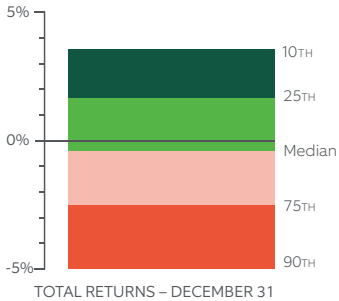


UNIVERSE SUMMARIES

ERISA

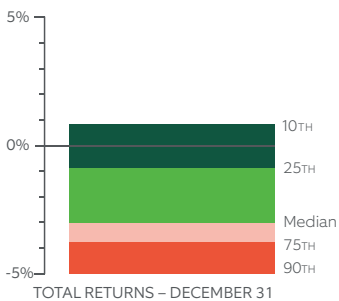


- The median ERISA pension plan returned -5.5% in the fourth-quarter of 2018.
- A comparatively large allocation to fixed income drove relative performance. The median fixed income program returned 0.6% in the fourth-quarter. Fixed income was one of only two asset classes to generate a positive median return last quarter.
- Better returning plans tended to have larger allocations to fixed income. The median ERISA total fixed program was off 0.6% in the fourth-quarter.

-0.07%

A weak twelve-month period has dragged down the five-year excess return to a negative 7 basis points annually

PUBLIC FUNDS

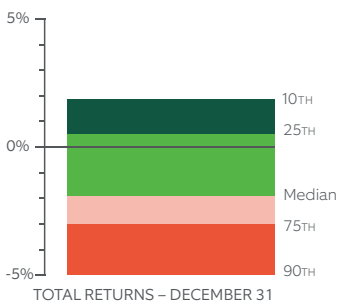


- The median Public Pension fund was down 7.3% in the fourth-quarter of 2018.
- A larger allocation to both domestic and international equities drove relative performance. The median total equity program lost 13.2% last quarter.
- Better returning plans tended to have larger allocation to fixed income. The median fixed income program was up 0.6% in the fourth-quarter.

0.18%

Over the last five-years the median Public Fund plan has generated 18 basis points in excess performance, annually.

GLOBAL FAMILY OFFICE

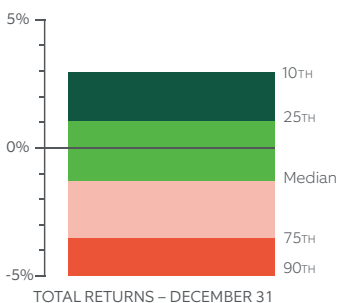


- The median GFO returned -7.1% in the fourth-quarter.
- Domestic equity and private equity were drivers of relative performance.
- Better returning family offices tended to have a smaller allocation to domestic equity as well as larger allocations to private equity (although because of the lagged valuations, next quarter the results could turn sharply down). Private equity was the best returning asset class.

0.33%

Over the last five-years the median Global Family Office has generated 33 basis points of excess performance, annually

FOUNDATIONS & ENDOWMENTS



- The median foundation & endowment returned -6.3% in the fourth-quarter of 2018.
- Alternatives were drivers of relative performance.
- Better returning foundations & endowments tended to have the largest allocations to alternatives. While hedge funds did generate negative results in the fourth-quarter, they were much better than publically traded equities. Private equity was the best returning asset class in the fourth-quarter of 2018.

0.15%

Over the last five-years the median Foundation & Endowment generated 15 basis points in excess return, annually

TO LEARN MORE

For more detailed universe information please contact your IRAS consultant or other Northern Trust representative.

ABOUT NORTHERN TRUST UNIVERSES

Northern Trust Universes represent the performance results of about 300 large institutional investment plans that subscribe to Northern Trust performance measurement services. These plans, with a combined asset value of approximately \$899 billion, represent a broad snapshot of overall institutional investment plan performance within the U.S. market.

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