Goldman Sachs
Investor Day

January 29, 2020
Today’s Presenters

Beth Hammack  Eric Lane  Karen Seymour  Stephen Scherr  Jim Esposito  Gregg Lemkau  Heather Miner  Marco Argenti  Carey Halio

Julian Salisbury  Stephanie Cohen  David Solomon  Sarah Smith  Tim O’Neill  Sheara Fredman  John Waldron  Asahi Pompey  Richard Gnodde

Amy Hong  Ashok Varadhan  Rajashree Datta  Liz Martin  John Goldstein  Margaret Anadu  Ezra Nahum  Brian Lee
# Investor Day Agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 AM</td>
<td><strong>BREAKFAST &amp; REGISTRATION</strong></td>
<td></td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Welcome Remarks</td>
<td>Heather Miner, Head of Investor Relations</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Strategic Roadmap and Goals</td>
<td>David Solomon, Chairman &amp; CEO</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Executing our Strategy</td>
<td>John Waldron, President &amp; COO</td>
</tr>
<tr>
<td>8:00 AM</td>
<td>Financial Roadmap</td>
<td>Stephen Scherr, CFO</td>
</tr>
<tr>
<td>8:00 AM</td>
<td><strong>BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Investment Banking</td>
<td>Gregg Lemkau</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Global Markets</td>
<td>James Esposito and Ashok Varadhan</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Asset Management</td>
<td>Tim O’Neill and Julian Salisbury</td>
</tr>
<tr>
<td>10:00 AM</td>
<td>Consumer &amp; Wealth Management</td>
<td>Eric Lane</td>
</tr>
<tr>
<td>12:15 PM</td>
<td><strong>LUNCH (SKY LOBBY)</strong></td>
<td></td>
</tr>
<tr>
<td>1:15 PM</td>
<td>International Strategy</td>
<td>Richard Gnodde</td>
</tr>
<tr>
<td>1:15 PM</td>
<td>Innovation</td>
<td>Marco Argenti and Stephanie Cohen</td>
</tr>
<tr>
<td>1:15 PM</td>
<td>A Conversation with David Solomon</td>
<td>David Solomon</td>
</tr>
<tr>
<td>2:50 PM</td>
<td>Fixed Income Investor Relations</td>
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<tr>
<td>2:50 PM</td>
<td>The Future of Market Structure</td>
<td></td>
</tr>
<tr>
<td>3:30 PM</td>
<td>Risk Management</td>
<td></td>
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<tr>
<td>3:30 PM</td>
<td>Sustainability</td>
<td></td>
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<tr>
<td>4:00 PM</td>
<td><strong>RECEPTION WITH MANAGEMENT</strong></td>
<td></td>
</tr>
</tbody>
</table>
Our Strategic Direction

David Solomon
Chairman and Chief Executive Officer

January 29, 2020
Who We Are
OUR PURPOSE

We advance sustainable economic growth and financial opportunity
Drawing on over 150 years of experience working with the world’s leading businesses, entrepreneurs and institutions, we mobilize our people, culture, technologies and ideas to advance the success of our clients, broaden individual prosperity and accelerate economic progress for all.
Successfully delivering on our purpose will drive shareholder returns
Our Core Values

Our core values have endured for 150 years, driven by a spirit of partnership.

Partnership
Client Service
Integrity
Excellence
Our Competitive Advantages

Poised to execute from a position of strength

- Global Presence
- Deep Client Relationships
- Exceptional Talent
- Innovation
- World-Class Brand
- Risk Management
Our Evolution

- Transparent
- Open
- Dynamic
- Long-term

- Purpose
- Core Values
- Competitive Advantages
Our Client Focus: Deliver One Goldman Sachs
Where We Are Going
An Era of Transformation and Opportunity

Digitization

Consumerization

Global Complexity

Corporate Stewardship
A New Operating Approach

Client-Centric Organizational Structure
- Delivering One Goldman Sachs

Longer Term Operating Focus
- Multi-year financial planning process

Investing for Growth
- Improving existing businesses and building new businesses

Enhanced Accountability
- Transparency and performance targets
Clear Strategic Direction

- Grow and Strengthen Existing Businesses
  - Higher Wallet Share

- Diversify our Products and Services
  - More Durable Earnings

- Operate More Efficiently
  - Higher Margins and Returns
Strong Foundation

- Asset Management
- Investment Banking
- Global Markets
- Consumer & Wealth Management
Strengthening Our Core

- Asset Management: Deepen Partnerships with Asset Allocators
- Investment Banking: Expand Footprint
- Global Markets: Enhance Platforms | Increase Financing
- Consumer & Wealth Management: Grow Wealth Management
## Evaluating Opportunities for Growth

### Strategic Criteria

- Address a client need
- Capitalize on our foundational advantages
- Leverage adjacencies to incumbent businesses

### Financial Criteria

- Produce more durable revenues
- Improve capital efficiency
- Enhance our funding profile

---

Driving a more durable and higher returning business mix
Four Areas of Focus

- Transaction Banking
- Third Party Alternatives
- Digital Consumer Bank
- Wealth Management
Leveraging Adjacencies to Expand Our Addressable Market

- Third Party Alternatives
- Asset Management
- Global Markets
- Transaction Banking
- Investment Banking
- Consumer & Wealth Management
- Wealth Management
- Digital Consumer Bank
A Commitment to Driving Value

<table>
<thead>
<tr>
<th>Medium-term¹ Financial Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE / ROTE</td>
</tr>
<tr>
<td>&gt;13% / &gt;14%</td>
</tr>
<tr>
<td>Efficiency Ratio</td>
</tr>
<tr>
<td>~60%</td>
</tr>
<tr>
<td>CET1 Ratio</td>
</tr>
<tr>
<td>13-13.5%</td>
</tr>
</tbody>
</table>

New business growth positions Goldman Sachs to generate mid-teens or higher returns over longer-term²
Why We Will Be Successful
Our People are our Greatest Asset

Aspirational for Campus Recruits

- #1: Most attractive bank employer among business students¹

Attractive to Experienced Talent

- #7: Most attractive employer among business students¹

- 1 of 10: Companies listed every year on Fortune’s 100 Best Companies to Work For List, since its inception 22 years ago

Invested in our People

- 66%: Of the 2019 Managing Director class started as analysts or associates

- 21K (57%): Employees received leadership development in 2019

Campus applications for 2,600 positions²

- 85K+: Campus applications for 2,600 positions²

¹ Source: ² Source:
Diversity is a Strategic Imperative

Our clients care about the diversity of our organization and our efforts to advance diversity

2019: Our Most Diverse Campus Analyst Class

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus Recruiting</td>
<td>40%</td>
<td>44%</td>
<td>49%</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian / Black / Hispanic / Latino</td>
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</tbody>
</table>

2019: Our Most Diverse Managing Director Class

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Director Promotes</td>
<td>25%</td>
<td>24%</td>
<td>29%</td>
</tr>
<tr>
<td>Women</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian / Black / Hispanic / Latino</td>
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2018: Our Most Diverse Partner Class

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<tr>
<th></th>
<th>2014</th>
<th>2016</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partner Promotes</td>
<td>14%</td>
<td>23%</td>
<td>26%</td>
</tr>
<tr>
<td>Women</td>
<td></td>
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</table>
Risk Management

Evolving Risk Profile

- Reputational
- Consumer Credit
- Cybersecurity
- Geopolitical

Culture of Risk Management
Process and Structural Oversight
Continuous Improvement
# Track Record of Change and Innovation

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Alternatives</th>
<th>UHNW Wealth</th>
<th>Commodities</th>
<th>M&amp;A Advisory</th>
<th>Debt &amp; Equity U/W</th>
<th>Market Making</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960s</td>
<td>Alternatives</td>
<td>UHNW Wealth</td>
<td>Commodities</td>
<td>M&amp;A Advisory</td>
<td>Debt &amp; Equity U/W</td>
<td>Market Making</td>
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<tr>
<td>1980s</td>
<td>Alternatives</td>
<td>UHNW Wealth</td>
<td>Commodities</td>
<td>M&amp;A Advisory</td>
<td>Debt &amp; Equity U/W</td>
<td>Market Making</td>
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<tr>
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<td>Alternatives</td>
<td>UHNW Wealth</td>
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<td>Market Making</td>
</tr>
<tr>
<td>2010s</td>
<td>Alternatives</td>
<td>UHNW Wealth</td>
<td>Commodities</td>
<td>M&amp;A Advisory</td>
<td>Debt &amp; Equity U/W</td>
<td>Market Making</td>
</tr>
<tr>
<td>Current</td>
<td>Alternatives</td>
<td>UHNW Wealth</td>
<td>Commodities</td>
<td>M&amp;A Advisory</td>
<td>Debt &amp; Equity U/W</td>
<td>Market Making</td>
</tr>
<tr>
<td>2020s</td>
<td>Alternatives</td>
<td>UHNW Wealth</td>
<td>Commodities</td>
<td>M&amp;A Advisory</td>
<td>Debt &amp; Equity U/W</td>
<td>Market Making</td>
</tr>
</tbody>
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### Changes Over Time
- **2000s**: Focus on Digital Wealth and Consumer Banking.
- **2010s**: Expansion into Financial Counseling, M&A Advisory, and Commodities.
- **Current**: Incorporation of Banking-as-a-Service and Transaction Banking.

**Key Services**
- Banking-as-a-Service
- Transaction Banking
- Credit Card
- Digital Wealth
- Consumer Banking
- Financial Counseling
- UHNW Wealth
- Commodities
- M&A Advisory
- Debt & Equity U/W
- Market Making
## Clear Strategic Direction

### Grow and Strengthen Existing Businesses
- Expand our global footprint: Investment Banking, Global Markets, Ultra High Net Worth
- Increase financing activities
- Grow asset management

### Diversify Our Products and Services
- Build Transaction Banking
- Grow third party Alternatives
- Scale digital Consumer Banking, High Net Worth and Mass Affluent

### Operate More Efficiently
- Increase organizational and process efficiency
- Remix to lower cost deposit funding
- Optimize capital footprint

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<table>
<thead>
<tr>
<th>Higher Wallet Share</th>
<th>More Durable Earnings</th>
<th>Higher Margins and Returns</th>
</tr>
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</table>
Our Strategic Direction

David Solomon
Chairman and Chief Executive Officer

January 29, 2020
These notes refer to the financial metrics and/or defined term presented on:

Slide 18:
1. Medium-term refers to 3 year time horizon
2. Longer-term refers to 5+ year time horizon

Slide 20:
1. Source: Universum 2019
2. For incoming 2020 class

Slide 23:
1. U/W refers to underwriting
2. UHNW refers to ultra-high-net-worth clients (currently defined as >$10mm in investable assets)
3. M&A refers to mergers and acquisitions
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.
Executing Our Strategy

John Waldron
President and Chief Operating Officer

January 29, 2020
Executing Our Strategy

Operating Approach

Execution in the Core Franchise

Investing for Growth

Operating Efficiency

Brand ● One Goldman Sachs ● Engineering ● Talent
Investment Banking

Narrow Wallet Share Gaps
- Top 3 M&A and Equity ranking in every subsector globally
- #1 in IB fees
- Relationship status improvement
- #1 in M&A Market Share
- Narrow ECM and DCM wallet share gaps
- #1 in Equity Market Share
- Coverage of >1,700 new corporates
- Top 4 Debt Market Share
- Track sourcing of investment opportunities

Expand Client Footprint

Source Firmwide Opportunities

Invest in Talent
**Global Markets**

**Deepen Relationships with Institutional Clients**
- Top 3 position with Top 100 clients

**Increase Client Financing**
- Increasing FICC financing revenues

**Deploy Technology to Improve Client Experience**
- Narrow Systematic/Quant wallet share gap
- Measure utilization of key platforms

**Enhance Corporate Offerings**

**Optimize Resource Utilization**

**MEASURING OUR PROGRESS**

- $700mm OpEx reduction in 3 years
- $250mm funding cost savings in 3 years
- ROE expansion from 7% to 10%+ in 3 years
Partner with Asset Allocators
- Consistent strong investment performance
- Morningstar rankings
- Measure quality of institutional client relationships

Deliver Holistic Solutions
- Organic long-term fee-based AUS growth
- Advisory / outsourced CIO revenues
- +$250bn of firmwide Traditional AUS inflows in 5 years

Innovate to Serve Client Needs

Invest in Institutional Sales Force

MEASURING OUR PROGRESS

Innovate to Serve Client Needs

Invest in Institutional Sales Force
Consumer & Wealth Management

MEASURING OUR PROGRESS

Organic Advisor Growth in Americas

- +20% Advisor headcount in Americas
- Measure Advisor productivity
- UHNW market share

Source Experienced PWA Hires in EMEA / APAC

- +50% Advisor headcount in EMEA / APAC
- PWM lending penetration
- C&WM margin to 20%+ at scale

Increase Lending to Private Wealth Clients
Investing for Growth: Four Areas of Focus

- Transaction Banking
- Third Party Alternatives
- Digital Consumer Bank
- Wealth Management
Build Transaction Banking

5+ Year Opportunity

$50bn
Deposit Balances

$1bn
in Revenues

Strong Client Value Proposition

- Analytics and actionable insights
- Fast and easy onboarding
- Modern tools and simple processes
- Scalable client customization

Progress and Forward Plan

- Built 350 Person Team
- Processed >$3tn for Goldman Sachs in 5 Currencies
- Opened Deposit Accounts with over 25 Clients
- Full Platform Launch – 1H 2020

5+ Year Opportunity

Opportunity

$50bn
Deposit Balances

$1bn
in Revenues

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$50bn Deposit Balances

$1bn in Revenues

Analytics and actionable insights

Fast and easy onboarding

Modern tools and simple processes

Scalable client customization

Progress and Forward Plan

Built 350 Person Team

Processed >$3tn for Goldman Sachs in 5 Currencies

Opened Deposit Accounts with over 25 Clients

Full Platform Launch – 1H 2020
Grow Third Party Alternatives

5-Year Opportunity

$100bn
Alternative Net Inflows\(^1\)

$4bn
Capital Reduction\(^2\)

Strong Client Value Proposition

- Global multi-asset class franchise
- Unique sourcing capabilities
- Experienced investment team
- Strong long-term track record

Progress and Forward Plan

- Unified 5 Investing Platforms
- Established Investing Teams Across Asset Classes
- Created Alternatives Capital Markets + Strategy Group
- Optimizing Capital Efficiency
Scale Digital Consumer Banking

**5-Year Opportunity**

- Grow to **$125bn+** Consumer Deposit Balances
- Grow to **$20bn+** Consumer Loan/Card Balances

**Strong Client Value Proposition**

Building products that are:

- Simple
- Transparent
- Valuable
- Personal
- Secure

**Progress and Forward Plan**

- Launched Marcus Deposits, Lending and Apple Card
- Building Integrated Digital Bank and Wealth Platform
- Growing Deposits, Lending and Card Balances
- Pursue Additional Products and Partnership Opportunities
Expand Wealth Offering

5-Year Opportunity

- **30** Corporate clients added annually
- **300k** Employees added annually

Strong Client Value Proposition

- Advice-driven solutions
- Innovative digital capabilities
- Holistic offering
- Tailored to client needs

Progress and Forward Plan

- Complete Integration of United Capital
- Drive Synergies Between Ayco and United Capital
- Launch New Marcus Products
- Increase Digital Utilization
Deep Global Network of Client Relationships

Execution Priorities

- **Grow PWM Advisors**
- **Grow IB Corporate Footprint**
- **Close Institutional Investor Wallet Share Gaps**
- **China 5-Year Plan**

**~$37bn**
- Firmwide Revenues

**~$15bn**
- International Revenues

**~100**
- Offices Globally

**~38k**
- Employees Globally

**~40**
- International Offices

**~18k**
- International Employees

**1**
- Note: Additional notes or data not provided in the image.
Track Record of Building Businesses

**Debt Underwriting**

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Revenues ($bn)</th>
<th>Change</th>
<th>Ranking 1</th>
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<tbody>
<tr>
<td>2011</td>
<td>$1.2</td>
<td>+84%</td>
<td>6</td>
</tr>
<tr>
<td>2019</td>
<td>$2.1</td>
<td></td>
<td>2</td>
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</table>

**Asset and Wealth Management**

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Firmwide AUS ($bn)</th>
<th>Change</th>
<th>Ranking 2</th>
</tr>
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<tbody>
<tr>
<td>4Q99</td>
<td>$285</td>
<td>+6.5x</td>
<td>Not Ranked</td>
</tr>
<tr>
<td>4Q19</td>
<td>$1,859</td>
<td></td>
<td>Top 10</td>
</tr>
</tbody>
</table>
$1.3bn Run-rate Expense Savings in 3 Years

Drives Capacity for Investment

Streamlined Organization
- Pyramid evolution
- Business alignment of 7,500 engineering and operations individuals
- Embed organizational design capabilities

Investment in Automation and Infrastructure
- Digital transformation
- Straight-through-processing
- Platform consolidation

Real Estate Strategy
- Strategic locations
- Campus consolidation

Integrated Expense Management
- Strategic technology capabilities
- Improved governance and transparency
- Holistic financial planning
One Goldman Sachs

Client-centricity drives everything we do – from organizational structure to talent deployment
One Goldman Sachs

**Initial Phase**

- **~30** Identified key clients with complex needs
- **>200** Dedicated Goldman Sachs professionals
- **97%** Positive client feedback

**Forward Plan**

- **>100** Clients in expansion plan
One Goldman Sachs

- Increasing collaboration
- Institutionalizing incentives
- Leveraging sourcing network

- Best-in-class intellectual capital
- Curated content
- Dedicated senior leadership

- Digital delivery channels
- Unified platform experience
- Harmonized client analytics
Engineering Core to Execution Strategy

Investing for Growth

- Build, scale and operate new platform businesses
- Develop and extend differentiated services via API1 ecosystem
- Shape and enable One Goldman Sachs capabilities
- Ignite the innovative capacity of our people

Run the Bank

- Enhance foundational shared services
- Promote secure, flexible and resilient infrastructure
- Drive platform simplification

Investing for Growth

$4bn

2019 Engineering Spend

~47%

Run the Bank

~53%

Metrics

Platform Engagement ● Resiliency ● APIs ● Productivity ● Cloud Usage
Enhancing Our World-Class Engineering Team

>80% Acceptance rate for full-time offers

40% of Engineers have PhDs or Advanced Degrees

Successfully hired Co-CIO and CTO

9K+ Engineers employed at Goldman Sachs

Growing Cutting-Edge Engineering Capabilities to Better Serve Clients
Incentives Align to Long-Term Shareholder Value

- **Management Committee**: Increased use of performance-based equity
- **Partnership**: Long-term compensation closely tied to performance
- **One Goldman Sachs**: Incentivizing a client-centric and collaborative culture
- **Firmwide**: Pay-for-performance philosophy with long-term orientation
Executing Our Strategy

Operating Approach

Execution in the Core Franchise

Investing for Growth

Operating Efficiency

Brand • One Goldman Sachs • Engineering • Talent
End Notes

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

Slide 8:
1. Growth shown net of realizations
2. Capital efficiencies across Alternatives in Asset Management

Slide 11:
1. Excludes the US and Canada from total international figures

Slide 12:
1. High Yield per Dealogic, Institutional Loans per Bloomberg
2. Data as of 3Q19. Competitor data compiled from publicly available Quarterly Earnings Releases and Supplements, eVestment database and Morningstar Direct. Where product classification (e.g. fixed income vs. alternatives) and portfolio management style (passive vs. active) were not explicit in competitors' publicly available data, GS applied certain assumptions for purposes of making comparisons. Peer population represents key competitors tracked internally by product classification and portfolio management style

Slide 17:
1. Application programming interface

Slide 18:
1. Refers to acceptance rate for 2020 full-time positions as of January 2020
2. Includes Engineers and Strats
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Financial Roadmap

Stephen Scherr
Chief Financial Officer

January 29, 2020
Agenda

1 Targets

2 Drivers of Improved Profitability
   - Revenue expansion opportunities
   - Funding optimization
   - Expense management
   - Dynamic capital management

3 Key Takeaways
A Commitment to Driving Value

Medium-term¹ Financial Targets

<table>
<thead>
<tr>
<th>ROE / ROTE</th>
<th>Efficiency Ratio</th>
<th>CET1 Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;13% / &gt;14%</td>
<td>~60%</td>
<td>13-13.5%</td>
</tr>
</tbody>
</table>

New business growth positions Goldman Sachs to generate mid-teens or higher returns over longer-term²
Drivers of Improved Profitability

- **CET1 Ratio**
  - 13.3%
  - 13-13.5%

- **Efficiency Ratio**
  - 68.1%
  - ~60%

- **2019 ROE**
  - 10.0%

- **Litigation and Tax**
  - ~75bps

- **Business Activity**
  - ~50bps

- **Funding Optimization**
  - ~75bps

- **Expense Efficiencies**
  - ~125bps

- **Medium-term ROE**
  - >13%
  - >14%
Clear Strategic Direction Will Drive Business Growth

**Grow and Strengthen Existing Businesses**
- Expand our global footprint: Investment Banking, Global Markets, Ultra High Net Worth
- Increase financing activities
- Grow asset management

**Diversify Our Products and Services**
- Build Transaction Banking
- Grow third party Alternatives
- Scale digital Consumer Banking, High Net Worth and Mass Affluent

**Operate More Efficiently**
- Increase organizational and process efficiency
- Remix to lower cost deposit funding
- Optimize capital footprint

**$2-3bn**
Incumbent Business Growth

**$1-2bn**
New Initiatives

**$1.0bn**
Funding Optimization

**$1.3bn**
Expense Efficiency
Forward Estimates: Pre-tax Income

- **Transaction Banking + Consumer (ex-reserve build)**
- **Transaction Banking + Consumer**

$1bn of pre-tax loss including reserve build
## Disciplined Return on Investment Framework

### Investment Philosophy

- Addresses a client need
- Capitalizes on our foundational advantages
- Leverages adjacencies to incumbent businesses
- Produces more durable revenues
- Enhances our funding profile
- Improves capital efficiency

<table>
<thead>
<tr>
<th>Initiative Type</th>
<th>Select Initiatives</th>
<th>Time Horizon</th>
<th>Financial Evaluation¹</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Business</strong></td>
<td>Growth in Investment Banking coverage</td>
<td>Up to 3 years</td>
<td>Return on risk-adjusted capital</td>
</tr>
<tr>
<td></td>
<td>Expansion of Private Wealth Management coverage</td>
<td></td>
<td>Cumulative and steady state PTI</td>
</tr>
<tr>
<td><strong>Adjacent / New Business</strong></td>
<td>Transaction Banking</td>
<td>3 to 5+ years</td>
<td>NPV analysis</td>
</tr>
<tr>
<td></td>
<td>Consumer Banking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹: NPV - Net Present Value
Funding Optimization to Drive Improved Returns

Increasing high-quality deposits to improve funding diversification and generate $1.0bn in revenues through lower interest expense

Key Tenets of our Strategy

1. Further diversify funding mix via deposits
2. Enhance Asset-Liability Management
3. Optimize liquidity pool

Target State

Legend
- Current State
- Future State

Lowering net interest expense
Embracing the Bank Model

Increase Utilization of Bank Entities

- Capture lower cost funding
- Continue migration of businesses into bank entities
- Grow diversifying businesses with more durable revenues
- Facilitate increase in firmwide lending

Significant Asset Growth Opportunity

Percent of Total Assets in Bank Entities

- GS: ~25%
- U.S. Peer Average: ~65%
- Held-for-Investment loans booked in GS bank entities: >80%

~$250bn in total assets across all Goldman Sachs’ bank entities
B Optimizing our Unsecured Funding Mix via Deposit Growth

Improvement in unsecured funding mix to drive higher returns

Interest expense savings reflected in revenue growth

$100bn
Growth in deposits across channels

~30bps
Expected improvement in cost of funds

<table>
<thead>
<tr>
<th>Year</th>
<th>Deposits</th>
<th>Wholesale Unsecured</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>69%</td>
<td>31%</td>
</tr>
<tr>
<td>2019</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>Medium-term</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Interest expense savings reflected in revenue growth

+$92bn
Growth in deposits across channels

+$100bn
Expected improvement in cost of funds

Deposits
Wholesale Unsecured
Expense Savings Creating Capacity to Fund Future Growth

3-year Expense Plan

$1.3bn
Run-rate Expense Savings

Key Drivers

- Streamlined organization
- Investment in automation and infrastructure
- Centralized expense management
- Real estate strategy

Efficiency Ratio

<table>
<thead>
<tr>
<th>2019 Ratio</th>
<th>Business Growth (Revenues)</th>
<th>Funding Optimization</th>
<th>Business Growth (Expenses)</th>
<th>Expense Efficiencies</th>
<th>Litigation</th>
<th>Medium-term Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>68.1%</td>
<td>~(600)bps</td>
<td>~(125)bps</td>
<td>~450bps</td>
<td>~(350)bps</td>
<td>~250bps</td>
<td>~60%</td>
</tr>
</tbody>
</table>

Ratio

Business Growth (Revenues)
Funding Optimization
Business Growth (Expenses)
Expense Efficiencies
Litigation
Medium-term Ratio
Dynamic Expense Management Drives Earnings Stability

Alignment of expenses with revenues through pay-for-performance discipline results in low earnings volatility

Revenue Volatility¹

- 2009-2019: GS 12%, U.S. Peer Average 10%
- 2014-2019: GS 7%, U.S. Peer Average 6%

Earnings Volatility¹

- 2009-2019: GS 37%, U.S. Peer Average 81%
- 2014-2019: GS 31%, U.S. Peer Average 49%
Proven History of Prudent Capital Management

In the last 5 years, Goldman Sachs returned over $30bn of capital, 90%+ of the firm’s net income and grew BVPS more than peers

---

**Capital Management Philosophy**

- Prudent capital management with evolving regulatory landscape
- Prioritize deploying capital to support client activity and grow our businesses
- Return excess capital in the form of dividends and buybacks

---

**BVPS Growth vs. Peers**

- In the last 5 years, Goldman Sachs returned over $30bn of capital, 90%+ of the firm’s net income and grew BVPS more than peers.

- **10 Year**
  - GS: 86%
  - U.S. Peer Average: 60%

- **5 Year**
  - GS: 34%
  - U.S. Peer Average: 31%

- **3 Year**
  - GS: 20%
  - U.S. Peer Average: 17%

---

1. CAGR: Compound Annual Growth Rate
Disciplined and Dynamic Capital Management

Key Forward Drivers

- **Stress Capital Buffer**
  Improvement due to capital efficiencies of 50bps across Alternatives in Asset Management

- **G-SIB**
  Expected surcharge of 3% as we continue to grow balance sheet to support client financing activity

- **Management Buffer**
  Estimated buffer of 50-100bps to account for uncertainties, including potential volatility in the Stress Capital Buffer

CET1 Ratio\(^1\)

- **Target:** 13-13.5%
- **Stress Capital Buffer:** 5.0%
- **G-SIB:** 3.0%
- **Minimum:** 4.5%
Capital Attribution and Segment Returns

**Capital Framework**

- Governed by regulatory constraints and internal risk measures
- Dynamically managed and responsive to changing binding constraints
- Active reallocation of capital towards higher-returning growth opportunities
- Fully cost-out businesses; no corporate center

**Capital Attribution and Returns**

<table>
<thead>
<tr>
<th>Capital Attribution ($bn)</th>
<th>2019 Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. 2019</td>
<td>Δ vs. 2017</td>
</tr>
<tr>
<td>Investment Banking</td>
<td>$11</td>
</tr>
<tr>
<td>Global Markets</td>
<td>$40</td>
</tr>
<tr>
<td>Asset Management</td>
<td>$22</td>
</tr>
<tr>
<td>Consumer &amp; Wealth Management</td>
<td>$6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$79</strong></td>
</tr>
</tbody>
</table>
Capital Deployment Opportunities for Global Markets

Global Markets Returns

Higher returns over the medium-term driven by:

+ Resource optimization including funding, expense and capital efficiencies

+ Redeployment of capital into ROE accretive activities including client financing

2019 ROE

- Resource optimization and growth in client financing: ~7%
- Cost of Capital

Medium-term ROE

>10%

Global Markets and Investment Banking 2019 ROE

- Synergies with Investment Banking in delivering integrated execution solutions for clients
- Goldman Sachs’ ROE was burdened in 2019 by elevated litigation expenses

<table>
<thead>
<tr>
<th>Bank</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS</td>
<td>9.2%</td>
</tr>
<tr>
<td>MS</td>
<td>8.7%</td>
</tr>
<tr>
<td>JPM</td>
<td>11.6%</td>
</tr>
<tr>
<td>C</td>
<td>10.6%</td>
</tr>
<tr>
<td>BAC</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

- Including pro-rata allocation of parent/corporate capital
Prudently Managing Risk

Comprehensive Risk Management Infrastructure

Culture of Risk Management
- Disciplined risk-reward approach
- Deep bench of risk managers
- Consensus-driven decision making

Process and Structural Oversight
- Independent controls and governance
- Comprehensive stress testing
- Mark-to-market discipline

Continuous Improvement
- Cycle preparedness
- Reputational risk and compliance
- Cyber risk

Evolving Risk Profile

Market RWAs
- 2015: $104bn
- 2019: $65bn

Credit RWAs
- 2015: $430bn
- 2019: $499bn
### Evolving Risk Profile

**Continuous investment in risk management to address evolving business mix**

<table>
<thead>
<tr>
<th>Key Areas of Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer</td>
<td>Robust credit underwriting framework and processes</td>
</tr>
<tr>
<td>Credit</td>
<td>Strong talent pool augmented by select hiring</td>
</tr>
<tr>
<td>Fraud</td>
<td>Best-in-class technology infrastructure and analytics</td>
</tr>
<tr>
<td>Increased cyber footprint</td>
<td>Modern tools with no legacy platforms and streamlined processes</td>
</tr>
<tr>
<td>Operational resiliency</td>
<td>Continuous innovation and investments to mitigate cyber risk</td>
</tr>
<tr>
<td>Privacy</td>
<td></td>
</tr>
</tbody>
</table>
Key Takeaways

1. Committed to Delivering on Our Financial Targets
2. Leading Businesses with Multiple Opportunities for Revenue Growth Across the Franchise
3. Optimizing Expenses and Capital
4. Prudently Managing Risk
5. Providing Investors Tools to Hold us Accountable
Financial Roadmap

Stephen Scherr
Chief Financial Officer

January 29, 2020
These notes refer to the financial metrics and/or defined term presented on:

Slide 2:
1. Medium-term refers to 3 year time horizon
2. Longer-term refers to 5+ year time horizon

Slide 3, 14:
1. Return on average common shareholders’ equity (ROE) is calculated by dividing net earnings applicable to common shareholders by average monthly common shareholders’ equity. Return on average tangible common shareholders’ equity (ROTE) is calculated by dividing net earnings applicable to common shareholders by average monthly tangible common shareholders’ equity (tangible common shareholders’ equity is calculated as total shareholders’ equity less preferred stock, goodwill and identifiable intangible assets). Management believes that ROTE is meaningful because it measures the performance of businesses consistently, whether they were acquired or developed internally, and that tangible common shareholders’ equity is meaningful because it is a measure that the firm and investors use to assess capital adequacy. ROTE and tangible common shareholders’ equity are non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies.

The table below presents average equity and a reconciliation of average common shareholders’ equity to average tangible common shareholders’ equity:

<table>
<thead>
<tr>
<th>Unaudited, $ in millions</th>
<th>AVERAGE FOR THE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>YEAR ENDED DECEMBER 31, 2019</td>
</tr>
<tr>
<td>Total shareholders’ equity</td>
<td>$ 90,297</td>
</tr>
<tr>
<td>Preferred stock</td>
<td>(11,203)</td>
</tr>
<tr>
<td>Common shareholders’ equity</td>
<td>79,094</td>
</tr>
<tr>
<td>Goodwill and identifiable intangible assets</td>
<td>(4,464)</td>
</tr>
<tr>
<td>Tangible common shareholders’ equity</td>
<td>$ 74,630</td>
</tr>
</tbody>
</table>

Slide 6: 1. PTI refers to pre-tax income; NPV refers to Net Present Value

Slide 8:
1. Source: SNL; includes U.S. bank entities for peers BAC, C, JPM, MS as of 3Q19; GS as of 4Q19, excludes affiliate assets

Slide 9:
1. Relative value of shift to deposits will change as credit spreads and overnight/term interest rates change
End Notes

Slide 11:
1. Annual revenue volatility calculated by dividing standard deviation of reported revenues by the average revenues over the period. Annual earnings volatility calculated by dividing standard deviation of reported net income to common by the average net income to common over the period. U.S. peers include BAC, C, JPM, MS

Slide 12:
1. Compares 3-year, 5-year, 10-year BVPS growth vs. 2019 BVPS; data per SNL

Slide 13:
1. Targets may change as regulatory landscape and firm business mix evolve; SCB reflects current proposal

Slide 15:
1. Compiled using publicly available information from peer filings

Slide 16:
1. As of December 31, 2015, the firm’s risk-weighted assets in accordance with the Standardized capital rules on a fully phased-in basis was a non-GAAP measure and may not be comparable to similar non-GAAP measures used by other companies. Management believes that the firm’s risk-weighted assets in accordance with the Standardized capital rules on a fully phased-in basis is meaningful because it is a measure that the firm and investors use when assessing capital adequacy. The table below presents reconciliations for the firm’s market and credit risk-weighted assets in accordance with the Standardized capital rules on a transitional basis to a fully phased-in basis as of December 31, 2015 (unaudited, $ in billions):

<table>
<thead>
<tr>
<th>Unaudited, $ in billions</th>
<th>As of December 31, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market risk-weighted assets, transitional and fully phased-in basis</td>
<td>$104</td>
</tr>
<tr>
<td>Credit risk-weighted assets, transitional basis</td>
<td>$420</td>
</tr>
<tr>
<td>Credit risk transitional adjustments</td>
<td>$10</td>
</tr>
<tr>
<td>Credit risk-weighted assets, fully phased-in basis</td>
<td>$430</td>
</tr>
</tbody>
</table>
Cautionary Note on Forward-Looking Statements

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What Drives Our Success

#1 Investment Bank in the world, built through decades of investment in people, clients and culture.
Leadership Reinforced by Breadth, Depth and Consistency

>10,000 Clients Covered

Global League Table Ranking¹

<table>
<thead>
<tr>
<th>2010</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td>Announced M&amp;A</td>
</tr>
<tr>
<td>#1</td>
<td>Completed M&amp;A</td>
</tr>
<tr>
<td>#2</td>
<td>Equity Underwriting</td>
</tr>
<tr>
<td>#2</td>
<td>Common Stock Offerings</td>
</tr>
<tr>
<td>#6</td>
<td>High-Yield Debt</td>
</tr>
<tr>
<td>#6</td>
<td>Institutional Loans</td>
</tr>
<tr>
<td>#6</td>
<td>Investment-Grade Debt ($+€)</td>
</tr>
</tbody>
</table>

¹ Source: [Global League Table Rankings](#)
Global Scale and Leadership Drive Opportunity

### Americas
- >6,000 Clients
- >1,700 Bankers
- #1 Announced M&A
- #1 Completed M&A
- #2 Equity Underwriting

### EMEA
- >3,000 Bankers in 43 Offices

### APAC
- >1,000 Clients
- >450 Bankers
- #1 Announced M&A
- #1 Completed M&A
- #2 Equity Underwriting

### EMEAE
- >3,000 Clients
- >850 Bankers
- #1 Announced M&A
- #1 Completed M&A
- #2 Equity Underwriting
# Broad Sector Leadership and Deep Expertise

<table>
<thead>
<tr>
<th>Sector</th>
<th>#1 Announced M&amp;A</th>
<th>#1 Completed M&amp;A</th>
<th>#2 Equity Underwriting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consumer and Retail</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Real Estate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech, Media and Telecom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Institutions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthcare</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrials</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Best-in-Class Financial Sponsor Relationships

Investment Banking Revenue from Financial Sponsor Clients (\$bn)$^1$

$\begin{array}{l}
\text{2010} & \text{\$1.0} \\
\text{2019} & \text{\$1.9} \\
\text{CAGR: } \sim 7\% \\
\end{array}$

#1

Ranking with Financial Sponsor Clients$^2$

- M&A
- Equity Underwriting
- High-Yield Bonds

Holding period creates regular cadence of M&A and Issuance activity
World-Class Talent Underpinned by a Culture of Excellence

“What distinguishes Goldman Sachs from your competitors is the quality and talent of the individuals working on the account”
– Client Survey Feedback

67%
2018 Partner promotes started as campus hires

>28,000
Applications to 2019 summer programs for <500 filled positions

22 Years
Average tenure of IB Executive Committee

>70%
Of global Partners have >15 years tenure

Spotlight on Diversity

>50%
Women in 2019 campus analyst class, up from 34% in 2017

>4x
Number of Black and Hispanic/Latino campus hires in 2019 vs. 2010

>22 Years
Average tenure of IB Executive Committee

2018 Partner promotes started as campus hires
Financial Advisory: Cornerstone of our Client Franchise

<table>
<thead>
<tr>
<th>Undisputed dominant M&amp;A advisor(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumulative Advisory Revenues Since 2010 ($bn)(^2)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Firm</th>
<th>Revenue ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS</td>
<td>$26.3</td>
</tr>
<tr>
<td>JPM</td>
<td>$19.0</td>
</tr>
<tr>
<td>MS</td>
<td>$18.3</td>
</tr>
<tr>
<td>BAC</td>
<td>$12.8</td>
</tr>
<tr>
<td>C</td>
<td>$9.7</td>
</tr>
<tr>
<td>CS</td>
<td>$9.5</td>
</tr>
<tr>
<td>UBS</td>
<td>$7.5</td>
</tr>
<tr>
<td>DB</td>
<td>$6.6</td>
</tr>
</tbody>
</table>

20 of 25
Largest announced M&A transactions in 2019

#1
In cross border deals since 2010

103
Spin-offs since 2010, 27% more than the next advisor

~225
Public activism defense situations since 2010, 1.7x next advisor\(^3\)
Equity Underwriting: Leadership Driven by Innovation

Leading global franchise across products and regions\(^1\)

Cumulative Equity and Equity-Related Volume Since 2010 (\(\text{bn}\))\(^2\)

<table>
<thead>
<tr>
<th>Bank</th>
<th>Volume ($bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS</td>
<td>$678</td>
</tr>
<tr>
<td>MS</td>
<td>$621</td>
</tr>
<tr>
<td>JPM</td>
<td>$589</td>
</tr>
<tr>
<td>BAC</td>
<td>$474</td>
</tr>
<tr>
<td>C</td>
<td>$466</td>
</tr>
<tr>
<td>CS</td>
<td>$382</td>
</tr>
<tr>
<td>UBS</td>
<td>$380</td>
</tr>
<tr>
<td>DB</td>
<td>$358</td>
</tr>
</tbody>
</table>

- Consistent Leadership
- Landmark Transactions
- IPO Underwriter of Choice\(^3\)
- Underpinned by Continuous Innovation
Debt Underwriting: Delivering Growth on Strength of Franchise

Execution of strategic focus driving revenue growth and improved competitive position

Debt Underwriting Net Revenues ($bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenues ($bn)</td>
<td>$1.1</td>
<td>$1.2</td>
<td>$1.2</td>
<td>$2.7</td>
<td>$2.4</td>
<td>$2.1</td>
</tr>
</tbody>
</table>

League Table Rankings¹

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Yield</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Institutional Loans</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Investment Grade (+$€)</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

¹ #1 = First; #2-4 = Second to Fourth; #5+ = Fifth or Higher
Franchise-Enhancing Corporate Lending

Lending generates significant franchise benefits and is underpinned by diligent risk management

Relationship lending to build and deepen client relationships

World-class acquisition finance franchise to enable client transactions

Financing for smaller companies, with focus on risk-adjusted returns

Corporate Lending Total Credit Exposure

<table>
<thead>
<tr>
<th>Category</th>
<th>Funded</th>
<th>Unfunded</th>
<th>Secured</th>
<th>Unsecured</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Credit Exposure</td>
<td>83%</td>
<td>17%</td>
<td>72%</td>
<td>28%</td>
</tr>
</tbody>
</table>

- Natural Resources: 21%
- Tech, Media and Telecom: 20%
- Diversified Industrials: 18%
- Healthcare: 13%
- Consumer and Retail: 12%
- Financial Institutions: 6%
- Real Estate: 5%
- Other: 5%
Executing a Clear Strategy for Growth

- Continue to Grow Share in Core Business
- Expand Client Footprint
- Offer New Client Solutions: Transaction Banking
- Deliver the Firm: One Goldman Sachs
Continue to Grow Share in Core Business

Industry Wallet ($bn) and Goldman Sachs Fee Share

- Each incremental 1% share is worth ~$750mm annual revenues

Focus on Growing Wallet Share

- Improve share in underpenetrated sectors and regions
- Drive market share across volumes, deal count and revenues
- Increase equity underwriting wallet share
- Opportunistically capture acquisition financing wallet share
Despite Leadership Position, Continued Room to Grow Share

Announced M&A League Table Ranking¹

<table>
<thead>
<tr>
<th>Industry:</th>
<th>CRG</th>
<th>FIG</th>
<th>HC</th>
<th>IND</th>
<th>NR</th>
<th>RE</th>
<th>TMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Americas</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>EMEA</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>APAC</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Tech, Media and Telecom

<table>
<thead>
<tr>
<th>Global</th>
<th>Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tech</td>
<td></td>
</tr>
<tr>
<td>Telecom</td>
<td></td>
</tr>
</tbody>
</table>

Americas Technology

- Communications Technology
- Education Technology
- Hardware and Infrastructure
- Internet
- Semis and Electronics
- Software
- Technology Services
- Venture Capital

#1 #2-4 #5+
Expanding Our Client Footprint

Opportunity to improve fee share by increasing coverage

Goldman Sachs M&A Fee Share by Deal Size

- >$10bn: 18%
- $2-10bn: 16%
- $500mm-2bn: 10%

Goldman Sachs Americas/EMEA Coverage Rate by Client Size

- >$10bn: 95%
- $2-10bn: 80%
- $500mm-2bn: 44%

Our fee share for sufficiently-covered clients is consistent across all size segments
Offer New Client Solutions: Transaction Banking

Attractive Addressable Market

Small Market Share Can Generate Meaningful Economics:

~$80bn
U.S. Transaction Banking wallet

$5tn
U.S. Corporate Deposits

Benefits to Our Franchise and Shareholders

Stable, More-Durable Revenues
Expense Savings
Funding Diversification
Synergistic with Broader Strategy

Strong Client Value Proposition

- Analytics and actionable insights
- Fast and easy onboarding
- Modern tools and simple processes
- Scalable client customization

Expected to be ROE and margin accretive in the long-term
Welcome Anne,
this is your daily snapshot.

Current balance

$3,282,525,312.29

On average you have excess cash of $203M,
earn a potentially higher yield in a Goldman Sachs Money Market Fund

Total cash  ▲  + $2,014,998.86 since yesterday

2 Notifications

1 hour ago  ●
You have 1 payment pending approval

2 hours ago  ●
Sally G. joined AcmeTxB, set up her entitlements

3 hours ago
ACME-NY-PAYROLL: 5 approvals awaiting action

3 hours ago
ACME-LA-VENDORS: 5 approvals awaiting action

ILLUSTRATIVE
“Spotify and I have been fortunate to have Goldman as partners every step of the way, from early days raising capital to going public to advice on strategic transactions”

– Daniel Ek, Founder and CEO
Core Competitive Advantages Driving Future Growth

- Trusted Advisor of Choice
- World-Class Talent and Culture
- Unparalleled Brand of Excellence
- Highest-Quality Execution
- Global Scale and Reach

### Forward Goals

<table>
<thead>
<tr>
<th>#1</th>
<th>Investment Banking Fees¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#1 M&amp;A Market Share</td>
</tr>
<tr>
<td></td>
<td>#1 Equity Market Share</td>
</tr>
<tr>
<td>Top 4</td>
<td>Debt Market Share</td>
</tr>
<tr>
<td>Expand Share</td>
<td>with $500mm-2bn Clients</td>
</tr>
<tr>
<td>Deliver Transaction Banking</td>
<td>$1bn Revenues in 5+ years</td>
</tr>
</tbody>
</table>
These notes refer to the financial metrics and/or defined term presented on:

Slide 1:
1. Based on cumulative publicly-disclosed Investment Banking revenues since 2015, per competitor public filings. Peers include Bank of America, Barclays, Citi, Credit Suisse, Deutsche Bank, JPMorgan, Morgan Stanley and UBS. GS excludes Corporate Lending for comparability.

Slide 2:
1. Source: Dealogic; Institutional Loans per Bloomberg. Equity Underwriting refers to Equity and Equity-Related Offerings.

Slide 3:

Slide 4:

Slide 5:
1. Represents Advisory, Equity Underwriting and Debt Underwriting revenues; excludes Corporate Lending and Asset Management revenues.

Slide 7:
Source: Dealogic
1. Ranked #1 in Announced M&A 17 of 21 years since GS’ IPO and #1 in Completed M&A 20 of 21 years.
2. Source: Company filings; GS Investment Research 4Q19 estimates used for Deutsche Bank and Credit Suisse, who have not yet reported FY2019 results; all revenues and estimates converted to USD.
3. Activism market share per Factset SharkWatch.

Slide 8:
1. Only bank ranked #1 or #2 in Americas, EMEA and Asia since 2010.
2. Source: Dealogic.
3. Source: Dealogic; ranked #1 for initial public offerings of ≥$100mm since GS’ IPO.

Slide 9:
1. High Yield and Investment Grade per Dealogic; Institutional Loans per Bloomberg.
These notes refer to the financial metrics and/or defined term presented on:

Slide 10:
1. Represents total notional commitments. Other includes special purpose vehicles and funds

Slide 12:
1. Source: Dealogic
2. Based on 2019 fee pool

Slides 13:

Slide 14:
1. Source: Dealogic 2015 – 2019
2. Represents coverage rate of public companies as of January 25, 2020 per internal Goldman Sachs coverage database, with client size measured by market capitalization
3. Internal Goldman Sachs classification based on frequency of GS coverage banker engagement

Slide 15:
1. McKinsey Global Cash Management Revenue Pools as of 2019

Slide 17:
Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of Goldman Sachs or its products/services

Slide 18:
1. Sum of Advisory, Equity Underwriting and Debt Underwriting revenues
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.
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 Franchise
- #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

Secular Forces

Regulatory Changes

Technological Innovation

Impact

Lower Market Liquidity

Higher Capital Consumption

Active to Passive Shift

Changing Competitive Dynamics

Opportunities

Expand Risk Intermediation Advantage

Increase Client Financing Activities

Enhance Client Experience

Growing Share and Returns
Adapting, Evolving, Improving

<table>
<thead>
<tr>
<th>Historical Business Model</th>
<th>New Business Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business selection guided by measuring returns on a per trade basis</td>
<td>Build holistic, long-term client relationships by adopting a portfolio approach</td>
</tr>
<tr>
<td></td>
<td>to generating higher returns</td>
</tr>
<tr>
<td>Skewed focus towards a portion of a client’s risk intermediation wallet</td>
<td>Grow our financing capabilities across</td>
</tr>
<tr>
<td></td>
<td>FICC and Equities</td>
</tr>
<tr>
<td>Concentrated on servicing the most complicated needs of sophisticated clients</td>
<td>Pair bespoke derivative intermediation with cash and electronic capabilities</td>
</tr>
<tr>
<td></td>
<td>Goldman Sachs Marquee</td>
</tr>
<tr>
<td>Limited client access to our market leading risk analytics and pricing tools used by our</td>
<td></td>
</tr>
<tr>
<td>traders (e.g. SecDb)</td>
<td></td>
</tr>
</tbody>
</table>
Disciplined Response to Change Drives Top 3 Ranking

Global Markets Revenues ($bn)

Reduction in firmwide market risk RWAs\(^1\) (2019 vs. 2015) \(-40\%\)

Reduction in attributed capital (2019 vs. 2015) \(-20\%\)

Competitive Landscape

<table>
<thead>
<tr>
<th>Rank</th>
<th>2019E Revenues ($bn)(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18.3</td>
</tr>
<tr>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>3</td>
<td>14.8</td>
</tr>
<tr>
<td>4</td>
<td>13.7</td>
</tr>
<tr>
<td>5</td>
<td>12.9</td>
</tr>
<tr>
<td>6</td>
<td>6.4</td>
</tr>
<tr>
<td>7</td>
<td>6.2</td>
</tr>
<tr>
<td>8</td>
<td>6.0</td>
</tr>
<tr>
<td>9</td>
<td>5.9</td>
</tr>
<tr>
<td>10</td>
<td>5.0</td>
</tr>
</tbody>
</table>

\(^1\) Reduction in firmwide market risk RWAs (2019 vs. 2015)

\(^2\) Reduction in firmwide market risk RWAs (2019 vs. 2015)
Action Plan

- Optimize Resource Consumption
- Deepen and Broaden Client Base
- Increase Client Financing
- Leverage Risk Expertise to Provide Scalable Liquidity
- Enhance Client Experience
Optimize Resource Consumption

Reduce Operating Expenses

- $300mm
  Reduction in expenses excl. litigation

Optimize Funding

- $200mm
  2019 funding efficiencies

Deliver Capital Efficiencies

- 40%
  Reduction in firmwide market risk RWAs
- 20%
  Reduction in attributed capital

Progress since 2015

Our medium-term plan

- $700mm
  Identified expense opportunities

- $250mm
  Further funding optimization

~ $2bn
  Capital reallocated to accretive opportunities
Path to Higher Returns

- 2019 ROE
- Litigation: ~125bps
- Expense Efficiencies: ~100bps
- Funding Optimization: ~50bps
- Client Initiatives: ~100bps

~150bps from resource optimization initiatives

+50bps ROTE\(^1\)

>11% ROTE

Medium-Term ROE

>10%
Deepen and Broaden Client Base

Goldman Sachs Ranked #2 Globally

<table>
<thead>
<tr>
<th>Overall</th>
<th>Asset Managers</th>
<th>Hedge Funds</th>
<th>Banks &amp; PSE</th>
<th>Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>#2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equities</td>
<td>#3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Derivatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prime</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Futures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FICC</td>
<td>#2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10 Rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10 FX</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emerging Markets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Securitized Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10 &amp; EM Flow Credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commodities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant Upside in Closing Client Gaps

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS Share</td>
<td>&lt;1.2bn</td>
<td>$1.2bn</td>
<td>#1 bank</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$1.2bn gap to #1 bank

Top 3: #1, #2, #3

4-7: #2, #3

8+: #2, #3

1. Goldman Sachs
2. Asset Managers
3. Hedge Funds
4. Banks & PSE
5. Insurance
6. Cash
7. Derivatives
8. Prime
9. Futures
10. G10 Rates
11. G10 FX
12. Emerging Markets
13. Securitized Products
14. G10 & EM Flow Credit
15. Commodities

2014: 7.6%
2015: 7.9%
2016: 8.3%
2017: 8.5%
2018: 9.4%
Increase Client Financing in FICC

Industry Wallet Composition1 ($bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Financing Wallet</th>
<th>Intermediation Wallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>65</td>
<td></td>
</tr>
</tbody>
</table>

Financing Percent of Total Revenues

- Financing: 19%
- Intermediation: 81%

<table>
<thead>
<tr>
<th>2019 Goldman Sachs</th>
<th>2018 U.S. Peer Average1</th>
</tr>
</thead>
<tbody>
<tr>
<td>68%</td>
<td>32%</td>
</tr>
</tbody>
</table>

- Revenue gap to U.S. peer average in 20181

Opportunity to grow FICC financing revenues

- Mortgage warehouse lending
- Repurchase agreements
- Secured lending

$1.4bn
Increase Client Financing in Equities

Industry Gross Balances¹ ($tn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Fundamental</th>
<th>Systematic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>2018</td>
<td>5.9</td>
<td>8.9</td>
</tr>
</tbody>
</table>

Systematic Wallet Growth² ($bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Systematic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1.8</td>
</tr>
<tr>
<td>2018</td>
<td>3.6</td>
</tr>
</tbody>
</table>

~$1bn
Revenue gap with systematic clients³

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

<table>
<thead>
<tr>
<th>Client Challenge</th>
<th>Solution</th>
<th>Result</th>
</tr>
</thead>
</table>
| **Corporate Bonds**
  ~75% Electronic\(^1\) | Pre-trade transparency  
Execution certainty  
Liquidity mismatch | Systematic Credit | **#1 IG Systematic**
A Market Leader in Portfolio Trading  
($120bn+ executed since inception) |
| **Commodities**
  ~80% Electronic\(^1\) | Liquidity fragmentation  
Minimal aggregation  
Limited algorithms & analytics | eAron | **Unique Offering**
Combined Goldman Sachs  
Liquidity, Algorithms  
& Market Access |
| **Equities**
  ~99.9% Electronic\(^1\) | 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

Before: Multiple Contacts
- Sales, Trading & Strats
  - Analysis, Pricing & Risk
- Technology
  - Execution & Trade Processing
- Operations
  - Onboarding & Trade Management

Current: Client Aligned
- Global Markets
  - Processing teams aligned by client

Future: Digital Interface
- Automate
- APIs

Pre-Trade
Trade
Post-Trade

Organize

Client
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

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merger Advisory</td>
<td>1.0</td>
</tr>
<tr>
<td>Acquisition Bridge Financing</td>
<td>1.6</td>
</tr>
<tr>
<td>Capital Markets Takeout Financing</td>
<td>1.2</td>
</tr>
<tr>
<td>Derivative Hedging</td>
<td>0.3</td>
</tr>
</tbody>
</table>

4x Multiplier Effect
### 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 Community

- **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
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 $338mm 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:

<table>
<thead>
<tr>
<th>Unaudited, $ in millions</th>
<th>Average for the year ended December 31, 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributed common shareholders’ equity</td>
<td>40,060</td>
</tr>
<tr>
<td>Attributed goodwill and identifiable intangible assets</td>
<td>(2,803)</td>
</tr>
<tr>
<td>Attributed tangible common shareholders’ equity</td>
<td>37,257</td>
</tr>
</tbody>
</table>
End Notes

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

Slide 8:
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.

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.
What Drives Our Success

- Global scale across full spectrum of asset classes
- Power of Goldman Sachs sourcing and distribution
- Strong investment performance track record
- Ability to leverage balance sheet

World-class active asset manager providing holistic solutions to a wide array of investors
## Global Scale Across Traditional and Alternatives

### $2.3$ Trillion Firmwide Investment Platform$^{1,2}$

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank$^3$</th>
<th>Gap to Leader$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity</td>
<td>#4</td>
<td>~$300bn</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>#4</td>
<td>~$1 trillion</td>
</tr>
<tr>
<td>Equity</td>
<td>#10</td>
<td>~$800bn</td>
</tr>
<tr>
<td>Alternatives</td>
<td>#4</td>
<td>~$200bn</td>
</tr>
<tr>
<td>Brokerage</td>
<td>NM</td>
<td>NM</td>
</tr>
</tbody>
</table>

Complete offering from money markets to private assets

1. Source: [Investment Platform Report](source1.com).
2. Source: [Alternative Investments Review](source2.com).
3. Rank based on [latest financial data](rankdata.com).

**Complete offering from money markets to private assets**
Delivered Through Broad Distribution Channels

Firmwide

$2.3tn Total Assets

Fee-Earning ~$1.9tn

Non-Fee Earning ~$130bn

Brokerage ~$280bn

Asset Management

$1.9tn AUS

$1.3tn AUS

3rd Party Distributed ~$610bn

Institutional ~$680bn

Wealth Management ~$560

Consumer & Wealth Management

Fee-Earning AUS

Other Investment Assets

Fee-Earning AUS

Asset Management

Asset Management

108x52 Consumer & Wealth Management

$1.9tn

~$1.9tn Fee Earning

~$280bn Brokerage

~$130bn Non-Fee Earning

~$560 Wealth Management

~$610bn 3rd Party Distributed

~$680bn Institutional

$2.3tn Total Assets

$1.9tn AUS

$1.3tn AUS
Franchise Built Over 30+ Years; Difficult to Replicate Breadth and Depth

Legend:
- Traditional / Alternatives

1980s
- Fixed Income
- Liquidity Solutions
- Private Equity

1990s
- Fundamental Equity
- Quantitative Equity
- Asia Special Situations
- Growth Equity
- Mezzanine Funds
- Open-Architecture
- Real Estate Equity
- Secondary Private Equity

2000s
- Advisory
- Insurance Solutions
- Pension Solutions
- Alternative Energy
- Global Special Situations
- General Partner Stakes
- Infrastructure
- Senior Loan Fund
- Specialty Lending
- Multi-Asset Funds

2010s
- ESG and Impact Investing
- ETFs
- Model Portfolios
- Retirement Advisory
- Smart Beta
- Stable Value
- Target Date Funds
- Co-Investment Funds
- Credit BDCs
- Real Estate Credit
Global Presence Driving Unique Opportunities

Average Partner tenure of ~19 years

**Americas**
- ~800 Investment Professionals
  - 76% of firmwide AUS\(^1\)
  - Investing since 1980s

**EMEA**
- ~200 Investment Professionals
  - 15% of firmwide AUS\(^1\)
  - Investing since 1990s

**APAC**
- ~200 Investment Professionals
  - 9% of firmwide AUS\(^1\)
  - Investing since 1990s
Track Record of Generating Strong Investment Returns: Traditional

| Portion of Goldman Sachs Mutual Fund AUS Performing in the Top 50% of Morningstar Funds\(^1\) |
|---|---|---|---|---|---|---|
| **3-Years** | **5-Years** | **10-Years** |
| Equity | Fixed Income | Quantitative | Equity | Fixed Income | Quantitative | Equity | Fixed Income | Quantitative |
| 62% | 66% | 61% | 52% | 73% | 79% | 72% | 88% | 89% |

Total Funds

- **65%**
- **69%**
- **83%**

Consistent and persistent track record across traditional investment products
Track Record of Generating Strong Investment Returns: Alternatives (Principal Strategies)

### Corporate Equity $^{1,2,3}$

<table>
<thead>
<tr>
<th></th>
<th>Net IRR</th>
<th>Gross IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI World</td>
<td>5.4%</td>
<td>15.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21.1%</td>
</tr>
</tbody>
</table>

### Corporate Credit $^{1,2,4}$

<table>
<thead>
<tr>
<th></th>
<th>Since Inception</th>
<th>Post-Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P Leveraged Loan + BAML US High Yield</td>
<td>7.5%</td>
<td>4.9%</td>
</tr>
<tr>
<td></td>
<td>8.9%</td>
<td>9.8%</td>
</tr>
<tr>
<td></td>
<td>13.0%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

### Real Estate Credit $^{1,2,5}$

<table>
<thead>
<tr>
<th></th>
<th>Since Inception</th>
<th>Post-Crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bloomberg Barclays CMBS Index</td>
<td>5.0%</td>
<td>3.3%</td>
</tr>
<tr>
<td></td>
<td>9.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td></td>
<td>13.6%</td>
<td>14.4%</td>
</tr>
</tbody>
</table>

### Open Architecture Private Assets $^{2,6}$

<table>
<thead>
<tr>
<th></th>
<th>Net IRR</th>
<th>Gross IRR</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI World</td>
<td>7.8%</td>
<td>14.4%</td>
</tr>
<tr>
<td></td>
<td>11.0%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Past performance does not guarantee future results, which may vary.
Resulting in Significant Asset Growth as We Deepen Client Relationships

Significant Firmwide AUS Growth Over the Past 5 Years
$ in billions

<table>
<thead>
<tr>
<th>Year</th>
<th>AUS</th>
<th>LTFB Growth</th>
<th>Liquidity</th>
<th>2019 AUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$1,178</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$1,178

$681

$502

$202

$102

$198

Net Inflows

$179

Appreciation

$202

Acquisitions

$179

Active LTFB Organic Growth² (2014 - 2019)

- Goldman Sachs: 22%
- JPMorgan: 18%
- BlackRock: 12%
- Alliance Bernstein: 7%
- Allianz (PIMCO): 6%
- T.Rowe: 4%
- Morgan Stanley: 4%
- Legg Mason: -2%
- Federated: -4%
- UBS: -4%
- Invesco: -9%

Represents Top 10 Public Active Managers

Significant Asset Growth as We Deepen Client Relationships

Resulting in Significant Asset Growth as We Deepen Client Relationships

Active LTFB Organic Growth² (2014 - 2019)
One Goldman Sachs: Power of our Investment Sourcing Network

- **Access to Capital**
  - UHNW Clients
  - Institutional Clients
  - Goldman Sachs

- **Investment Sourcing**
  - Corporate Relationships
  - Partnering with Clients
  - Global Footprint

- **Intellectual Capital**
  - Operational Expertise
  - Market Insights
  - Exit Strategies

**Diamonds:**
- Investment Banking
- Asset Management
- Consumer & Wealth Management
- Global Markets
Executing a Clear Strategy for Growth

- Partner with asset allocators to deliver holistic solutions
- Innovate to serve evolving client needs
- Grow 3rd party Alternatives
- Leverage balance sheet as a strategic asset
- Optimize capital
Continuing to Deliver for Our Clients, Fueling Continued AUS Growth

Significant asset growth achieved

$ in billions, unless otherwise noted

Firmwide View

Clear path to continued growth

+$350 net inflows$1

$100

Split across Private Equity, Credit, Real Estate and Open Architecture

~$2.2 trillion

<table>
<thead>
<tr>
<th>Year</th>
<th>AUS</th>
<th>5-Year Growth</th>
<th>2019 AUS</th>
<th>Traditional Net Inflows</th>
<th>Alternatives Net Inflows</th>
<th>Longer-term AUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$1,178</td>
<td>$681</td>
<td>$1,859</td>
<td>$250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. net inflows
2. $ in billions, unless otherwise noted
5-Year Growth Plan: DiversifiedCapabilities Support Broad-Based Growth

Traditional $250bn
- Fixed Income ~60%
- Equity ~40%

Alternatives $100bn
- Corporate Equity ~35%
- Private Credit ~25%
- Multi-Asset & Other ~25%
- Real Estate ~15%
Partnering with Asset Allocators to Deliver Holistic Solutions

- Pensions
- Insurers
- Sovereign Wealth Funds
- Corporates
- Financial Intermediaries
- Endowments & Foundations

Capabilities:
- Risk Mgmt.
- Market Views
- Asset Allocation
- Hedging
- Holistic Advice
- Asset Liability Mgmt.
## Continue to Innovate to Serve Evolving Client Needs

<table>
<thead>
<tr>
<th>Shift from Active to Passive</th>
<th>Integration of ESG</th>
<th>Seamless Digital Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ETF and ActiveBeta</strong></td>
<td><strong>ESG and Impact Investing</strong></td>
<td><strong>Liquidity Investment Solutions</strong></td>
</tr>
<tr>
<td>$26bn AUS</td>
<td>$74bn AUS¹</td>
<td>API Connectivity</td>
</tr>
<tr>
<td>22 ETFs</td>
<td>Turnkey Solutions</td>
<td>Cash Solutions Proprietary liquidity platform</td>
</tr>
<tr>
<td>Cost Effective</td>
<td>Public and private markets</td>
<td>Expertise Digital portal backed by Goldman Sachs team</td>
</tr>
<tr>
<td>Competitive with Passive</td>
<td>Acquired Capabilities Via Imprint Capital</td>
<td></td>
</tr>
</tbody>
</table>

---

1. US$74 billion AUS is the market value as of a specific date.
Top 5 Alternative Asset Manager with Full Asset Class Capabilities

Real Estate
- Real Estate Equity (Core to Opportunistic)
- Real Estate Credit

Credit
- Senior Secured Lending
- Mezzanine Financing
- Special Situations

Private Equity
- Mid-to-Large Cap Buyouts
- Growth Equity
- Infrastructure
- Secondaries

Hedge Funds / Multi-Asset
- Firm-Managed Strategies
- Manager Selection
- Outsourced CIO

Alternative Assets: $320bn

1. Source: $320bn estimate from Alternative Asset Manager with Full Asset Class Capabilities.
Prudently Leveraging Our Balance Sheet

Benefitting Our Clients

- Aligned Interests
- Investment Sourcing

Benefitting Our Shareholders

- Incubation of New Strategies
- Meaningful Revenue Contribution

Diversified Across Various Dimensions

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Investments</th>
<th>Geography</th>
<th>Vintage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Portfolio ($62bn)¹</td>
<td>~1,000 Investments</td>
<td>Americas 50%</td>
<td>2016 - Present 40%</td>
</tr>
<tr>
<td>Equity Portfolio excluding CIEs ($22bn)²</td>
<td></td>
<td>APAC 33%</td>
<td>2012 or Earlier 29%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMEA 17%</td>
<td>2013 - 2015 31%</td>
</tr>
<tr>
<td>Credit 31%</td>
<td>Private Equity 27%</td>
<td>Other 2%</td>
<td>2012 or Earlier 29%</td>
</tr>
<tr>
<td>RE Credit 19%</td>
<td>RE Equity 21%</td>
<td>2013 - 2015 31%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Total Portfolio ($62bn) includes private equity, other investments, and RE credit.
² Equity Portfolio excluding CIEs ($22bn) includes private equity, other investments, and RE equity.
## Strong On Balance Sheet Investment Performance

### Goldman Sachs On Balance Sheet Investments

<table>
<thead>
<tr>
<th>Asset Investments</th>
<th>Equity Investments</th>
<th>Lending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Yield¹</td>
<td>Based on net revenues</td>
<td>Based on net revenues, net of expenses related to consolidated investments</td>
</tr>
<tr>
<td>2017</td>
<td>17.4%</td>
<td>8.2%</td>
</tr>
<tr>
<td>2018</td>
<td>15.9%</td>
<td>6.5%</td>
</tr>
<tr>
<td>2019</td>
<td>17.5%</td>
<td>6.7%</td>
</tr>
<tr>
<td>Asset Yield²</td>
<td>Based on net revenues, net of provision for credit losses</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>15.4%</td>
<td>4.4%</td>
</tr>
<tr>
<td>2018</td>
<td>13.2%</td>
<td>7.4%</td>
</tr>
<tr>
<td>2019</td>
<td>13.8%</td>
<td>5.4%</td>
</tr>
</tbody>
</table>
3\textsuperscript{rd} Party Growth and Balance Sheet Remix Opportunity

\textit{(Pro Forma Simulation)}

<table>
<thead>
<tr>
<th>Growth in 3\textsuperscript{rd} Party Funds</th>
<th>Current (2019)\textsuperscript{1}</th>
<th>5-Year Growth Plan</th>
<th>Longer-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>~$1.9tn Fee-Earning AUS (Firmwide)</td>
<td>+2% Annual Mkt. Appreciation</td>
<td>~$2.4tn Fee-Earning AUS</td>
<td></td>
</tr>
<tr>
<td>~$6.3bn Management and Other Fees and Incentive Fees (Firmwide)</td>
<td>+$350bn Organic AUS Growth</td>
<td>Improved Revenue Durability</td>
<td></td>
</tr>
<tr>
<td>~$6.2bn On-Balance Sheet Revenues (Asset Management)</td>
<td>+$1.6bn Assuming Stable Fee Rate (32bps) and Incentive Fees</td>
<td>New Capacity for Growth</td>
<td></td>
</tr>
<tr>
<td>~$22bn Attributed Common Equity (Asset Management)</td>
<td>RemiX Equity to Credit Lower Revenues and Risk</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textbf{-$4bn Capital Reduction}
Improving Revenue Durability and Returns Over Time

FY 2019 AM Segment Revenue Composition

Longer-Term AM Segment Revenue Composition (Illustrative)

- Equity Investments
- Lending
- Management and Incentive Fees

Grow Management and Incentive Fees and Lending

- Equity Investments
- Management and Incentive Fees
- Lending
End Notes

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

Slide 2:
Note: Values reflect firmwide investment assets, including assets in Asset Management and Consumer & Wealth segments
1. Includes non-fee-earning assets in Alternatives of ~$130bn, which are not included in reported Assets Under Supervision
2. Includes brokerage assets of ~$280bn, which are not included in reported Assets Under Supervision
3. Data as of 3Q19. Competitor data compiled from publicly available Quarterly Earnings Releases and Supplements, eVestment database, and Morningstar Direct. Where product classification (e.g. fixed income vs. alternatives) and portfolio management style (passive vs. active) were not explicit in competitors' publicly available data, GS applied certain assumptions for purposes of making comparisons. Peer population represents key competitors tracked internally by product classification and portfolio management style

Slide 3:
1. Non-fee earning assets of ~$130bn includes Goldman Sachs balance sheet investments, employee funds, leverage, cost vs. fair value on Alternatives funds, and unfunded capital commitments

Slide 4:
1. ESG refers to Environmental, Social, and Governance

Slide 5:
1. Regional AUS includes Asset Management and Consumer & Wealth Management segments, excluding brokerage and non-fee earning assets

Slide 6:
Note, past performance does not guarantee future results, which may vary
1. Represents global funds. Source: Morningstar. Data of December 31, 2019
End Notes

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

Slide 7:

Note: Past performance does not guarantee future results, which may vary.

1. Performance is based on net asset values as of 9/30/19 for Corporate Equity, Corporate Credit, and Real Estate Credit strategies. Performance is calculated by pooling the cash flows and calculating the IRR of the resulting cash flow stream on a capital-weighted basis for fee-paying investors. The information on which this performance is based is unaudited and reflects best available estimates, and therefore may be subject to change. Gross performance is based on aggregated cash flows without deduction for fees, carried interest, or fund expenses and includes leverage from fund-level credit facilities (which may enhance investor returns). Net performance is based on aggregated cash flows with deduction for fees, carried interest and fund expenses and includes leverage from fund-level credit facilities (which may enhance investor returns).

2. Index performance is calculated using the Modified PME approach, net of reasonable index transaction costs proxied to ETF expense ratios. Public Market Equivalent (PME), or the Index Comparison Method, is a methodology for calculating private market benchmark returns by using private fund cash flows and public market index returns. It is not possible to invest directly in an index, and the simulation seeks to provide a basis for comparing index returns with fund returns by mirroring the timing and amounts of cash flows of the fund to the index. The indices chosen for comparison were selected because we believe that they represent the closest public market alternative to investing in each of the applicable principal strategies.

3. Reflects weighted average performance of Corporate Equity strategy since 2000 and specifically includes GSCP 2000, GSCP V, GSCP VI, the Pre-CPVII portfolio and WSCP VII. The Pre-CPVII portfolio represents all investments over $100mm made by the balance sheet and managed accounts between 2012 and 2016 (post-GSCP VI, but pre-WSCP VII). The benchmark is MSCI World Total Return Index.

4. Reflects weighted average performance of all Senior Credit and Mezzanine vehicles managed by MBD since inception and since post-crisis, as applicable. Post-crisis reflects the following vehicles that were raised since 2009: BSLP 2013, BSLP III, SCP, SCP II, GSMP VI and GSMP VII. Senior Credit and Mezzanine strategies are benchmarked separately against S&P Global Leveraged Loan and BAML US High Yield Master II Total Return indices before aggregation.

5. Reflects weighted average performance of all Real Estate Credit funds managed by MBD since inception and since post-crisis, as applicable. Post-crisis reflects the following funds that were raised since 2009: RECP II and RECP III. The benchmark is Bloomberg Barclays CMBS Total Return Index.

6. Open Architecture Private Assets performance reflects all commingled client vehicles of the Private Equity Partners (first fund 1997), Private Equity Manager (first fund 2011), Vintage (first fund 1998), Petershill (first fund 2007), and Private Equity Co-investment Partners (first fund 2014) series of funds raised since 2000. These funds are closed to new investors. Performance is calculated by pooling the asset-weighted cash flows and 6/30/2019 asset valuations and calculating the IRR of the resulting cash flow stream. The information on which this performance is based is unaudited and reflects best available estimates, and therefore may be subject to change. Gross performance is based on the cash flows between the funds and their investments and do not deduct GSAM-related fees, carried interest, or GSAM vehicle expenses, but do deduct any management fees, carried interest, or expenses from third-party managers. Net performance is based on the aggregated cash flows of the fee-paying investors in the funds and includes GSAM-related fees, carried interest and vehicle expenses. Net performance figures also reflect the impact of all GSAM fund-level and underlying manager-level credit facilities, the reinvestment of proceeds from the sale of underlying funds and/or portfolio companies, cash management, and hedging, which may enhance investor returns. Investor returns may be lower without these activities, but leverage will magnify the loss of capital to investors if investments experience negative performance.
These notes refer to the financial metrics and/or defined term presented on:

Slide 8:
1. LTFB refers to long-term fee based assets, including equity, fixed income, and alternatives
2. Reflects cumulative organic growth from YE2014 through YE2019 where applicable (excluding acquisitions), calculated as active LTFB net sales divided by 2014 LTFB AUS. Competitor data compiled from publicly available Quarterly Earnings Releases and Supplements, eVestment database, and Morningstar Direct. Competitor data reflects most recently available Quarterly Earnings Releases as of 1/22/2020; eVestment data as of Q3 2019; Morningstar Direct data as of 12/31/2019 for US-Domiciled Funds and 11/30/2019 for Non-US Domiciled Funds. Where product classification (e.g. fixed income vs. alternatives) and portfolio management style (passive vs. active) were not explicit in competitors' publicly available data, GS applied certain assumptions for purposes of making comparisons. Peer population represents key competitors tracked internally by product classification and portfolio management style

Slide 11:
1. Growth shown net of realizations
2. Plus or minus net market appreciation, acquisitions, dispositions, and changes in Goldman Sachs' on balance sheet investments

Slide 14:
1. ESG and impact investing AUS includes mandates where there is an explicit ESG or impact objective in the investment guidelines

Slide 15:
1. Includes non-fee-earning assets in Alternatives

Slide 16:
1. Total asset management investment portfolio includes $71bn of balance sheet assets less ~$9bn of non-recourse debt, primarily attributable to our Consolidated Real Estate Equity Investments
2. Equity portfolio of $22bn excludes all Consolidated Investment Entities, which total ~$17bn and are funded with liabilities of ~$9bn, substantially all of which were non-recourse

Slide 17:
1. Asset yield equals net revenues related to equity investments divided by average on balance sheet equity investments. A second version of this metric reflects a deduction for expenses related to Consolidated Investment Entities
2. Asset yield equals lending-related net revenues divided by average on balance sheet credit investments. A second version of this metric reflects a deduction for provision for credit losses

Slide 18:
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.
What Drives Our Success

We provide unparalleled advice and product experience to help individuals through all stages of their financial journeys.

- Our Brand Signifies Credibility and Excellence
- Unwavering Commitment to Serving Our Clients
- Our Ability to Deliver the Entire Firm
- Advice-Led Technology-Enabled Client Solutions
Serving Clients Across the Wealth Spectrum to Expand Our Addressable Market

<table>
<thead>
<tr>
<th>Customer Segment</th>
<th>Wealth Management</th>
<th>Consumer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ultra-High Net Worth (UHNW)</td>
<td>High Net Worth (HNW)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$10mm (investable assets)</td>
<td>$10tn / $1.5tn</td>
<td>~7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1-10mm (investable assets)</td>
<td>$18tn / $3.1tn</td>
<td>&lt;1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;$1mm / $100k (investable assets / income)</td>
<td>$13tn / $3.5tn</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our Client and Firm Investment Assets

Firmwide

- ~$2.3tn Total Assets
- Institutional ~$680bn
- Brokerage Assets ~$280bn
- Wealth Management ~$560bn
- 3rd Party Distributed ~$610bn
- Non-Fee Earning ~$130bn

Consumer & Wealth Management

- ~$840bn Total Assets
- UHNW Fee Based AUS ~$475bn
- Brokerage ~$280bn
- HNW Fee Based AUS ~$85bn
- Wealth Management ~$560bn
- 3rd Party Distributed ~$610bn
- Institutional ~$680bn

Loans / Card:
- $28
- $7
- $35bn

Deposits:
- $56
- $60
- $116bn
Long-Term Track Record of Growth

$5.2bn
Revenues

>90%
Management Fees or NII

Advisors

Client Assets ($bn)$¹

Deposits ($bn)

>50% Growth
~1,400
2014
2019

>40% Growth
~$840
$590
2014
2019

+3x
$116
$60
2014
2019

Wealth Management
Consumer

1

2014
2019

~900
~$590
~$840
$35
$56

>50%
>40%
Growth
Growth

~1,400
~$840
$116
$56

Growth
~40%
Growth

>$5.2bn
Revenues

>$90%
Management Fees or NII
Executing a Clear Strategy for Growth

1. Growing Our Premier UHNW Wealth Business Globally
   - Increase advisors and capture embedded client opportunity

2. Expanding Our HNW Platform
   - Leverage corporate relationships and expand HNW franchise reach

   - Scale existing products, introduce new channels and launch new products
Leading Ultra-High Net Worth Platform

Leading Global Business in Fragmented Market

~800 advisors\(^1\)

~13,000 clients

~$3.5bn revenues

~$55mm avg. account size

>85% management fees or NII

~14 years avg. tenure per advisor\(^2\)

~$475bn of AUS

$>4mm advisor productivity\(^1\)

Growing Our ~3% Global Market Share\(^3\)
Increase Scale via Global Advisor Growth

Targeting 3-Year Global Advisor Growth of ~30% via ~250 new Private Wealth Advisors

Goldman Sachs UHNW AUS Mix

- Americas 84%
- EMEA 11%
- Asia 5%

1. **Americas**
   - Advisors: +20%
   - Organic talent development

2. **EMEA**
   - Advisors: +50%
   - Experienced lateral hires with significant existing client business

3. **APAC**
   - Advisors: +50%
   - Sourcing experienced hires with high growth potential
Capturing Embedded Opportunity with Existing Clients

Client Assets

- ~$840bn of Client Assets
- ~$475bn of UHNW AUS

Lending Penetration

- $28bn of Total WM Loans
- 27% U.S. Penetration
- 8% International Penetration

Increase client returns via diversification

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity</td>
<td>16%</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>34%</td>
</tr>
<tr>
<td>Equity</td>
<td>36%</td>
</tr>
<tr>
<td>Alts</td>
<td>14%</td>
</tr>
<tr>
<td>Brokerage</td>
<td>33%</td>
</tr>
<tr>
<td>HNW Fee Based AUS</td>
<td>10%</td>
</tr>
<tr>
<td>UHNW Fee Based AUS</td>
<td>57%</td>
</tr>
</tbody>
</table>
Integrated Corporate Client Service through Ayco

Providing corporate clients and their employees a holistic wealth offering

- Financial counseling and family office
  - Full service integrated offering
- Personalized financial planning via dedicated advisor
  - Digital wealth, wellness and budgeting
- Live coaching
  - High-value banking products

Goldman Sachs Footprint

<table>
<thead>
<tr>
<th>C-Suite</th>
<th>Senior Level Executives</th>
<th>Broader Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>~435 Corporations</td>
<td>&gt;1mm U.S. Employees</td>
<td>~1,500 Corporations¹</td>
</tr>
<tr>
<td>~40mm Est. Global Employees²</td>
<td>~16,000 Corporations³</td>
<td>~50mm Est. U.S. Employees⁴</td>
</tr>
</tbody>
</table>

¹ Target Opportunity
³ Total Market
² Goldman Sachs Footprint
⁴ Total Market
High Net Worth Expansion

High growth, U.S.-focused business in expansion mode

~600 advisors

~40,000 clients

~$85bn of AUS

~$0.9bn revenues

>95% management fees or NII

Present in 28 of top 30 U.S. metro areas

Growing from our <1% U.S. Market Share
Building a Leading Digital Consumer Bank

Our Vision

Building the consumer bank of the future to address the spending, borrowing and saving needs for millions of customers and help them take control of their financial lives.

Our Criteria

- Ability to Address Consumer Pain Points
- Our Competitive Advantages
- Deep Revenue Pools

Our Value Proposition

Demonstrating we are “on your side” through products that are:

- Simple
- Transparent
- Valuable
- Personal
- Secure
### Progress Three Years In

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customers</strong></td>
<td>0.2mm</td>
<td>~5mm</td>
</tr>
<tr>
<td><strong>Deposit Balances</strong></td>
<td>$12bn</td>
<td>$60bn</td>
</tr>
<tr>
<td><strong>Loan / Card Balances</strong></td>
<td>$0.2bn</td>
<td>~$7bn</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td>$2mn</td>
<td>~$860mn</td>
</tr>
</tbody>
</table>

1. Amount refers to estimated values for 2019.
Creating an Integrated Platform

**Products**

- **Spend**
  - Checking (2021)
  - Credit Cards
  - Loans
  - Savings

- **Save**
  - Invest / Wealth (2020)

**Channels**

- Direct Marketing
- Financial Tools
- Merchants at Point of Sale
- Corporates (via Ayco)

**Brand**

- Marcus: Savings
- Marcus: Insights
- Marcus: Pay
- Marcus: @Work

**Partnerships**

- Corporate Relationships
- Partner / Co-Brand
Marcus by Goldman Sachs

Good morning.
Remember that time is money.
-B. Franklin

Savings: $84,150.00
Online Savings-3059: $37,026.00
Certificate of Deposit-0124: $47,124.00

Interest earned YTD: $339.60
Interest Paid: $28.30
3 Consumer Credit Risk Management

Holistic Approach

Governance and Expertise
Risk-Focused Product Design
Foundational Credit Decision Framework
Modern Technology Infrastructure

Credit Risk Management

Disciplined Risk Appetite

<table>
<thead>
<tr>
<th>Offer Presentment / Approval Rate</th>
<th>~25-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. FICO Score at Origination</td>
<td>~740</td>
</tr>
<tr>
<td>Current Balances</td>
<td>~$7bn</td>
</tr>
</tbody>
</table>

Designed to drive resiliency and through-the-cycle performance
Driving Higher Margins in Consumer & Wealth Management

C&WM Metrics (2019)

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenues</td>
<td>$5.2bn</td>
</tr>
<tr>
<td>Pre-tax Earnings</td>
<td>$0.2bn</td>
</tr>
<tr>
<td>Pre-tax Margin</td>
<td>5%</td>
</tr>
</tbody>
</table>

5-Year Consumer Opportunity

- **Grow to $125bn+**
  - Consumer Deposit Balances

- **Grow to $20bn+**
  - Loan / Card Balances

- **$700mm - $900mm**
  - Pre-tax Income ex-reserves

C&WM Segment Forward Pre-tax Margin

<table>
<thead>
<tr>
<th>Period</th>
<th>Pre-tax Margins</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY19</td>
<td>5%</td>
</tr>
<tr>
<td>Medium-term</td>
<td>~15%</td>
</tr>
<tr>
<td>At scale</td>
<td>&gt;20%</td>
</tr>
</tbody>
</table>
Consumer & Wealth Management

Eric Lane

January 29, 2020
End Notes

Note: Data as of 2019YE except where otherwise noted

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

Slide 2:
1. UHNW market share reflects GS client assets in the Americas and personal financial assets of >$30mm. HNW market share reflects GS client assets in the US and personal financial assets between $1mm and $10mm. Source: McKinsey Wealth Pools, 2018. Market share calculated using GS total client assets figures. Deposits are included in investable asset figures and include retail current account deposits, savings deposits and term deposits.

Slide 3:
1. Non-Fee Earning assets of ~$130bn includes Goldman Sachs balance sheet investments, employee funds, leverage, cost vs. fair value on Alternatives funds and unfunded capital commitments.

Slide 4:
1. Client assets include Wealth Management AUS and brokerage assets.

Slide 6:
1. Reflects both self-sustaining and non-self-sustaining advisors.
2. Reflects self-sustaining advisors only.
3. Based on total global UHNW market size of $26tn in investable assets per McKinsey Wealth Pools, 2018. Market share calculated using GS UHNW client assets figures. Deposits are included in investable asset figures and include retail current account deposits, savings deposits and term deposits.

Slide 7:
1. Targeted growth from 2019YE through 2022YE.

Slide 8:
1. Loans include bank loans, mortgages and GS Select; excludes Margin. Penetration measures PWM accounts with bank loan / mortgage products vs. total accounts by region.

Slide 9:
1. Target corporations include existing corporate clients and prospects.
2. Due to limited data availability of U.S. employee count, global employee estimate is included. Ayco target market is U.S.-only today. Source: 2019 Fortune 1000 & Forbes America's Largest Private Companies 2019 Ranking.
End Notes

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

Slide 10:

1. Source: U.S. Census Bureau
2. Based on total U.S. HNW market size of $18 trillion in investable assets per McKinsey Wealth Pools, 2018. Market share calculated using GS HNW client assets figures. Deposits are included in investable asset figures and include retail current account deposits, savings deposits and term deposits

Slide 12:

Note: Graphs not to scale
1. 2016 revenue does not include results from Consumer deposit-taking activities

Slide 15:

1. Metrics are across total loan and card portfolios and dollar-weighted; FICO at origination is account-weighted
Cautionary Note on Forward-Looking Statements

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### Growth of International Footprint

A Remarkable, Organic Growth Story

<table>
<thead>
<tr>
<th>REVENUES&lt;sup&gt;1&lt;/sup&gt;</th>
<th>HEADCOUNT&lt;sup&gt;1&lt;/sup&gt;</th>
<th>OFFICES&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1990</td>
<td>1990</td>
</tr>
<tr>
<td>$0.7bn</td>
<td>~1,500</td>
<td>8</td>
</tr>
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</table>
Growth of International Footprint
A Remarkable, Organic Growth Story

<table>
<thead>
<tr>
<th>REVENUES¹</th>
<th>1990</th>
<th>2019</th>
<th>GROWTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.7bn</td>
<td>~$15bn</td>
<td>+22x</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEADCOUNT¹</th>
<th>1990</th>
<th>2019</th>
<th>GROWTH</th>
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</thead>
<tbody>
<tr>
<td>~1,500</td>
<td>~17,800</td>
<td>+12x</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>OFFICES¹</th>
<th>1990</th>
<th>2019</th>
<th>GROWTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>41</td>
<td>+5x</td>
<td></td>
</tr>
</tbody>
</table>
Deep International Footprint: Differentiated in Reach and Share

The scale and breadth of our international businesses position us to better serve our clients.

~40% Firmwide Revenues ($bn)

- Asia $4.7
- EMEA $9.7
- LatAm $0.8

By Region

28% Pre-tax Margin

By Segment (EMEA & Asia)

- Investment Banking 16%
- Asset Mgmt 31%
- Consumer & Wealth Mgmt 5%
- Global Markets 48%

~45% Headcount

- ~40% Female
- ~100 Languages
- ~140 Nationalities
Deliver the Firm: One Goldman Sachs
A Local Client Accessing Global Capabilities

- Global Markets
- Investment Banking
- Asset Management
- Consumer & Wealth Management

Financing
- UHNW Clients
- Institutional Clients
- Goldman Sachs

Advisory & Underwriting
- Asset Divestitures
- Green Bond Issuance
- Strategic Advice

Investing
- Sustainable Investing Opportunity
Deliver the Firm: One Goldman Sachs
A Global Client Accessing Local Capabilities

Global Markets

Investment Banking

Asset Management

Consumer & Wealth Management

Trusted Advisor
- Cross-border Acquisitions
- Corporate Restructuring
- Asset Sales / Divestitures
- JV Formation

Long-term Financier
- Lead IPO Underwriter
- Bond and Loan Issuance

Provider of Intellectual Capital
- Market Insights
- Entry / Exit Strategies
- Strategic Advice
Leading Global Investment Banking and Market Making Franchise Enabled by our International Footprint

<table>
<thead>
<tr>
<th>Investment Banking¹</th>
<th>EMEA</th>
<th>Asia Pacific</th>
<th>Latin America</th>
</tr>
</thead>
<tbody>
<tr>
<td>M&amp;A</td>
<td></td>
<td>#1</td>
<td></td>
</tr>
<tr>
<td>Equity Underwriting</td>
<td></td>
<td>#2</td>
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</tr>
<tr>
<td>High Yield Debt</td>
<td></td>
<td>#4</td>
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<table>
<thead>
<tr>
<th>Global Markets²</th>
<th>EMEA</th>
<th>Asia Pacific</th>
<th>Latin America</th>
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<tbody>
<tr>
<td>FICC</td>
<td></td>
<td></td>
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<tr>
<td>Equities</td>
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<table>
<thead>
<tr>
<th>Asset Management</th>
<th>EMEA</th>
<th>Asia Pacific</th>
<th>Latin America</th>
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</thead>
<tbody>
<tr>
<td>Alternatives</td>
<td></td>
<td></td>
<td>Leading Platform</td>
</tr>
<tr>
<td>GSAM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Consumer &amp; Wealth Management</th>
<th>EMEA</th>
<th>Asia Pacific</th>
<th>Latin America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Wealth</td>
<td></td>
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<td>Growing Platform</td>
</tr>
<tr>
<td>Consumer</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Firmwide Strategy Consistent Globally

## Grow and Strengthen Existing Businesses
- Investment Banking client expansion
- Grow in new geographies
- Wealth Management penetration

## Diversify Our Products and Services
- Build Transaction Banking
- Grow third party Alternatives
- Scale Consumer Banking

## Operate More Efficiently
- Invest in automation and digitization
- Streamline organizational structure
- Grow strategic locations
Substantial and Growing Footprint in Developed Markets

**Continental Europe**

Longstanding presence in large and diverse region – Goldman Sachs well positioned to benefit from competitive dynamics and development of EU capital markets

- Evolving structure of European bank balance sheets creating commercial opportunities
- Market share opportunities as large competitors reposition
- Incremental push to complete EU Banking and Capital Markets Union, stimulating cross-border activity
- Significant growth in EU-27 headcount, moving coverage closer to our clients
Japan is one of the highest revenue contributors in the APAC region with opportunity to grow our strong franchise.
China: Expand Footprint Across Developing Markets

GS China Background
- 25+ Years Onshore in China
  Established in 1994
- #1 Foreign Firm
  in Equity and M&A
- $10bn Invested in China
  Principal Investments over the last 25 years

Shifting Landscape
- Acceleration of Capital Markets Reforms
- Rebalancing of Funding from Banking System to Capital Markets
- Structural Change in Asset Management

$100bn+
Estimated Industry Revenue Pool by mid-2020s

Significant Opportunities
1. Increase in foreign inflows to onshore trading markets
2. Increase in cross-border Investment Banking activities
3. Expand Private Wealth and Asset Management franchises

Achieve 100% ownership of our business

China is a major focus area with an increasing addressable market and opportunity set
Well-diversified portfolio and pipeline of alternative investments with track record of delivering strong returns
Alternative Investment Platform

Well-diversified portfolio and pipeline of alternative investments with track record of delivering strong returns
Alternative Investment Platform to Scale Further

~$100bn Alternatives Net Inflows Global Long-term Target

Our international franchise will be a critical contributor in achieving our firmwide targets.
Unique Wealth Management Capabilities with Room to Increase Share

Global UHNW Investable Assets ($tn)$

- Americas: ~7%
- EMEA: ~1%
- Asia: ~9%
- GS market share: ~1%

~$26tn Global Assets

Medium-term Expectations
Goal to hire ~250 new Private Wealth Advisors globally

- Advisor growth to achieve scale in key geographies: China, Germany, U.K. and Switzerland
- Investing in platform capabilities, e.g. Swiss bank and China onshore RMB
Key Takeaways

Continue to grow longstanding franchises

Maintain leading position and strengthen our footprint in Europe, Japan, and China

Scale Alternatives and Wealth Management Businesses

Focus on fundraising to scale our third party alternative assets under supervision and addressing the under-penetrated UHNW space

Operating Efficiency

Continue to improve efficiency in line with the firm, including growth in strategic locations
International Strategy

Richard Gnodde
Chief Executive Officer | Goldman Sachs International

January 29, 2020
End Notes

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

Slide 1:
1. Excludes the U.S. and Canada from total international figures

Slide 2:
1. Excludes the U.S. and Canada from total international figures

Slide 3:
1. International revenues by segment and pre-tax margin are non-GAAP presentations and may not be comparable to similar non-GAAP presentations used by other companies. We believe that calculating these measures on this basis is meaningful because it is consistent with the way management views our international businesses. Pre-tax margin excludes U.S. and Canada figures and is calculated including $820mm of total net revenues and $254mm of total pre-tax earnings from Latin America, with Latin America using the pre-tax margin for the Americas

Slide 4:
Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of GS or its products/services

Slide 5:
Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of GS or its products/services

Slide 6:
1. Source: Dealogic rankings for 2015 to 2019
2. Source: Coalition institutional client analytics for FY2018. Institutional clients only. Analysis excludes captive and non-core products

Slide 10:
1. Source: Dealogic; from 1994 to 2019
2. Includes investments in the firm and clients
3. Source: Based on GIR estimates; industry pool primarily domestic

Slide 11:
1. Includes 3rd party capital committed in recent MBD Funds. Recent MBD Funds include Loan Partners III, Real Estate Credit Partners III, Mezzanine Partners VII, Capital Partners VII, China Coop Fund and Infrastructure Partners III as of 3Q19; includes open architecture 3rd party capital as of 2Q19 from most recent completed fundraises for core funds currently earning management fees (PEM 2018, Vintage VII, Petershill Private Equity, Private Equity Co-Investment Partners II)
Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of GS or its products/services

Slide 13:
1. Growth shown net of realizations

Slide 14:
1. Represents global personal financial assets >$30mm Source: McKinsey Wealth Pools; Includes cash deposits, investments, life insurance and pensions / retirement assets
2. GS market share reflects client assets from our Wealth Management business as of 2019YE
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.

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A Culture of Innovation

Marco Argenti
Co-Chief Information Officer

Stephanie Cohen
Chief Strategy Officer

January 29, 2020
The Potential of Platforms

Build leading technology
Externalize these services
Developers are first class citizens
Innovation is Fundamental to Our Strategy

Unique Position in the Innovation Economy

Dynamic Approach

Strength in Execution
Innovation is Fundamental to Our Strategy

Building platforms that benefit the firm, our clients and our shareholders
Unique Position in the Innovation Economy

Global Markets
Investment Banking
Asset Management
Consumer & Wealth Management

Advise
Raise Capital
Invest
Co-create
Unique Position in the Innovation Economy

Global Markets

Investment Banking

Asset Management

Consumer & Wealth Management
Pace of Innovation Requires a Dynamic Approach

Driving a more durable and higher returning business mix
Pace of Innovation Requires a Dynamic Approach

Driving a more durable and higher returning business mix
Pace of Innovation Requires a Dynamic Approach

Direct Marketing → Financial Tools App → Merchants at Point-of-Sale → Corporate (via Ayco) → Corporate Relationships → Partner Ecosystem

- Checking
- Cards
- Loans
- Savings
- Invest/Wealth

Banking-as-a-Service

Build  Buy  Invest  Partner

Individual Clients
One Goldman Sachs as a Platform

Goldman Sachs Platform

Internal

Corporations and Governments

External

Institutions

Individuals

Risk

Analytics

Payments

Data

Custody

Clearing

Advice

GOLDMAN SACHS PLATFORM
Goldman Sachs | From Service Provider...to Platform

Corporations

Institutions

Individuals

VOICE and APIs

Clearing

Risk

Payments

Analytics

Custody

Advice

Data

Simplify the complex services we provide to clients into component pieces
Developers are Our Clients

G S M A R Q U E E
Trading
Execution

Developer Focus

Transaction Banking

Corporations & Governments

Loans and Deposits

Individuals

API

M A R C U S B Y G O L D M A N S A C H S
Driving Value for the Firm, Our Clients and Our Shareholders

- Build technology platforms as its own first customer
- Internal developers access the same APIs as clients
- Drive scale advantages and fee-based revenues

FINANCIAL CLOUD

Goldman Sachs
Innovation at Goldman Sachs – Key Takeaways

We have a unique position in the innovation economy

We have a dynamic framework and proven track record

We have a client-centric platform strategy

Innovation will drive value for our clients, communities and shareholders
A Culture of Innovation

Marco Argenti
Co-Chief Information Officer

Stephanie Cohen
Chief Strategy Officer

January 29, 2020
End Notes

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

Slide 5:
Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of Goldman Sachs or its products/services

Slide 8:
Note: Includes products under development
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.

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Panelist Overview

Beth Hammack
Global Treasurer

Carey Halio
CEO of Goldman Sachs Bank USA and Deputy Treasurer

Rajashree Datta
Global Head of Liquidity Risk
Ask a Question

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#gsfi
Role of Corporate Treasury

Corporate Treasury supports the firm’s strategic priorities

**Liability Businesses**
- Marcus
- Private Wealth Management
- Global Markets
- Transaction Banking

**Corporate Treasury Responsibilities**
- Receive Funding Rate
- Sell Marginal Funding
- Resource Allocation
- Asset-Liability Management
- Funding Risk Management
- Liquidity Risk Management

**Asset Businesses**
- Marcus
- Private Wealth Management
- Global Markets
- Investment Banking
- Asset Management
**Funding and Liquidity Management**

**Key Tenets of our Strategy**

1. Further diversify funding mix via deposits
2. Enhance Asset-Liability Management
3. Optimize liquidity pool

**Target State**

Increasing high-quality deposits to improve funding diversification and generate $1.0bn in revenues through lower interest expense.
Spotlight on Funding Mix Transformation

Strategic deposit growth will diversify mix and improve funding costs\(^1\)

2015
- Deposits 31%
  - Wholesale Unsecured 69%

2019
- Deposits 43%
  - Wholesale Unsecured 57%

Medium-term\(^2\)
- Deposits 50%
  - Wholesale Unsecured 50%
Liquidity Risk Management

We maintain a conservative liquidity framework relative to peers

- Liquidity pool management based on our Modeled Liquidity Outflow (MLO)
  - MLO assesses the firm’s potential liquidity risks under a combination of very conservative market-wide and firm-specific stressed scenarios

- Methodologies continuously refined to reflect changes in markets and our business mix

- Global Core Liquid Assets (GCLA²) are generally a subset of High Quality Liquid Assets (HQLA) as it reflects a more conservative set of assets

![Average Liquidity Coverage Ratio Trend](image-url)
LIBOR Transition

We are committed to ensuring a seamless transition for our clients, the marketplace and our firm.

Leadership Accountability

- Appointed a Chief LIBOR Transition Officer and established a centralized LIBOR transition program in early 2018

Meeting Investor Needs

- Issued over $2bn of floating rate notes which are not reliant on LIBOR

Manageable LIBOR Exposure

- Majority of our LIBOR exposures in derivatives, where we expect a reasonably orderly transition given industrywide ISDA protocols

Outstanding Vanilla Debt and Preferred Shares Referencing USD LIBORs ($bn)¹:

- Total Debt $39.7
- Total Preferred Shares $9.4
- $5.3bn of debt will mature before 2022

¹ Referencing USD LIBOR

$39.7bn of debt
Fixed Income Investor
Breakout Session

Beth Hammack, Rajashree Datta, Carey Halio

January 29, 2020
These notes refer to the financial metrics and/or defined term presented on:

Slide 5:
1. Relative value of shift to deposits will change as credit spreads and overnight/term interest rates change
2. Medium-term refers to 3 year time horizon

Slide 6:
1. 4Q19 liquidity coverage ratio (LCR) is preliminary
2. GCLA includes U.S. Treasuries and agencies and other highly liquid government bonds. HQLA, as defined by the U.S. Liquidity Coverage Ratio, includes additional sovereign bonds, equities, and corporate bonds, subject to criteria set forth in the rule
3. U.S. peers include commercial banking peers JPM, BAC, C and WFC

Slide 7:
1. Represents debt and preferred shares outstanding as of December 2019
Cautionary Note on Forward-Looking Statements

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The Future of Market Structure
Breakout Session

Ezra Nahum, Elizabeth Martin, Amy Hong

January 29, 2020
Panelist Overview

Ezra Nahum
Head of Global Markets Engineering and Operations

Elizabeth Martin
Global Head of Equities Electronic Execution Services

Amy Hong
Global Head of Market Structure Strategy
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#gsmarkets
Market Structure Evolution: Catalysts and Secular Trends

1. Increased Regulation
2. Technology Development
3. Changing Landscape

Continuum of Market Structure Evolution
Market Structure Evolution: Catalysts and Secular Trends

1. Increased Regulation

2. Technology Development

Continuum of Market Structure Evolution

3. Changing Landscape
Market Structure Evolution: Catalysts and Secular Trends

U.S. Regulations

Increased Regulations

Dodd Frank
MM Reform
U.S. Stay Rule
Volcker Rule 2.0
Reg NMS
Brexit
MAR
MiFID II
Margin Rules
ESMA
Global / Non-U.S. Regulations

Market Participants
Example of a Vanilla Interest Rate Swap Trade

Pre-Trade and Execution

HK-based Client → Trading Venue (SEF) → Goldman Sachs International

Post-Trade and Position Management

HK-based Client → CCP → Goldman Sachs International → Trading Venue (SEF)

Risk Management

CCP → Goldman Sachs Bank USA

Increasingly complex and dynamic regulatory environment...

...driving the need for global scale in technology and efficiencies in execution and downstream services
Market Structure Evolution: Catalysts and Secular Trends

1. Increased Regulation

2. Technology Development

Continuum of Market Structure Evolution

3. Changing Landscape
Market Structure Evolution: Catalysts and Secular Trends

Technology Development

Data is Growing

Data in zettabytes (ZB)

- 2009: 0.8 ZB
- 2013: ~1,000 Micros
- 2016: 10 Micros
- 2019: 0.35 Micros
- 2022E: 175 ZB
- 2025E: ~1,000 Micros

CAGR: 40%

Execution Speed is Increasing

- 2009: 0.8 ZB (~1,000 Micros)
- 2015: 10 Micros (~3,000x Faster)
- 2019: 0.35 Micros
Market Structure Evolution: Catalysts and Secular Trends

1. Increased Regulation

2. Technology Development

Continuum of Market Structure Evolution

3. Changing Landscape
Market Structure Evolution: Catalysts and Secular Trends

Changing Market Participant Landscape

Significant Growth in Passive AUM\(^1\)

- Passive Equity AUM ($bn)
- Passive Fixed Income AUM ($bn)
- Passive % of Global Equity AUM (RHS)
- Passive % of Global Fixed Income (RHS)

$10.7tn in passive funds globally

$19.1tn in active funds globally

+17% CAGR 2013-2019

0% 10% 20% 30% 40% 50%

0 2,000 4,000 6,000 8,000 10,000

Evolving Our Business for the Future

Secular Forces

- Regulatory Changes
- Technological Innovation

Impact

- Lower Market Liquidity
- Higher Capital Consumption
- Active to Passive Shift
- Changing Competitive Dynamics
Client-centric Global Equities Execution Platform

Growth in Systematic
Systematic Wallet¹ ($bn)

<table>
<thead>
<tr>
<th>Year</th>
<th>Systematic Wallet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$1.8</td>
</tr>
<tr>
<td>2018</td>
<td>$3.6</td>
</tr>
</tbody>
</table>

Client value drivers

- Global footprint
- Multi-service
- Flexible swap or cash format
- Quantitative execution

Foundations

- High performance post trade capabilities
- Integrated unique liquidity
- Integrated securities lending capacity
- Customizable

Leveling the playing field with a best in class technology foundation centered on delivering value to clients

¹ Systematic Wallet is a measure of the scale of systematic trading and its growth over time.
Pioneering a New Market Structure in Credit

Goldman Sachs Ecosystem

**Pricing Capabilities**
- Bond Pricing Engine

**Execution and Risk Management**
- Trading Talent
- Algo
- Marquee

**Services**
- Single Bond Execution
- Portfolio Trades
- Bond ETFs

**Clients**
- Pre-trade transparency
- Ease of execution
- Workflow benefits

- >6 million price updates daily across 32,000 CUSIPs
- GS liquidity in over 15,000 CUSIPs
- Pricing over 10,000 inquiries daily

Order/Execution Management Systems
Multilateral Venues
Bilateral APIs
Evolving Our Business for the Future

Secular Forces
- Regulatory Changes
- Technological Innovation

Impact
- Lower Market Liquidity
- Higher Capital Consumption
- Active to Passive Shift
- Changing Competitive Dynamics

Opportunities
- Expand Risk Intermediation Advantage
- Increase Client Financing Activities
- Enhance Client Experience

Growing Share and Returns
The Future of Market Structure
Breakout Session

Ezra Nahum, Elizabeth Martin, Amy Hong

January 29, 2020
End Notes

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Slide 8:
1. Source: IDC, “The Digital Universe in 2020” and “Data Age 2025”
2. Reflects internal execution speed for a vanilla US Cash Equity

Slide 10:
1. Source: Morningstar; Based on worldwide retail funds across Open-Ended and ETF investment types as of November 2019

Slide 12:
1. Source: Coalition institutional client analytics. Wallet includes cash execution and cash and synthetic financing wallet for leading systematic clients
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Risk Management
Breakout Session

Brian Lee, Sheara Fredman, Karen Seymour, Sarah Smith

January 29, 2020
Ask a Question

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#gsrisk
Risk Management at Goldman Sachs

Culture of Risk Management

Process and Structural Oversight

Continuous Improvement
Risk Management at Goldman Sachs

- **Culture of Risk Management**
- **Process and Structural Oversight**
- **Continuous Improvement**

**Culture of Risk Management**
- Disciplined risk-reward approach
- Deep bench of risk managers
- Consensus-driven decision making
Risk Management at Goldman Sachs

Culture of Risk Management

Process and Structural Oversight

Continuous Improvement

Process and Structural Oversight

Independent controls and governance

Comprehensive stress testing

Mark-to-market discipline
Risk Management at Goldman Sachs

1. Risk Appetite and Cycle Preparedness
2. Capital Adequacy and Prudential Regulation
3. Cybersecurity Risk
4. Reputational Risk and Compliance

Culture of Risk Management
Process and Structural Oversight
Continuous Improvement
Risk Appetite and Cycle Preparedness

Managing Across the Risk Continuum

- Severity and Asset Correlation
  - Low Severity
  + Frequency
  - Severely Adverse
Risk Appetite and Cycle Preparedness

- Severity and Asset Correlation

- Low Severity
  - BAU
    - Consumer Credit
    - Credit Spread Widening
    - Equity Price Volatility
  - Adverse
    - Brexit
    - Trade War
    - Oil Shock
  - Severe
    - Global Financial Crisis
    - CCAR
    - Liquidity Risk

- Frequency

Severity and Asset Correlation

- +
- -

- +
- -
Prudently Managing Capital

Adapting to New Regulations and Conservatively Positioned for Growth

Resilient Capital Ratios (Standardized CET1)\(^1\)

<table>
<thead>
<tr>
<th>3Q17</th>
<th>YE17</th>
<th>YE18</th>
<th>YE19</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.0%</td>
<td>11.9%</td>
<td>13.3%</td>
<td>13.3%</td>
<td>13.0-13.5%</td>
</tr>
</tbody>
</table>

$4.4bn Impact from Tax Reform

Dynamic Capital Management

In-Line with Target Capital Levels

Continuous Adaptation to Capital Requirements

Past

Future

Basel III

G-SIB

SCB

FRTB

SLR

SA-CCR

Adapting to New Regulations and Conservatively Positioned for Growth

Prudently Managing Capital

Resilient Capital Ratios (Standardized CET1)\(^1\)

Continuous Adaptation to Capital Requirements

Future

Past

Basel III

G-SIB

SCB

FRTB

SLR

SA-CCR
Mitigating Cyber Risks

Key Priority: Protect the Firm and Our Clients

1. Identify
   Emerging threats and critical data

2. Protect
   Security controls, penetration tests and “bug bounty” program

3. Detect
   Cyber threats, leveraging tools and shared information

4. Respond
   To events quickly and effectively

5. Recover
   Rapidly restore applications and critical data

Continue to invest to maintain operational resilience
Reputational Risk and Compliance

Continuously Improving from a Solid Foundation

Key Focus Areas

- **Reputational Risk**
  - Comprehensive Reputational Risk Framework & training
  - Establishment of regional vetting groups for transactions
  - Enhanced regional supervision framework

- **Insider Threat**
  - Establishment of Insider Threat and Conduct Committee
  - Increased supervision and supervisory metrics
  - Heightened profile of whistleblower program

- **Surveillance**
  - Sophisticated search tools
  - Innovative technology
  - Targeted electronic surveillance

- **Conduct**
  - Tone from the top
  - Consequences of misconduct
  - Chairman’s Forum
Risk Management
Breakout Session

Brian Lee, Sheara Fredman, Karen Seymour, Sarah Smith

January 29, 2020
End Notes

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

Slide 9:

1. As of September 30, 2017 and December 31, 2017, the firm’s capital ratios on a fully phased-in basis were non-GAAP measures and may not be comparable to similar non-GAAP measures used by other companies. Management believes that the firm’s capital ratios on a fully phased-in basis are meaningful because they are the measures that the firm and investors use to assess capital adequacy. The table below presents reconciliations, for the Standardized approach, of common equity tier 1 and risk-weighted assets on a transitional basis to a fully phased-in basis as of September 30, 2017 and December 31, 2017 (unaudited, $ in billions).

<table>
<thead>
<tr>
<th>Standardized CET1 Ratio</th>
<th>As of September 30, 2017</th>
<th>As of December 31, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common equity tier 1, transitional basis</td>
<td>$</td>
<td>71.9</td>
</tr>
<tr>
<td>Transitional adjustments</td>
<td>(0.2)</td>
<td></td>
</tr>
<tr>
<td>Common equity tier 1, fully phased-in basis</td>
<td>$</td>
<td>71.7</td>
</tr>
<tr>
<td>Risk-weighted assets, transitional basis</td>
<td>$</td>
<td>540</td>
</tr>
<tr>
<td>Transitional adjustments</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Risk-weighted assets, fully phased-in basis</td>
<td>$</td>
<td>553</td>
</tr>
<tr>
<td>Common equity tier 1 ratio, transitional basis</td>
<td>13.3%</td>
<td></td>
</tr>
<tr>
<td>Common equity tier 1 ratio, fully phased-in basis</td>
<td>13.0%</td>
<td></td>
</tr>
</tbody>
</table>
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.

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Sustainability
Breakout Session

Asahi Pompey, Margaret Anadu, John Goldstein

January 29, 2020
Panelist Overview

Asahi Pompey
Global Head of Corporate Engagement and President of Goldman Sachs Foundation

Margaret Anadu
Head of Urban Investment Group

John Goldstein
Head of Sustainable Finance Group
Ask a Question

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events@gs.com

WITH SUBJECT:

#gsesg
We advance sustainable economic growth and financial opportunity

Driving Our Purpose through Five Key Sustainability Themes

- Drive Sustainable Growth
- Increase Financial Empowerment
- Advance Environmental Progress
- Invest in Our People
- Manage Responsibly
A Commercial Approach To Sustainable Finance

$750bn

Sustainable Finance by 2030

- Clean Energy
- Waste and Materials
- Sustainable Transport
- Food and Agriculture
- Financial Inclusion
- Accessible and Affordable Education
- Communities
- Accessible and Innovative Healthcare
- Ecosystem Services
- CLIMATE TRANSITION
- INCLUSIVE GROWTH
Sustainable Finance Group: Mobilizing Expertise Across the Firm

Growing commercial opportunity to address full spectrum of our clients’ ESG needs

Investor
- Drive Stakeholder Value Through Investments
- ESG Treasury / Cash Management

Business
- ESG Products and Services
- Strategic M&A

Operator
- Community Engagement
- Diversity Initiatives

Issuer
- Profusion of Ratings and Reporting
- Green Bonds and ESG-linked Capital

Employer
- Attract, Retain, and Engage Talent
- Provide Additional Resources
Urban Investment Group

UIG’s unique commitment to building deep relationships within our communities creates differentiated commercial opportunities that are accretive to firmwide returns

A Flexible Investing Approach Leads to…

- Equity
- Debt
- Tax Credit Equity

…A Wide Range of Impacts

- Sustainable Transport
- Financial Inclusion
- Accessible and Affordable Education
- Communities

NYC Bikeshare
Largest investor in launch of privately financed bike program

Climb Credit
Largest capital provider to student lender

Port Covington
Lead Investor transforming 177 acres in Baltimore
Urban Investment Group

1. Innovative Solutions for a Range of Clients

2. Experienced Team and a Proven Strategy

3. Well Positioned to be a First Mover

$8.5bn Invested to date

19 years Of investing in underserved areas

300+ Investments made to date

$2.8bn development financed in opportunity zones

2012: lead investor in the first social impact bonds in the US

2016: financed world’s largest indoor aeroponic farm

2017: financed public housing energy retrofits through largest ever energy performance contract
Focused efforts on two signature entrepreneurship programs, partner giving and employee volunteerism.

<table>
<thead>
<tr>
<th>Program</th>
<th>Count</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Engagement</td>
<td><strong>452k</strong></td>
<td><strong>$350M</strong></td>
</tr>
<tr>
<td>Volunteer days through CTW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need-based scholarships through GS Gives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 Women</td>
<td><strong>100+</strong></td>
<td><strong>$1.4bn</strong></td>
</tr>
<tr>
<td>Countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 Small Businesses</td>
<td><strong>175k+</strong></td>
<td><strong>$12bn</strong></td>
</tr>
<tr>
<td>U.S. Total employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. Total revenues</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sustainability
Breakout Session

Asahi Pompey, Margaret Anadu, John Goldstein

January 29, 2020
End Notes

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

Slide 4:
   Note: The target includes financing, investing and advisory activity across our businesses

Slides 6 & 7:
   Note: Third-party brands used in this presentation are the property of their respective owners and are not intended to imply an affiliation with or endorsement of Goldman Sachs or its products/services
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