

Third Party Research

GSAM receives research services paid for with securities brokerage commissions (soft dollars) in accordance with Section 28(e) of the Securities Exchange Act of 1934, as amended. The services are received in connection with GSAM's trading for all of its equity accounts and, thus, the value of the services cannot reasonably be allocated to any particular account. To the extent that any broker or research provider provides proprietary research, GSAM cannot place a value on that research, and the eligibility conditions for the proprietary research (other than the fact of using the provider's services) are not shared with GSAM.

In certain cases, GSAM has entered into commission sharing agreements with brokers and entities who provide research services (each, a "CSA Provider"). Listed below are the CSA Providers and the total amount of third party research credits received by GSAM from such entities during 2023. In other cases, entities provide research services but have not entered into commission sharing agreements with GSAM (each, a "Bundled Provider"). Also listed below are the Bundled Providers used by GSAM during 2023. If the entity providing third party research also provides proprietary research, the column "Provide Proprietary Research?" is marked "Yes."

Note that for 2024 and future years, different providers may be used than those shown below.

Provider Name	Type	Provide Proprietary Research?
AVIOR CAPITAL MARKETS (PTY) LTD	Bundled	Yes
B. RILEY FINANCIAL, INC.	Bundled	Yes
BAIRD FINANCIAL GROUP INC / WISCONSIN	Bundled	Yes
BANCO BRADESCO S.A.	Bundled	Yes
BANCO SANTANDER, S.A.	Bundled	Yes
BANK OF MONTREAL	Bundled	Yes
BNP PARIBAS	Bundled	Yes
BTG PACTUAL GROUP	Bundled	Yes
CANACCORD GENUITY GROUP INC.	Bundled	Yes
CITIC SECURITIES COMPANY LIMITED	Bundled	Yes
DAIWA SECURITIES GROUP INC.	Bundled	Yes
EQUITABLE HOLDINGS, INC. ¹	Bundled	Yes
EVERCORE INC.	Bundled	Yes
FIDELITY CAPITAL MARKETS, INC.	Bundled	Yes
GF SECURITIES CO., LTD.	Bundled	Yes
GONESHOPPING LLC ²	Bundled	Yes
GOODBODY SECURITIES INC.	Bundled	Yes
(GS) GOLDMAN SACHS GROUP, INC. (THE) ³	Bundled	Yes
HAITONG SECURITIES CO., LTD.	Bundled	Yes
HSBC HOLDINGS PLC	Bundled	Yes

¹ EQUITABLE HOLDINGS, INC. = Sanford Bernstein

² GONESHOPPING LLC = Telsey Advisory Group

³ Note that GSAM uses The Goldman Sachs Group, Inc. to execute equities trades as agent on behalf of ERISA plan clients only if authorized under an applicable exemption under the Employee Retirement Income Security Act of 1974, as amended, including Prohibited Transaction Class Exemption 86-128, as amended.

Provider Name	Type	Provide Proprietary Research?
INVESTEC PLC	Bundled	Yes
ITAU UNIBANCO HOLDING S.A.	Bundled	Yes
JOH. BERENBERG, GOSSLER & CO. KG	Bundled	Yes
KEPLER CHEUVREUX	Bundled	Yes
KEYCORP	Bundled	Yes
MACQUARIE GROUP LIMITED	Bundled	Yes
MIZUHO FINANCIAL GROUP, INC.	Bundled	Yes
NOMURA HOLDINGS, INC.	Bundled	Yes
PEEL HUNT LLP	Bundled	Yes
PEOPLE'S REPUBLIC OF CHINA ⁴	Bundled	Yes
PHILADELPHIA TRADING, INC. ⁵	Bundled	Yes
PIPER SANDLER & CO.	Bundled	Yes
RAYMOND JAMES FINANCIAL, INC.	Bundled	Yes
SI HOLDINGS INC. ⁶	Bundled	Yes
SOCIETE GENERALE	Bundled	Yes
STANDARD BANK GROUP LTD.	Bundled	Yes
STIFEL FINANCIAL CORP.	Bundled	Yes
TFI SECURITIES AND FUTURES LIMITED	Bundled	Yes
TORONTO-DOMINION BANK (THE) ⁷	Bundled	Yes
TRUIST FINANCIAL CORPORATION	Bundled	Yes
USCA SECURITIES LLC	Bundled	Yes
VAN LANSCHOT KEMPEN N.V.	Bundled	Yes
WELLS FARGO & COMPANY	Bundled	Yes
WOOD & COMPANY FINANCIAL SERVICES, A.S.	Bundled	Yes
XP INC.	Bundled	Yes

⁴ PEOPLE'S REPUBLIC OF CHINA = Shenwan Hongyuan Securities and Soochow Securities

⁵ PHILADELPHIA TRADING, INC. = Susquehanna International Group

⁶ SI HOLDINGS INC. = Stephens & Co.

⁷ TORONTO-DOMINION BANK = TD/Cowen

Provider Name	Type	Provide Proprietary Research?	Research Credits
BANK OF AMERICA CORPORATION	CSA Provider	Yes	\$1,058,161
BARCLAYS PLC	CSA Provider	Yes	\$512,980
CITIGROUP INC.	CSA Provider	Yes	\$1,063,336
FMR LLC ⁸	CSA Provider	Yes	\$1,067,791
JEFFERIES FINANCIAL GROUP INC.	CSA Provider	No	\$1,223,991
JPMORGAN CHASE & CO.	CSA Provider	Yes	\$977,919
LIQUIDNET HOLDINGS, INC.	CSA Provider	No	\$305,805
MORGAN STANLEY	CSA Provider	Yes	\$1,199,048
ROYAL BANK OF CANADA	CSA Provider	Yes	\$641,574
UBS GROUP AG ⁹	CSA Provider	Yes	\$847,062

Updated: February 2024

⁸ FMR LLC = Fidelity Capital Markets

⁹ UBS figures include any Credit Suisse commissions.