

Governance, risk & compliance

- ✓ **Corporate governance:** a system of rules and practices ensuring accountability, fairness, transparency; aligns management with shareholder interests
- ✓ **Agency theory:** tension between shareholders (principals) and management (agents); mitigated by independent committees, CEO/chair separation, performance pay, independent board oversight
- ✓ **Board of directors:** ultimate oversight; majority independent; approves strategy, appoints and evaluates the CEO, oversees risk
- ✓ **CFO:** financial planning, reporting, statement accuracy, regulator and auditor liaison
- ✓ **Audit committee:** independent directors (at least 1 financial expert); oversees audits, internal controls, auditor independence, whistleblower complaints
- ✓ **Documentary hierarchy:** articles of incorporation → bylaws → corporate policies → procedures and manuals

Internal control framework (COSO)

- ✓ **Objectives (3):** operations, reporting, compliance; controls give *reasonable*, not absolute, assurance
- ✓ **5 components**, in COSO's order (mnemonic CRIME: control activities, risk assessment, information & communication, monitoring, control environment):
 - Control environment (the foundation)
 - Risk assessment
 - Control activities: approvals, reconciliations, SoD
 - Information & communication
 - Monitoring activities
- ✓ **Limitations:** human error, collusion, management override, cost-benefit constraints, outdated controls
- ✓ **Control types:** preventive (stop before: SoD, access controls), detective (find after: reconciliations, audits), corrective/safeguarding
- ✓ **Segregation of duties (SoD):** separate authorization, recording, custody, and reconciliation; no one person completes a transaction end to end

External audit & regulatory bodies

- ✓ **External audit:** an independent opinion on fairness and conformity with GAAP/IFRS; governed by the PCAOB (public companies) and SOX §404
- ✓ **Audit risk model:** $AR = IR \times CR \times DR$
 $RMM = IR \times CR$, the risk of material misstatement;
 AR, IR, CR, DR = audit, inherent, control, detection risk
- ✓ **Opinions:** unqualified (clean), qualified, adverse, disclaimer

Sarbanes-Oxley Act (SOX)

- ✓ **Purpose:** restore investor trust; applies to US public companies and their auditors; administered by the SEC and PCAOB
- ✓ **Titles:**
 - I: establishes the PCAOB
 - II: auditor independence (partner rotation, restricted non-audit services)
 - VIII: criminalizes record destruction; workpaper retention; whistleblower protection
- ✓ **Sections:**
 - §302: the CEO and CFO personally certify financial reports
 - §404: management and auditors report on internal-control effectiveness

System controls & security

- ✓ **General vs application controls:** general = the overall IT environment; application = transaction level
- ✓ **Application controls:** input (validation, batch/hash totals), processing (control totals, sequence checks), output (reconciliation, distribution controls)
- ✓ **System development:** follows the SDLC; management authorization + user-acceptance testing
- ✓ **Backup / BCP:** full, incremental, differential backups; DRP recovery sites: hot (immediate, costliest), warm (moderate), cold (slowest, cheapest)