Columbia Business School

Capital Markets & Investments

Session 20:
Funds (3) – Skill vs. Luck: Part 2

Spring 2025

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Columbia Business School

Recap: Factor Models

$$r_{it} - r_{ft} = \alpha_i^{4F} + \underbrace{\beta_i(r_{mt} - r_{ft})}_{\text{CAPM model benchmark}} + e_{it}$$

$$r_{it} - r_{ft} = \alpha_i^{4F} + \underbrace{\beta_i(r_{mt} - r_{ft}) + s_i SMB_t + h_i HML_t + u_i UMD_t}_{4-\text{factor (4F) model benchmark}} + e_{it}$$

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Scenario

- Imagine you are deciding your risky asset allocation.
- Currently, your risky portfolio is 60% S&P500 and 40% value ETF.
- A salesman comes to you and asks you to invest in the fund, which will (allegedly) increase the Sharpe Ratio of your portfolio.
- Unfortunately, we do not have enough history to accurately estimate alpha and beta of these funds.

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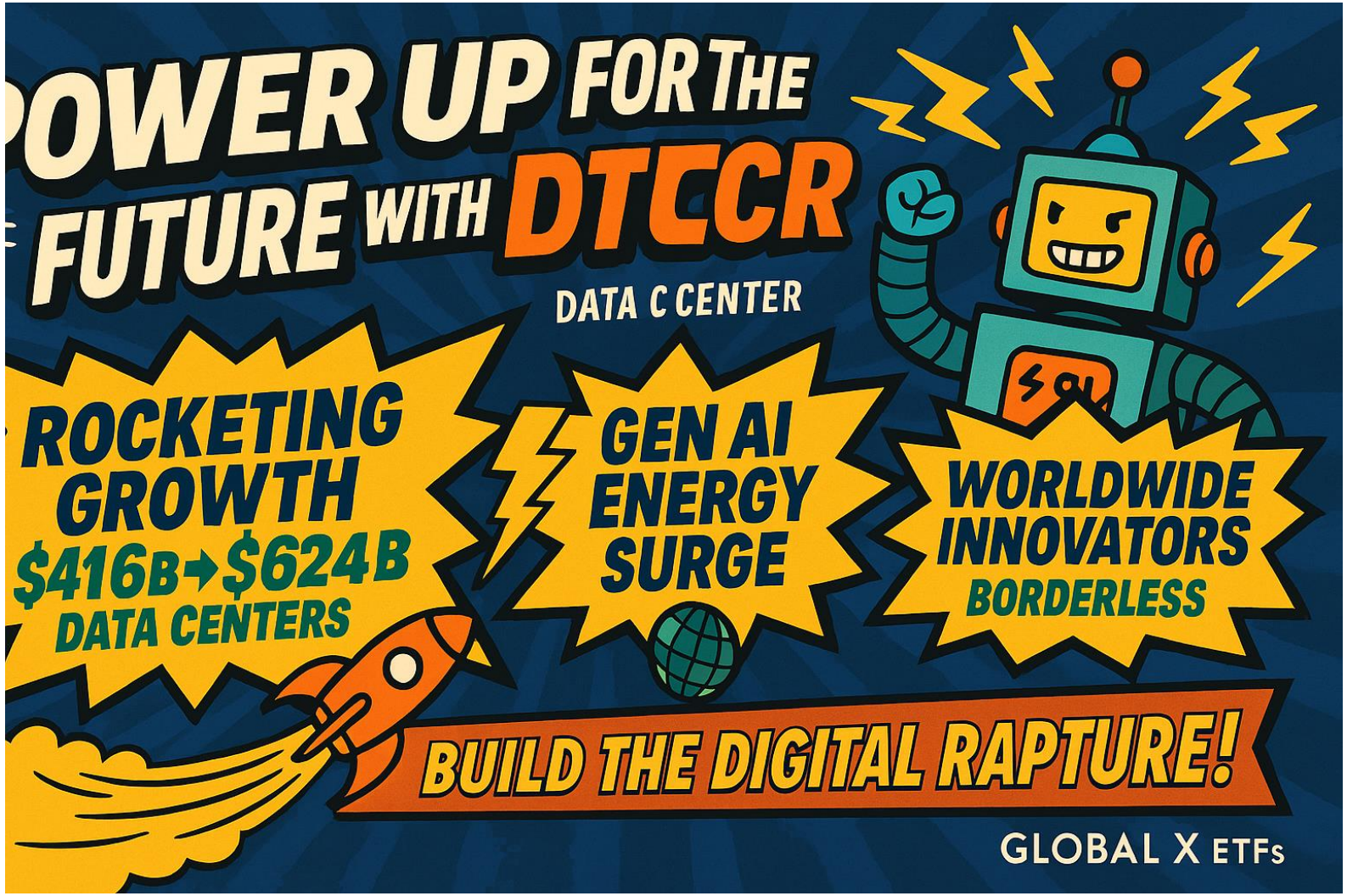
Option #1:

https://www.defianceetfs.com/nvox/

Option #2:

https://www.globalxetfs.com/funds/dtcr/



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Option #3:

https://www.proshares.com/our-etfs/strategic/pawz