Special* at 6.50pm, while the majority of debt capital market participants still complain about the typo on the New Issue Screen that has been sent out, after five different versions have already been circulated on the Bloomberg chat.

While this is certainly an example of inefficiency, which we will also get to later on, with that example I rather want to outline the difference in technological advancement between the most successful companies of our decade and how the majority of DCM divisions across the globe still work today.

During an interview with ADMA[1] Coca-Cola's director of data-strategy outlined the obvious fact that there is a reason why we have "2 ears and only one mouth", pointing towards the immense value of listening to your customers or at least use their data to your best advantage – and this is where things become more interesting.

I know what you are thinking now, "another boring big data paper from a millennial telling me how Snapchat will take over the global bond markets" and while you are right on the millennial (sorry! – this is not what we use Snapchat for), you cannot undermine the fact that too many decisions in bond markets are still taken on the back of vague information or very limited "color" from your investor base.

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[1] Association for Data-Driven Marketing & Advertising

How "big" is big data even in Debt Capital Markets?

Sure, as a Director of a global Syndicate or DCM team, you have enough experience to tell your issuer client about the *increased flow of central banks buying in the 2-4 part of the curve* or that *if you tighten by another basis point we expect the asset manager to drop*, but the core issue still holds: you are acting on the back of a very uncertain data-pool – if there even is a data pool.

Please spare me the details around the *nature of doing business is uncertainty and taking risks*, I agree with you, but this is not where I am heading. The question I am raising is:

Why do Google, Amazon and Facebook adjust their products, websites and apps on a real-time and customer-matched basis, while bankers are still getting together for weekly new issue meetings, just to gather pieces of information regarding some of the recent trends that they are seeing in capital markets?

Is there not a better way to collect, analyze and display primary market data for the benefit of issuers, investors and banks? Right now my answer to the headline of this chapter would be, "not very big" and certainly not used to the greatest potential.

So let me take you on a Journey!

In the below chapters I will jump into 2028 and execute a new issue transaction from two different perspectives, a sales person and a DCM banker. While some of the software, the processes and interactions are based on my imagination and experience, these pages still take into consideration, the regulatory aspects, the core inefficiencies banks and investors face today, as well as the already established abilities of successful global companies to utilize their technological abilities in the 21st Century.

A new Issue from the Sales Perspective – Christian, 31. Director for Fixed Income Sales at B.A.D. Bank

Wednesday, 19th of July 2028

Christian has been with the **B**est **A**dvisor on **D**ata Bank for a few years now and covers around 50 global Asset Managers who invest in fixed income investment grade bonds. While markets have been quiet during this year's summer break, the recently established development Bank BXS[2] (Aaa/AAA/AAA) announced a new 5 year EUR Benchmark for today's business.

The same second when the transaction was announced on Bloomberg, the Investor & Issuer Behavior Analyzer (IIBA) software popped up on Christian's screen and displayed an overview of probabilities for each of his investors, with regards to how likely they will be interested in this new issue.

Investor	Country	Type	Buying BXS MoM (in mio)	Buying bonds with same criteria MoM (in mio)	Probability of investment
Whiterock	GE	AM – IG	0.00	433.80	63.4%
First Capital	UK	AM – IG & HY	0.00	410.00	57.8%
Brown Mount	FR	AM – IG	35.30	398.90	55.9%
Silver Funds	FR	AM - IG	0.00	550.80	54.8%
Joint Investment	GE	AM – IG & HY	29.50	634.90	53.7%
ZTX Capital	IT	AM – IG & HY	323.20	259.03	51.7%

Figure 1: Investor & Issuer Behavior Analyzer – Sales New Issue Overview

This software analyses the new issue announcement, which is not posted on a chat anymore but instead incorporated into Bloomberg's New Issue Monitor (NIM), based on the defined terms. IIBA then compares the characteristics of this transaction to an immense internal data pool, which is put together from a variety of sources:
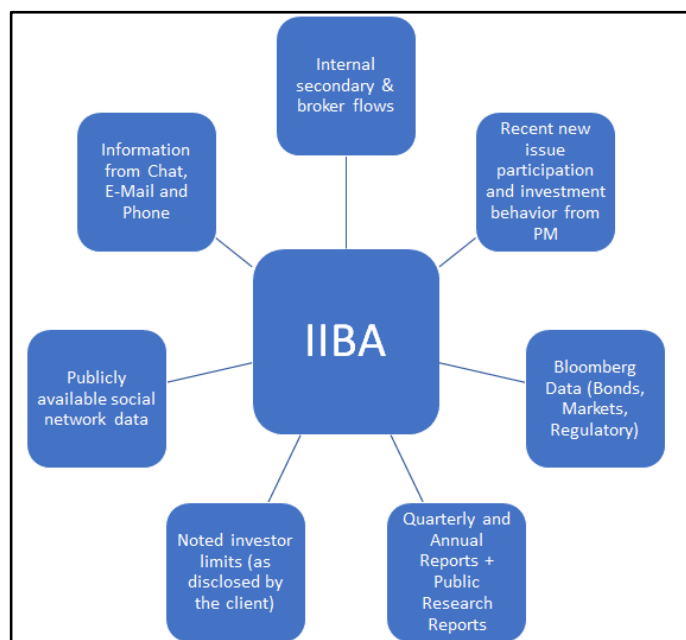
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[2] Brexit Solution Bank

Figure 2: Data inputs for IIBA

By opening up each investor within the software, Christian receives a suggestion of potential switch ideas that incorporate the runs of his trader as well as the investor's most recent flows, requests and trends the Portfolio Manager (PM) discussed with Christian on the chat or on the phone. There is only limited need to spend time on discussing ideas with the traders as Christian has full transparency and suggestions right in front of him.

IIBA filters out any investor that must not invest in this new issue automatically, as it incorporates general and specific selling restrictions from the most recent update of the issuer's dept issuance programme.

INVESTOR & ISSUER BEHAVIOUR ANALYZER Ltd was established in 2022, as a Joint-Venture between two banks, an Artificial Intelligence (AI) startup and an established data management company. The prime goal was to set up a software that incorporates a bank's already available data into a data-pool, which in turn analyses critical investor information on a real-time basis. The breakthrough came in late 2023 with IIBA's AI, called ELLI, which automatically scans through the firms Emails, Calls, Bloomberg Chats, capital market flows, research analysis (internal Data) and combines this data-pool with all publicly available sets of information focused on particular investors, including their portfolio manager's social network profiles, quarterly and annual reports or online presentations. "It is like having an additional co-worker, absorbing data 24/7, not missing a single piece of information and working with you side by side during the entire day and on every project." – said Joe Maloney Head of Capital Markets at Goldwomen Sachs.

There has been some resistance from investors as they argued this to be an illegal way of data-collection and analysis, but following several court hearings, the judges could not see a reason for any breach, given that IIBA has only been using publicly available or voluntarily shared information. As the next big hurdle, the initial set up of a historical data-pool, has been overcome, a trial run was conducted with 10 banks separately in January 2027. Ever since then, around 80% of the global banking community have become a member of IIBA's product.

Christian uses this overview to schedule his phone calls, as IIBA gives him also the opportunity to filter the investor summary based on customized overviews such as 1) highest probability of investment, 2) largest expected order volume or 3) probability of receiving an order from this particular Portfolio Manager. IIBA also incorporates the attendance of each portfolio manager from the asset managers, as Bloomberg data on who is currently at the desk (Green vs. Yellow vs. Red on the Chat) is combined with information from calls, Emails and chats held with this investor over the recent weeks, in which each manager mentioned where they will be during this summer.

Today Christian wants to focus on the five "greatest expected volume" accounts, as the Head of Sales recently set the goal for the entire trading floor to deepen relationships with their largest clients. A few seconds after he filtered his asset managers accordingly, Christian choses to call Michael Money – Head of Fixed Income at Whiterock. As Christian dials his number, ELLI pops-up on Christians screen and displays the following information of Michael.

Michael Money - Switzerland, Geneva
Head of Fixed Income at Whiterock
38 years old, 2 children, divorced, lives in Geneva

Private	Last Converstaion	Recent Trades	Organisational Data	Personal Notes

• **Last vacation:** Florida in June 2018 (Facebook)
• **Last Post:** „Relaxing weekend with my kids" (Facebook)
• **Latest Tweet:** „Can't believe @kanyeWest really runs for president – crazy world" (Twitter)
• (Instagram): No data available
	• **11th July:** Discussed EUR/US$ Basis and 3 months vs. 6 months expectations
	• **06th July:** Looking for EUR investments in 3-5 years
	• **28th June:** Michael expects less cash available due to end of quarter and half-year
	• **26th June:** Michael sees value in Dutch paper due to the recent widening
		• **Bought:** US$ 22m of KFW Jun-30 at ms+24bp
		• **Bought:** EUR 5m of BXS Jan-33 at ms+36bp
		• **Bought:** EUR 17m BNW Sep-38 at ms+55bp
		• **Sold:** GBP 22m NEDW Oct-32 at UKT+21bp
		• **Bought:** EUR 9m KOLM Dec-31 FRN at ESTER+37bp
			• **Last Meeting:** 20th April 2018 in Geneva
			• **Next Meeting:** Not defined
				• **Investment Criteria:**
				  • Aaa to AA+
				  • EUR 2yr-12yr
				  • USD 1yr-10yr
				  • GBP 2yr-5yr
				  • EM: not interested
				• **Other Criteria:**
				  • Often requests Debt Issuance Program before making an investment

Figure 3: IIBA Personal Profile of Michael Money

Just after catching up on the Michael's lovely weekend with his kids, Christian summarizes the new issue's terms, relative value analysis and customized selling points before he finishes up the conversation with a quick comment on the fact that they have not met in over 3 months and that there is a new sushi place in Geneva Michael will surely love!

Everything they discuss on the phone is being monitored by ELLI and incorporated into BAD Bank's data-pool on a real-time basis – appearing in a summarized overview on the DCM group's screen (*Information flow from public to private only*).

After around 30 minutes, Michael gets back to Christian via the chat and mentions that even though they already have credit limits for BXS, he would like to know how much funding BXS has done this year and whether they are likely to be back in the market any time soon in Q3 2028 as he will have more funds to invest in September. He also expects rates to rise until

then but believes the new issue premium is so attractive that he should participate (ELLI is collecting, collecting, collecting: 1) Available credit lines for BXS 2) Funds to invest in September, 3) Michael expects rates to rise, 4) Limited price sensitivity). In real-time, ELLI pops-up with funding statistics of BXS in a window right next to the chat: "Suggested Information"

- Public funding target: BXS does not publish an annual funding target.

- Funding in 2028ytd: EUR 44bn

- Funding in 2027: EUR 87bn

- Statistical funding per Quarter:
    - Q1: 37%
    - Q2: 22%
    - Q3: 30%
    - Q4: 11%

"Yes Michael", Christian responds within 30 seconds, "they are half way through their funding and usually conduct almost one third of their annual program in Q3" – "Thanks for the quick answer Christian!"

As usual, Michael felt very well covered by Christian, who did not only have the required information very quickly at hand, but also seems to care about issues, other than just getting this ticket done. He leaves a small EUR 25m order at reoffer in the chat, ELLI incorporates it into the new issue book and suggests to Christian to post "Thank you for the order: Confirmed EUR 25m at reoffer in BXS 5 year". Christian confirms and calls the next client.

A new Issue from the DCM Perspective – Andreas, 36. Director for SSA DCM at B.A.D. Bank

Monday, 17th of July 2028

Andreas has been pitching for a 5 to 7 year Benchmark EUR trade from BXS for some time now and believes this week offers a great opportunity for the issuer to come into the market. On his way to work, he reads through the latest market news on Bloomberg and as he opens up the IIBA app, ELLI gives him an overview of the current primary market projects he and his team are working on. He clicks on BXS:

- Attendance Status: 3 out of 5 team members should be in today.
  - The decision maker (Freddy Funding) is not on vacation. *Press here for full team status*
- Funding Status: EUR 44bn (50.5% of anticipated funding done). *Press here for full trade overview*
- Expected annual funding (EUR 87bn)
- Last trades:
  - June 2028: US$ 3bn at ms+3bp, equals 6mEster + 32bp
  - Mai 2028: EUR 50m tap of Jan-2034 EUR 1.35bn, price undisclosed
- Latest topics:
  - Focus on EUR funding next. No decision taken on tenor
  - Have mentioned concerns on issuing during the summer time

After logging into his systems, Andreas updates the pricing indication that was sent to BXS last Friday and on the right hand side ELLI updates in real-time, noting the biggest changes from last week. Andreas takes into consideration the expressed concern from Freddy to issue in the summer time and opens up IIBA to analyze this potential issue. He finds that BAD Bank has only been Joint-Lead on one tap in the past, which gives him color on 12 potential investors – not enough to eliminate Freddy's concerns.

Accordingly, he uses the <u>IIBA DCM Tool - Shadow Book</u> and defines deal characteristics of both 5 years and 7 years, while requesting any potential investor that will invest in a new benchmark from BXS Bank with a given probability of greater than 50%. Based on the internal and publicly available external data, ELLI displays the following overview within the next 60 seconds.

Deals | Investors | Settings

Issuer: BXS ▼ Tenor: 5yr, 7yr ▼ Probability: >50% ▼

5 year — MS+14bp

Investor	Exp. Volume	Probability
Building Inv.	50mm	74%
Trend Fund	48mm	72%
Holiday Trust	40mm	64%
Nording	32mm	54%
Saving Rule	22mm	51%
Bread Inc	15mm	51%
-	-	-

7 year — MS+20bp

Investor	Exp. Volume	Probability
Volkin Ins..	75mm	64%
Lomin trust	60mm	59%
Kinley UK	55mm	54%
Inklu	50mm	54%
Inco Tsy	35mm	53%
Watter Inv	22mm	51%
-	-	-

Figure 4: IIBA Shadow Book Tool

Below the report Andreas finds more details, based on their BAD Bank's sales force's interaction with their clients:

- 87% of the responsible Portfolio Managers are expected to be in this week
- Following the investment behavior of the displayed portfolio managers and the upcoming risk events, the suggested execution date is: **Wednesday**
- Main topics discussed among investors over the last 14 days:
  - 1st Economic situation in Germany (23%)
  - 2nd Implication from FED's QE Program on global rates (19%)
  - 3rd Expected rise in EUR yield curve steepness (17%)

The rate market is stable this morning and in order to be clear on potential risks events, Andreas opens up the New Issue Calendar function, in which he can incorporate the required risk events from around the globe. ELLI analyses public news, annual and quarterly reporting dates and research reports for a continuous update of the calendar.

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
10:00 ISM Man. (Nov) 10:00 Construction Spending (Oct) 15:00 Vehicle Sales (Nov) *Announcement FHLB*	*RBA Meeting*	8:15 ADP Employment (Nov) 8:30 Productivity & ULC (Q3 F) 10:00 Quarterly Services Survey 10:00 ISM Non-Man. (Nov) 14:00 Fed Beige Book *BOC Meeting* *Announcement FHLMC*	8:30 Trade Balance (Oct) 8:30 Jobless Claims 10:00 Factory Orders (Oct) *Announcement 3-Year Note* *Announcement 10-Year Note (R)* *Announcement 30-Year Bond (R)*	8:30 Employment Report (Nov) 10:00 Wholesale Inventories (Oct) 10:00 Michigan Conf. (Dec P) 15:00 Consumer Credit (Oct)
10:00 JOLTS (Oct) *Announcement FHLB* *Auction 3-Year Note*	6:00 NFIB Sm. Business (Nov) 8:30 PPI (Nov) 10:00 ISM Semiannual Forecast	8:30 CPI (Nov) *Auction 10-Year Note (R)*	8:30 Import Price Index (Nov) 8:30 Jobless Claims 14:00 Flow of Funds *ECB Meeting* *Announcement FVMI* *Announcement 3-Year Note* *Announcement 2, 5, & 7-Year Note* *Announcement 30-Year TIPS (R)* *Auction 30-Year Bond (R)*	8:30 Retail Sales (Nov) 9:15 Industrial Production (Nov) 10:00 Business Inventories (Oct)
8:30 Empire Manufacturing (Dec) 10:00 NAHB Index (Dec) 16:00 TIC Flows (Oct) *FOMC Meeting* *Auction 3-Year Note*	8:30 Housing Starts (Nov) *FOMC Meeting* *Auction 5-Year Note*	8:30 Current Account Balance (Q3) 10:00 Existing Home Sales (Nov) *FOMC Meeting* *Auction 2-Year FRN (R)* *Auction 7-Year Note*	8:30 Philly Fed (Dec) 8:30 Jobless Claims *BOC Meeting* *BOJ Meeting* *Auction 5-Year TIPS (R)*	8:30 GDP (Q3 T) 8:30 Corporate Profits (Q3 F) 8:30 Per. Inc. & Spending (Nov) 8:30 Durable Goods Orders (Nov) 10:00 Michigan Conf. (Dec F)
Stock Market Early Close at 1pm EST *Bond Market Early Close at 2pm EST*		9:00 S&P/CaseShiller (Oct) 10:00 Richmond Fed Index (Dec) *Boxing Day*	8:30 Jobless Claims 9:00 FHFA Home Price Index (Oct) 10:00 New Home Sales (Nov) 10:00 Consumer Confidence (Dec)	8:30 Advance Goods Trade (Nov) 10:00 Pending Home Sales (Nov)
9:45 Chicago PMI (Dec) *Bond Market Early Close at 2pm EST*				

Risk Events
- ☐ Politics
- ☐ Macro Economic
- ☐ Data
- ☐ Speeches
- ☐ Elections
- ☐ Central Banks

Region
- ☐ Europe
  - ☐ Germany
  - ☐ France
  - ☐ Italy
  - ☐ Netherlands
  - ☐ *Open for other*
- ☐ *Asia*
- ☐ *Americas*

Figure 5: IIBA New Issue Calendar Function

Andreas now feels confident to pitch an EUR Benchmark by BXS Bank for this week. He dials Freddy's number and as he waits for him pick-up the phone, Andreas reads through the IIBA summary on Freddy Funding that automatically appears as he dialed the number.

"Ines Sonia speaking" – the IIBA screen changes immediately from Freddy Funding to Ines:

Ines Sonia - London, UK
Capital markets intern at BXS
21 years old, no children, 2 older brothers, lives in London

Private	Last Converstaion	Recent Trades	Organisational Data	Personal Notes
• **Last vacation**: Berlin in January 2018 (Facebook) • **Last Post**: „My Boyfriend is the best in the world" (Facebook) • **Latest Tweet**: No data (Twitter) • (Instagram): *Publicly availalbe Profile* open here	• **12th June**: Will run through different departments within the next weeks • **09th June**: New intern with currently at the funding department.	• **No data availabe**	• **Last Meeting**: - • **Next Meeting**: -	• Supports Freddy in his daily tasks • The team seems to like her so it makes sense to build up a relationship with her • High probability that she will start a full time job at BXS' funding team

Figure 6: IIBA Personal Profile of Ines Sonia

"Good morning, Ines, how are you? Are you finding yourself in well in the funding department?". Andreas quickly chats with Ines and asks to be put through to Freddy.

As Freddy picks up the phone, ELLI updates its page on Freddy and Andreas starts discussing the current market environment and trends that most investors talk about at this moment. In particular Andreas focuses on a 5 year versus 7 year discussion but certainly expands on his available color on investors. "We can assure you that the current summer holidays across Europe do not lead to the risk of investors being away as the main portfolio managers of almost 90% of your expected investors are not on vacation this week". While in the past, Freddy has been very reluctant to believe such statements from bankers, he now has made a number of good decisions on the back of the information provided by the Artificial Intelligence data pools of banks. As a matter of fact, he more often obtains information from BAD Bank given their correct insights.

Following the call Andreas summarizes key points of his pitch, the investor insights as well as the calendar suggestion and sends this pitch Email to the BXS Funding team.

Later this Monday Andreas receives the mandate from Michael for a new 5 year EUR Benchmark, with a planned announcement and pricing on Wednesday.

Following a joint call with the other mandated banks and the issuer throughout Tuesday, the syndicate group is just a few minutes away from officially mandating the trade. Rather than preparing a chat message, like in the old days, ELLI fills out the software based NIM window on Bloomberg, in which it automatically selects the terms of the transaction and the syndicate confirms via drop-down fields if required. This assures that the transaction will directly be filtered and addressed to investors who have pre-defined the characteristics of new issues that they are looking for. Also each sales has pre-defined terms of what their particular investors may currently look for – as explained from Christians perspective, this is entirely based on data available to BAD Bank and updated by ELLI on an ongoing basis.

As the orders flow into the orderbook during the early morning, the <u>IIBA DCM Tool – New Issue</u> is automatically filled with comments from investors who have responded to the sales team's requests via chat, Email or on the phone. ELLI thereby analyses the responses and is able to order them into probabilities for a potential order. ELLI incorporates for this purpose not just the single feedback, but also any interaction and investment behavior of the particular portfolio manager from the entire data pool. Andreas uses all of this information for the next call with the issuer, as it is his turn to lead the next update call among the syndicate group.

"Out of the top five investors, two have stated spread limits" Freddy Funding begins during the call "but do you really expect them and the others to reduce their order or even drop if we tighten by two basis points during our next update?". As Andreas prepared for this call, he opened each investor within the <u>IIBA DCM Tool – New Issue</u> and analyzed price sensitivities in all of the historical transactions available to BAD Bank. Out of the five investors only four have previously left orders with BAD Bank and Andreas finds that there is a very high probability for the two limited orders to stick to their stated sensitivities and drop completely. Andreas accordingly proposes the strategy which was previously agreed among the banks, to only tighten this transaction by one basis point and close books within the next 60 minutes.

Based on the collected historical criteria on each investor, ELLI suggests the allocation, points out hedges or swaps requested from investors and also takes care of the ticketing and settlement after the pricing call. It even incorporates collected feedback from recent roadshows conducted by the issuer to outline potentially preferred treatment of investors who have recently met the issuer.

The DCM bankers as well as the issuer still have the final call on each of those steps and can amend every point within the process. Although, as deals pass by and ELLI collects more information, learns further and understands more complex dynamics, the need for amendments decreases.

Back to 2018…

You might have noted that not too much in the process or available data has actually changed in the above scenario. What has changed, however, is how the already available information is processed, analyzed and used for the purpose of new issues. While some of the steps may sound unrealistic to you, are we really at a point where bankers should get back to their excel sheets now? The implications of the explained environment are actually much greater than I am able to put in the scope of this paper. Within the above new issue scenario, we will not need a huge team of analysts, associates to support senior bankers – ELLI does it. We will certainly not need a distinction between syndicate and DCM – data and price analysis can now all be done by one person within minutes. We will save so much valuable time, browsing through our notes, discussing trends within groups and also within entire departments – the information flow will be automated and at the same time controlled between private and public side.

A main criticism I see, which may not only slow down the above scenario but decelerate the entire evolution of Debt Capital Markets, is the issue of necessity. Do bankers really have to invest in a clearer and more thorough data pool? Do issuers really care about the 'true' insights a bank has or is it actually 'peoples business' and soft selling skills are actually much more important than the thorough analysis of investor behavior and markets? Is all this really going to lead to more mandates and more business? – Ultimately this is what it is all about.

I leave the answer to this question to you.

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