In-Class Assignment DFF3: Knight Capital Post-Mortem

Digital Finance, BSc Course — Prof. Dr. Joerg Osterrieder

Context. August 1, 2012: Knight Capital deploys new SMARS router code to 7 of 8 servers, but reuses an unrelated 2003 order-flag bit ("Power Peg") left in the 8th server's untouched legacy code. When the bit fires at market open, the dormant Power Peg logic on server 8 starts buying high and selling low on 140+ stocks. In **45 minutes**, Knight executes $7B of unintended trades, realising a **$460M loss**, four times its prior-year net income. Knight is insolvent within days; rescued by a forced investor consortium at $0.30/share vs. $10 pre-incident.

Q1. Decompose the incident into **3 control failures**, one per layer (deployment, pre-trade risk, kill switch). One sentence each.

Q2. Design a **5-point deployment checklist** that would have caught this in $<$ **4.5 seconds** (vs. the 45-minute actual detection).

Q3. Knight's loss was **$460M**. If the firm had held the 5-point checklist but *still* lost **$5M** before the circuit tripped, would the firm have survived? Give a one-sentence quantitative argument.