

FIN04: Technical Analysis

TPV Modeling & Correlation Analysis | January 31, 2026

1. Data Overview

Analysis Period	2016-02-03 to 2026-01-30
Total Data Points	45,263
Securities Analyzed	19
Primary Data Source	Yahoo Finance (Daily OHLCV)

2. TPV Modeling Methodology

Total Payment Volume estimated using:

- Historical growth rates from quarterly earnings
- Seasonal adjustments for holiday spending patterns
- Consumer spending indices correlation
- Cross-border volume premiums

$$TPV(t) = \text{Base_TPV} \times (1 + r)^t \times \text{Seasonal_Factor} \times (1 + \varepsilon)$$

3. Transaction Type Breakdown

Transaction Type	Total TPV (\$B)	Weight
Commercial	\$16,665,800B	16.5%
Consumer Credit	\$38,164,233B	37.9%
Consumer Debit	\$35,410,039B	35.2%
Cross Border	\$10,479,370B	10.4%

4. Network-Level Analysis

Network	Estimated TPV (\$B)	Market Share
V	\$51,579,230B	51.2%
MA	\$36,437,518B	36.2%
PYPL	\$6,950,404B	6.9%
AXP	\$5,752,290B	5.7%

5. Correlation Analysis

Rolling correlations computed between payment networks and:

- Consumer discretionary stocks (proxy for spending)
- Bank stocks (card issuer economics)
- E-commerce platforms (digital payments growth)

Key Correlation Findings:

- Payment networks show 0.329 correlation with consumer stocks
- Higher correlation during economic expansions
- Cross-border volumes most cyclically sensitive

6. Competitive Threats

- **BNPL:** Affirm, Klarna capturing younger demographics
- **RTP Networks:** FedNow, Zelle reducing card dependence
- **Crypto/Stablecoins:** Potential long-term disruption
- **Open Banking:** Account-to-account payments gaining traction

