

Global Markets

Jim Esposito and Ashok Varadhan

January 29, 2020



What Drives Our Success

Our ambition is to have the preeminent Global Markets client franchise with industry leading returns

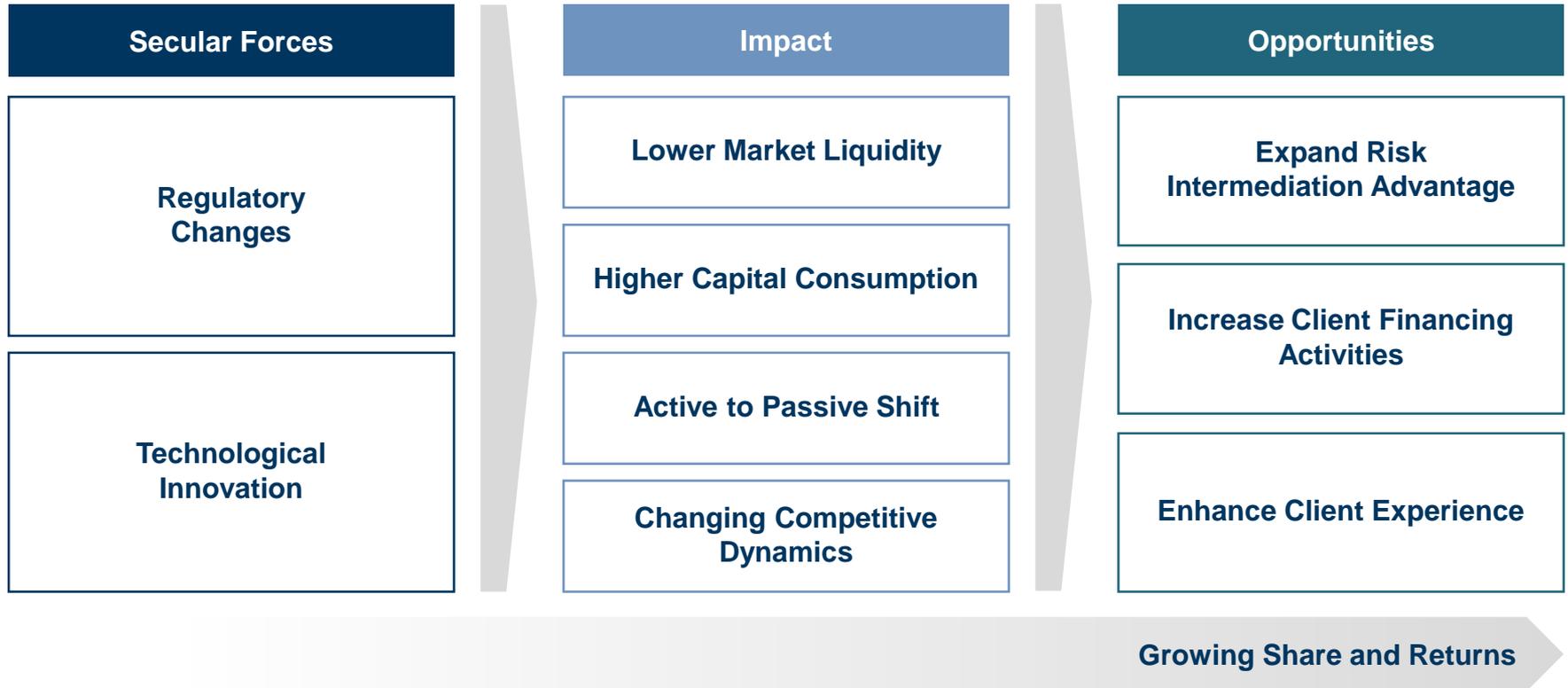
We are one of three market franchises with deep and consistent global scale across both FICC and Equities

- ✓ #2 in Institutional Client Franchise¹
- ✓ #3 in reported revenues

Exceptional and experienced talent enables:

- ✓ Global and deep client relationships
- ✓ Superior risk intermediation
- ✓ Scalable, client-centric technology platforms

Global Markets Opportunities Arising from Secular Change



Adapting, Evolving, Improving

Historical Business Model

Business selection guided by measuring returns on a per trade basis

Skewed focus towards a portion of a client's risk intermediation wallet

Concentrated on servicing the most complicated needs of sophisticated clients

Limited client access to our market leading risk analytics and pricing tools used by our own traders (e.g. SecDb)



New Business Model

Build holistic, long-term client relationships by adopting a portfolio approach to generating higher returns

Grow our financing capabilities across FICC and Equities

Pair bespoke derivative intermediation with cash and electronic capabilities

Goldman Sachs Marquee



Disciplined Response to Change Drives Top 3 Ranking

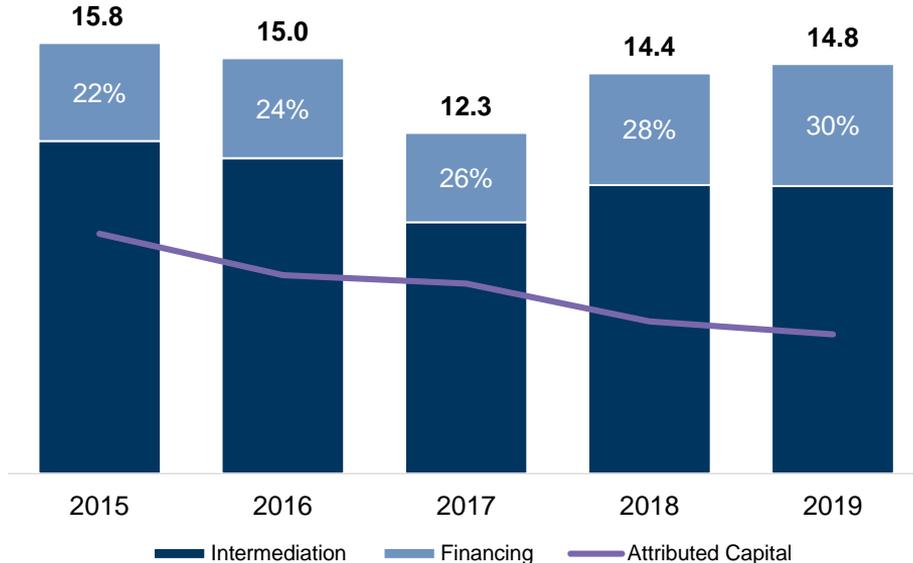
Global Markets Revenues (\$bn)

Reduction in firmwide market risk RWAs¹ (2019 vs. 2015)

-40%

Reduction in attributed capital (2019 vs. 2015)

-20%



Competitive Landscape

	Rank	2019E Revenues (\$bn) ²
J.P.Morgan	1	18.3
citi	2	15.4
Goldman Sachs	3	14.8
Morgan Stanley	4	13.7
Bank of America	5	12.9
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BARCLAYS	6	6.4
CREDIT SUISSE	7	6.2
BNP PARIBAS	8	6.0
Deutsche Bank	9	5.9
UBS	10	5.0

Action Plan



Optimize Resource Consumption

Reduce Operating Expenses

Optimize Funding

Deliver Capital Efficiencies

Progress since 2015

-\$300mm

Reduction in expenses
excl. litigation

-\$200mm

2019 funding efficiencies

-40%

Reduction in
firmwide market
risk RWAs

-20%

Reduction in
attributed
capital

Our medium-term plan

-\$700mm

Identified expense opportunities

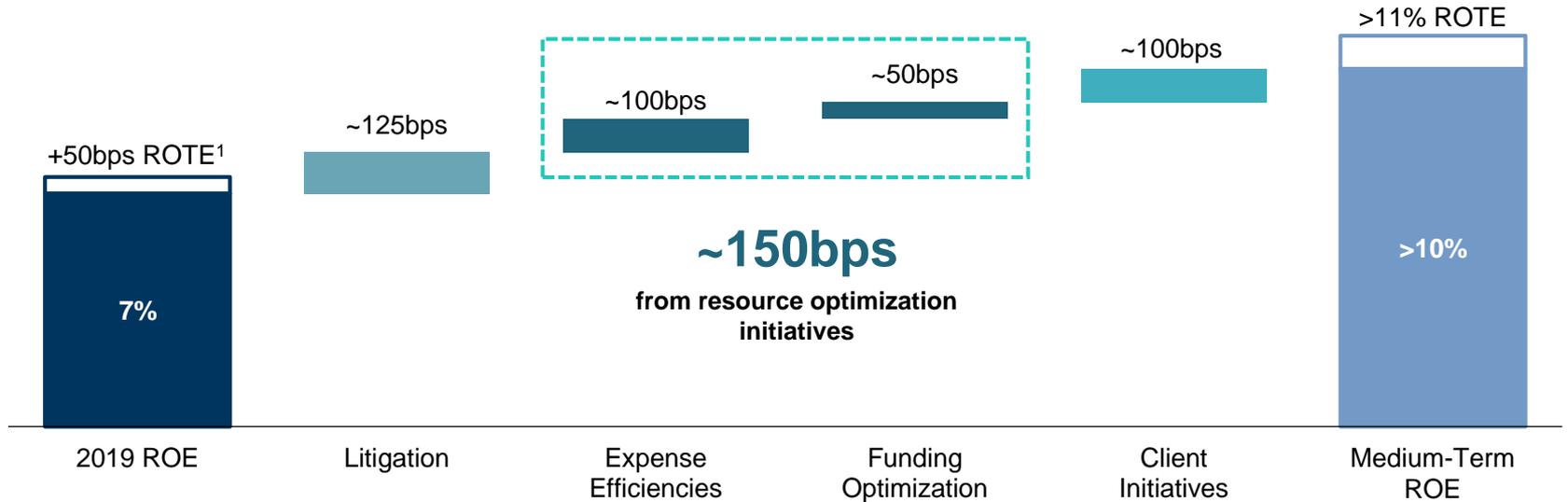
-\$250mm

Further funding optimization

~\$2bn

Capital reallocated to
accretive opportunities

Path to Higher Returns



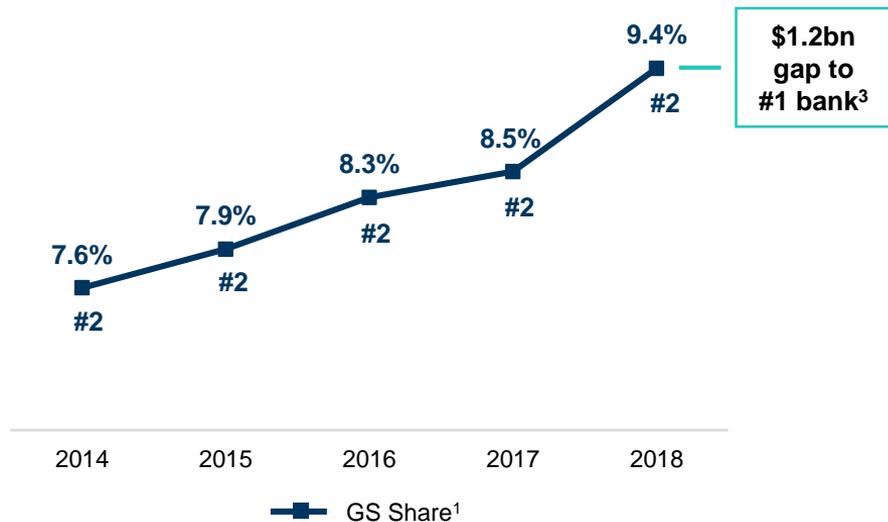
Deepen and Broaden Client Base

Goldman Sachs Ranked #2 Globally¹

	Overall	Asset Managers	Hedge Funds	Banks & PSE ²	Insurance
Overall	#2				
Equities	#3				
Cash					
Derivatives					
Prime					
Futures					
FICC	#2				
G10 Rates					
G10 FX					
Emerging Markets					
Securitized Products					
G10 & EM Flow Credit					
Commodities					

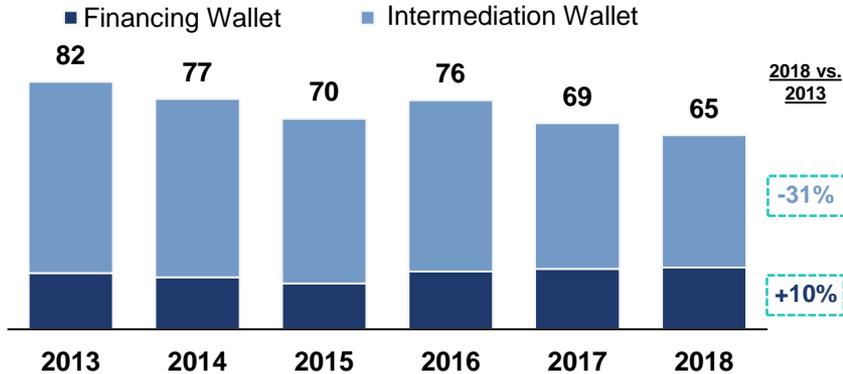
Top 3
 4-7
 8+

Significant Upside in Closing Client Gaps

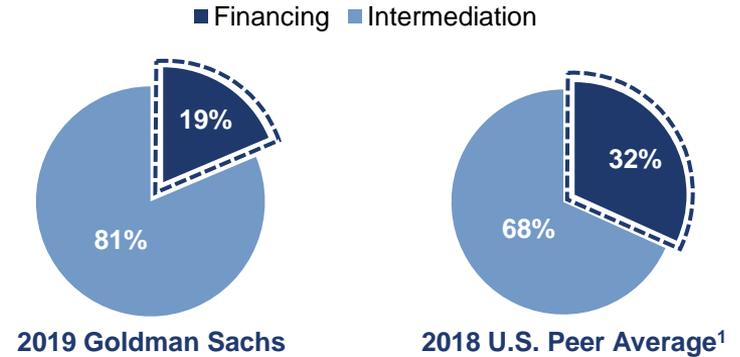


Increase Client Financing in FICC

Industry Wallet Composition¹ (\$bn)



Financing Percent of Total Revenues



\$1.4bn
Revenue gap to U.S. peer average in 2018¹

Opportunity to grow FICC financing revenues

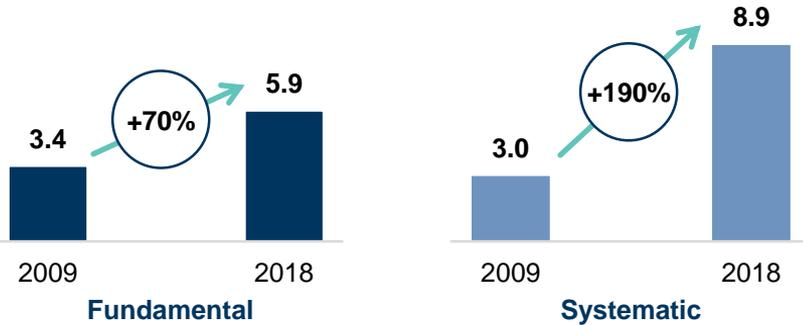
Mortgage warehouse lending

Repurchase agreements

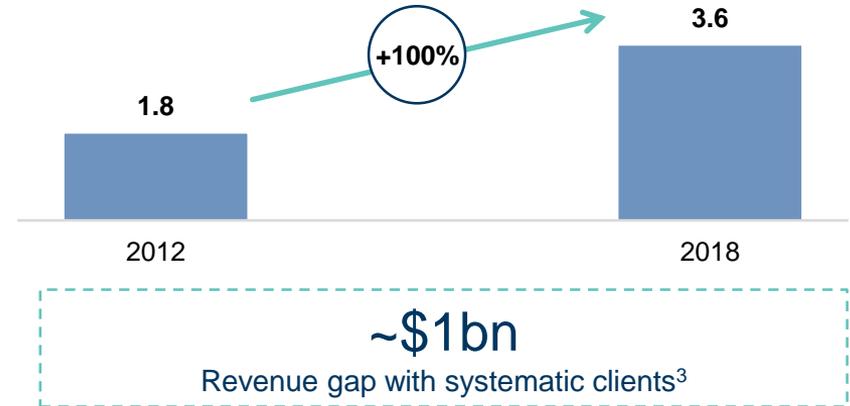
Secured lending

Increase Client Financing in Equities

Industry Gross Balances¹ (\$tn)



Systematic Wallet Growth² (\$bn)



Building a strategic platform to execute in 50 global markets

Cash or Synthetic

Direct Market Access or
Algorithmic

99%+ Straight-Through-
Processing Rate

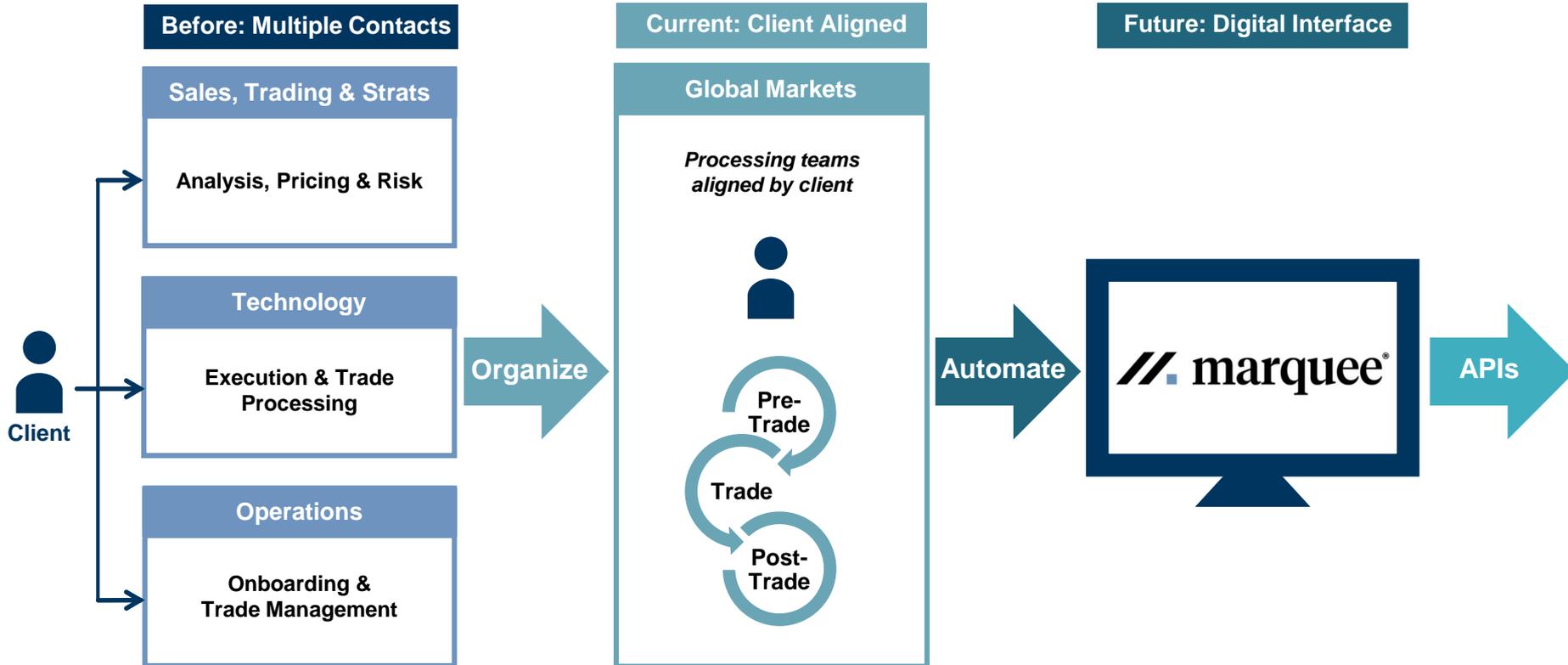
Leverage Risk Expertise to Provide Scalable Liquidity

Combining Historical Strengths with Client-Focused Technology

	Client Challenge	Solution	Result
Corporate Bonds <i>~75% Electronic¹</i>	Pre-trade transparency Execution certainty Liquidity mismatch	Systematic Credit	#1 IG Systematic A Market Leader in Portfolio Trading (\$120bn+ executed since inception)
Commodities <i>~80% Electronic¹</i>	Liquidity fragmentation Minimal aggregation Limited algorithms & analytics	eAron	Unique Offering Combined Goldman Sachs Liquidity, Algorithms & Market Access
Equities <i>~99.9% Electronic¹</i>	Liquidity fragmentation Transaction costs	Institutional Principal Facilitation	#1 Provider of Institutional Principal Liquidity ² (>\$2tn of liquidity supplied in 2019)

Enhance Client Experience

Holistic Client Coverage through the Trade Lifecycle



Enhance Client Experience

Marquee Unlocks the Power of Goldman Sachs

What is Marquee?

- Marquee is Goldman Sachs' digital storefront for institutional client services
- Powered by a cross-asset infrastructure and informed by decades of innovation, this intuitive platform unlocks the power of Goldman Sachs to deliver access to global financial markets and risk management capabilities, content and data



Leading Market Maker Delivering One Goldman Sachs



Global Markets-Enabled Product Multiplier Case Study



Exceptional Talent and Client Focus

Experienced Leadership

72%

Trading Partners / Managing Directors with Goldman Sachs since 2008

18 years

Average experience of Sales and Trading Partners / Managing Directors

Diverse and Talented Community¹

48%

Women campus hires in 2019, up from 32% in 2017

93%

Analyst acceptance rate

>90%

Retention rate of top performers

Goldman Sachs Client

“Our GS team is so good it’s like they work for us: they’re part of our investment process”

Path Forward: Keys To Success

World-Class Market Making Franchise With Exceptional Talent

**Global and deep
client relationships**

**Superior
risk intermediation**

**Scalable, client-centric
technology platforms**

Strategic Priorities

**Optimize resource
consumption**

**Deepen and
broaden client
base**

**Increase
client financing**

**Leverage risk
expertise to
provide scalable
liquidity**

**Enhance
client experience**

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End Notes

These notes refer to the financial metrics and/or defined terms presented on:

Slide 1:

1. Source: Coalition institutional client analytics for FY2018. Institutional clients only. Analysis excludes captive and non-core products

Slide 4:

1. RWAs are risk weighted assets
2. US banks: externally reported revenues adjusted for disclosed one-off items (Tradeweb gains of ~\$335mm in JPM and \$355mm in C) and fully-taxable equivalent adjustments of \$2,259mm in JPM. European banks: externally reported revenues adjusted for disclosed one-off items for 9M19 and FY2019 for UBS (Tradeweb gains of \$38mm in UBS, €101mm in DB and £126mm in BARC, £90mm gain from the net impact of treasury operations and hedging counterparty risk in BARC and a change in the valuation of an investment of €(37)mm in 3Q19 and €36mm in 1Q19 in DB); DB excludes Equities revenues generated in 1H19; Goldman Sachs Global Investment Research trading revenue estimates used for 4Q19, except for UBS; all revenue estimates have been converted to dollars for consistency, using a quarterly average of their respective conversion rates

Slide 7:

1. Return on average common shareholders' equity (ROE) is calculated by dividing net earnings applicable to common shareholders by average monthly attributed common shareholders' equity. Attributed tangible common shareholders' equity is calculated as attributed common shareholders' equity less attributed goodwill and identifiable intangible assets. Return on average tangible common shareholders' equity (ROTE) is calculated by dividing net earnings applicable to common shareholders by average monthly attributed tangible common shareholders' equity. Management believes that ROTE is meaningful because it measures the performance of businesses consistently, whether they were acquired or developed internally. Attributed tangible common shareholders' equity and ROTE are non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies.

The table below presents a reconciliation of average attributed common shareholders' equity to average attributed tangible common shareholders' equity:

Average for the year ended	
<i>Unaudited, \$ in millions</i>	December 31, 2019
Attributed common shareholders' equity	40,060
Attributed goodwill and identifiable intangible assets	(2,803)
Attributed tangible common shareholders' equity	37,257

End Notes

These notes refer to the financial metrics and/or defined terms presented on:

Slide 8:

1. Source: Coalition institutional client analytics for FY2018. Institutional clients only. Analysis excludes captive, and non-core products. Client and product universe not always consistent across years
2. PSE includes Pensions, Sovereigns and Endowments
3. JPM Investor Day, February 26, 2019

Slide 9:

1. Source: Coalition competitor analytics. Industry wallet includes the Coalition index banks (BAC, BARC, BNPP, C, CS, DB, GS, HSBC, JPM, MS, SG, UBS). Analysis according to the Coalition standard taxonomy

Slide 10:

1. Gross balances calculation based upon estimated industry AUM published by Hedge Fund Research, Inc. (HFR) multiplied by leverage estimated from the Goldman Sachs client universe. Fundamental fund balances vary with market conditions
2. Source: Coalition institutional client analytics. Wallet includes cash execution and cash and synthetic financing wallet for leading systematic clients
3. Source: Coalition institutional client analytics, 2018. Wallet includes equities revenues for leading systematic clients

Slide 11:

1. Goldman Sachs electronic tickets as a percentage of total:
 - ~75% of US credit
 - ~80% of principal delta one trades in energy and metals
 - ~99.9% of US cash equities
2. US over-the-counter equities trades, 10,000+ shares and \$200,000+ notional. Source: FINRA, October – November 2019

Slide 15:

1. Includes sales, trading, strats and cross-divisional roles

Cautionary Note on Forward-Looking Statements

Statements about the firm's target metrics, including its target ROE, ROTE, efficiency ratio and CET1 capital ratios, and how they can be achieved, and statements about future operating expense (including future litigation expense), amount and composition of future Assets under Supervision, planned debt issuances, growth of deposits and associated interest expense savings, future geographic location of its employees, and the timing and profitability of its business initiatives, including its launch of new businesses or new activities, its ability to increase its market share in incumbent businesses and its ability to achieve more durable revenues and higher returns from these initiatives, are forward-looking statements, and it is possible that the firm's actual results may differ, possibly materially, from the targeted results indicated in these statements.

Forward looking statements, including those about the firm's target ROE, ROTE, efficiency ratio, and expense savings, and how they can be achieved, are based on the firm's current expectations regarding its business prospects and are subject to the risk that the firm may be unable to achieve its targets due to, among other things, changes in the firm's business mix, lower profitability of new business initiatives, increases in technology and other costs to launch and bring new business initiatives to scale, and increases in liquidity requirements. Statements about the firm's target ROE, ROTE and CET1 capital ratios, and how they can be achieved, are based on the firm's current expectations regarding the capital requirements applicable to the firm and are subject to the risk that the firm's actual capital requirements may be higher than currently anticipated because of, among other factors, changes in the regulatory capital requirements applicable to the firm resulting from changes in regulations or the interpretation or application of existing regulations or changes in the nature and composition of the firm's activities. Statements about the timing and benefits of business and expense savings initiatives, the level and composition of more durable revenues and increases in market share are based on the firm's current expectations regarding its ability to implement these initiatives and may change, possibly materially, from what is currently expected. Due to the inherent uncertainty in these forward-looking statements, investors should not place undue reliance on the firm's ability to achieve these results.

For a discussion of some of the risks and important factors that could affect the firm's future business, results and financial condition, see "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2018. You should also read the cautionary notes on forward-looking statements in our Form 10-Q for the period ended September 30, 2019 and Earnings Results Presentation for the Full Year and Fourth Quarter 2019. For more information regarding non-GAAP financial measures such as ROTE, refer to the footnotes in the Earnings Release and Earnings Presentation for the Full Year and Fourth Quarter 2019 and information on the calculation of non-GAAP financial measures that is posted on the Investor Relations portion of our website: www.goldmansachs.com.

The statements in the presentation are current only as of January 29, 2020 and the firm does not undertake to update forward-looking statements to reflect the impact of subsequent events or circumstances.