

I am working with four tickers John Deere (DE), Agco (AGCO), CNH Industrial (CNH), Caterpillar (CAT), and also using commodities like Corn, Cotton, Soybeans, and Wheat.

My current equities are all U.S. heavy-equipment industrials, so their returns are naturally turning out to be highly correlated, showing strong cyclicalities, and driven by similar macro exposures like commodities, agriculture, construction, and manufacturing.

To reduce correlation and improve risk-adjusted returns (Sharpe, drawdowns)

which ETF's should I include in my analysis

Since your current equity universe is concentrated in *U.S. heavy-equipment industrials* with strong exposure to *ag, commodities, construction, and global macro cycles*, the goal is to add ETFs that (a) are structurally uncorrelated or negatively correlated with these drivers, and (b) improve the overall portfolio Sharpe and reduce drawdowns.

Below is a practical menu of ETF **categories and specific examples** that are commonly used in institutional-style diversification. These avoid relying on the same macro factors that drive DE/AGCO/CNH/CAT.

1. Asset Classes With Low or Negative Correlation to Industrials

A. Long-Duration U.S. Treasuries (defensive macro hedge)

- TLT – 20+ Year U.S. Treasuries
- IEF – 7–10 Year Treasuries

These generally rally during growth slowdowns or recessions, which is *exactly when heavy-equipment cyclical sell off*. Extremely powerful for diversifying drawdowns.

B. Market-Neutral / Low-Beta / Risk-Managed Strategies

(Not driven by economic cycles.)

- **BTAL** – Anti-Beta (long low beta, short high beta)
- **LALT** – Multi-strategy, alt-risk premia
- **HFRI ETF equivalents** (if accessible)

These tend to have low equity beta and low correlation to industrial cyclicality.

2. Equities With Different Factor + Industry Exposures

C. Low-Volatility Equities

- **USMV** – U.S. Minimum Volatility
- **SPLV** – S&P 500 Low Volatility

Their sector makeup (utilities, health care, staples) is structurally the opposite of industrial cyclicals.

D. Quality + Profitability Tilt

- **QUAL** – MSCI USA Quality

Not perfectly uncorrelated but helps reduce drawdowns because quality stocks hold up better in downturns.

E. Growth / Tech Exposure

Industrials correlate more with value/cyclicals; tech adds orthogonality.

- **QQQ** – Nasdaq-100
- **VGT** – Vanguard Information Technology
- **ARKK** (higher risk but low correlation to ag/industrial conditions)

These give exposure to innovation, software, semiconductors, not tied to farm or construction capex cycles.

✓ 3. Commodities and Real Assets (but not agricultural)

You already have exposure to **Corn, Soybeans, Wheat, Cotton**, so avoid redundant ag ETFs.

F. Energy & Metals (low correlation to ag)

- **DBC** – Broad Commodities (energy-weighted)
- **GNR** – Global Natural Resources
- **GLD / IAU** – Gold (excellent crisis hedge)
- **SLV** – Silver (industrial + monetary)
- **COPX** – Copper Miners

These diversify commodity risk away from agriculture.

✓ 4. International Diversification

U.S. industrials are highly correlated to domestic economic cycles.

G. Developed Markets (non-U.S.)

- **EFA** – Developed Markets ex-US
- **VEA** – Vanguard Developed ex-US

H. Emerging Markets

- **EEM, VWO** – Emerging Markets Equity

Different macro cycles, currencies, and growth drivers.

✓ 5. Defensive Sectors (Highly Uncorrelated with Industrials)

I. Utilities

- **XLU** – Utilities Select Sector

Historically very low correlation to cyclicals.

J. Health Care

- **XLV** – Health Care Select Sector
Structural earnings stability; offsets cyclical.

K. Consumer Staples

- **XLP** – Consumer Staples
Defensive performance in economic slowdowns.

 If you want the *most effective* diversifiers for Sharpe and drawdowns:

Top-Tier Recommendations (high impact per unit of allocation)

1. **TLT** – Long Treasuries
2. **GLD** or **IAU** – Gold
3. **USMV** – Minimum Volatility
4. **XLU** – Utilities
5. **QUAL** – Quality Factor
6. **EFA** – Developed Markets ex-US

This set has been empirically strong at reducing correlation to industrial cyclicals.

Summary: What to Add to Your Analysis

Include ETFs from these categories:

Goal	ETF Types
Reduce cyclical risk	TLT, IEF, USMV, XLU, XLP, XLV
Lower correlation to industrials	GLD/IAU, DBC, QQQ, QUAL
Add non-U.S. economic cycles	EFA, VEA, VWO
Add alternative strategies	BTAL, LALT

If you'd like, I can:

- ✓ Run correlation matrices using these ETFs
- ✓ Build a sample diversified portfolio
- ✓ Optimize a portfolio using Sharpe, volatility, or max-drawdown

Just tell me which tickers you want to include!

