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This brochure provides information about the qualifications and business practices of Compass Analytics, LLC. If you have any questions about the contents of this brochure, please contact us at (415) 462-7500. The information in this brochure has not been approved or verified by the United States Securities and Exchange Commission or by any state securities authority.

Compass Analytics, LLC is a registered investment adviser. Registration of an investment adviser does not imply any level of skill or training. Additional information about Compass Analytics, LLC is available on the SEC's website at www.adviserinfo.sec.gov.

If you would like to learn more about Compass Analytics, LLC or our suite of products, please contact Kellie Kramer, Managing Director, at (415) 462-7500 or kellie.kramer@bkfs.com.

Item 2 MATERIAL CHANGES

This brochure is the annual update to our last brochure dated March 11, 2019, and contains the following material changes:

- In 2019, Black Knight, Inc. wholly acquired Compass Analytics, LLC (“Compass”). Compass’ Form ADV has been updated to reflect the new ownership structure, accordingly.
- Effective January 1, 2020, Compass updated its advisory fee billing practice, as described in Item 5 of this brochure. Most notably, Compass now bills clients in arrears, rather than in advance.

Item 3 TABLE OF CONTENTS

Item 2	MATERIAL CHANGES	2
Item 3	TABLE OF CONTENTS.....	3
Item 4	ADVISORY BUSINESS	4
Item 5	FEES AND COMPENSATION	4
Item 6	PERFORMANCE-BASED FEES AND SIDE-BY-SIDE MANAGEMENT	4
Item 7	TYPES OF CLIENTS.....	4
Item 8	METHODS OF ANALYSIS, INVESTMENT STRATEGIES AND RISK OF LOSS	5
Item 9	DISCIPLINARY INFORMATION.....	7
Item 10	OTHER FINANCIAL INDUSTRY ACTIVITIES AND AFFILIATIONS	7
Item 13	REVIEW OF ACCOUNTS	8
Item 14	CLIENT REFERRALS AND OTHER COMPENSATION	10
Item 15	CUSTODY	10
Item 16	INVESTMENT DISCRETION.....	10
Item 17	VOTING CLIENT SECURITIES	10
Item 18	FINANCIAL INFORMATION	10

Item 4 ADVISORY BUSINESS

Compass Analytics, LLC (“Compass”) has been in business since 2004. Compass is principally owned by Black Knight, Inc., which is a publicly traded company that holds its interest in Compass via wholly owned subsidiaries.

Compass provides risk management, loan sales (best execution) and general secondary marketing advisory and hedge execution services in concert with licensing Compass’ mortgage valuation and risk management analytics to its clients. In the course of such advisory services, Compass may advise clients regarding their best practices, strategic relationships and workflow. Using its analytics, Compass may suggest specific hedge instruments and amounts to offset interest rate and fallout risk for mortgage pipelines and portfolios.

Advisory services are tailored to individual clients given their expertise, balance sheet, relationships and current workflow, and limited to the hedge instruments described above. Compass’ primary objectives include helping clients achieve best execution in their loan sales and protecting them against interest rate and fallout risk. In other words, Compass’ trading strategies revolve around preserving client profit margins, not generating extra profits strictly through trading. Compass implements a hedge strategy and policy specific to each client. The hedge policy will include communication between the client and Compass, allowable hedge instruments, position exposure limits and any other specific hedge policy elements requested by the client. When Compass executes trades on behalf of clients, the hedge execution is performed under a specific and limited power of attorney. Compass earns no transaction-based commission or compensation for trade execution.

As of December 31, 2019, assets under management on a discretionary basis were \$13.2 billion, and no assets were managed on a non-discretionary basis.

Item 5 FEES AND COMPENSATION

Compass invoices clients for its advisory services monthly, in arrears, based on loan volume closed in the previous month. Clients may pay the invoices by check or ACH; Compass does not deduct its fees from client accounts. Though Compass reserves the right to impose a minimum monthly fee of \$7,500, clients should review their License and Services Agreement to determine their specific advisory fee information.

Clients should note they may pay additional fees to third parties unaffiliated with Compass, such as broker-dealers and custodians. Clients should review their respective agreements with such third parties to determine such fees, and review Item 12 below for additional information regarding Compass’ brokerage practices.

Item 6 PERFORMANCE-BASED FEES AND SIDE-BY-SIDE MANAGEMENT

Compass does not accept performance-based fees.

Item 7 TYPES OF CLIENTS

Compass offers its advisory services to mortgage originators and servicers, including mortgage banks, community and commercial banks, credit unions, mortgage insurers, government agencies, investors, FHLB’s and REITs.

Although Compass does not have a minimum origination loan volume or portfolio balance requirement, for

economic reasons, clients typically originate at least \$10 million of principal balance monthly or have a servicing or whole loan portfolio of at least \$100 million of unpaid principal balance (“UPB”). Although Compass does not have a minimum net worth requirement for clients requesting hedge execution services, other required counterparties such as broker-dealers or investors typically require a minimum of \$2 million of net worth in order for the client to secure forward credit/trading lines for pipeline hedging.

Clients requesting Mortgage Servicing Rights (“MSR”) hedge advisory and/or execution services may be required by counterparties to have larger net worth commensurate with portfolio UPB. As noted under Fees and Compensation, Compass does have minimum monthly billing fees for some products and services.

Item 8 METHODS OF ANALYSIS, INVESTMENT STRATEGIES AND RISK OF LOSS

Pipeline Hedge Advisory

For its pipeline hedge advisory business, Compass employs best execution, duration and expected closing analysis to suggest specific loan sale executions, hedge instruments and amounts. Best execution processes use client-supplied investor settings and price schedules alongside market data to derive highest loan price available given the client’s investors. This analysis also identifies best execution investor, instrument and delivery method which are used in determination of hedges. Client pipelines include loan lock commitments (unclosed loans). Probability models are used to project expected loan closing percentages. To that end, best execution loan prices are evaluated against opening loan prices to determine market price movement – a key driver in projected expected closing percentages. The client’s historical data is used to calibrate and back-test expected closing assumptions/functions.

Loans are primarily delivered into forward mortgage backed securities (“TBAs”) which, depending on the product and coupon, have different sensitivities to interest rate movement (duration and convexity). Compass employs interest rate and prepayment models to derive option adjusted spreads given current TBA prices (discovered from market data sources such as Tradeweb, Reuters and market transactions). A weekly duration/convexity calibration process is employed to insure Compass TBA duration and convexity profiles do not materially deviate from a consensus of broker-dealers.

The position’s long exposure is determined by summing the product of a loan’s UPB, its expected closing percentage and its duration relative to the duration of a single benchmark hedge instrument.

The position’s short exposure is determined by summing the product of a hedges residual trade balance, its duration sign, its option delta and its duration relative to the duration of a single benchmark hedge instrument.

The following are risks of methods employed:

- Incorrect or outdated investor settings may result in incorrect gain/loss projections and expected closing percentages (and therefore hedge amount).
- Incorrect or outdated investor settings may lead to loans being bought at too high of price (from rate sheet) or sold at too low of price, resulting in lower profit or higher loss.
- Incorrect client settings may result in incorrect hedge amount and gain/loss.
- Incorrect market data imports may result in incorrect gain/loss projections and expected closing percentages (and therefore hedge amount).
- Incorrect loan data may result in incorrect hedge amount and gain/loss.
- Failure to have a sufficient selection of investors may lead to lower best execution prices.
- Incorrectly specified expected closing functions may lead to inaccurate hedge amount.

- Inaccurate duration derivation may lead to inaccurate hedge amount.
- Hedge instrument duration or price may not perform as expected due to market variables, impacting performance.
- Markets may become excessively volatile leading to material increase in hedge activity, bid/ask expense and in hedge cost – leading to lower profit or higher loss.
- Use of TBAs in current market carries headline risk, e.g. major changes in government agency charter (Fannie Mae, Freddie Mac and Ginnie Mae) or disruptions to servicing markets.
- In times of decreasing mortgage originations, hedge accounting may lead to losses due to the decrease in mortgage pipelines (less future expected earnings).
- Certain delivery methods may lead to cash flow timing mismatches, i.e., gains may be realized with later trading losses due or the converse.
- Investors may change loan price adjustments during the pipeline period, potentially leading to losses.

MSR Hedge Advisory

For its MSR hedge advisory business, Compass derives MSR durations (total and partial). This analysis identifies MSR value sensitivity to changes in primary (swap and treasury) rates, mortgage spreads and other market related mortgage rate changes. Historical and production forecasting models are used to determine mortgage rate correlations to primary market rates. Third-party prepayment models are used to model prepayment assumptions (e.g. Bloomberg medians, AD-CO and LPS/AFT). Depending on client preferences, MSR values may be derived by static or stochastic (OAS) valuations and clients may elect to hedge some or all risk in the portfolio. Emphasis is placed on modeling clients MSR values in a similar manner to client's third party (fair value) MSR value provider. Hedge balancing frequency and rate movement thresholds are defined individually for each client.

Primary hedge instruments used include TBAs, Interest Rate Swaps, Swap Futures, Eurodollar Futures, Treasury Futures and Treasury Futures Options. Key rate duration is derived for hedged MSR portfolio and hedges are selected with sufficient opposite key rate duration to offset total and partial durations (yield curve risk).

The following are risks of methods employed:

- Third party MSR valuations and market MSR values may fluctuate due to technical or liquidity factors that may lead to hedge over/under performance.
- New rules and/or regulations may materially impact the value of Agency and non-Agency portfolios.
- Third party prepayment models may not accurately predict prepayment performance leading to hedge under/over performance.
- Inaccurate client portfolio data could lead to incorrect hedge statistics and amounts.
- If partial (key rate) duration hedging is not employed, non-parallel yield curve shifts could lead to hedge over/under performance.
- If non-mortgage based hedges are employed, mortgage-primary rate spreads may widen or tighten leading to hedge over/under performance.
- If treasury based hedges are employed with interest rate swap or Mortgage related MSR rate models, widening or tightening of treasury-swap or treasury-mortgage spreads may lead to hedge under/over performance.
- Markets may become excessively volatile leading to material increases in hedge activity, bid/ask expense and resulting hedge cost – leading to lower profit or higher loss.

- Depending on portfolio size and client balance sheet, client may experience smaller/larger bid-ask spreads in hedge execution/balancing.
- If non-vanilla hedge instruments are used, e.g., Constant Maturity Mortgage Forward Rate Agreements or Swaptions), market volatility or technical factors may lead to hedge over/under performance.
- Use of TBAs in current market is subject to headline risk, e.g. major changes in government agency charters (Fannie Mae, Freddie Mac and Ginnie Mae) or disruptions to servicing markets.
- Different hedge instruments have different cash and/or margin posting requirements as market rates change.

Item 9 DISCIPLINARY INFORMATION

Compass has no legal or disciplinary events that are material to a client's or prospective client's evaluation of our advisory business or the integrity of our management.

Item 10 OTHER FINANCIAL INDUSTRY ACTIVITIES AND AFFILIATIONS

Neither Compass nor any of our management persons are registered or have an application pending to register, as a broker-dealer or a registered representative of a broker-dealer, a futures commission merchant, commodity pool operator, a commodity trading advisor or an associated person of such entities.

Compass does not have any relationship or arrangement that is material to our advisory business or to our clients that any of our management persons have with any related person listed below:

- Broker-dealer, municipal securities dealer, or government securities dealer or broker,
- Investment company or other pooled investment vehicle (including a mutual fund, closed-end investment company unit investment trust, private investment company or "hedge fund" and offshore fund),
- Other investment adviser or financial planner,
- Futures commission merchant, commodity pool operator, or commodity trading advisor,
- Bank or thrift institution,
- Accountant or accounting firm,
- Lawyer or law firm,
- Insurance company or agency,
- Pension consultant,
- Real estate broker or dealer,
- Sponsor or syndicator of limited partnerships.

Although Compass may recommend other advisors to its clients or advisors that are Compass clients, Compass receives no direct or indirect compensation for such referrals.

Item 11 CODE OF ETHICS, PARTICIPATION OR INTEREST IN CLIENT TRANSACTIONS AND PERSONAL TRADING

In our efforts to ensure that Compass develops and maintains a reputation for integrity and high ethical standards, it is essential not only that Compass and its employees comply with relevant federal and state securities laws, but also that we maintain high standards of personal and professional conduct. Compass' Code of Ethics (the "Code") is designed to help ensure that we conduct our business consistent with these

high standards.

Compass is a fee-only firm, and does not accept commissions. The only compensation we receive is paid directly to us from our clients or vendors where mutual clients access vendor's analytics through our own analytics. We have no exclusive allegiance to any company, product or service and we only execute transactions in accordance with the hedging policies and practices provided in the Compass contracts or as requested by our clients in their hedging policy documents or direct verbal or written request.

The Code is based on the principle that the managing partners, account managers and trade operation employees, or persons having similar status or function ("Access Persons") of Compass, have a fiduciary duty to place the interests of the clients ahead of their own interests. This Code applies to all Access Persons and focuses principally on monitoring and reporting of personal transactions in securities. Access Persons must avoid activities, interests and relationships that might interfere with making decisions in the best interests of the clients. Accordingly, it is Compass policy that Access Persons are not allowed to: i) hold any non-exempt equity positions relating to any Compass client; or ii) personally engage in any financial transactions relating to any Compass client; or iii) hold any direct positions in instruments with which Compass clients mitigate interest rate or credit risk management (collectively "Unacceptable Transactions"). Additionally, Access Persons must obtain pre-approval before they directly or indirectly acquire a beneficial ownership in any security in an initial public offering or limited offering.

Compass will provide a copy of the Code to any client or prospective client upon request.

Item 12 BROKERAGE PRACTICES

Compass receives no compensation or soft dollar consideration from any broker-dealers. Compass will evaluate a client's balance sheet and production in consideration with specific broker-dealer minimum net worth requirements and advise clients accordingly to establish relationships with several broker-dealers of their choosing. Considering best execution on a transaction-by-transaction basis, Compass requests simultaneous quotes from certain of such broker-dealers. Compass then executes hedges on the client's behalf, transacting through the broker with the winning quote. Although clients provide to Compass their chosen broker-dealers, clients may not direct Compass to trade with a particular broker-dealer on a transaction by transaction basis.

Compass executes hedges on behalf of its clients through a limited power of attorney. As such, the counterparty relationship is between the client and the broker-dealer, and Compass is unable to aggregate hedge activity.

Item 13 REVIEW OF ACCOUNTS

Client positions and gain/loss are evaluated every day, often multiple times in the day. A report with gain/loss data is produced across all clients and is reviewed daily by a Compass partner. In the event of outlying performance, a Compass partner will seek clarification on performance and contact the client management as appropriate.

Compass provides the following interactive screens and summary reports, in addition to numerous detailed reports, on a daily basis:

Interactive Screens

Interactive Position: The Interactive Position screen is designed to reflect the current position considering market movement, new trade and allocation activity, daily production assumptions and updated pipeline data as provided by client.

Hedge Selection: The Hedge Selection screen is designed to reflect the current position given available updates. It provides hedge buckets showing detailed bucket-level exposure, and provides interactive trading tools for selecting desired hedges.

Pooling Summary: The Pooling Summary screen organizes loans ready to allocate or sell into best execution buckets. It also provides interactive tools to sell/allocate such loans and define/enter applicable investor commitment information. The screen also allows extracts of investor data feeds.

Position Reconciliation: The Position Reconciliation screen is an interactive tool which provides the necessary details to quickly reconcile the multiple components of position change from one data processing run to the next.

Gain/Loss Reconciliation: The Gain/Loss Reconciliation screen is an interactive tool which provides the necessary details to quickly reconcile the multiple components of gain/loss change from one data processing run to the next.

Command Center: The Command Center screen provides a tool for users to update investor pricing as needed. The screen displays the date/time of the most recent update for each eligible investor and allows the user to pull the most recently-posted pricing on demand.

Loan Execution Detail: The Loan Execution Detail screen provides the user with a detailed view of each eligible pricing method for a given loan along with a status history, current rate shock display and coverage model detail.

Summary Reports

Asset Credit Limits: The Asset Credit Limits report is designed to track both the allowed limits and the current volume with each dealer that has authorized an account.

Daily Summary Change: Displays day over day change in loan volume and hedge volume by Position. The G/L impact of these changes as well as the effect of the previous day's market move can be seen on this report.

Day Manager: Displays day over day change in position and gain/loss for each day in the current month.

G/L Summary by Month: This report summarizes the expected overall Gain/Loss ("G/L") by month for the current month and the months going forward. G/L is pull through weighted and the report is written to easily identify which products are the most profitable. This report also separates the hedging cost from the overall G/L.

Position Overview: The Position Overview report gives Users a detailed view of their entire mortgage pipeline. The report breaks up the pipeline first into different positions (e.g., ARMS, Fixed, etc.), then by type (e.g., Jumbo, Conventional, Government, etc.) and finally by the term (e.g., 3 year, 5 year, 15 year,

30 year, etc.). The report is designed to get an overall view of the exposure that exists, along with the amount of hedging that is present on all the different segments of the mortgage pipeline.

Shock Summary: An overview of the effect a market (rate) move will have on the active (hedged and unallocated) pipeline in terms of risk exposure and Gain/Loss (G/L). This report is used to audit the lender's P&L exposure due to various possible market-moves.

Item 14 CLIENT REFERRALS AND OTHER COMPENSATION

Compass does not currently receive, nor does it provide, compensation in exchange for client referrals. Should Compass choose to engage in advisory client referral arrangements, it will provide appropriate disclosure at such time.

Item 15 CUSTODY

Compass does not have custody of any client funds or securities.

Item 16 INVESTMENT DISCRETION

Compass accepts investment discretion with respect to certain client relationships and receives a limited power of attorney from each such client. Compass works with each such client to define its hedge policy, which governs hedge type, timing and exposure limits.

To the extent mutually agreed upon and communicated in writing, Compass will accept reasonable restrictions imposed by clients with respect to the management of their account(s).

Item 17 VOTING CLIENT SECURITIES

Compass does not have or accept authority to vote client securities.

Item 18 FINANCIAL INFORMATION

Compass does not have custody of client funds or securities, nor does it require or solicit prepayment of fees six months or more in advance.

Compass has never been the subject of a bankruptcy petition.