New Research and Outlook on Credit Markets

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Abstract

We present a summary of the contributions of Speakers at the recent conference on May 24, 2016, jointly organized and sponsored by S&P Global Market Intelligence and the NYU Salomon Center at the Stern School of Business.

The goal of the Program Committee was to blend academic findings with “real world” experience from Regulators and Market Participants, while making sure the topics presented were diverse enough to interest everyone in the vast audience.

The conference on “New Research and Outlook on Credit Markets” was organized around two Keynote Speeches, Three Academic Sessions and Two Practitioner-Market Panels. The academic sessions focused on Corporate and Sovereign Risk and Ratings, Sovereign and Bank Credit Markets, and Credit Derivatives Markets, while the Panels centered on Outlook for Global Credit Markets, and the Regulatory Landscape and its Impact on Financial Markets.

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Keynote Presentations

The keynote speeches centered on measuring credit risk in the global economic system. Both presentations stopped short of projecting significant credit risks lurking in the financial system; in fact, they noted recent relative market stability. At the same time, both keynoter speakers pointed to some disturbing data that, at the very least, requires further monitoring.

One speech by **Robert Engle** ("The Prospects for Global Financial Stability"), Professor of Finance at the NYU Stern School of Business, Director of the Stern Volatility Institute, and recipient of the Nobel Prize in Economics in 2003 for his work on time-series econometrics, said the goal of market monitoring and government policy is to be sure "that we are not preventing the last crisis, but rather the next one." And to help prevent that next one, market monitoring needs to be able to answer the question, "How much capital would a financial institution need to raise for it to function normally if there is another financial crisis?"

The Volatility Institute's (V-LAB) measurement of systemic risk (S-Risk) employs as a key data point a company's beta, measuring the volatility of its share price relative to the market as a whole. Market capitalization and the size of the balance sheet are other primary inputs. "If the beta is high, it means that the investors of this institution think the assets are going to go down significantly more than the average bank's assets during a financial crisis," Engle said. "So we think of beta not just as a financial thing, but as a way of measuring the sensitivity of the assets and the liabilities of this financial institution to changes in the global economy." Professor Engle discussed, as an example, Citigroup. He said the company's beta rose to four at the height of the financial crisis, "so every drop in the equity market would produce four times as much in the market cap of Citi." Goldman Sachs' beta did not approach the level of Citi, because investors did not believe it was as exposed to the financial crisis as Citi, Engle said. By contrast, recent moves in the beta of Banco do Brazil are troubling, not because the bank's leverage has increased but because the turmoil in the Brazilian political and financial sectors has reduced the bank's market capitalization so much that another financial crisis is going to require Banco do Brazil to seek $30 billion in new capital, Engle went on to say.

"What is really important in measuring systemic risk is the leverage, the ratio of assets to market equity," Engle said. "And firms with a high systemic risk are going to try to de-lever, because their risk manager or a regulator is going to insist. And that means selling assets and loans to retire debt. If many firms do that simultaneously, you could get fire-sales, and then that could cause a credit crunch in the economy."

Going from granular analytics to the broad financial sector gives perspective on global systemic risk of the financial sector, which can then be broken down on a country basis. The sum of the V-LAB's work is that of 1,000 financial institutions around the globe.

The capital needed for these companies to weather another financial crisis is $3.5 trillion. The figure at the peak of the last crisis was over $4 trillion. The current, somewhat lower total did not impress Engle, and he described the current level as "still quite high."

There are two ways of looking at the S-Risk of individual nations, Engle said. The most basic is simply looking at the capital requirements necessary to make it through a financial crisis; in this case, the top five nations on the list were, in order, China, Japan, the U.S., the U.K. and France. But measuring that gross total as a share of GDP would rank the top 3 as Japan, the U.K. and France, with China well down the list of the top 20 nations, and the U.S. not on it at all. (Canada, impacted by a drop in oil prices, is now in far worse shape than it was during the fiscal crisis).

Richard Berner, the second keynote speaker and the Director of the Office of Financial Research (created by Dodd-Frank), which is part of the Treasury Department, did not use the term "systemic risk" in his speech. But rising risk was clearly his concern, noting that "indicators of corporate credit risk in our monitoring tools have been flashing warning signs for some time." Spreads are wider than they were two years ago, reducing incentives to take on debt. "Still, fueled by highly accommodative credit and underwriting standards, and a persistent reach for yield by investors, credit continues to grow at a rapid pace," Berner said.

Dr. Berner praised stress testing as "one of the best tools" for measuring risk. But stress-testing the banking sector won't be adequate in the face of the rise of non-bank lending, though Berner described non-bank lending overall as "a good thing, because diversity in the financial system can increase resilience." But migrating away from a transparent banking sector may leave the financial system "more vulnerable to shocks," he said. More granular data are needed for assessing who is exposed and by how much, especially here in the United States, where about two-thirds of credit extensions are intermediated outside banks and through the capital markets."

The Keynote session Moderator, **Mr. Douglas Petersen**, CEO of S&P Global, summed up today's risk management for investors and institutions related to financial markets as one that spans both the traditional areas of credit risk and bank solvency to the newer areas of cyber risk, reputation risk and the emerging risks related to Environmental, Social and Governance (ESG), and especially climate risk. He did emphasize that market liquidity along with the two issues that the Keynote Speakers would address, namely, Bank Solvency (Engle) and Financial Market Stability (Berner), still are the main elements for concerns about global financial market systemic risk.

Academic Session 1: Corporate Credit Ratings and Markets

Professor Marti Subramanian of the Finance Department of NYU Stern, in a paper co-authored with R. Jankowitsch and G. Ottonello, commented on "The New Rules of the Rating Game: Market Perception of Corporate Ratings." They analyzed the impact of credit rating changes on the pricing and the market's liquidity of U.S. corporate, non-financial and financial bonds. They focused on whether the information content of rating events varied in different economic environments, particularly before and after the Dodd-Frank Act. "We find that the informativeness of rating changes was low before the crisis, particularly for financial company bonds. However, after Dodd-Frank, rating changes led to significantly stronger market reactions, especially for non-financial bonds. This somewhat surprising result convinced the authors to conclude that the new regulation has led to ambiguous results, at least so far. Using existing models of rating agency behavior, the authors link their findings to differences in the complexity of the rated securities.

Professor Patrick Augustin from McGill University discussed his paper (co-authored with H. Boustanifar, J. Breckenfelder and J. Schnitzer) on "Sovereign to Corporate Spillovers" of credit risk events based on results from the first Greek bailout in April 2010. They conclude that a 10% increase in sovereign credit risk CDS (credit default swap) spreads raised corporate CDS credit risk on average by 1.1% after that bailout. The effects were more pronounced in countries that belong to the Eurozone, especially the ones that were themselves financially distressed, e.g. Portugal, Spain, Ireland and Italy. Countries that were bank dependent for funding corporate needs and that had public ownership of key companies and industries, were particularly vulnerable to this spillover effect. Also, the impact of the sovereign ceiling tends to enhance the sovereign to corporate risk transfer. Uncertainty about a government's commitment to service debt may restrict its access to capital markets. Such risk may spillover to companies through increased taxation, reduction in subsidies or decreased value of government guarantees.

Professor Augustin did acknowledge that the reverse impact of corporate to sovereign transfer of credit risk is also quite relevant to the recent credit situation in Europe, and probably beyond the current Eurozone sovereign crisis.

Academic Session 2 – Sovereign and Bank Credit Markets

Professor Viral Acharya of the NYU Stern School of Business summarized two related works on sovereign and bank markets on "The Real Effects of the Sovereign Debt Crisis in Europe: Evidence from Syndicated Loans" and "Whatever it takes: The Real Effects of Unconventional Monetary Policy" (co-authored by Tim Eisert, Christian Eufinger, and Christian Hirsch).

The latter analysis involved the European Central Bank (ECB) President, Mario Dragi's, announcement to do "whatever it takes" to preserve the Euro and, shortly after, launched the Outright Monetary Transactions (OMT) Program, which led to a significant reduction in the sovereign yields of periphery countries. Due to their significant holdings of GIIPS (Greece, Ireland, Italy, Portugal and Spain) sovereign debt, the OMT announcement indirectly recapitalized periphery country banks by increasing the value of their sovereign bond holdings. The paper showed that this backdoor recapitalization of European banks led to an increased supply of loans to private borrowers in Europe. This loan increase mostly targeted low-quality firms and can at least partly be explained by "ever-greening" of banks that benefited from the OMT announcement, but, in some cases, remained weakly capitalized even after the announcement. They show that firms that receive loans from these banks use the newly available funding to build up cash reserves, but there is no significant impact on real economic activity, like employment or investment. Moreover, the presence of zombie firms in Europe, which, by definition, are being artificially kept alive by additional bank loans even though they are too weak to invest or expand, depresses employment growth and investment of high quality firms that operate in the same industries.

Professor Heitor Almeida, of the University of Illinois, presented a study on "The Real Effects of Credit Ratings and the Sovereign Ceiling Channel." The paper shows that sovereign debt impairments can have a significant effect on financial markets and real economies through a credit-ratings-channel. Specifically, the author finds that firms reduce their investment and reliance on credit markets due to a rising cost of debt capital following a sovereign rating downgrade. He identifies these effects by exploring exogenous variation in corporate ratings due to rating agencies' sovereign ceiling policies, which require that firms' ratings remain at or below the sovereign rating of their country of domicile. The results uncover unintended consequences for real economic activity of the sovereign ceiling policies that the rating agencies typically follow. They also have implications for sovereign debt management, as they suggest that sovereign downgrades matter for real economic activity, over and above the deterioration in macroeconomic fundamentals.

Academic Session 3: Credit Derivatives Markets

Professor Rangarajan Sundaram, Professor of Finance at the NYU Stern School of Business, presented a paper on "Determinants of Sovereign CDS Spreads and Local Returns." He analyzed the factors driving credit spread changes in the Sovereign, Corporate, Equity, and Foreign Exchange markets, with a focus on global and local determinants. His research builds on a paper by Longstaff, Pan, Pedersen and Singleton published in 2011 (see Bibliography), but differs in several ways. For example, it uses daily data *versus* monthly and a Vector Error Correct (VEC) model with lead-lag relationships *versus* a contemporaneous Ordinary Least Square (OLS) model. The data source is also different, since Prof. Sundaram used CDS spreads from S&P Global Market Intelligence (Credit Market Analysis or CMA), which tends to lead the price-discovery process in the market by being based on executable quotes agreed upon between buy-side and sell-side trading desks. The main finding of this analysis is that global factors tend to drive spread changes in every market, dominating local factors in explaining returns. Particularly, the US stock market is “dramatically more important [to explaining returns] than anything that earlier studies have indicated and, in fact, appears to swamp the effects of every other factor, including local stock markets”. This result holds true not only for the Sovereign CDS markets, but also for the Equity, Debt, and Exchange Rate markets in any of the 15 countries analyzed. Evidence also shows this impact has strengthened in the post-crisis, (with the exception of the Greek and Italian markets), confirming that the international markets are actually co-integrated, being more sensitive to global factors. Prof. Sundaram also tried to understand the channels by which the US markets are affecting every other markets, with a focus on the funding liquidity connection between markets, but results were not statistically robust on this front. During the Q&A, Prof. Sundaram confirmed further research needs to be carried out to define the drivers of this relationship.

Professor Paul Glasserman, Professor of Business at Columbia Business School, discussed changes in the market structure of the OTC Derivatives market, presenting the conclusions of a recent paper entitled “Does OTC Derivatives Regulatory Reform Incentivize Central Clearing.” The research, co-authored by Samim Ghamami of the Federal Reserve Board of Governors, analyzes the implications of the OTC Derivatives Reform proposed by the G20 leaders in September 2009 as a response to the recent subprime crisis. One of the main requirements of this reform is the introduction of mandatory Central Clearing for standardized OTC Derivatives products, with the goal of having a more transparent, liquid and simpler OTC Derivatives market. To further promote Central Clearing, regulators also proposed Initial and Variation Margins for less standardized, less actively traded and more complex bilateral OTC Derivatives transactions. These new requirements on Non-Centrally Cleared trades will come become effective for major dealers in US and Europe (via Dodd-Frank and EMIR legislations, respectively) in September 2016.

Based on a unique dataset of confidential OTC Derivatives transactions from a small number of US Bank Holding companies, the authors carried out an empirical analysis to assess the cost incentive in favor of Central Clearing versus Bilateral Trading, as originally intended by regulators. Moreover, they also tried to understand what are the key factors driving the cost comparison. The main takeaways of this analysis is that the cost comparison does not consistently favor Central Clearing, and when it does, the incentive may be driven by inadequate default waterfall resources at Clearing Houses. Glasserman highlighted a contrasting effect of Central Clearing: netting benefits can only be achieved with fewer, but more concentrated Central Counterparties (CCPs). This trade-off *“then raises concerns about whether you’re concentrating risk in a small number of Too-Big-To-Fail institutions”*. This research also casts light on the impact of mandatory Central Clearing of OTC Derivatives on systemic risks presented by Clearing Houses. This is a relevant issue that is currently attracting the attention of regulators, Clearing Members, and Investors.

Panel #1 – Current Conditions and Outlook for Global Credit Markets

The first panel discussion was moderated by **Ms. Ashu Suyash**, CEO of CRISIL, S&P Global’s Indian subsidiary, and featured presentations by prominent practitioners and one academic. **Diane Vazza**, from S&P Global Ratings, discussed the current credit market conditions from a global perspective, highlighting trends in corporate default, recoveries and rating downgrades. Relative to upgrades, the downgrades could hit an eight-year high in 2016, following a particularly high ratio in 2015. As expected, the downgrades and defaults were led by oil/gas/metals firms in 2015 and 2016. Ms. Vazza also observed that the emerging market downgrade risk is sharply elevated of late. She did point out that while S&P Global Ratings’ “weakest links” tally pointed toward higher defaults in 2016, resulting in an estimated 5.3% default rate in the U.S., speculative-grade bond spreads tightened after the initial high levels of early 2016 as markets reacted positively to central bank liquidity stimuli.

Professor Edward Altman from the NYU Stern School of Business discussed his assessment of “Where are we in the Credit Cycle?” in the U.S. leveraged finance markets. He used a baseball metaphor for the existing benign cycle as being at the bottom of the 9th inning (for those more familiar with football, this would be the equivalent of being in the 85th minute of a match), after 6½ years of low default rates, high recoveries on default, low interest rates and spreads and high liquidity. But, since the score is tied in the game, the match is in “extra innings” (or “extra time” in a football knock-out competition) and the benign cycle seems to be continuing for an indefinite period. Dr. Altman believes, however, that the credit fundamentals for investment grade, and especially high-yield bond issuing firms, have deteriorated based on the enormous new issuance of non-investment grade bonds, especially in the most risky “CCC”-rated bonds. In addition, the average eponymous Z-Scores of high-yield bonds are about the same in recent years as they were in 2007, just before the financial crisis of 2008-2009. This seemed to him as not particularly good news, and he expects high-yield defaults to continue to rise in 2016/2017 and for the first time since 2010, the last 12-month default rate now exceeds the historic average annual rate of 3.4% (dollar denominated).

Professor Altman also pointed out that the latest data on purchase-price-multiples for private-equity sponsored leveraged buyouts (LBOs) showed that they reached an all-time high in 2016 at almost 12-times, which indicated to him that this market was extremely "frothy" and was being stimulated by the availability of low-interest debt financing for projects regardless of the risk. Like Ms. Vazza, he looked to the enormous amount of liquidity being pumped into several key areas by central banks in the U.S., Europe, Japan and China, as well as the recent rise in oil prices, as causing the markets to remain benign – this despite the huge increase in rates and spreads at the end of 2015 and the first month and a half of 2016, which threatened to be the precursor to the start of the next stressed-cycle. He, like several other speakers at the conference, was particularly concerned with the credit market situation in China as being the catalyst for the next credit-cycle crisis.

Simon Jin, representing S&P's Greater China Global Ratings, followed Dr. Altman's call for concern about China's credit markets with his own assessment of the current situation and outlook. He showed the recent increase in rating downgrades relative to upgrades in China. He also pointed to China's corporates increasingly tapping bond markets for their financing needs, led by property developers, and the risks associated with these potentially low-quality issuers. He showed data and gave commentary on the rise in corporate bond yields, as well as the new phenomenon in China – bond defaults – and their impact on spreads and the prospect of increased defaults. Mr. Jin's negative outlook was tempered by the likelihood that Chinese financial authorities would do what it takes to avoid an increasingly volatile and risky environment, strategies which have met with mixed success in the past.

The moderator, Ms. Suyash, gave her own assessment of credit markets of one of the other major economies in Asia – India. She was mostly positive about India's transition from vulnerable to a resilient financial environment, with higher GDP growth, lower yields and more investment in the country's growth. She likened India as one of the few bright spots in the global economy. Her assessment of the credit quality of the Indian markets was mixed with a reasonably good upgrade to downgrade ratio, but the debt-weighted ratio, remained below 1.0, reflecting systemic stress.

The CRISIL CEO stated that asset quality in India continued to pose challenges for the banking sector, and she proposed that for the credit cycle to pick-up, three factors were critical: (1) government's ability to push reforms, (2) pickup in investment demand continuing, and (3) a "favorable monsoon."

The final panelist, **Mr. Philipp Hartmann** of the European Central Bank (ECB), commented on the financial, credit and business cycle in the Euro Area. Overall, he felt that the Euro Area's financial activity was recovering, but remained below a "neutral" level and behind U.S. activity. While property markets continued to recover, bank lending slowed. He pointed out the significant heterogeneity across different Euro countries in economic growth and that the credit and business cycles were not the same, i.e., that credit cycles tend to be longer (>8 years) and usually uncorrelated to the business cycle, except at the low frequency end (<8 years). Hartmann then indicated the key financial stability risks for the Euro Area as:

(1) Increase in risk premia due to financial turmoil and low commodity prices,

(2) Weak profitability prospects for banks and insurers, especially from unresolved problems in reducing non-performing loans,

(3) Rising debt-sustainability in the sovereign and non-financial private sectors due to low nominal growth and political uncertainty, and

(4) Prospective stress in the investment fund sector.

Panel #2 – Regulatory Landscape: Impact on Financial Markets

The second and final panel discussion was moderated by **Ms. Martina Cheung**, Executive Managing Director and Head of Risk Services at S&P Global Market Intelligence, and included representatives from US Regulators (Securities and Exchange Commission, Federal Reserve Board of Governors), ISDA (International Swaps and Derivatives Association), and the Asset Management industry (Trient Asset Management and FSN Capital).

Martina Cheung started the debate referring to an article on Basel IV, which recently appeared on the *Financial Times*. Specifically, she asked the panel to comment on the implications of the new Basel Committee's proposals that restrict the use of internal models on Banks' trading and banking books.

Mark Carey of the Federal Reserve doesn't consider these proposals to be big game changers, but rather a logical evolution of the post-crisis period. Particularly, when discussing the "Fundamental Review of the Trading Book", the Basel Committee for Banking Supervision revision of trading book capital rules, he stressed this proposal will only affect large banks who are the ones with material trading books.

Mark Flannery of the SEC suggested paying more attention to Pillar 2 in the Regulatory Capital framework. This should complement Pillar 1 requirements with forward-looking, risk-absorbing capital standards. Focusing exclusively on Pillar 1 could generate a situation of *"correlated risk management techniques"* in the banking system, he said.

Martina Cheung posed a second relevant question to the panelists on the broader regulatory framework: *"What's your view on the different objectives of various regulatory bodies, and, particularly, of the SEC and FASB (Financial Accounting Standards Board)?"*

Mark Flannery immediately clarified that the SEC oversees the FASB, and then outlined the different roles played by the SEC and other US Bank Regulatory agencies. The latter are *“prudential regulators”*, caring about whether firms fail, while the SEC is a *“disclosure agency”* making sure that risks and returns are adequately disclosed to investors in financial instruments. On FASB, he highlighted a relevant issue: the interaction between the new accounting standards on *“Current Expected Credit Losses”* (CECL) and the Basel capital requirements. Since CECL is a forward-looking measure of credit losses, any increase in loss allowances would cause capital ratios to drop. Therefore, Basel rules need to reflect the impact of CECL to get a balanced view of credit risk in Banks’ financial statements.

Mark Carey took a historical perspective on accounting, outlining the evolution of it in the last 100 years (*“when it was invented”*): from fraud detection to cash flows auditing. In the current context, the FASB’s proposal to move from a “Realized” to an “Expected” (forward-looking) Loss philosophy, gave rise to the use of credit analytical models in the accounting world. According to Carey, “in the last 20 years models have crept into accounting”, and the only way to get a forward looking measure of credit losses is via the use of credit models.

Knut Kjaer of Trient Asset Management and FSN Capital focused attention on the importance of an Enterprise Risk Culture, of which models should be an integral part. The problems of modern risk management are not related to analytical models (where the sophistication is very high), but to the lack of a proper risk culture and governance policies. This is where the regulators should intervene, if the owners of financial institutions were unable to build this framework internally. Kjaer also stressed the relevance of global coordination between regulators, mentioning the specific case of China, where the combination of a current strong credit expansion and the lack of a developed supervisory system poses big challenges for international financial markets. Kjaer underlined the role of non-bank institutions in the current environment, and the need for a proper regulation and supervisory framework of Insurance undertakings and Asset Managers. According to Kjaer, the latter deserve more attention from a regulatory standpoint, due to their “concentrated” nature: the 10 largest asset managers control 30% of the entire asset base in the world, while in the banking sector the control is limited to 20% of the assets.

Audrey Costabile Blatter of ISDA commented on the misalignment of regulators’ objectives in different jurisdictions. As an example, she mentioned the uneven playing field created by the implementation of the OTC Derivatives Reform in the US (via Dodd-Frank) and in Europe (via EMIR and MiFID 2). Particularly, the fact that US institutions are mandated to trade standardized OTC Derivatives on Swaps Execution Facilities (SEFs), but not in Europe, is creating fractures in liquidity pools between regions. If rules and implementation times are different, it is difficult to economically assess the impact of these regulations. Ms. Blatter came up with a proposal to consider Regulations as a “network,” and to study the interplay of them to assess the potential unintended consequences on financial markets and the economy.

Martina Cheung introduced another discussion topic, which is relevant in the current market situation: *"Herding Behaviors"*. The current low (negative) interest rate environment is favoring collective risk-taking strategies on specific asset classes (such as Commercial Real Estate and Infrastructure), with potential negative implications on liquidity risk. However, Cheung reminded the audience the effects of the recent Central Banks' monetary policy actions have yet to fully unfold their potential.

Mark Flannery confirmed that the issue of "Herding Behaviors" is of paramount importance for financial stability purposes, and the SEC has been working particularly on the determination of *"an adequate liquidity buffer"*. Identifying who owns the illiquid assets in the market is key to address this issue.

Mark Carey highlighted that "Herding Behaviors" materialize only when market participants are interconnected, giving rise to contagion and system risks. Monetary policy focuses not only on first order effects, such as short-term interest rates and inflation, but also on financial stability factors, for example on the full term structure of the yield curve ("*there is not just one interest rate: there's a 5-year, a 10-year, a 20-year, etc…"*). Carey acknowledged the regulation on systemic risk is still in its early days and contributions from researchers and practitioners are very welcome on this issue.

At the end of the panel, **Professor Ed Altman** asked **Mark Flannery** his view as an SEC economist on the repercussions on asset managers of the newly proposed fiduciary rules by the US Department of Labor (DOL). This is currently a key issue in the Asset Management industry, as also confirmed by a market participant in the audience who said these rules are drawing an incredible amount of consternation in the industry.

Mark Flannery clarified that these fiduciary standards will be applied to retirement accounts only, therefore with a likely higher impact on broker/dealers servicing IRA and 401(k) accounts than on registered investment advisers. The overarching goal of these rules is to overcome the current information asymmetry between sellers (brokers) and buyers of financial savings products. However, Flannery confirmed that the SEC is expected to issue a rule applying this standard to non-retirement accounts in the near future. This will have an impact on the distribution of asset management products through the wealth management channels in the US. In closing, Flannery admitted that the implications of these DOL fiduciary rules on the asset management industry are still subject to interpretation and discussion.

Conclusion: “New drivers of Change in Credit Markets”

The presentations and discussions summarized in this note offer very interesting reflections on the challenges faced by market participants in the current credit market conditions.

If one theme stands out from this conference, it is that Credit Markets are exposed to new risks due to the non-linear interaction among the following forces:

- Central Banks’ monetary policies (Low/negative interest rates),
- Macroeconomic events (Slow and declining economic growth),
- Regulations (Dodd-Frank, “Basel IV”, DOL rules), and
- Accounting standards (IFRS 9/CECL).

In this environment, understanding the drivers of change in today’s credit markets is key to navigate a fast moving and unpredictable landscape.

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