



Intercontinental Exchange (NYSE: ICE)

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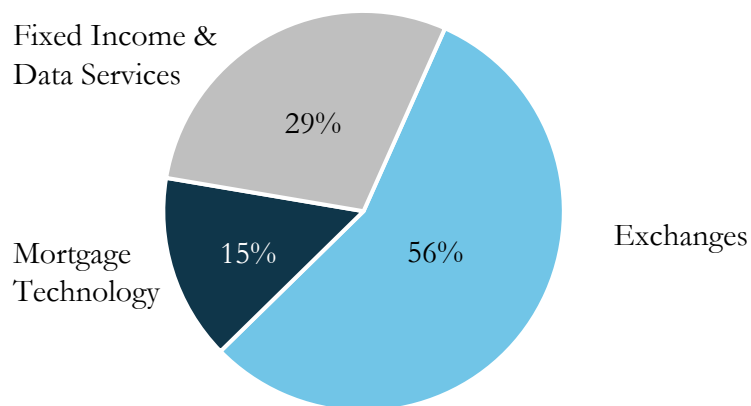
What is The Intercontinental Exchange (ICE)

ICE is a global corporation with powerful assets and a diversified and stable revenue base.

Company Overview

- Intercontinental Exchange (ICE) provides the **technological infrastructure** for the trading, listing, and analysis of a wide variety of financial products
- ICE operates **three** main business segments: Exchanges, Fixed Income & Data Service, and Mortgage Technology
- **Founded in 2000** by Jeffrey Sprecher as a digital exchange to trade energy derivatives, and he has successfully grown the company through **numerous successful acquisitions**
- 2005 IPO, 9000 employees, **operates globally**, particularly in the US, UK, EU, Canada, Singapore, and Abu Dhabi

Revenue Segmentation




51% of 2022 Revenues were **Recurring**

Highlighted Financial Information


Valuation Metrics		Operating Statistics	
Mkt. Cap	\$61.7B	Revenue	\$7.6B
Shares Out.	572.4M	Operating Margins	59%
EV/EBITDA	17.7x	EBITDA	\$4.7B
P/E	18.6x	Debt/EBITDA	4.9x

Segment Description




Exchanges

ICE owns **13 stock exchanges** and **6 clearing houses**, providing a platform to trade options and futures. These generate revenue through **listings and trading fees**.



Fixed Income & Data Services

ICE collects **subscription fees** for their bond analytics and **pricing platforms**. Also has a platform to execute trades.



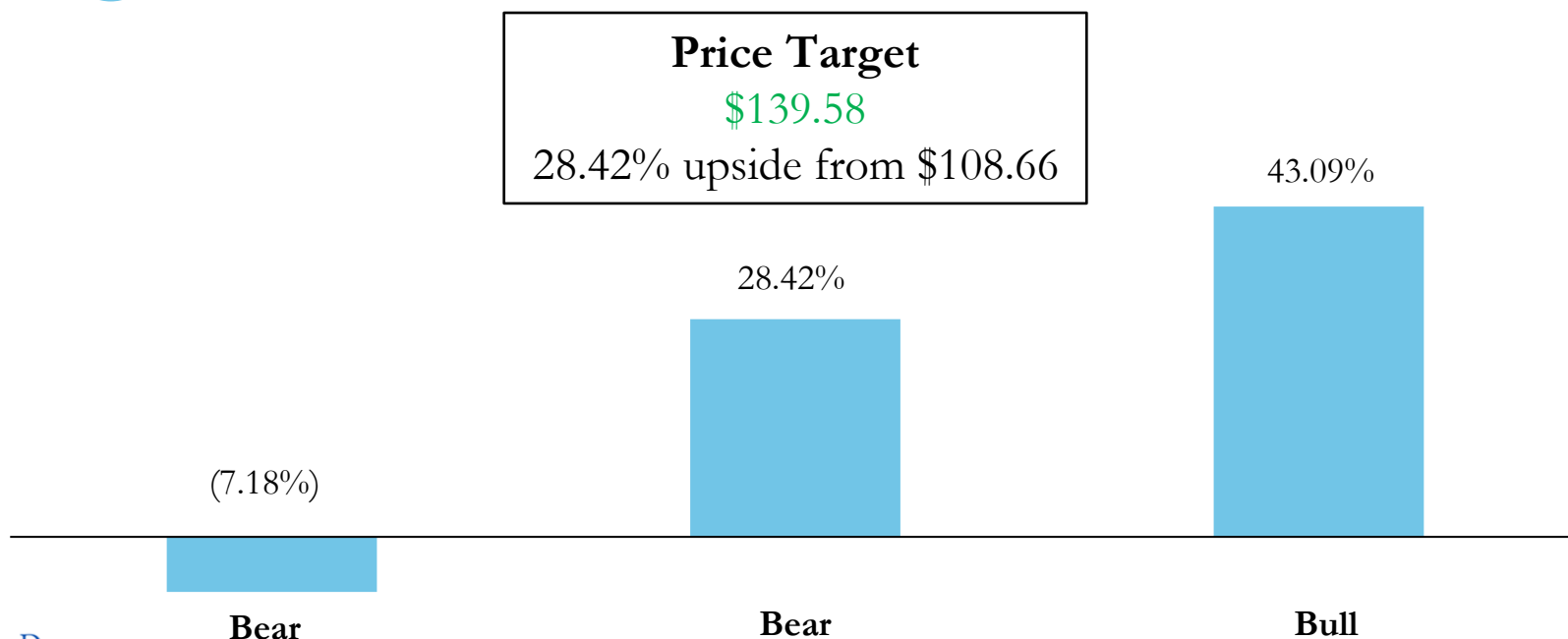
Mortgage Technology

ICE has **digitized** the mortgage acquisition process through their **newly-formed platform**, collecting subscription fees.

A Compelling Value-Add for NDIC

Investment Thesis

- 1 ICE possesses significant competitive advantages in all three of their business segments as well as strong recurring revenues, mitigating any downside risks.
- 2 ICE's recent acquisition of Black Knight is the final component to digitizing the loan origination process, an untapped market with significant growth potential.
- 3 ICE's asymmetric risk-reward profile and historic growth sets them up for success, even during a time of macroeconomic uncertainty.



Investment Thesis



1

ICE possesses significant competitive advantages in all three of their business segments as well as strong recurring revenues, mitigating any downside risks.

NYSE: ICE's Greatest Asset

The New York Stock Exchange is the world's largest stock exchange that generates strong recurring revenues.

What is it?

- The New York Stock Exchange was founded in 1792
- Physical trading floor on Wall Street, but its trading flows through their data center in Mahwah, New Jersey
- A marketplace on which **2,400 stocks** are listed and traded; total market cap of **\$22.649 trillion**
- Over 70% of S&P 500 companies are listed on NYSE
- **Global leader** in ETF AUM Listing (~75%)
- In 2022, listed over \$345 billion from IPO's
- World's most **prestigious and largest** stock exchange

Notable Portfolio Companies



How Does the NYSE Generate Revenues?

Initial Listing Fees (IPO's)



Firms must pay a one-time listing fee of at least \$295,000, and it increases with the number of shares outstanding

Annual Listing Fees



Firms pay a recurring listing fee each year. They pay at least \$74,000, and this rises with more shares outstanding.

Trade Commissions

BUY

SELL

Options

Margin

The NYSE collects a fee for transactions that occur on their exchange, pending on share price, margin, etc.

NYSE vs. NASDAQ: The American Duopoly

The two exchange models are quite different, but NYSE's prestige and efficiency outweighs its higher costs.

What is the NASDAQ?

- Founded in 1971 in New York
- Unlike the NYSE, it does not have a physical trading floor, and it operates fully electronically
- Does not require an independent compensation committee, independent nominating committee, internal audit function, nor corporate governance guidance
- Owns an electronic billboard in Times Square that presents its companies and their products
- Companies tend to be tech-based and growth oriented



One-time and Recurring Fee Structure

75mm Shares Outstanding Example



Initial Listing Fee

\$295,000

Initial Listing Fee

\$360,000

Annual Fee

\$84,000

Annual Fee

\$74,000

Dealer vs. Auction Market

Dealer Market (NASDAQ)

- Market Makers (MM's) display the prices at which it is willing to buy and sell a security (bid-ask spread), which is also their risk control and source of profit
- Traders buy securities from and sell to market makers, not to other individual traders
- Dealers do not receive commissions, but they have all of the rights to buy and sell securities.

Auction Market (NYSE)

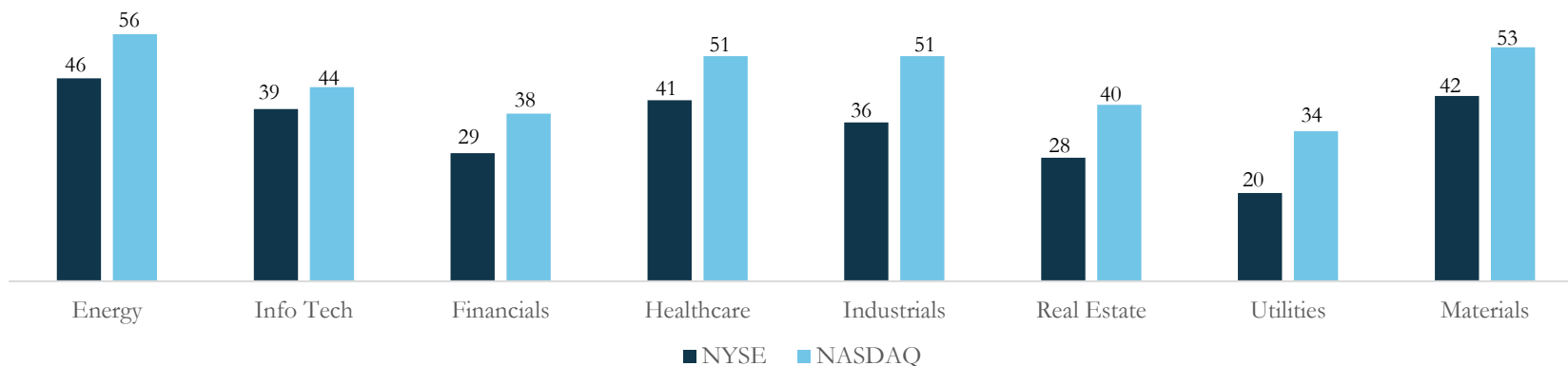
- For each transaction, there is a buyer and a seller, and the broker connects the two players
- Every stock is assigned a designated market maker (DMM) that ensures the market functions smoothly by adjusting opening times and prices
- Brokers receive commissions for transactions, but they don't have the rights to buy or sell securities

NYSE's Efficiency Outpaces the NASDAQ

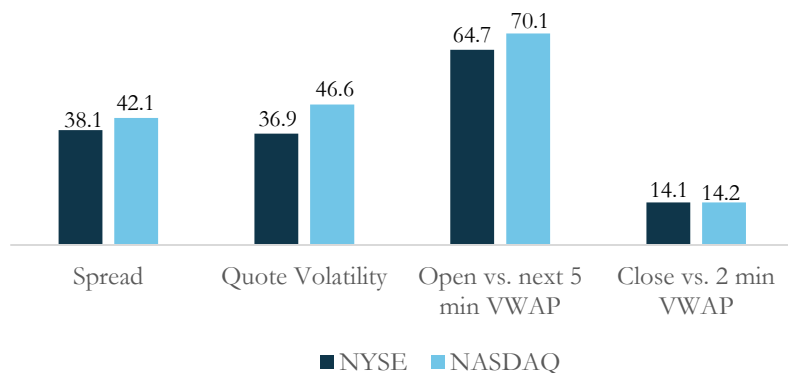
NYSE wins in major statistical categories, even up against NASDAQ's strong technology sector.

Paired 1,356 stocks based off of market cap, sector, average daily volume, and volume-weighted average price

NYSE vs. NASDAQ Quote Volatility in Highlighted Sectors



Selected Statistics



Designated Market Makers

DMM's are required to maintain an orderly market and have regulatory depth and continuity guidelines. Second, they are incentivized to provide liquidity at the National Best Price (NBBO), producing lower quote volatilities.




Higher Quality Technology

NYSE's more advanced technology and data analytics leads to much more accurate open and close auctions.

Who else does ICE Compete with?



ICE's competitors each have their own competitive advantage, but ICE is protected from each of them.

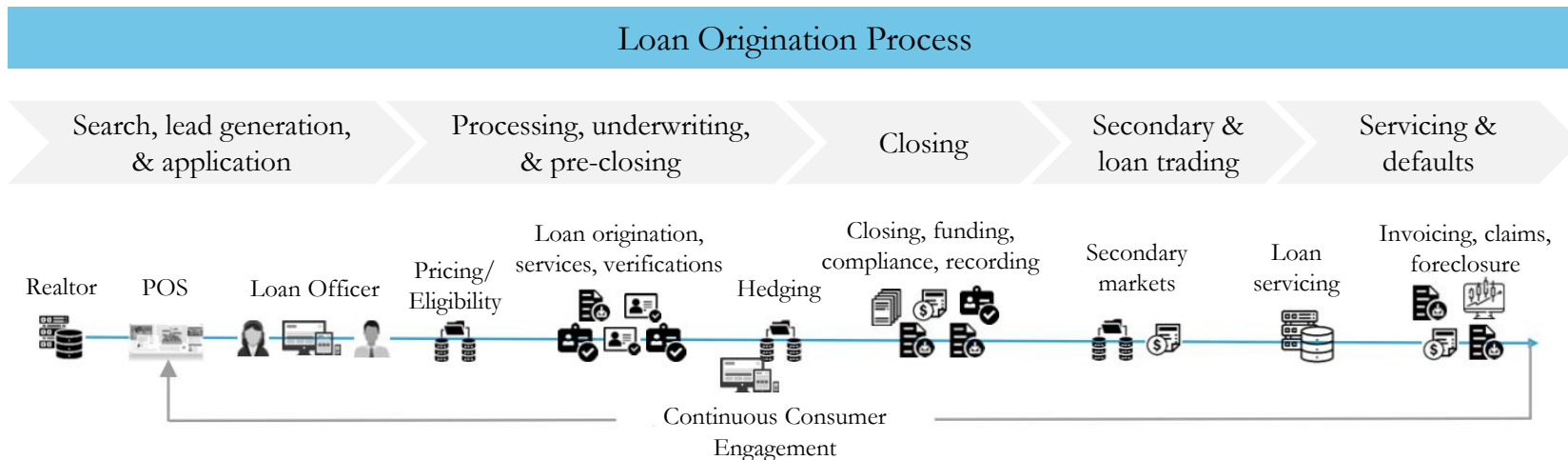
Competitor	Competitive Advantage	How is ICE protected?
 CME Group \$76b Market Cap \$5.3b Revenue	Interest Rate and Agricultural Futures	ICE's Rate Per Contract (RPC) is higher for both Interest Rate and Agricultural Futures
 Tradeweb \$19b Market Cap \$1.2b Revenue	Interest Rate Swaps	ICE Swap Rate is the principal global benchmark for Interest Rate Swaps
 Cboe \$17b Market Cap \$3.8b Revenue	Volatility Index (VIX) and ETF Listings	63.4% of ETFs are listed under the NYSE, compared to the 19.5% listed under CBOE

2

ICE's recent acquisition of Black Knight is the final component to digitizing the mortgage acquisition process, an untapped market with significant growth potential.

Life of a Loan

A loan undergoes a long, inefficient process consisting of many moving parts and different parties.



Loan Origination Inefficiencies

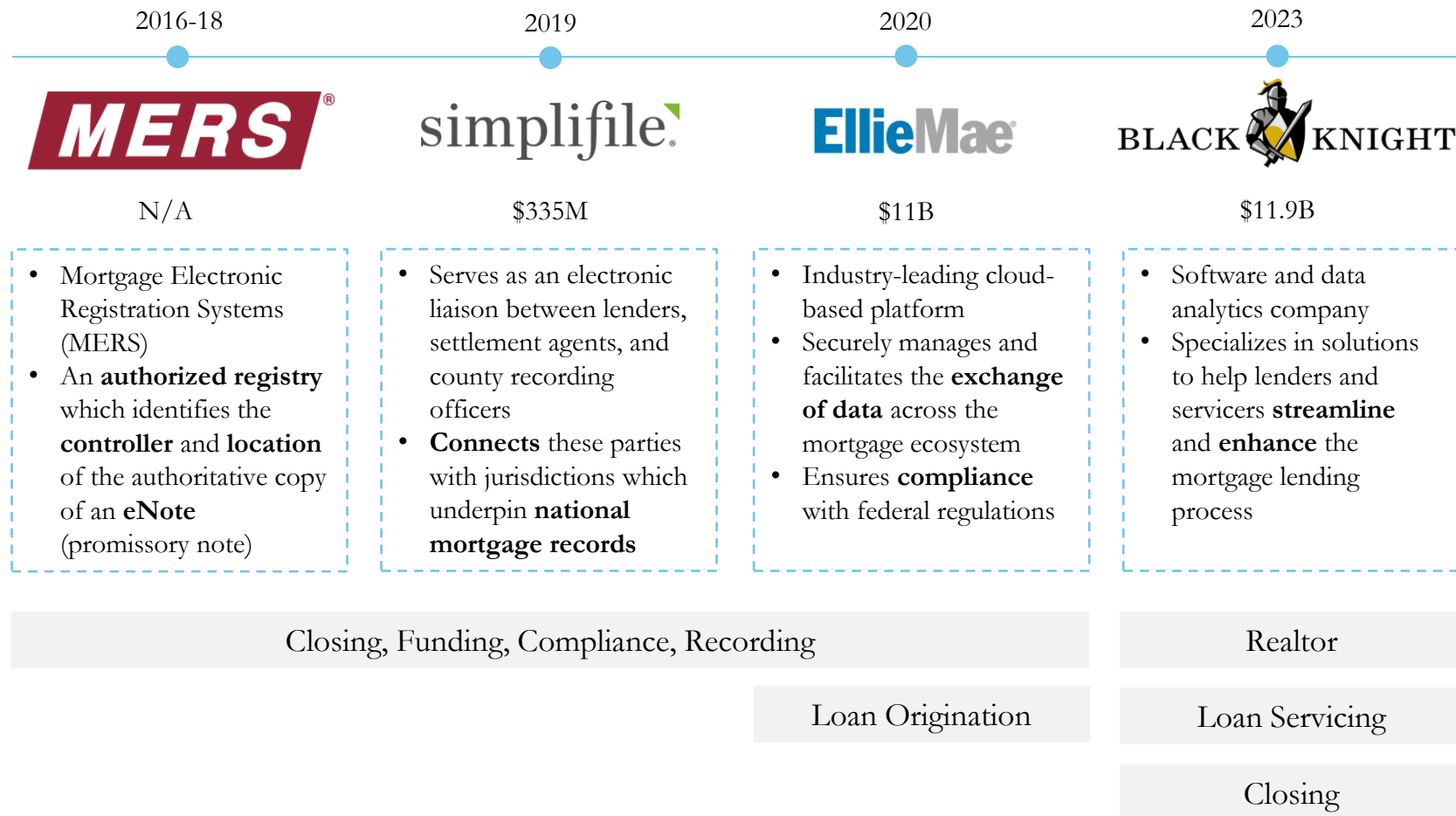
Lengthy Timelines	Cost	Inefficiency & Inaccuracy
<p>Mortgage loan origination typically takes between 45 to 60 days, with additional delays occurring if borrowers fail to meet lender benchmarks</p>	<p>Closing costs for borrowers can be up to 6% of the loan, meaning a \$500,000 loan raises up to \$30,000 in mortgage closing fees alone</p>	<p>Borrowers and lenders are both subject to risk occurring from the lack of accurate data and inefficiencies stemming from the quantity of parties involved within the process</p>

ICE Mortgage Technology's Acquisitions



IMT's investments in the mortgage technology industry look to complete their life-of-loan software.

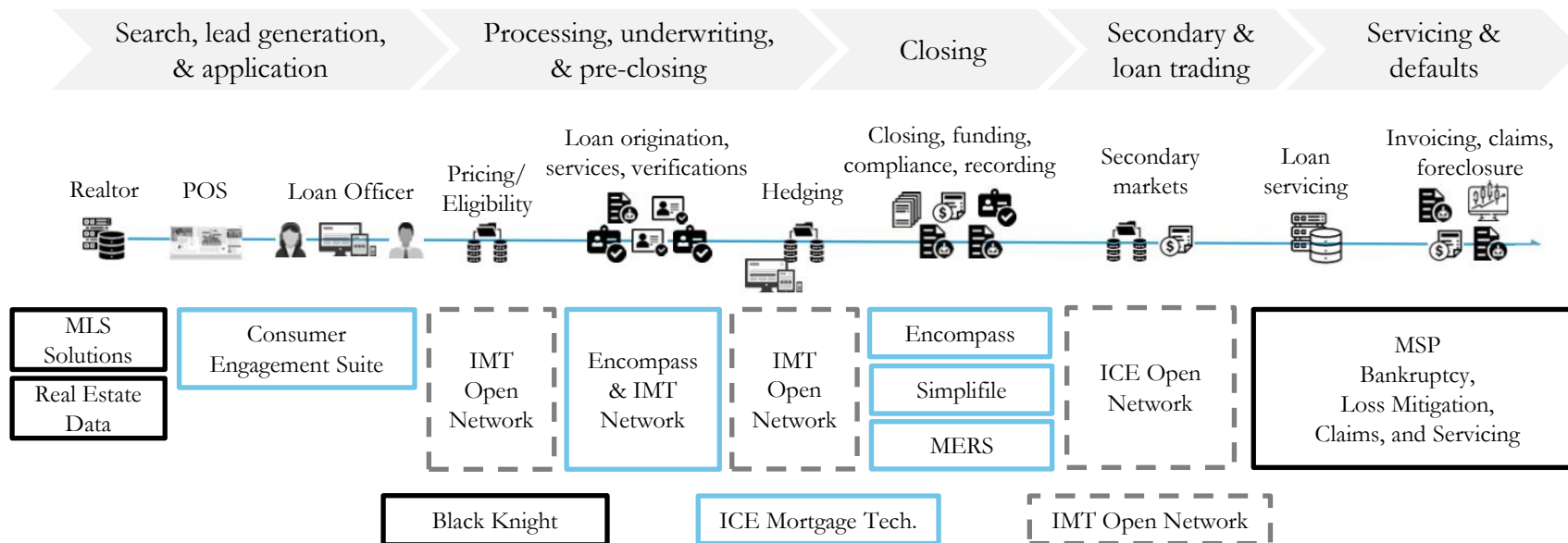
IMT's Acquisition History



ICE's Life of Loan Platform

ICE's recent acquisitions were the remaining puzzle pieces to completing their end-to-end loan platform.

Loan Origination Process



ICE Mortgage Technology's Encompass

- Encompass is ICE's **end-to-end**, single system of record digital lending software
- **Shortens** loan cycle times by **2.4 days** on average
- Increase average gross profit per loan by **\$971.39**
- Causes a **12%** decrease in **compliance** and **processing errors**, saving **\$62** per loan

IMT Open Network

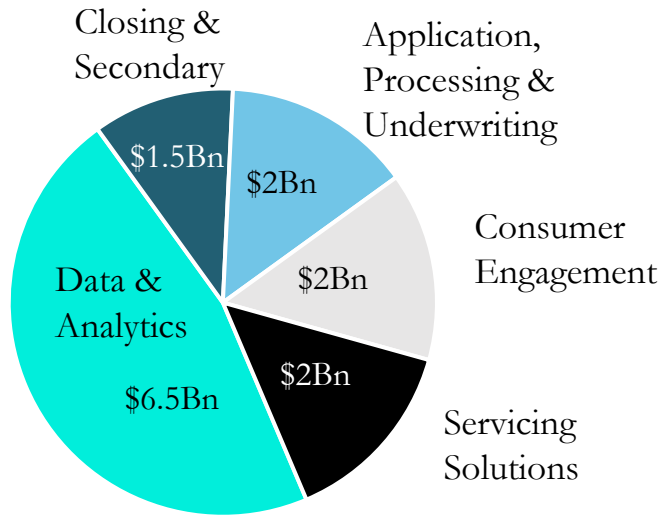
- Integrated network connecting thousands of partners' products and solutions
- Includes solutions from **Optimal Blue**, whose products are fully available to ICE's customers
- Includes outside **developers** and **consultants** dedicated to **maximizing return** on ICE mortgage technology

Unprecedented Room for Growth in a Frozen Market

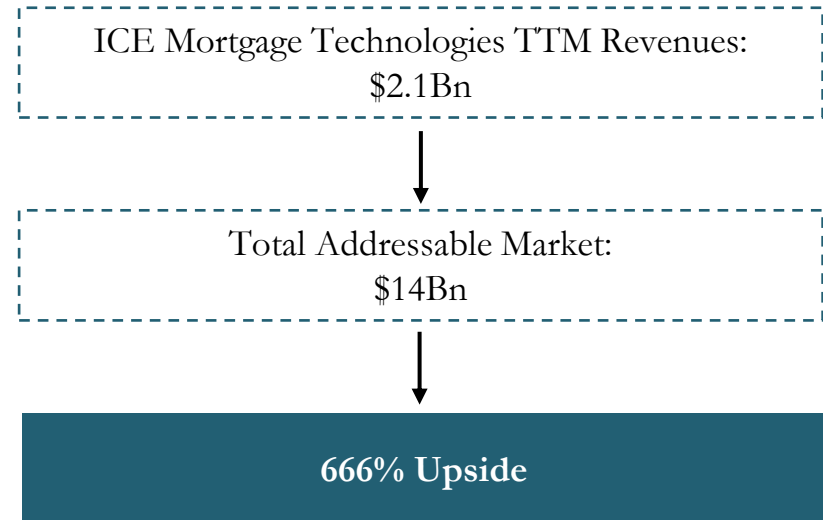


ICE's completed segment provides an amazing product with great growth potential in a quiet market.

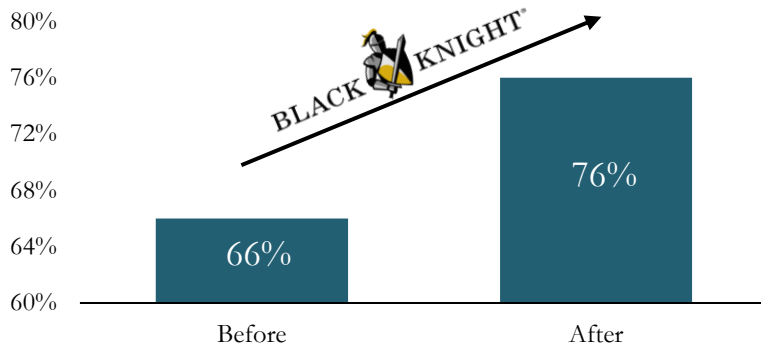
Reaching a Diversified TAM



Impressive Runway for Growth



BKI Grows Mortgage Segment Recurring Revenues



Valuable Asset for American Consumers

	Pre-ICE	IMT
Process Length	60 Days	1-2 Weeks
Cost	\$10,000	\$7,000

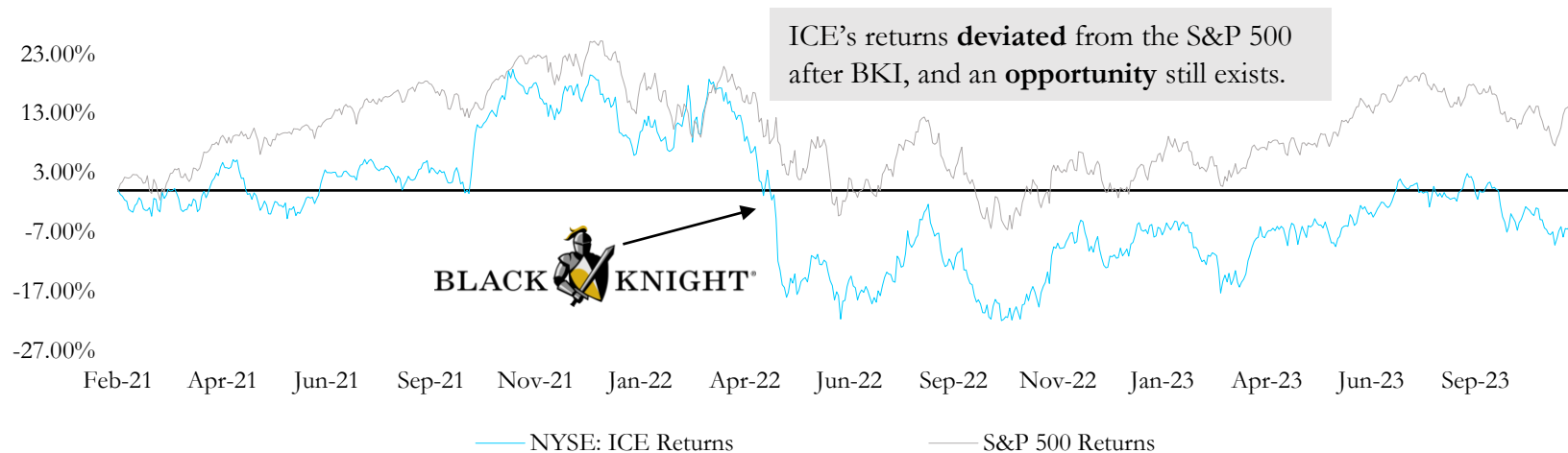
Black Knight: A Controversial Acquisition

ICE's acquisition of BKI resulted in massive FTC scrutiny as well as a depression of the stock price.

Acquisition Timeline



Historical Stock Returns Compared with the S&P 500



Depression Caused by Irrational Fears

Even though investors believed ICE overpaid for BKI, strong accretion and synergies are still attainable.

Concerns of Overpayment, but...

High Expected Synergies by Year 5

- Expected **\$125M** (15% top line) in revenue synergies
- “We see that there's well north of \$300 million worth of opportunities for us to go after that require little to almost **no technology build** to go after.”
- Largely due to **cross-selling** ability on ICE’s platform
- \$200M in cost synergies, \$40M of which **already realized**

Past and Expected Time to Accretion

EllieMae[®]

Immediate

Ellie Mae acquired in 2020; BKI expected to be accretive by the 2nd half of 2024, to accelerate after debt paydown and realization of synergies

BLACK KNIGHT[®]

~9 Months

Is their Life of Loan Platform Complete Post-Divestitures?



- ICE divested Optimal Blue and Empower to Constellation for \$700M
- Market believed this was too cheap, and that these two systems were necessary to complete the Life of Loan Platform



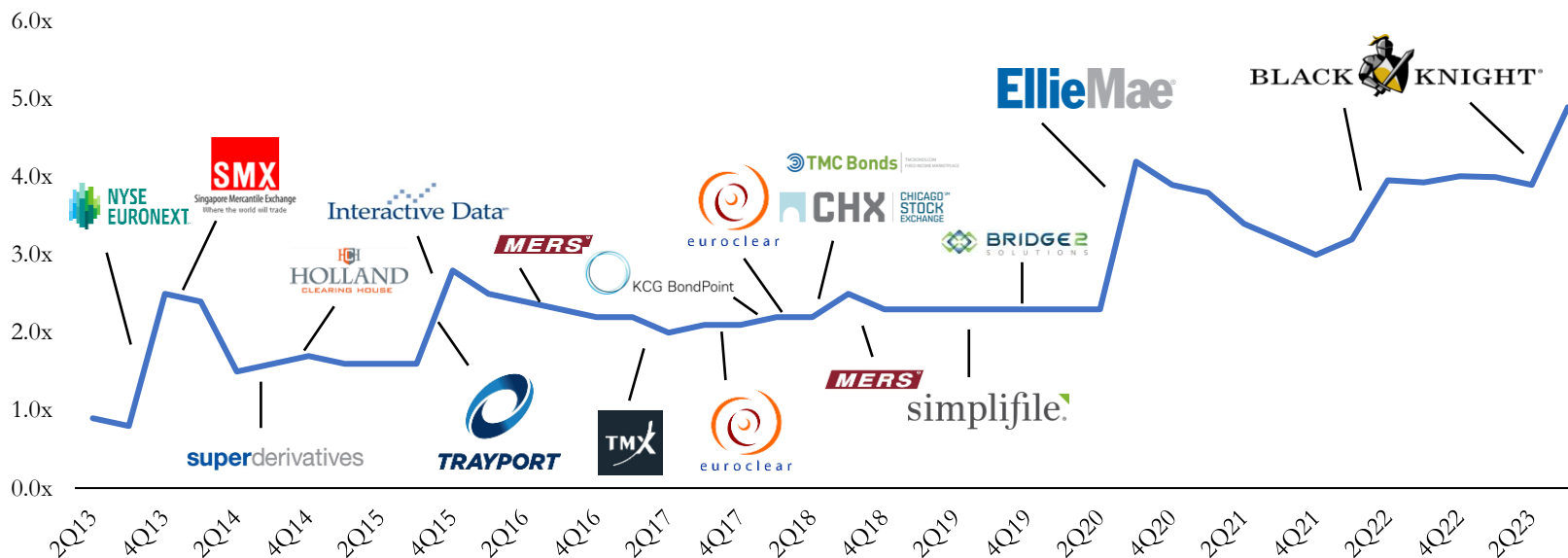
These Two Products Remain on ICE’s Platform Due to Deep Connections

- They are fully available to ICE’s customers on IMT’s Open Network.
- Follows a relationship of nearly 2 decades, as well as a current 10 year agreement. ICE’s customers are the largest consumers of Optimal Blue

Leverage Concerns are Unjustified

ICE's history of rapidly paying down debt eases any investor worries of ICE being overlevered.

Strong History of Deleveraging Following Acquisitions



After Ellie Mae acquisition, ICE went from 4.25x Debt/EBITDA to 3.0X at year-end 2021, much faster than original plan of less than 3.25x by the end of 2022.



- Purchased for \$11.8B; 10% Stock, 90% Cash (~50% Debt)
- Amounts to \$5.5-6B of debt, total debt balance = \$23.3B
- Brought ICE to 4.9x Debt/EBITDA; ICE is targeting 3.25x by 2025, very possible with 51% recurring revenue

Investment Thesis



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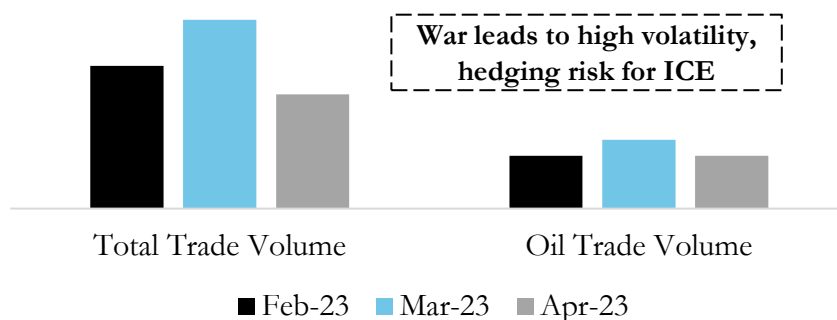
ICE's asymmetric risk-reward profile and historic growth sets them up for success, even during a time of macroeconomic uncertainty.

The ICE Won't Melt

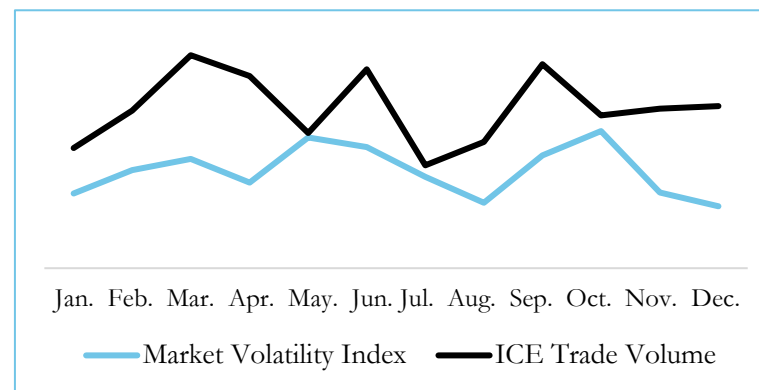
ICE is able to perform under a variety of market and global stresses through its different business segments.

Global Uncertainty

ICE Futures & Options Trade Volume Before, During, and After Start of War in Ukraine

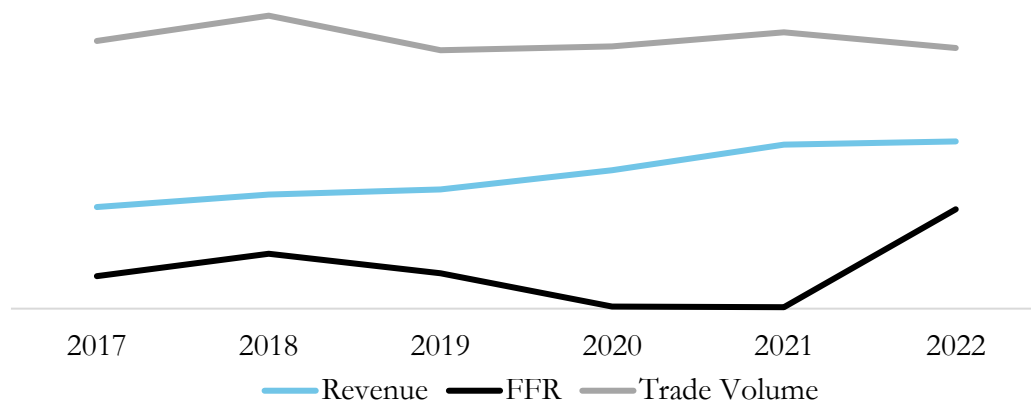


UNCERTAINTY → VOLATILITY → HIGH TRADE VOLUME



Interest Rate Fluctuation

ICE Revenue vs. Fed Funds Rate (FFR)



Interest Rates Increase:

ICE managed to maintain stable revenue growth through rate hikes in recent years via its recurring revenue (51% of total)

Interest Rates Stay High:

Consumers will seek cost-efficiencies created through Black Knight Acquisition

Interest Rates Go Low:

Mortgage market boom, increased IPO listings and exchange revenue

Kevin Heal – Primary Research

Kevin Heal reiterated our investment thesis while explaining ICE’s long-term growth and potential catalysts.

Who is He?



- **Fixed Income strategist**, senior financial services analyst & Chief Compliance Officer at Argus Research
- Multiple **guest appearances** on CNBC
- Covers Intercontinental Exchange

Conversation Highlights

No Reason for Concern over Black Knight

- Life of Loan platform is **complete**
- Strong history of delevering and accretion, market is only concerned by the D/E ratio

Catalysts & Investment Merits

- When the market sees BKI will be **accretive**
- Mortgage rates lower to around **6-6.5%**
- He expects an **IPO boom** in early-middle 2024
- CME, CBOE, & ICE have all attempted to compete in core offerings **unsuccessfully**

Recent Earnings Call

- ICE **beat and raised** expectations for earnings growth, but increased costs created concerns
- Led to a small depression in the share price
- Short-term share fluctuations are not a concern, as ICE is a **long-term play** on the growth of their mortgage business

DCF - Base

ICE delivers on its post-BKI acquisition promises, leading to a promising 28% return.

Terminal Value	
Perpetuity Growth Method	
2028 FCF	\$6,216
Growth	3.00%
Terminal Value	\$105,668
PV of Terminal Value	\$71,235
PV of Projection Period	\$20,913
PV of Terminal Value	\$71,235
Implied TEV	\$92,149
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$71,727
Diluted Shares Outstanding	560
Implied Share Price	\$128.01
Upside/Downside	17.81%

Terminal Value	
Exit Multiple Method	
2028 EBITDA	\$7,343
EV/EBITDA	17x
Terminal Value	\$124,827
PV of Terminal Value	\$84,151
PV of Projection Period	\$20,913
PV of Terminal Value	\$84,151
Implied TEV	\$105,065
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$84,643
Diluted Shares Outstanding	560
Implied Share Price	\$151.07
Upside/Downside	39.03%

Blended Share Price	
Perpetuity Growth Method	50%
Exit Multiple Method	50%
Blended Share Price	\$139.54
Upside/Downside	28.42%

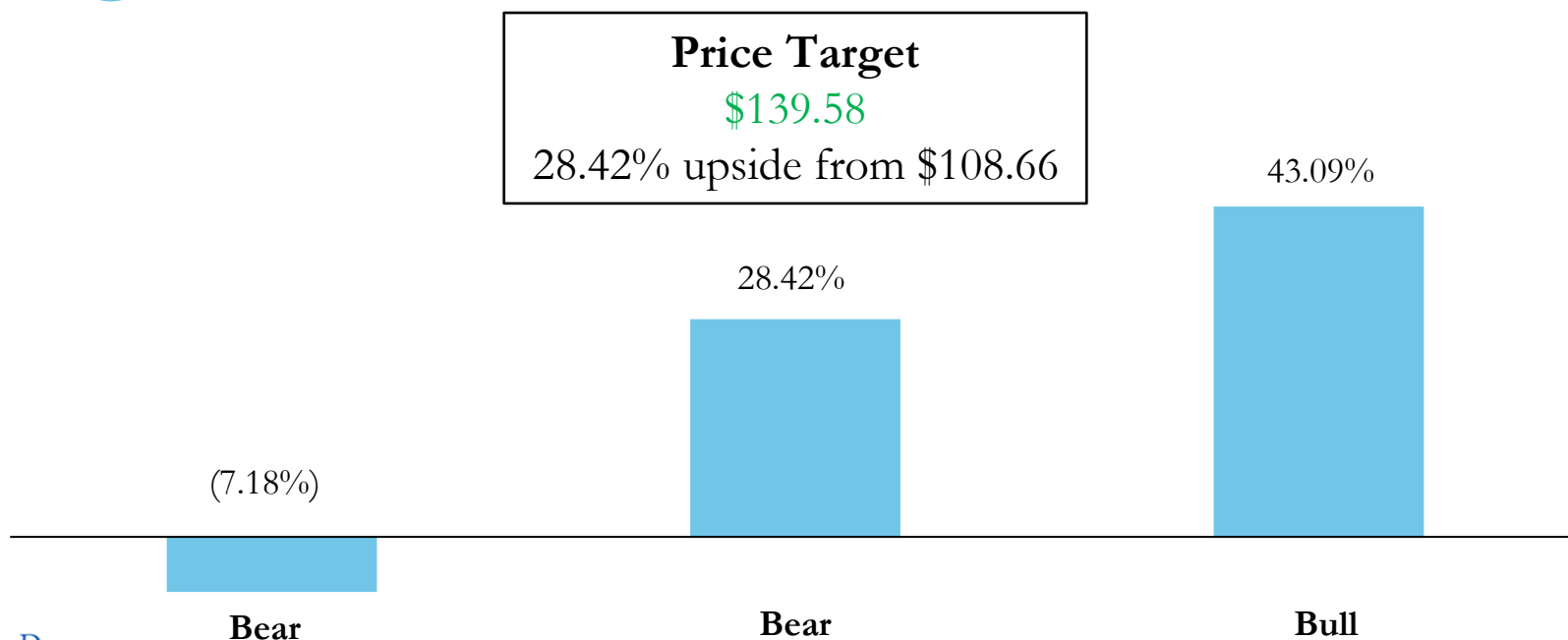
Key Assumptions

- BKI becomes accretive by mid 2024, and ICE delevers to 3.25x Debt/EBITDA by 2025.
- 30 year mortgage rates drop below 6.5% by 2027, driving volume in mortgage originations.
- Paired with an increase in IPOs, driving growth in the exchange segment.

A Compelling Value-Add for NDIC

Investment Thesis

- 1 ICE possesses significant competitive advantages in all three of their business segments as well as strong recurring revenues, mitigating any downside risks.
- 2 ICE's recent acquisition of Black Knight is the final component to digitizing the loan origination process, an untapped market with significant growth potential.
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Appendix

Fixed Income and Data Services – All-Encompassing



ICE's data platform provides individual investors and firms with extensive access to a variety of invaluable data.

ICE's Comprehensive Fixed Income Platform, Offering End-To-End Solutions

Pre-Trade Pricing and Analytics



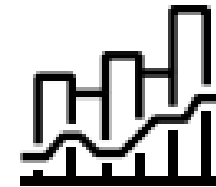
Leading provider of pricing on ~3M securities with reference data on over 35M securities.

Trading



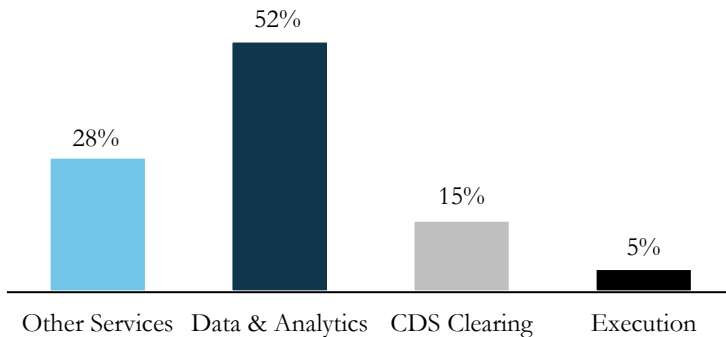
Through ICE Bonds, they support click-to-trade across all major fixed income asset classes.

Post-Trade Analysis



Over 90% of all CDS volume cleared by ICE, and they also offer a best execution service for all trades.

Revenue Segmentation



81% of 2022 Revenues were Recurring

Additional Services Offered

Sustainable Finance & ESG Indices

ICE launched a new asset class called a Natural Asset Company (NAC) on the NYSE. Also, over \$18B tons in carbon allowances were traded ~ half the world's emissions.

Indices and Much More

ICE indices benchmark over \$1.8T in AUM, and their data services help firms with regulation compliance and analytics.

Motivated Management With a Track Record of Success



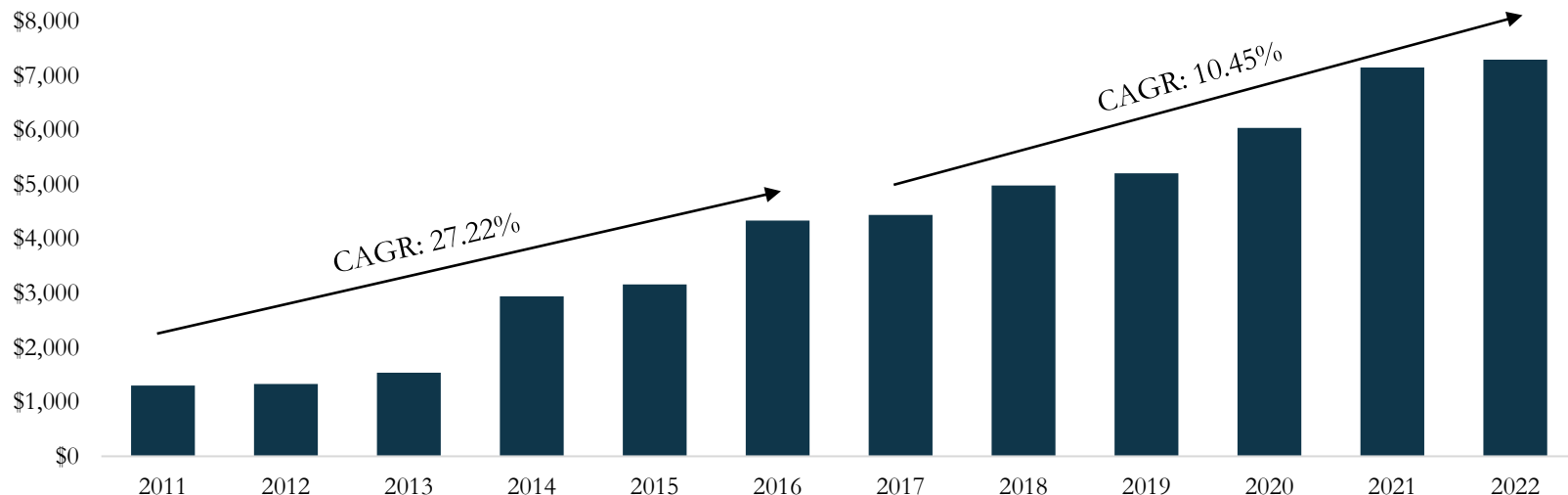
Sprecher is a highly acclaimed and motivated CEO, accredited with ICE's rapid rise to success and profitability.

Jeffrey T. Sprecher: ICE's Successful Founder and CEO



- Founded ICE in 2000 as a digital exchange to trade derivatives
- He is often credited for “seeing around corners” in anticipating the explosion of cryptocurrency as well as the globalization of natural gas and the following trading
- “It’s just hard to appreciate what’s possible in a company like this when the founder reinvests capital at attractive rates for a very long time.” (Ruane, Cunniff, Goldfarb)
- Sprecher has no wife or kids, and ICE is his ultimate motivation and legacy
- One of Barron’s top CEO’s for the past consecutive 6 years

Driving a Runway of Steady Top Line Revenue Growth (\$mm)



Cybersecurity Risks and Mitigations



ICE has created tactical policies and formed strategic partnerships to mitigate exposure to cyber attacks.

Cybersecurity Risks



- Cyber attacks pose a significant threat to all of ICE's business segments
- The US has suffered far more data breaches than any other country, both in quantity and in magnitude
- ICE's wealth of data would be the likely target of any possible attacks
- Cybersecurity risks are a large inhibitor of future growth in the loan origination software industry



Mitigations

- The introduction and progression of artificial intelligence, machine learning, and the **blockchain** will further secure data
- ICE **regularly** conducts **third-party reviews** in penetration testing, vulnerability scanning, and ethical hacking
- ICE keeps their data security defenses **private** from the public
- **Transparency** with customers about cyber attacks is **ensured** by SEC regulations



ICE Collaborates With...



- Financial Services Information Sharing Analysis Center (US)
- Shares critical cyber intelligence among its **22,000** active users who represent **\$100 trillion** in assets



- Analysis and Resiliency Center (US)
- Coalition that **identifies, prioritizes, and mitigates** systemic cybersecurity risks in financial services firms

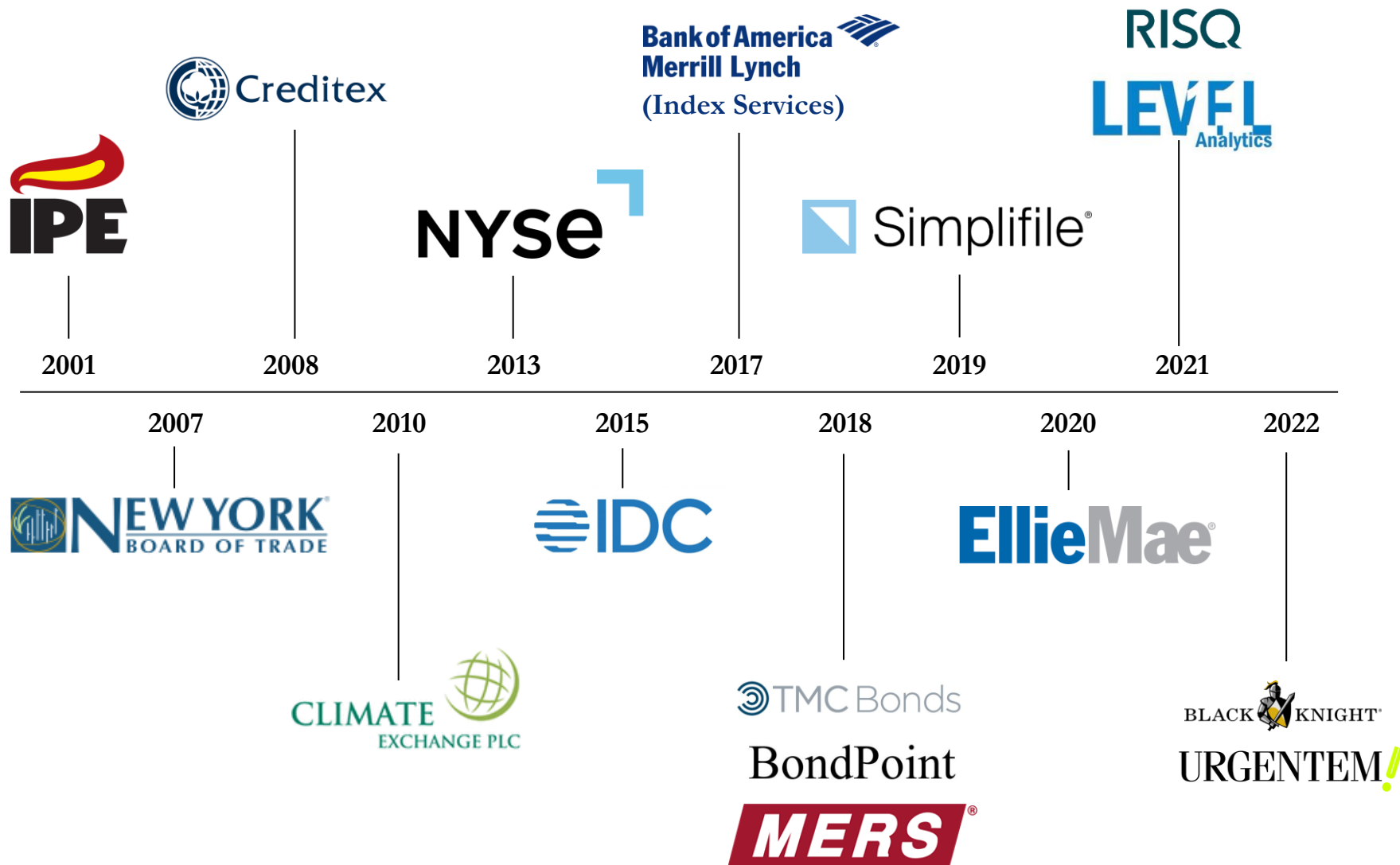


National Cyber Security Centre

- Financial Sector Cyber Collaboration Center (UK)
- Partnership which **identifies, investigates, and coordinates** responses to incidents that have consequences for the financial sector

Acquisition History

ICE has a history of growth through successfully integrated acquisitions.



Acquisition Information



ICE's past acquisitions have a range of valuations, but are centered in their core business offerings.

<p>\$513mm</p>	<p>\$11b</p>	<p>undisclosed</p>	<p>\$686mm, undisclosed, \$400mm</p>
<p>Leader in executing and processing CDS</p>	<p>Leading cloud-based software for processing mortgage applications</p>	<p>A family of fixed income volatility indices, including “MOVE” index</p>	<p>Premier fixed income marketplace, electronic registry for mortgages, leader in fixed income trading solutions</p>
<p>\$604mm</p>	<p>\$1b</p>	<p>undisclosed</p>	<p>\$335mm</p>
<p>Leader in the traded emissions market</p>	<p>Soft commodity exchange (coffee, sugar, etc)</p>	<p>Data-driven technologies for managing climate change risk</p>	<p>Biggest liaison for residential mortgage transactions</p>
<p>\$68mm</p>	<p>\$11.9b, undisclosed</p>	<p>\$8.2b</p>	<p>\$5.2b</p>
<p>Exchange that trades oil futures and other energy contracts</p>	<p>Mortgage analytics company, global corporate emission and climate transition data provider</p>	<p>Premier US-based exchange</p>	<p>Leading provider of financial market data and analytics</p>

What does ICE do?

ICE offers a wide range of trading products as well as cutting-edge data analytic solutions.

1

Exchanges

Product Offerings

- Energy Futures & Options
- Financial Futures & Options
- Listings
- OTC
- Agricultural & Metals Futures & Options
- Cash Equities & Equity Options
- Data & Connectivity Services

2

Fixed Income & Data Services

Product Offerings

- Fixed Income Data & Analytics
- Other Data & Network Services
- CDS Clearing
- Fixed Income Execution

3

Mortgage Technology

Product Offerings

- Originations Technology
- Data & Analytics
- Closing Solutions

Services Description



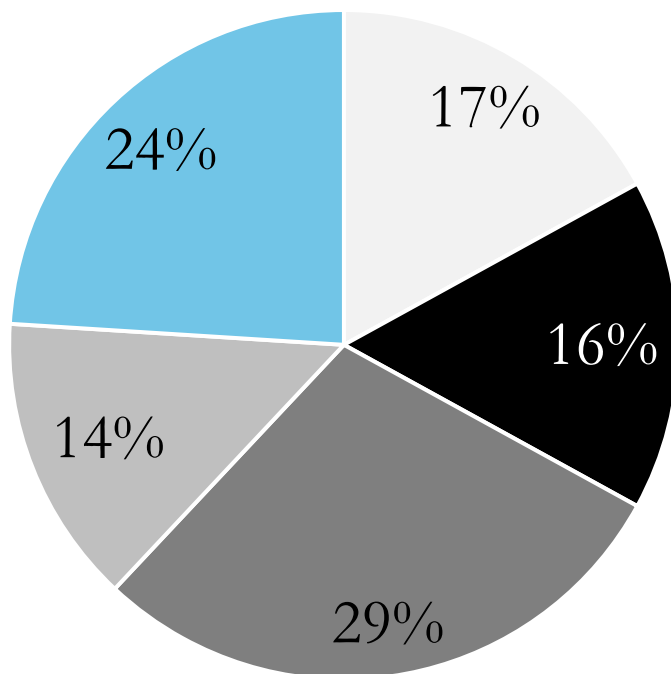
ICE offers a wide range of trading products as well as cutting-edge data analytic solutions.

Energy Futures & Options	Contracts that obligate delivery of oil, natural gas, etc at a pre-determined price.	Fixed Income Data & Analytics	Leading provider of end-of-day and real-time pricing services for 3 million fixed income securities spanning 150 countries.
Agricultural & Metals Futures & Options	Contracts that obligate delivery of soft commodities and metals at a pre-determined price.	Other Data & Network Services	ICE offers a secure instant messaging system as well as secure, low latency connectivity solutions for over 150 trading venues.
Cash Equities & Equity Options	Trading services for common stock and call options and put options.	CDS Clearing	ICE provides clearing services for over 90% of the global Credit Default Swap (CDS) market.
Financial Futures & Options	Trading services for contracts that speculate on the future prices of stocks, currencies, and interest rates.	Originations Technology	Automated technology for the gathering, reviewing, and verifying of information related to mortgages.
Listings	ICE provides a location for companies to issue shares.	Closing Solutions	ICE connects lenders, title and settlement agents, and individual county recorders, digitizing the closing and recording process.
OTC	ICE also provides OTC electronic trading for natural gas, power, and refined oil contracts.	Data & Analytics	ICE provides industry peer benchmarking tools as well as analytics on the real-time trends of the US residential mortgage market.
Data & Connectivity Services	Real-time and historical pricing data and transaction information related to the futures markets and exchanges ICE owns.	Fixed Income Execution	ICE provides a range of tools that help customers trade bonds more efficiently.

Diversified Recurring and Transaction Revenue

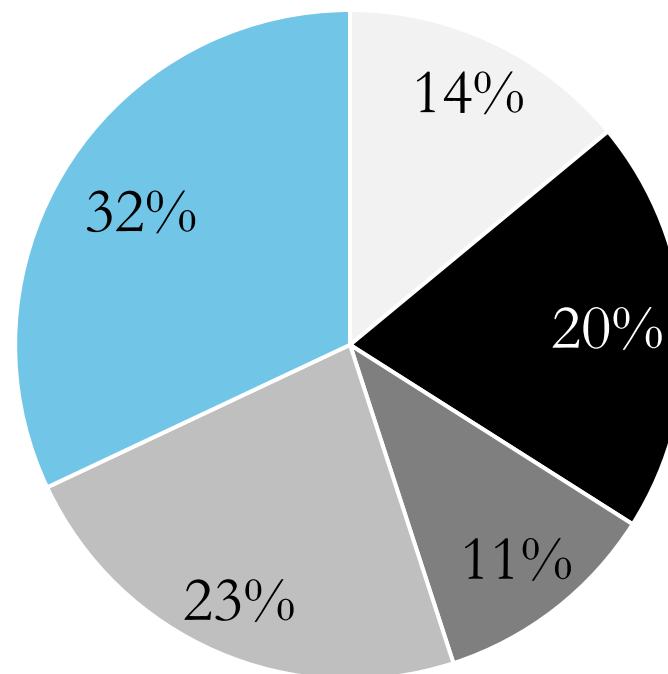
ICE has diversified revenue streams that are both recurring and transaction based.

2022 Recurring Revenue



- Mortgage Technology
- Other Data Network Services
- Fixed Income Data & Analytics
- Listings
- Exchange Data and Connectivity Services

2022 Transaction Revenue

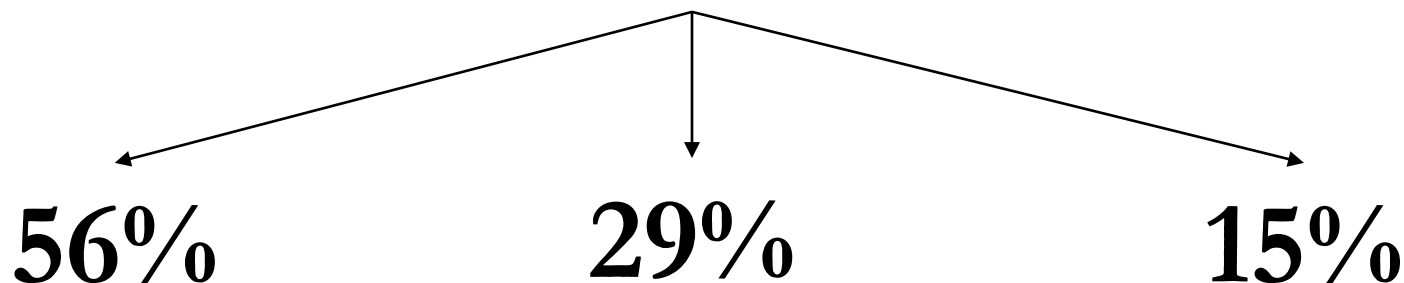


- Mortgage Technology
- Agricultural and Financial Futures
- Cash Equities & Options
- Fixed Income, CDS Clearing, OTC & Other
- Energy Futures

How does ICE make money?

ICE's revenue is diversified among its three business segments, and over half of total revenues are recurring.

Revenue Breakdown

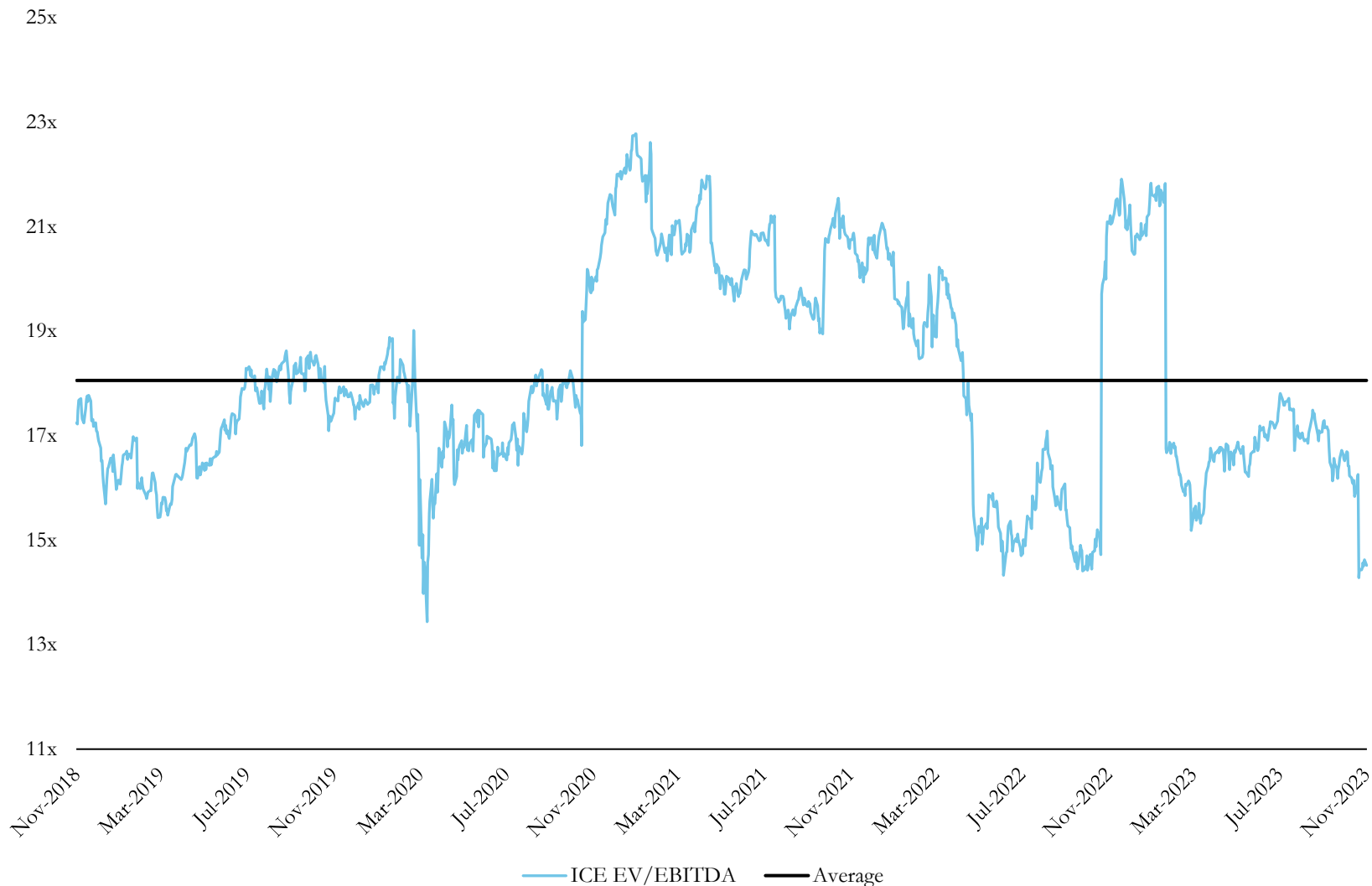


Exchanges	Fixed Income & Data Services	Mortgage Technology
Trading Fees	Subscription Fees	Subscription Fees
Listings Fees	Execution Fees	Transaction Fees

51% Recurring Revenues in 2022

Historical EV/EBITDA Multiple

ICE is currently trading well below its 5 year average multiple of 18x.



Comparable Companies

ICE trades at an attractive valuation when compared to its closest competitors

Company	Ticker	Market Cap (\$bn)	Enterprise Value (\$bn)	EBITDA Margin	EBITDA Margin (NTM)	EV/EBITDA (LTM)	EV/EBITDA (NTM)	EV/Revenue (LTM)	EV Revenue (NTM)	P/E
CME Group	CME	\$75.10	\$76.59	67.20%	68.80%	19.5x	19.6x	14.3x	13.4x	24.9x
Nasdaq	NDAQ	\$28.98	\$33.70	33.80%	55.20%	15.7x	15.8x	5.6x	8.7x	22.5x
CBOE Global Markets	CBOE	\$17.89	\$19.12	30.90%	62.70%	15.4x	15.1x	5.0x	9.5x	25.5x
S&P Global	SPGI	\$121.30	\$135.38	45.10%	47.80%	23.8x	21.7x	11.0x	10.4x	49.6x
Tradeweb Markets	TW	\$19.46	\$17.99	51.50%	53%	27.7x	23.6x	14.3x	12.5x	53.5x
MarketAxess Holdings	MKTX	\$8.34	\$7.91	51%	52.90%	20.3x	18.4x	10.8x	9.7x	33.4x
Moody's Corporation	MCO	\$60.65	\$66.28	42.80%	45.60%	25.7x	22.9x	11.6x	10.4x	40.3x
MSCI	MSCI	\$39.37	\$43.10	58.30%	59.10%	30.0x	26.7x	17.8x	15.8x	41.5x
Deutsche Börse	DBI	\$31.27	\$40.94	45.10%	58.40%	14.1x	11.6x	6.5x	6.8x	17.4x

Intercontinental Exchange	ICE	\$61.76	\$84.59	62.20%	64.60%	14.4x	14.6x	11.2x	9.4x	25.0x
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Low	\$8.34	\$7.91	30.90%	45.60%	14.1x	11.6x	5.0x	6.8x	17.4x
25th Percentile	\$19.07	\$18.83	40.55%	51.63%	15.2x	15.0x	6.3x	9.2x	24.3x
Median	\$35.32	\$42.02	48.05%	56.80%	19.9x	19.0x	11.1x	10.0x	29.5x
Mean	\$46.41	\$52.56	48.79%	56.81%	20.7x	19.0x	10.8x	10.7x	33.4x
75th Percentile	\$65.10	\$78.59	59.28%	63.18%	26.2x	23.0x	14.3x	12.7x	43.5x
High	\$121.30	\$135.38	67.20%	68.80%	30.0x	26.7x	17.8x	15.8x	53.5x

Case 1: 25th Percentile	
Implied Multiple	15.2x
LTM EBITDA	\$4,696
Enterprise Value	\$71,379.20
Less: Debt	(\$23,299)
Plus: Cash	\$2,877
Equity Value	\$50,957.20
Diluted Shares Outstanding	560.3
Implied Share Price	\$90.95
<i>Upside/Downside</i>	<i>(16.3%)</i>

Case 2: Mean	
Implied Multiple	20.3x
LTM EBITDA	\$4,696
Enterprise Value	\$95,328.80
Less: Debt	(\$23,299)
Plus: Cash	\$2,877
Equity Value	\$74,906.80
Diluted Shares Outstanding	560.3
Implied Share Price	\$133.69
<i>Upside/Downside</i>	<i>23.0%</i>

Case 3: 75th Percentile	
Implied Multiple	26.2x
LTM EBITDA	\$4,696
Enterprise Value	\$123,035.20
Less: Debt	(\$23,299)
Plus: Cash	\$2,877
Equity Value	\$102,613.20
Diluted Shares Outstanding	560.3
Implied Share Price	\$183.14
<i>Upside/Downside</i>	<i>68.5%</i>

DCF - Bull



Terminal Value	
Perpetuity Growth Method	
2028 FCF	\$6,846
Growth	3.00%
Terminal Value	\$116,368
PV of Terminal Value	\$78,449
PV of Projection Period	\$22,369
PV of Terminal Value	\$78,449
Implied TEV	\$100,818
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$80,396
Diluted Shares Outstanding	560
Implied Share Price	\$143.49
Upside/Downside	32.05%

Terminal Value	
Exit Multiple Method	
2028 EBITDA	\$8,018
EV/EBITDA	17x
Terminal Value	\$136,307
PV of Terminal Value	\$91,891
PV of Projection Period	\$22,369
PV of Terminal Value	\$91,891
Implied TEV	\$114,260
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$93,838
Diluted Shares Outstanding	560
Implied Share Price	\$167.48
Upside/Downside	54.13%

Blended Share Price	
Perpetuity Growth Method	50%
Exit Multiple Method	50%
Blended Share Price	\$155.48
Upside/Downside	43.09%

Key Assumptions

- The Black Knight acquisition is quickly accretive.
- Interest and mortgage rates drop, driving booms in the economy and housing industry.
- Furthermore, ICE delevers to 3x DEBT/EBITDA by 2025.

DCF - Bear

Terminal Value	
Perpetuity Growth Method	
2028 FCF	\$4,720
Growth	3.00%
Terminal Value	\$80,227
PV of Terminal Value	\$54,085
PV of Projection Period	\$16,752
PV of Terminal Value	\$54,085
Implied TEV	\$70,837
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$50,415
Diluted Shares Outstanding	560
Implied Share Price	\$89.98
Upside/Downside	-17.19%

Terminal Value	
Exit Multiple Method	
2028 EBITDA	\$5,783
EV/EBITDA	17x
Terminal Value	\$98,312
PV of Terminal Value	\$66,277
PV of Projection Period	\$16,752
PV of Terminal Value	\$66,277
Implied TEV	\$83,029
(-) Debt	\$23,299
(+) Cash	\$2,877
Implied Equity Value	\$62,607
Diluted Shares Outstanding	560
Implied Share Price	\$111.74
Upside/Downside	2.83%

Blended Share Price	
Perpetuity Growth Method	50%
Exit Multiple Method	50%
Blended Share Price	\$100.86
Upside/Downside	-7.18%

Key Assumptions

- Ice fails to delever to 3.25x Debt/EBITDA until 2028, and BKI takes multiple years to become accretive.
- Mortgage rates remain high through 2028, leaving ICE's mortgage technology in a cramped market.
- Lack of market volatility leads to lower-than-expected exchange revenue growth.

Revenue Build



Revenue Segmentation

Total Revenue	4979.00	5202.00	6036.00	7146.00	7292.00	7363.00					
Exchanges Revenue	4573.00	4652.00	5839.00	5878.00	6415.00	7056.50					
<i>Growth YOY</i>		1.7%	25.5%	0.7%	9.1%	10.0%					
Base							6.5%	6.5%	6.5%	6.5%	6.5%
Bull							8.5%	8.5%	8.5%	8.5%	8.5%
Bear							2.5%	2.5%	2.5%	2.5%	2.5%
Fixed Income & Analytics	1681.00	1756.00	1810.00	1883.00	2092.00	2301.20					
<i>Growth YOY</i>		4.5%	3.1%	4.0%	11.1%	10.0%					
Base							7.2%	7.2%	7.2%	7.2%	7.2%
Bull							7.5%	7.5%	7.5%	7.5%	7.5%
Bear							6.0%	6.0%	6.0%	6.0%	6.0%
Mortgage	22.00	139.00	595.00	1407.00	1129.00	1241.90					
<i>Growth YOY</i>		531.8%	328.1%	136.5%	-19.8%	10.0%					
Base							15.0%	6.0%	7.0%	8.0%	9.0%
Bull							17.0%	8.0%	10.0%	11.0%	12.0%
Bear							9.5%	1.5%	1.5%	1.5%	1.5%
Section 31	(357.00)	(379.00)	(622.00)	(248.00)	(499.00)	(548.90)					
<i>Growth YOY</i>		6.2%	64.1%	-60.1%	101.2%	10.0%					
<i>% of Exchange Revenue</i>		-8.1%	-10.7%	-4.2%	-7.8%	10.0%					
Base							-7.0%	-7.0%	-7.0%	-7.0%	-7.0%
Bull							-6.7%	-6.7%	-6.7%	-6.7%	-6.7%
Bear							-11.3%	-11.3%	-11.3%	-11.3%	-11.3%
Cash Liquidity Payments	(940.00)	(966.00)	(1586.00)	(1774.00)	(1845.00)	(2029.50)					
<i>Growth YOY</i>		2.8%	64.2%	11.9%	4.0%	10.0%					
<i>% of Revenue</i>		-20.8%	-27.2%	-30.2%	-28.8%	-28.8%					
Base							6.5%	6.5%	6.5%	6.5%	6.5%
Bull							8.5%	8.5%	8.5%	8.5%	8.5%
Bear							3.5%	3.5%	3.5%	3.5%	3.5%

Weighted Average Cost of Capital



Weighted Average Cost of Capital (\$mm)	
Market Risk Premium	5.50%
Beta	0.99
Risk Free Rate	5.30%
Cost of Equity	10.75%
Weighted Average Cost of Debt	5.20%
Tax Rate	24%
Cost of Debt	3.95%
Total Equity	\$61,695
Total Debt	\$23,299
Equity/Total Capitalization	72.59%
Debt/Total Capitalization	27.41%
WACC	8.88%