

DWS Funds and Germany Funds
Code of Ethics
Last reviewed April 2024

I. General

While affirming its confidence in the integrity and good faith of all of its officers and directors (references to a “director” apply to a trustee if the Fund is a business trust), the Fund recognizes that the knowledge of present or future portfolio transactions and/or, in certain instances, the power to influence portfolio transactions which may be possessed by certain of its officers or directors, could place such individuals, if they engage in personal securities transactions, in a position where their personal interests may conflict with that of the Fund. In view of this and of the provisions of Rule 17j-1(b) under the Investment Company Act of 1940, as amended (“1940 Act”), the Fund has determined to adopt this Code of Ethics (the “Code”) to specify and prohibit certain types of personal securities transactions that may create conflicts of interest and to establish reporting requirements and enforcement procedures.

This Code is divided into six parts. The first part contains definitions. The second part contains provisions applicable to any officer, director, trustee or employee of the Funds, Adviser, Sub-Advisers or Distributor. The third part contains provisions applicable to any officer, director, trustee or employee of the Funds, Adviser, Sub-Advisers or Distributor, but excluding Distributor employees and other employees who do not make investment recommendations. The fourth part contains provisions applicable to the Adviser, Sub-Adviser, and Distributor. The fifth part contains provisions relating to the review of reports. The final part contains record-keeping and other provisions.

The Adviser imposes stringent reporting requirements and restrictions on the personal securities transactions of its personnel. The Fund has determined that the high standards established by the Adviser may be appropriately applied by the Fund to its officers and those of its directors who are affiliated with the Adviser and, accordingly, may have frequent opportunities for knowledge of and, in some cases, influence over Fund portfolio transactions.

All parts of the Code of Ethics – DWS Group (U.S. Registered Entities) are hereby incorporated by reference as the “Adviser’s Code of Ethics” applicable to officers and directors of the Fund who are officers, directors or employees of DWS or an affiliate thereof.

Rule 17j-1 (c)(1)(ii) requires that a majority of the board of directors, including a majority of the independent directors, must approve the written Code.

II. Definitions

For purposes of this Code, the following terms have the meanings set forth as follows:

A. “Access Person” means:

1. All of a Fund's directors, officers, and general partners, and any Advisory Person of a Fund or of a Fund's Adviser or Sub-Adviser. If an investment adviser's primary business is advising Funds or other advisory clients, all of the investment adviser's directors, officers, and general partners are presumed to be Access Persons of any Fund advised by the investment adviser.
 - a) If an investment adviser is primarily engaged in a business or businesses other than advising Funds or other advisory clients, the term Access Person means any director, officer, general partner or Advisory Person of the investment adviser who,

with respect to any Fund, makes any recommendation, participates in the determination of which recommendation will be made, or whose principal function or duties relate to the determination of which recommendation will be made, or who, in connection with his or her duties, obtains any information concerning recommendations on Covered Securities being made by the investment adviser to any Fund.

- b) An investment adviser is "primarily engaged in a business or businesses other than advising Funds or other advisory clients" if, for each of its most recent three fiscal years or for the period of time since its organization, whichever is less, the investment adviser derived, on an unconsolidated basis, more than 50 percent of its total sales and revenues and more than 50 percent of its income (or loss), before income taxes and extraordinary items, from the other business or businesses.

- 2. Any director, officer or general partner of a principal underwriter who, in the ordinary course of business, makes, participates in or obtains information regarding, the purchase or sale of Securities by the Fund for which the principal underwriter acts, or whose functions or duties in the ordinary course of business relate to the making of any recommendation to the Fund regarding the purchase or sale of Securities.

B. "Adviser" means DWS Investment Management Americas, Inc. or, in the case of the Germany Funds, DWS International GmbH.

C. "Advisory Person" is:

- 1. any employee, director, general partner, (or any company in a controlled relationship to the Fund or Adviser or Sub-Adviser), trustee or officer of a Fund, Adviser or Sub-Adviser who, in connection with his or her regular functions or duties, makes, participates in, or obtains information regarding the Purchase or Sale of a Security by a Fund, or whose functions relate to the making of any recommendations with respect to such purchases or sales; and
- 2. any natural person in a Control relationship to a Fund, Adviser or Sub-Adviser who obtains information concerning recommendations made to the Fund with regard to the Purchase or Sale of a Security by the Fund.

D. "Automatic Investment Plan" means a program in which regular periodic purchases (or withdrawals) are made automatically in (or from) investment accounts in accordance with a predetermined schedule and allocation. An Automatic Investment Plan includes a dividend reinvestment plan.

E. "Beneficial Ownership" of a Security is to be determined in the same manner as it is for purposes of Rule 16a-1(a)(2) of the Securities Exchange Act of 1934. This means that a person should generally consider himself or herself the beneficial owner of any securities of which he or she shares in the profits, even if he or she has no influence on voting or disposition of the securities.

- F. “Control” shall have the same meaning as that set forth in Section 2(a)(9) of the 1940 Act. Section 2(a)(9) defines “control” as the power to exercise a controlling influence over the management or policies of a company, unless such power is solely the result of an official position with such company. Ownership of 25% or more of a company’s outstanding voting securities is presumed to give the holder thereof control over the company. Such presumption may be countered by the facts and circumstances of a given situation.
- G. “Covered Persons” means any officer, director, trustee or employee of the Funds, Adviser, Sub-Advisers or Distributor.
- H. “Derivative” means options, futures contracts, options on futures contracts, swaps, caps and the like, where the underlying instrument is a Security, a securities index, a financial indicator, or a precious metal.
- I. “Distributor” means DWS Distributors, Inc. for the DWS Funds (excluding closed-end funds) only.
- J. “DWS” means the Adviser and the Distributor, which are indirect subsidiaries of DWS Group GmbH & Co. KGaA.
- K. “Compliance Department” means the DWS Compliance Department and/or Deutsche Bank’s Employee Compliance Group.
- L. “Fund” means any fund overseen by any of the Board of Directors for any DWS Fund or Germany Fund.
- M. “Independent Director” means a director or trustee of a Fund who is not an “interested person” of the Fund within the meaning of Section 2 (a)(19) of the 1940 Act.
- N. “Investment Personnel” means:
1. any employee of the Fund or Adviser or Sub-Adviser (or of any company in a control relationship to the Fund or Adviser or Sub-Adviser) who, in connection with his or her regular functions or duties, makes or participates in making recommendations regarding the Purchase or Sale of Securities by the Fund.
 2. any natural person who controls the Fund or Adviser and who obtains information concerning recommendations made to the Fund regarding the Purchase or Sale of Securities by the Fund.
- O. “Initial Public Offering” or “IPO” means an offering of securities registered under the Securities Act of 1933 [15 U.S.C. 77a], the issuer of which, immediately before the registration, was not subject to the reporting requirements of sections 13 or 15(d) of the Securities Exchange Act of 1934 [15 U.S.C. 78m or 78o(d)].
- P. “Limited Offering” means an offering that is exempt from registration under the Securities Act of 1933 pursuant to section 4(2) or section 4(6) [15 U.S.C. 77d(2) or 77d(6)] or pursuant to rule 504, rule 505, or rule 506 [17 CFR 230.504, 230.505, or 230.506] under the Securities Act of 1933.

- Q. “Purchase or Sale of a Security” means obtaining or disposing of “Beneficial Ownership” of that Security and includes, among other things, the writing of an option to purchase or sell a Security.
- R. “Review Officer” means the person responsible for receiving and reviewing quarterly and annual reports submitted by the Independent Directors as designated on **Appendices A, B and C**, respectively.
- S. “Security” shall have the same meaning as that set forth in Section 2(a)(36) of the 1940 Act, except that it shall not include direct obligations of the Government of the United States, bankers’ acceptances, bank certificates of deposit, commercial paper and high quality short-term debt instruments (including repurchase agreements) and shares issued by registered, open-end investment companies not advised by DWS or its affiliates. The term “Security” includes any separate security which is convertible into, exchangeable for or which carries a right to purchase a security and also includes derivatives.
- T. “Sub-Adviser” means any registered investment adviser to any of the DWS Funds, to whom the Adviser delegates certain investment management responsibilities.

III. General Principles Applicable to Covered Persons

A. Introduction.

Although certain provisions of this Code apply only to Access Persons, all Covered Persons are subject to the prohibitions of Rule 17j-1 against fraudulent, deceptive and manipulative practices and to the general fiduciary principles as set forth in III.B., III.C., and III.D. below.

Every Covered Person should appreciate the need to behave in an ethical manner with respect to the Funds. In particular, all Covered Persons who are involved in any way with the activities of a Fund should be wary of any potential conflicts between their duty of loyalty to a Fund and their own financial interests, particularly with respect to their own securities trading activities. Covered Persons should take care to preserve the confidentiality of the Funds’ business affairs. Covered Persons who are not “Access Persons” but who become aware of proposed fund securities transactions should not engage in transactions in those same securities without the permission of the Chief Compliance Officer of the Fund (or his designee). Otherwise, Covered Persons who are not Access Persons are not limited in their personal securities transactions by this Code, but such Covered Persons are encouraged to consult with the Compliance Department if they have any doubts about the applicability of the Code to any proposed transaction.

- B. The provisions of this Code applies to Independent Directors or other Covered Persons who are not subject to the Adviser’s Code of Ethics.

C. Statement of General Fiduciary Principles.

The following principles are the policy of the Fund and are the obligations of all Covered Persons:

1. It is the duty of all Covered Persons at all times to place the interests of Fund shareholders first.
2. All personal securities transactions must be conducted in such manner as to avoid any actual or potential conflict of interest or any abuse of an individual’s position of trust

and responsibility.

3. Covered Persons must not take inappropriate advantage of their positions or the information they acquire, with or on behalf of a Fund, Adviser, Sub-Adviser and/or Distributor, to the detriment of shareholders of the Fund.

D. Fraudulent Practices.

Rule 17j-1(b) makes it unlawful for any Covered Person, in connection with the purchase or sale, directly or indirectly, by the person of a Security held or to be acquired by the Fund, to:

1. employ any device, scheme or artifice to defraud a Fund;
2. make to a Fund any untrue statement of a material fact or omit to state to the Fund a material fact necessary in order to make the statements made, in light of the circumstances under which they are made, not misleading;
3. engage in any act, practice or course of business which operates or would operate as a fraud or deceit upon a Fund; or
4. engage in any manipulative practice with respect to a Fund.

IV. Reporting Requirement for All Access Persons.

- A. Unless exempted by paragraph B of this section, every Access Person (other than a person covered by a code of ethics pursuant to Section V below) of a Fund (other than a money market fund or a Fund that does not invest in Securities), must file the reports detailed in paragraphs C, D, and E of this section.

1. Investments in IPOs and Limited Offerings (i.e., Private Placements).

Investment Personnel of a Fund or its Adviser are prohibited from purchasing or subscribing for Securities pursuant to an initial public offering. Prior to effecting a transaction in Limited Offerings (i.e., Securities not requiring registration with the Securities and Exchange Commission and sold directly to the investor), all employees must first, in accordance with DWS policy, obtain the approval of his/her supervisor and then pre-clear the transaction with Employee Compliance, including completing the Conflicts Questionnaire. Any person who has previously purchased Limited Offerings must disclose such purchases to the Compliance Department before he or she participates in a fund's or an advisory client's subsequent consideration of an investment in the Securities of the same or a related issuer.

B. Exemptions.

1. A person need not make a report under paragraph A of this section with respect to transactions effected for, and Securities held in, any account over which the person has no direct or indirect influence or control.

2. An Independent Director of the Fund who would be required to make a report solely by reason of being a Fund director, need not make:
 - a) An Initial Holdings Report under paragraph C of this section and an Annual Holdings Report under paragraph D of this section; and
 - b) A Quarterly Transaction Report under paragraph E of this section, unless the director knew or, in the ordinary course of fulfilling his or her official duties as a Fund director, should have known that during the 15-day period immediately before or after the director's transaction in a Security, the Fund purchased or sold the Security, or the Fund or its investment adviser considered purchasing or selling the Security.
 3. All Access Persons shall not be required to make a quarterly transaction report under paragraph D of this section with respect to purchases that are part of an Automatic Investment Plan.
- C. Initial Holdings Reports. Within ten (10) days of commencing service as an Access Person, each Access Person must report all holdings of securities in which he/she has beneficial ownership (use **Appendix B**). These Access Persons must file such reports even if they have no holdings. The information in the initial holding report must be current to forty-five (45) days of the date the person becomes an Access Person. The initial holding report must include:
1. The title, number of shares and principal amount of each Security in which the Access Person had any direct or indirect beneficial ownership when the person became an Access Person;
 2. The name of any broker, dealer or bank with whom the Access Person maintained an account in which any securities were held for the direct or indirect benefit of the Access Person as of the date the person became an Access Person; and
 3. The date that the report is submitted by the Access Person.
- D. Annual Holdings Reports. Annually, all Access Persons shall also submit an Annual Holdings Report which includes an acknowledgement of obligations under the Code (use **Appendix C**) within forty-five (45) days of such report being requested from an Access Person by the Review Officer or his/her alternate. The Annual Holdings Report must include:
1. The title, number of shares and principal amount of each covered Security in which the Access Person had any direct or indirect beneficial ownership;
 2. The name of any broker, dealer or bank with whom the Access Person maintains an account in which any securities are held for the direct or indirect benefit of the Access Person; and
 3. The date that the report is submitted by the Access Person.

E. Quarterly Transaction Reports. Every quarterly transaction report shall indicate the date it was submitted and be made not later than thirty (30) days after the end of the calendar quarter in which the transaction to which the report relates was effected. **Appendix A** shall be used to report transactions required to be reported pursuant hereto. The quarterly transaction report must include:

1. With respect to any transaction during the quarter in a covered Security in which the Access Person had any direct or indirect beneficial ownership:
 - a) The date of the transaction, the title, the interest rate and maturity date (if applicable), the number of shares and the principal amount of each covered Security involved;
 - b) The nature of the transaction (i.e., purchase, sale or any other type of acquisition or disposition);
 - c) The price of the covered Security at which the transaction was effected;
 - d) The name of the broker, dealer or bank with or through which the transaction was effected; and
 - e) The date that the report is submitted by the Access Person.
2. With respect to any account established by the Access Person in which any securities were held during the quarter for the direct or indirect benefit of the Access Person:
 - a) The name of the broker, dealer or bank with whom the Access Person established the account;
 - b) The date the account was established; and
 - c) The date that the report is submitted by the Access Person.

V. **Requirements Applicable to Adviser, Sub-Adviser, and Distributor.**

A. The requirements of this Code are not applicable to any Covered Person or Access Person to the Fund who is subject to a code of ethics adopted by an Adviser, Sub-Adviser, or Distributor of the Fund (as such terms are defined in **Section II**), provided that:

1. such code of ethics complies with the requirements of Rule 17j-1 and has been approved by the Board of Directors/Trustees of the Fund; and
2. such Adviser, Sub-Adviser, or Distributor has certified to the Board of Directors/Trustees of the Fund that it has adopted procedures reasonably necessary to prevent Access Persons from violating such code of ethics.

B. Each Adviser, Sub-Adviser, and Distributor shall:

1. submit to the Fund a copy of the code of ethics adopted pursuant to Rule 17j-1;
2. promptly report to the Fund in writing any material amendments to such code of ethics;

3. furnish to the Fund upon request (and in any event no less than quarterly) written reports which:
 - a) describe any issues arising under the code of ethics or procedures during the period specified including (but not limited to) information about material violations of the code of ethics or procedures and sanctions imposed in response to material violations; and
 - b) certify that it has adopted procedures reasonably necessary to prevent an Access Persons from violating the code of ethics.

C. Exception for Distributor.

Pursuant to Rule 17j-1; the requirements set forth in V.A. and V.B. do not apply to the Distributor unless:

1. the Distributor is an affiliated person of the Fund or of the Fund's investment adviser; or
2. an officer, director or general partner of the Distributor serves as an officer, director or general partner of the Fund or of the Fund's investment adviser.

VI. Review of Reports and Sanctions

A. Review.

1. The Review Officer shall compare the reported personal holdings and personal securities transactions with completed and contemplated portfolio transactions of the Fund to determine whether a violation of this Code may have occurred. Before making any determination that a violation has been committed by any person, the Review Officer shall give such person an opportunity to supply additional explanatory material.
2. If the Review Officer determines that a violation of this Code has or may have occurred, he/she shall submit his/her written determination, together with the reports and any additional explanatory material provided by the individual to the Compliance Department, who shall make an independent determination of whether a violation has occurred.
3. The Review Officer may appoint an alternate to act as Review Officer.

B. Sanctions.

1. Directors. If the Compliance Department determines that a violation of this Code has occurred by a Director, the Compliance Department shall so advise a committee consisting of the Independent Directors, other than the person whose transaction is under consideration, and shall provide the committee with the report, the record of pertinent actual or contemplated portfolio transactions of the Fund and any additional material supplied by such person. The committee, at its option, shall either impose such sanction as it deems appropriate or refer the matter to the entire Board of Directors, which shall impose such sanctions as are deemed appropriate. The sanctions that may be imposed hereunder include, without limitation, reversing the improper personal securities transaction and/or disgorging any profit realized, censure,

imposition of restrictions on personal trading and fines.

2. Non-Directors. If the Compliance Department determines that a violation of this Code has occurred by any Access Person other than a Director, the procedures of the Adviser's Code of Ethics or the relevant Sub-Adviser's code of ethics should be used.

VII. Miscellaneous

A. Annual Report.

The Review Officer or the Review Officer's alternate shall report annually to the Board of Directors concerning issues arising under this Code or existing procedures and any material changes to those procedures, as well as any material violations and sanctions imposed during the past year which related to the Fund. Such report shall be in writing and include any certification required by law. Such report may be made jointly with the report provided by the Adviser pursuant to the Adviser's Code of Ethics or, if made separately, need not duplicate information provided in the Adviser's report.

B. Records.

The Fund shall maintain records in the manner and to the extent set forth below, which records may be maintained on microfilm or such other medium permitted under Rule 31a-2(f) of the 1940 Act and shall be made available for examination by representatives of the Securities and Exchange Commission.

1. A copy of this Code and any other Code which is, or at any time within the past five years has been, in effect shall be preserved in an easily accessible place;
2. A record of any violation of such Code(s) and of any action taken as a result of such violation shall be preserved in an easily accessible place for a period of not less than five years following the end of the fiscal year in which the violation occurs;
3. A copy of each report made by an Access Person pursuant to such Code(s), including any information provided in lieu of such reports, shall be preserved for a period of not less than five years from the end of the fiscal year in which it is made or the information is provided, the first two years in an easily accessible place;
4. A list of all persons who are, or within the past five years have been, required to make reports pursuant to such Code(s) shall be maintained in an easily accessible place;
5. A list of names of all persons who are, or within the past five years, have been responsible for reviewing any transaction or holdings reports filed pursuant to such code(s) shall be maintained in an easily accessible place; and
6. A copy of each report made to the Board of Directors pursuant to such Code(s) shall be maintained for at least five (5) years after the end of the fiscal year in which it was made, the first two (2) years in an easily accessible place.

C. Amendments to the Code.

Any material amendments to this Code shall be approved by the Board of Directors of the Fund, including a majority of Independent Directors.

D. Confidentiality.

All reports of securities transactions and any other information filed with the Fund pursuant to this Code shall be treated as confidential, except as otherwise provided herein.

E. Interpretation of Provisions.

The Board of Directors may from time to time adopt such interpretations of this Code as it deems appropriate.

F. Reports Are Not Admissions.

Any transaction or holdings report may contain a statement that the report shall not be construed as an admission by the person making such report that he/she has any direct or indirect beneficial ownership in the security to which the report relates.

APPENDIX A

QUARTERLY PERSONAL SECURITIES TRANSACTIONS REPORT FOR INDEPENDENT DIRECTORS

An Independent Director is required to complete this report ONLY if the Director knew or, in the ordinary course of fulfilling his/her official duties as a Fund Director or Trustee should have known, that during the 15-day period immediately before or after the director's or trustee's transaction, such Security is or was Purchased or Sold, or considered for Purchase or Sale, by a Fund. Reports are due within 30 calendar days after the end of the calendar quarter.

Name of Reporting Person: _____

Calendar Quarter Ended: _____

Securities Transactions

Date of Transaction	Name of Issuer and Title of Security	CUSIP / Ticker Symbol	Number of Shares, Principal Amount, Maturity Date and Interest Rate (if applicable)	Type of Transaction	Price	Principal Amount	Name of Broker, Dealer or Bank Effecting Transaction	Disclaim Beneficial Ownership? (indicate by "X")*	Broker Who Established Account	Date Account Established

I certify that I have included on this report all securities transactions required to be reported pursuant to the Code of Ethics.

Signature

Date

Please return this form to: Scott Hogan via email at scott-d.hogan@dws.com or mail at DWS Compliance, 100 Summer Street, 8th Floor, Boston, MA 02110, USA.

Questions should be directed to Scott Hogan at (617) 295-3986.

* If you do not want this report to be construed as an admission that you have Beneficial Ownership of a particular security, please indicate this by marking an "X" in the box.

NOTE: Use additional forms if necessary to report all transactions.

SALES OR OTHER DISPOSITIONS

Security Type	Units	Ticker/ Cusip	Issuer/ Company	Trade Date	Price	Principal Amount	Broker/ Dealer/Bank(1)	Acct #	Interest Rate(2)	Maturity Date(2)	Gift/ AIP/NBI(3)

PURCHASES OR OTHER ACQUISITIONS

Security Type	Units	Ticker/ Cusip	Issuer/ Company	Trade Date	Price	Principal Amount	Broker/ Dealer/Bank(1)	Acct #	Interest Rate(2)	Maturity Date(2)	Gift/ AIP/NBI(3)

DID YOU ESTABLISH ANY INVESTMENT ACCOUNTS (I.E., BROKER/DEALER/BANK) THIS QUARTER? IF SO INSERT THE FOLLOWING INFORMATION BELOW:

Name of Broker, Dealer or Bank where account was established _____

Account Number _____

Date Account was opened _____

FOOTNOTES

(1) If you have made a direct issuer trade (i.e. traded directly with the company) enter N/A in this column.

(2) For Fixed Income securities only.

(3) Indicate here if transaction is a Gift, Automatic Investment Plan (AIP), or No Beneficial Ownership (NBI-you claim that you do not have any direct or indirect beneficial ownership in such transactions).

APPENDIX B

PERSONAL SECURITIES HOLDINGS REPORT

Name _____ (print)

Return To:

Scott Hogan via email at scott-d.hogan@dws.com or mail at DWS Compliance, 100 Summer Street, 8th Floor, Boston, MA 02110, USA

Symbol (or CUSIP)	Issuer/Company	Security Type	Principal Amt.	Number of Shares	Name of Broker/Dealer or Bank	Account Number	Name in which Security/Acct. is held

The undersigned does not by this report admit that he/she has any direct or indirect beneficial ownership in the securities listed.

- I certify that the securities listed above and/or the holdings statements attached reflect all my reportable securities holdings as of a date not earlier than 45 days prior to the date of my submission of this Report.
- I currently have no reportable securities holdings to report.

Not all securities are required to be reported. Please see Section II.R. for a definition of securities.

Signature

Date

APPENDIX C

Return Completed Form to: Scott Hogan via email at scott-d.hogan@dws.com or mail at DWS Compliance, 100 Summer Street, 8th Floor, Boston, MA 02110, USA.

Annual Holdings Under the Code

Name (print clearly)

I.CODE OF ETHICS

I understand that my signature below means that I *have read/reread* and understand the Code. Further, I have reported all personal holdings and transactions required to be reported pursuant to the requirements of the Code and have complied with the provisions of the Code applicable to me over the past year and will continue to comply with such provisions.

II.CHECK THE APPROPRIATE STATEMENTS:

- (a) I am an Affiliated Director:
(b) I am an Unaffiliated but not an Independent Director:

(1) The following is a complete list of all broker, dealer or bank accounts that contain holdings wherein I have beneficial ownership:

Account Number	Broker Name

and

- (2) I have arranged for provision of a complete report of all my holdings information in the form of duplicate account statements for all of my covered accounts. (Only those securities meeting the definition set in Section II.R. need to be reported); *or*
(3) I have not arranged for provision of all of my holdings, so I have submitted a supplemental report of all current holdings concurrently herewith (Use Appendix B to list additional holdings not on file).

Signature

Date