FMDQ

THOUGHT LEADERSHIP SERIES

The Nigerian Derivatives Market

PART 3

Exchange-Traded Derivatives Market

With a notional value of $79.36 trillion[1] outstanding at the end of 2022, representing c.11.00% of the global derivatives market, exchange-traded derivatives ("**ETDs**") are less popular than over-the-counter ("**OTC**") derivatives due to a variety of reasons, especially:

- **Range of Products**: While OTC derivatives markets boast a wider variety of products such as forwards, swaps and exotic derivatives, ETD markets predominantly feature futures and options
- **Tailored Contracts**: OTC derivatives offer a higher degree of product customisation, allowing market participants to tailor the terms of the contracts to their specific needs
- **Privacy and Confidentiality**: OTC derivatives present a distinct advantage for market participants who value privacy and confidentiality. By participating in OTC derivatives markets, traders can keep their trading strategies, positions, and market views confidential

However, ETD markets have witnessed a remarkable growth since the 2007/2008 Global Financial Crisis ("**GFC**" or the "**Crisis**"), during which OTC derivatives were plagued by significant and wide-scale counterparty defaults, which threatened financial system stability globally. This is evidenced by the growth in the number of ETD (futures and options) contracts traded annually from 15.53 billion in 2007 to 83.90 billion in 2022, representing a remarkable 440.00% growth since the GFC. This growth in ETD markets was driven by the stellar performance of these markets during the GFC (*there were no reported cases or evidence of large-scale counterparty defaults requiring regulatory interventions or bailouts in any ETD market during the GFC*) and regulatory reforms which sought to make OTC derivatives markets less risky by driving the adoption of age-long risk management mechanisms and practices present in ETD markets.

Such notable regulatory reforms include the introduction of the Dodd-Frank Act[2] in the United States of America and European Market Infrastructure Regulation (EMIR[3]) in Europe, among other similar regulations worldwide. These reforms primarily target the vulnerabilities and regulatory deficiencies that played a role in the GFC, with the objectives of enhancing transparency, mitigating counterparty risk through the adoption of risk management mechanisms found in ETDs, and bolstering the overall stability of the derivatives market within their respective jurisdictions. Of utmost importance among these risk management mechanisms and practices derived from ETD markets are:

- Introduction of central clearing via a critical financial market infrastructure ("**FMI**") known as a Central Counterparty ("**CCP**") for certain OTC derivatives contracts
- Mandatory execution of certain OTC derivatives contracts on securities exchanges and trading facilities

[1] BIS Statistics Explorer: Table D2
[2] The Dodd-Frank Wall Street Reform and Consumer Protection Act (commonly known as Dodd-Frank) which was signed into law in July 2010
[3] The European Market Infrastructure Regulation was introduced in 2012

- Mandatory reporting of OTC derivatives contracts to another type of FMI known as Trade Repositories
- Introduction of higher capital requirements for non-centrally cleared OTC derivatives (akin to margining in ETD markets)

All of these reforms in the OTC derivatives markets globally have contributed to financial market participants' increased awareness, adoption of ETD products and the rise in ETD markets' activities.

Historical Perspective On Exchange-Traded Derivatives Markets

One of the earliest records of organised and centralised trading of derivatives contracts similar to the modern-day ETD markets is the Dojima Rice Exchange, established in 1697 in Osaka, Japan[4]. The Dojima Rice Exchange listed and traded rice receipts for future delivery in Japan when rice was an acceptable form of payment.

However, the blueprint for modern-day ETD markets is the Chicago Board of Trade ("**CBOT**"), the first derivatives exchange in the United States of America, which was established in 1848 and remains in operation as part of the Chicago Mercantile Exchange Group. The CBOT introduced several key practices that distinguished it from the Dojima Rice Exchange and contributed to the development of modern ETD markets. Some of these notable differences are:

- **Novation and Central Counterparty Clearing**: While the Dojima Rice Exchange relied on individual counterparties to fulfil their obligations, the CBOT introduced a third-party entity (a CCP) which acts as a central counterparty for all ETD contracts traded on the exchange by interposing itself between every buyer and seller (a process termed "**Novation**"). Through this arrangement, the CCP eliminates the need for market participants to carry out individual credit risk assessments for multiple counterparties, thereby promoting safety and improving market activity
- **Formalisation of Margin Requirements**: The CBOT introduced and continues to enforce margin requirements for all ETD contracts traded on the exchange. These margins vary by ETD products and specific contracts and essentially require dealers to deposit a fraction of the ETD contract's value as collateral called **Initial Margin** at trade execution, as well as subsequently (*often on a daily basis*) after the ETD contract is valued by the exchange. The subsequent additional collateral provided by traders after such daily valuation (referred to as "**Mark-to-market**") is called **Variation Margin**. This practice of administering margins for ETD contracts has also helped in the management of counterparty risk as the margins are set aside to cover potential losses that market participants may incur and was central to the risk mitigation mechanics in ETD markets globally during the GFC
- **Product Diversification:** While the Dojima Rice Exchange primarily focused on rice futures contracts, the CBOT expanded into a broader range of commodities, including other grains and livestock, thus attracting a wider range of market participants

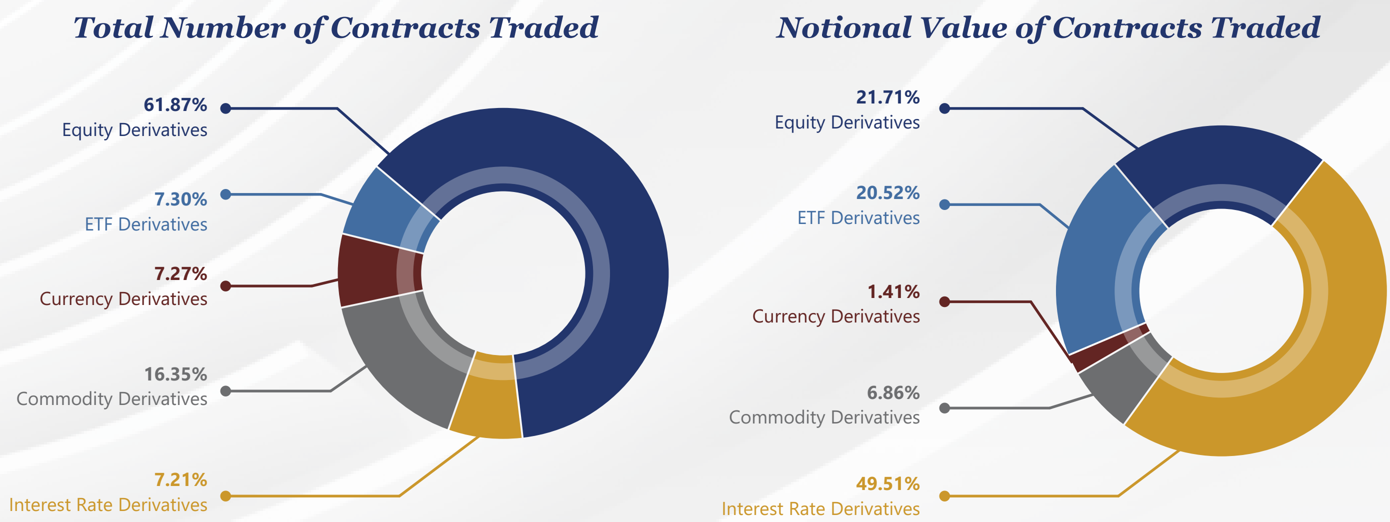
ETD markets have continued to evolve with the emergence of technology and the proliferation of various contracts referencing diverse underlyings ranging from assets, securities, and indices to even atmospheric (weather) conditions such as average daily temperature or rainfall. While ETD markets

[4] https://edisciplinas.usp.br/pluginfile.php/151297/mod_resource/content/2/Dojima_Rice_Market_Case.pdf

remain dominated by futures and options contracts, the most popular underlying for these contracts has shifted from agricultural commodities to financial instruments. In 2021, ETD contracts referencing interest rates (*i.e., interest rate benchmarks/indices, and fixed income securities' yields*) dominated ETD markets accounting for c.50.00% of the notional value traded[5], while ETD contracts referencing equities and equity indices were the dominant ETDs in terms of the total number of ETD contracts traded, accounting for c.62.00% of 84.76 billion contracts traded.

The dominance of interest rate or fixed income ETDs by notional value is due to the corresponding dominance of fixed income spot market relative to other markets as significant amounts of investments by institutional investors such as banks, pension funds, non-pension fund/asset managers, insurance companies, etc. are held in fixed income securities due to their lower risk profile, and fixed income market are substantially larger and account for more capital raising relative to equity market.

Chart 1: *2021 Distribution of ETD Contracts by Underlying*[6]



[5] https://www.world-exchanges.org/storage/app/media/2021%20Annual%20Derivatives%20Report.pdf
[6] World Federation of Exchanges

Table 1 below highlights the top ten (10) securities exchanges based on the total number of ETD contracts traded on these securities exchanges.

***Table 1**: Top ETD Markets by Volume of Contracts Traded in 2022*[7]

Exchange	Country	Volume Traded
National Stock Exchange of India Limited	India	38,113,511,047
B3 S.A. - Brasil, Bolsa, Balcao	Brasil	8,313,793,640
The Chicago Mercantile Exchange	USA	5,846,331,689
Cboe Global Markets, Inc.	USA	3,476,174,099
Intercontinental Exchange, Inc.	USA	3,435,073,009
Nasdaq, Inc.	USA	3,147,540,772
Borsa Instabul A.S.	Turkey	2,726,889,885
Zhengzhou Commodity Exchange	China	2,397,600,933
Dalian Commodity Exchange	China	2,275,200,779
Korea Exchange Inc.	Korea	2,058,222,218

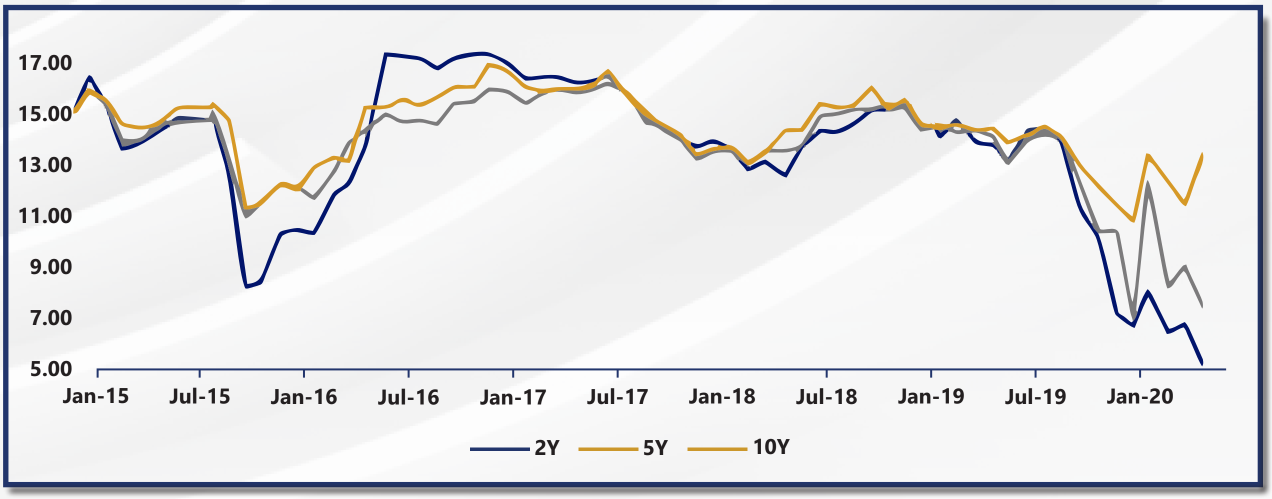
[7] https://www.fia.org/sites/default/files/2023-02/2022%20Annual%20Review%20ETD%20Trading%20Trends_updated%20v2%5B15%5D_0.pdf

The Case for Exchange-Traded Derivatives in Nigeria

As previously discussed in earlier publications, the Nigerian derivatives market is predominantly OTC and is dominated by foreign exchange derivatives products used to mitigate the financial risk associated with fluctuations in exchange rates. However, in addition to exchange rate volatility, participants in the Nigerian financial markets are also exposed to additional financial risks stemming from fluctuations in interest rates, commodity prices, and equity prices. Noteworthy instances of these risk exposures include the historical volatility in fixed income security yields and the significant price increase of diesel.

Influenced by various economic and market risk factors, yields on fixed income instruments in Nigeria have experienced significant fluctuations at different points in time. For instance, the spot yield on the benchmark 2-Year Sovereign (FGN[8]) Bond dropped from 16.48% in February 2015 to approximately 8.26% in November 2015, only to rise within eight (8) months to 17.32% by July 2016. Additionally, the increased demand for sovereign fixed income securities (bonds and Nigerian treasury bills ("**T.bills**")) due to the scarcity of Open Market Operations ("**OMO**") bills, led to a sharp decline in yields between 2019 and 2020. These fluctuations created significant interest rate risk for both buy-side participants (*higher prices for securities when interest rates fall*) and sell-side participants (*lower prices for securities when interest rates rise*).

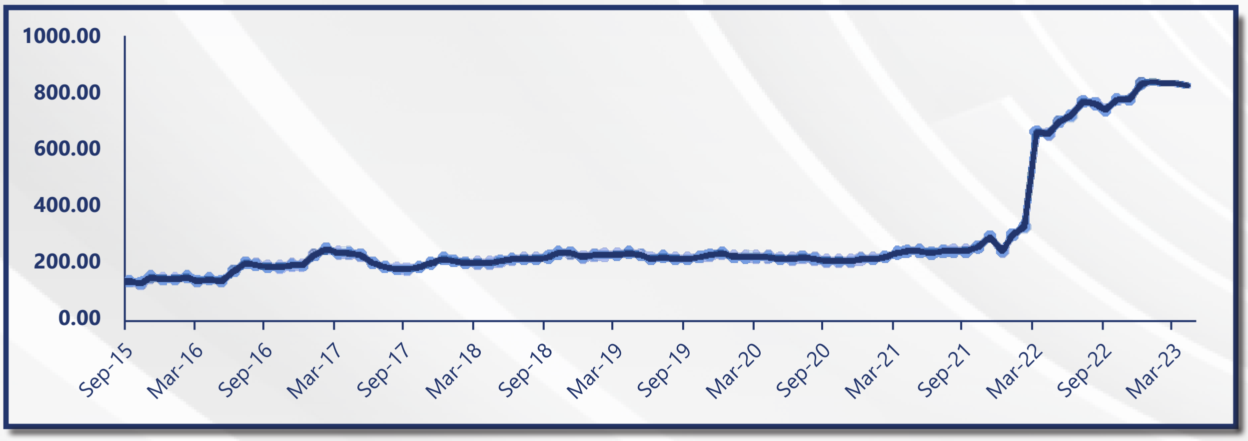
Chart 2: *Volatility of Yields on FGN Bonds (%)*



[8] Federal Government of Nigeria

Furthermore, the disruption in global commodities prices resulting from the ongoing Russia-Ukraine conflict has underscored the importance of risk management through hedging for financial market participants grappling with rising input costs and margin erosion. In Nigeria, this is exemplified by the rapid escalation in prices of deregulated commodities such as automotive gasoline oil (referred to as "**AGO**" or "**diesel**"). Fluctuations in global crude oil prices directly impact the price of distillates like diesel, which is essential for power generation in the Nigerian economy, and the inelastic demand for diesel has created uncertainties affecting pricing and returns on economic activities in Nigeria. This situation has been further exacerbated by exchange rate volatility due to the country's reliance on imports to meet the demand for the product, leading to the price of diesel soaring from an average of ₦303.26 per litre in January 2022 to ₦829.29 per litre in April 2023.

***Chart 3:** Average Retail Price of Automotive Gas Oil (Diesel) in Lagos State, Nigeria (₦/litre)*



While historical analysis and reviews reveal the existence of non-FX risk factors, such as interest rates, commodities, and equity prices, which necessitate the use of derivatives products for effective risk hedging, the utilisation of non-FX derivatives in the Nigerian financial markets remains significantly low compared to the level of exposure to these risk factors.

Therefore, in order to ensure the advancement of the Nigerian financial markets towards the next phase of development while promoting economic prosperity and mitigating the likelihood of a situation similar to the GFC, the introduction of ETD markets and products is critical. This strategic move will not only enhance domestic risk management practices but also contribute to the growth and positioning of the Nigerian financial markets as a crucial regional financial centre.

Taking the Plunge - FMDQ Derivatives Market Development Project

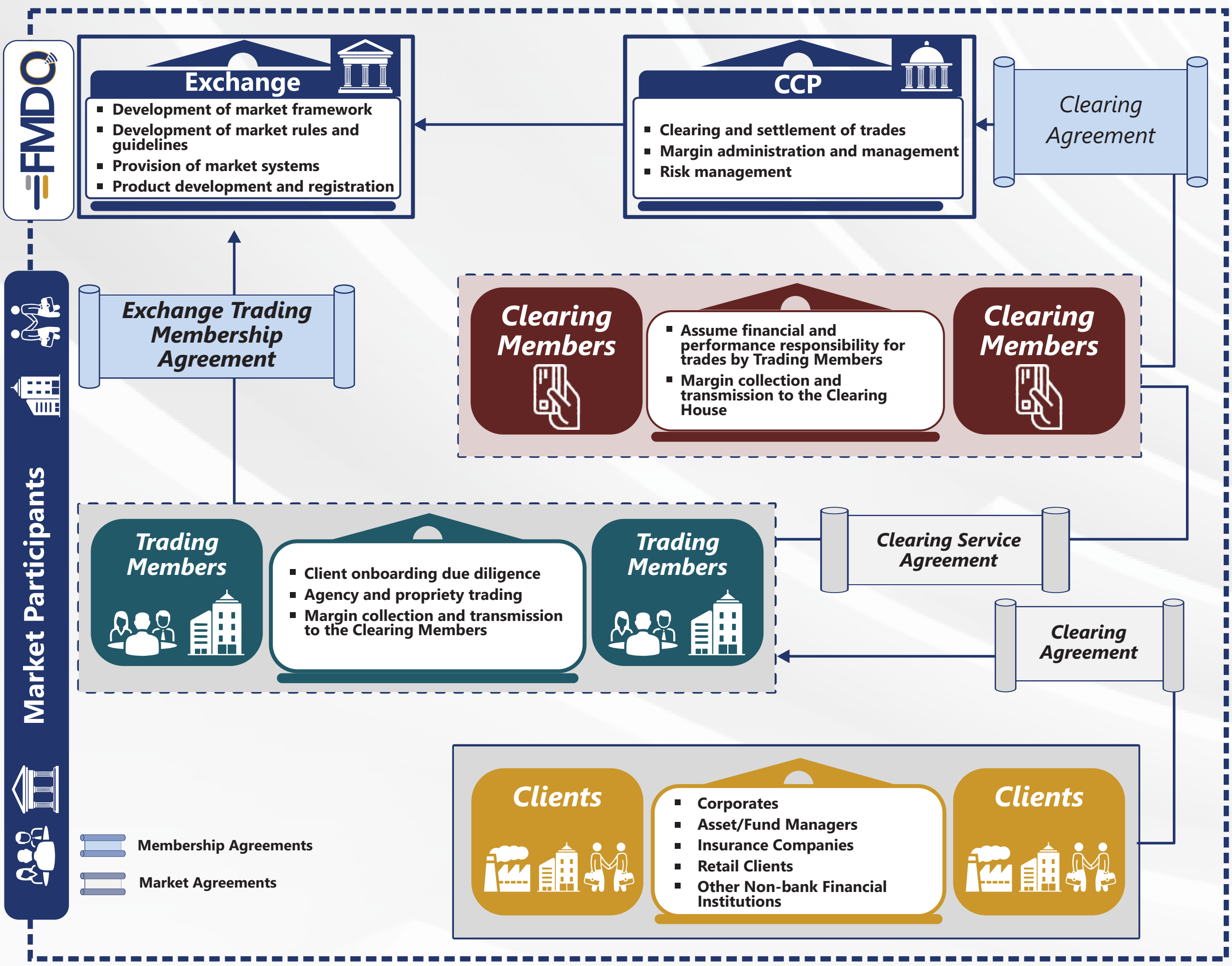
FMDQ Securities Exchange Limited ("**FMDQ Exchange**"), a subsidiary of FMDQ Group PLC, have long recognised the significance of establishing a viable ETD market as a pivotal progression towards harnessing the transformative potential of the Nigerian financial markets for the advancement of the economy. This understanding, along with our firm belief in its importance, led to the initiation of a feasibility study in 2015. The objective was to assess the state of the Nigerian financial markets and identify the necessary measures to bridge existing gaps before successfully launching an ETD market in Nigeria.

The feasibility study, concluded in 2016, involved extensive engagement with banks, non-bank financial institutions ("**NBFIs**"), corporates, and regulators through one-on-one interviews and stakeholder roundtables. The findings revealed that the level of readiness in key areas, namely education, risk management, technology, and legal/regulatory framework, was relatively low. Consequently, to address these identified gaps and establish a robust ETD market in Nigeria, FMDQ Exchange launched the Derivatives Market Development Project (the "**Project**"). The Project was designed to facilitate the launch of Nigeria's most dynamic ETD market, and its implementation was structured in three (3) distinct phases, as illustrated in ***Figure 1*** below.

Figure 1: *Overview of the FMDQ Derivatives Market Development Project*

The Project was initiated in 2018, commencing with Phase I, which primarily focused on the establishment of a framework, the associated architecture for the ETD market and the delivery of introductory training sessions aimed at engaging relevant stakeholders within the Nigerian financial markets. Akin to established ETD markets globally, the envisioned participants in the FMDQ ETD market, as defined in the market framework, encompass FMIs responsible for the organisation and risk management of the ETD market (i.e., the securities exchange and CCP), as well as direct market participants (Clearing and Trading Members), and indirect market participants (Clients/End-Users). The roles of these potential participants are briefly outlined in ***Figure 2*** below.

Figure 2: *Structure of the FMDQ Exchange-Traded Derivatives Market*



Subsequent to the initial phase of the Project, the Phase II was initiated with the specific objective of attaining the necessary readiness for the launch of the desired ETD market in the Nigerian economy. This phase involved extensive and comprehensive efforts undertaken by FMDQ Exchange, in collaboration with various stakeholders, notably regulators in the Nigerian financial markets, towards ensuring that the essential components for the successful implementation of the ETD market, encompassing aspects such as the legal and regulatory framework, robust risk management mechanisms, and other pertinent considerations, were put in place for the launch of an active ETD market.

Significant progress was made in achieving these essential elements and key milestones required to ensure the readiness for the activation of an ETD market with some notable achievements including:

- **Legal and Regulatory Framework:** As seen from research into other economies with active ETD markets, a critical ingredient for the activation and proliferation of these markets is the existence of enabling financial market laws and regulations that enable the institution of relevant contractual and risk management arrangements and inspire participants' confidence in the markets. Critical interventions which have facilitated the readiness for the launch of an active ETD market in Nigeria under this theme are:

  - The release of two (2) new regulations by the Securities and Exchange Commission, Nigeria ("**SEC**"), in December 2019, on derivatives trading and CCPs. Both regulations provide the regulatory framework for the activation and organisation of the ETD market, as well as the provision of CCP services. The regulation on CCPs also served as the trigger for the SEC to commence the registration of CCPs in the Nigerian financial markets

  - The introduction of netting for financial market transactions in relevant laws in 2020. Netting of obligations arising from financial market transactions was not encoded in any Nigerian law (unlike what is obtainable in other jurisdictions) before 2020; rather, it was included in the relevant contracts/agreements governing each financial market transaction between counterparties. This created uncertainty regarding settlement finality and enforceability of such netting arrangements by financial market participants in the event of bankruptcy, where such netting provisions in the relevant contracts/agreements contradict the provisions of any other laws (e.g., bankruptcy laws). This is fundamental for the development of ETD markets globally because a critical tool used by CCPs in their risk management role in ETD markets is netting. Hence, the inclusion of netting and bankruptcy remoteness provisions in the Companies and Allied

Matters Act ("**CAMA**") 2020 and the Bank and Other Financial Institutions Act ("**BOFIA**") 2020 provided key ingredients for the activation of ETD markets in the Nigerian financial markets

- **Risk Management:** As previously indicated, a key feature of ETD markets globally is the central counterparty clearing and risk management by FMIs known as CCPs. These institutions manage risks in ETD markets by acting as the counterparty to all participants. To manage the risk inherent in such a role, CCPs aggregate and net financial obligations that arise from transactions in all ETD contracts for the markets they serve. Until the SEC released its ***Rules on Central Counterparty*** in December 2019, there were no CCPs in the Nigerian financial markets. However, upon release of the new regulation, the SEC commenced the registration of qualifying institutions as CCPs, leading to the registration of FMDQ Clear Limited as a CCP in 2021

- **Other critical elements** include product development (i.e., the design and regulatory approval of ETD products), market education and sensitisation, technology deployment, etc. All of these have been completed by FMDQ Exchange in readiness for the launch of its ETD market with the following:

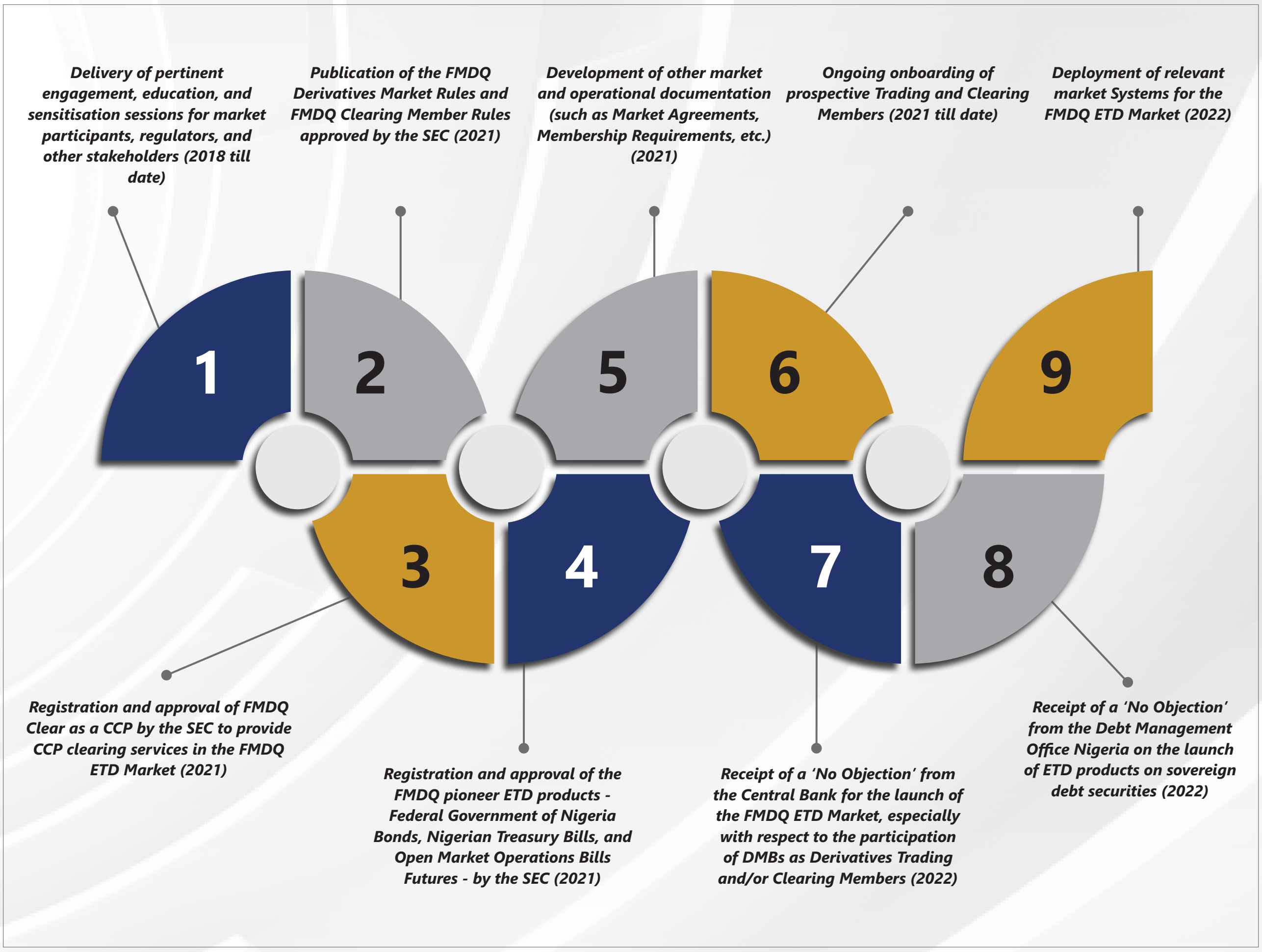
  - design, development and registration of over twenty (20) ETD contracts with SEC

  - delivery of market education and sensitisation to over two thousand and six hundred (2,600) market participants across various stakeholder groups, including but not limited to banks, NBFIs, regulators and media practitioners

  - deployment of relevant technology for the market

Figure 3 below highlights some of the critical milestones achieved towards launching an active ETD market:

Figure 3: Key Milestones Achieved under the FMDQ Derivatives Market Development Project



Chasing Gold

Having provided insights into the Nigerian derivatives market – unravelling its unique structure and available product offerings – and established compelling economic rationale for the introduction of ETDs in Nigeria, FMDQ Exchange is delighted to conclude this three-part Series by reporting the successful outcomes of our collaborative efforts with market stakeholders. Over the past three years, significant strides have been made to bridge critical gaps and cultivate a thriving ETD market in Nigeria.

While acknowledging the susceptibility of the Nigerian financial markets and the broader economy to external shocks, we have a reasonable level of confidence that the combined strength and resilience of the Nigerian people and markets, coupled with the imminent launch of the FMDQ ETD market, will propel the Nigerian financial markets towards a trajectory of growth and progress.

As we approach the final stages of preparation for the launch of the FMDQ ETD market, we firmly believe that we are closer than ever to achieving our aspiration for the Nigerian financial markets, which is encapsulated in our "GOLD" (**Global Competitiveness, Operational Excellence, Liquidity, and Diversity**) Agenda. We encourage all relevant stakeholders to anticipate the positive impacts that the forthcoming launch of the FMDQ ETD market will bring. This launch is pivotal in ensuring that the Nigerian financial markets assume its rightful position among the world's leading financial centres while actively supporting economic prosperity.