

Treasury Management

FIN 2237



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Mission

The mission of the Institute is to provide superior-quality, practitioner-driven content within the higher education treasury and finance community by connecting people, ideas, and solutions.

2026 Programs

- Treasury Symposium
- CBMI Treasury Track
- Senior Financial Roundtables

CBMI & TIHE Treasury Track

- Treasury Management (*FIN 2237*)
- Introduction to Capital Finance (*FIN 2232*)
- Advanced Capital Financing (*FIN 2240*)
- PCI Compliance and Trends in Higher Education Payments (*FIN 2242*)
- Fundamentals of Higher Education Investments (*FIN 2235*)
- Current Hot Topics in Risk Management (*BUS 2253*)
- Advanced Insurance & Risk Management (*BUS 2260*)
- Asset Liability Management and Long-Term Planning (*FIN 2250*)
- Advanced Endowment Management (*FIN 2251*)
- Current Issues & Trends in Strategic Treasury Management (*FIN 2248*)

Treasury Management (FIN 2237)

Learning Objectives

Participants will gain an understanding of:

- The role of treasury management within a higher educational institution
- The fundamentals of treasury management
- Treasury management tools and processes
- Electronic and card payment systems
- Treasury analytics and workstations
- The concept of an internal or central bank within the institution
- Current challenges and regulatory issues

Treasury Management Defined

Treasury management provides stewardship over the cash assets and liabilities of a college or university. This involves maximizing investment income, using debt strategically (while minimizing the cost), optimizing liquidity, managing risks, minimizing expenses and streamlining processes associated with cash flows. ***An effective treasury management program ensures that money is in the right place in the right amount at the right time.***

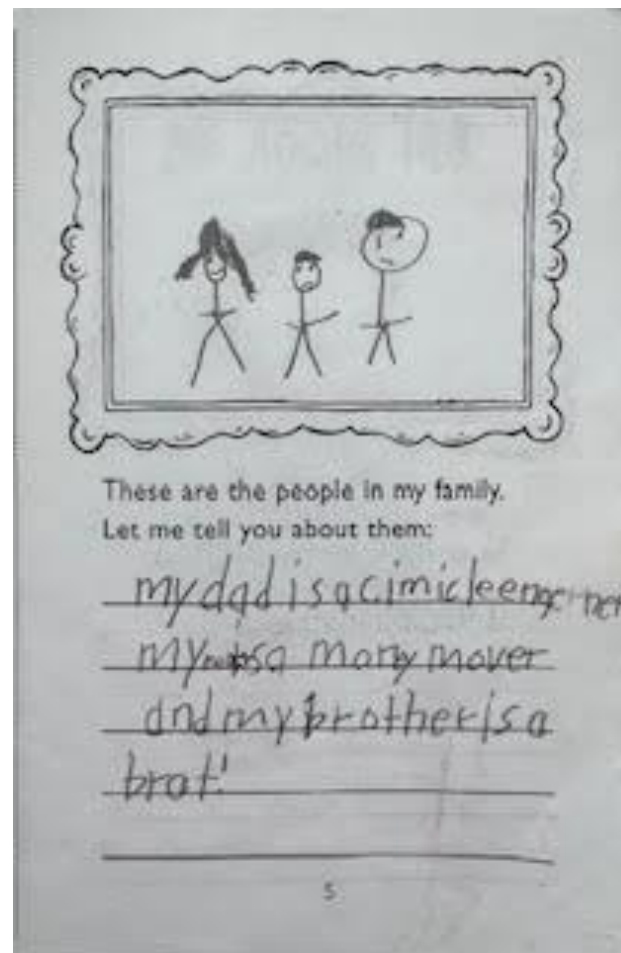
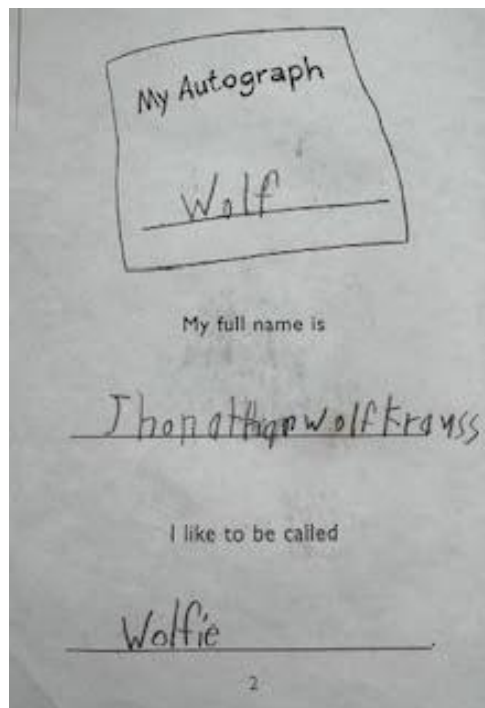
Source: NACUBO College and University Business Administration

Treasury Management Defined defined by a treasury professional

“Our team manages the University’s checkbook, savings, short-term investments, and borrowings, along with related systems and information.

And we work on a lot of special projects.”

Treasury Management Defined defined by a preschooler



"My mom is a money mover."

Polling Question #1

What Type of Institution do you represent?

- a. Public
- b. Private
- c. Other



Basics of Treasury Management

The Fundamentals

<i>Short-term</i>	<i>Long-term</i>
• Daily liquidity management • Cash resources and availability • For operations	• Finance functions • Funds and information/data availability • For initiatives to support financial objectives

Basics of Treasury Management

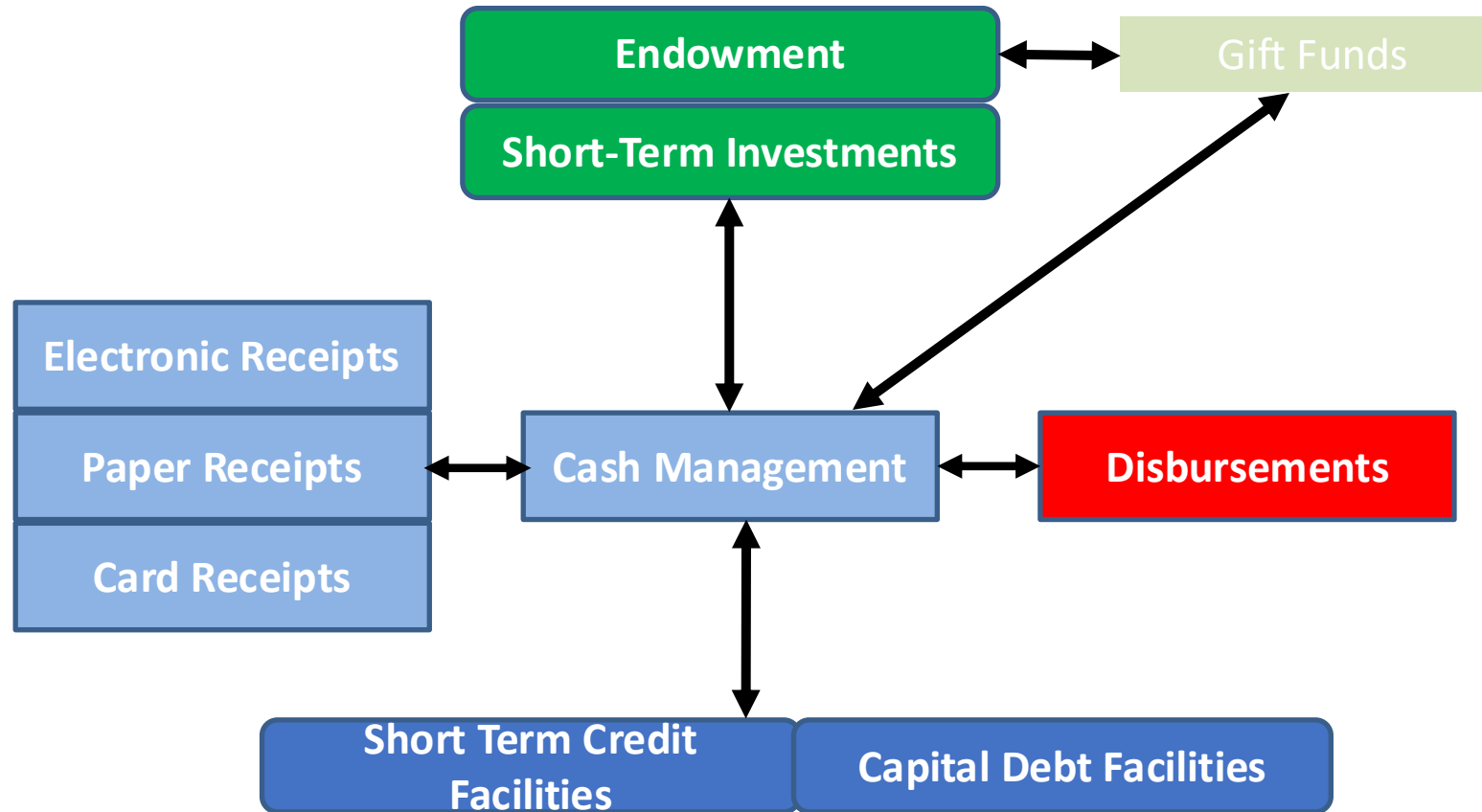
The Daily Details

- Complete cash position worksheet
- Monitor cash/liquidity balances
- Collect, concentrate and disburse
- Short-term investing and borrowing
- Research and reconcile exceptions
- Coordinate with A/R, A/P, tax, accounting

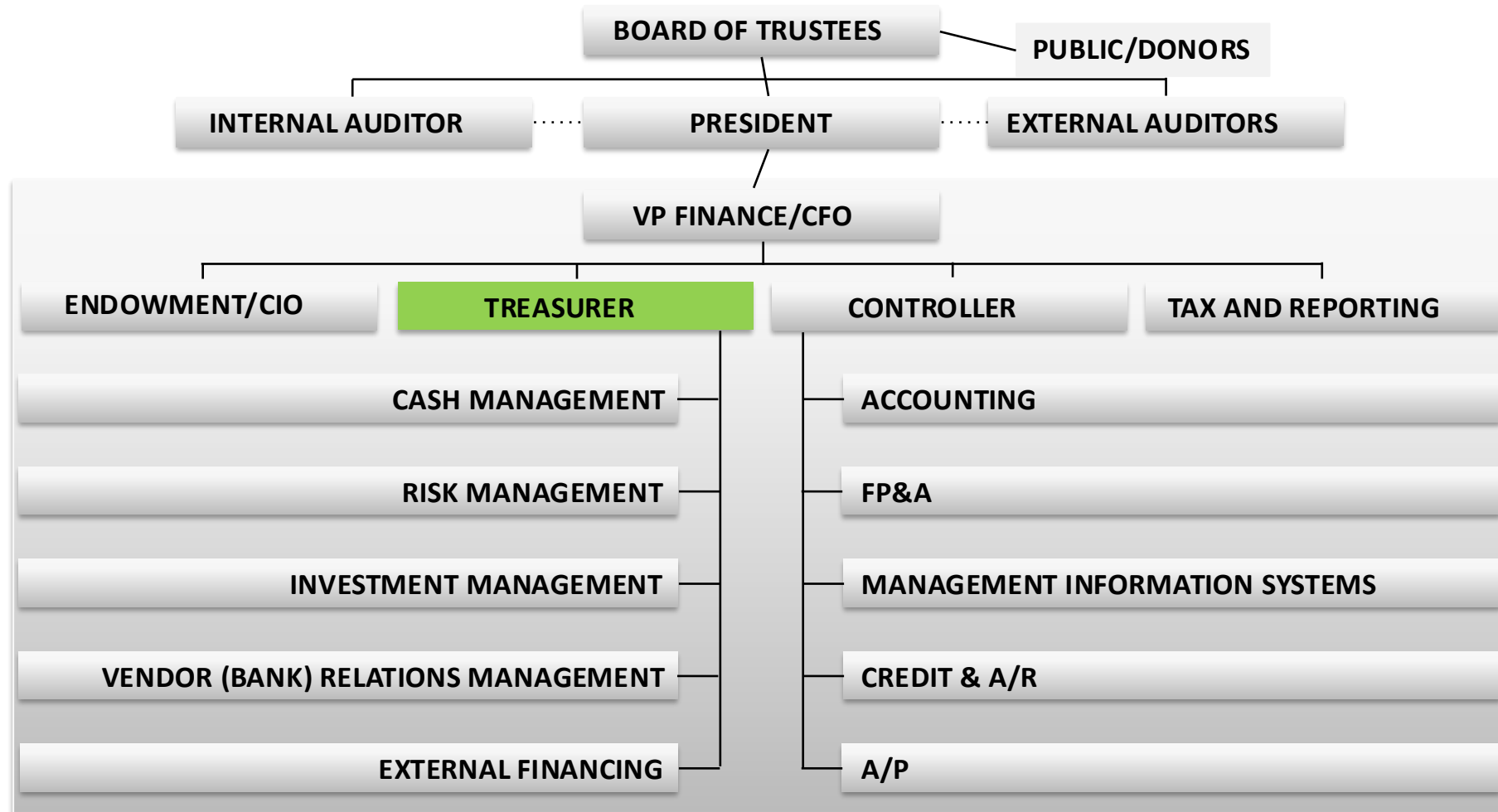
Treasury Management Responsibilities

- Oversee daily liquidity and cash management
 - Collection
 - Disbursement
 - Concentration
 - Information Gathering & Analysis
 - Forecasting
- Investments
- Negotiate External Financing
- Risk Management & Compliance
- Manage Relationships with Banks & Providers
- Internal Consulting

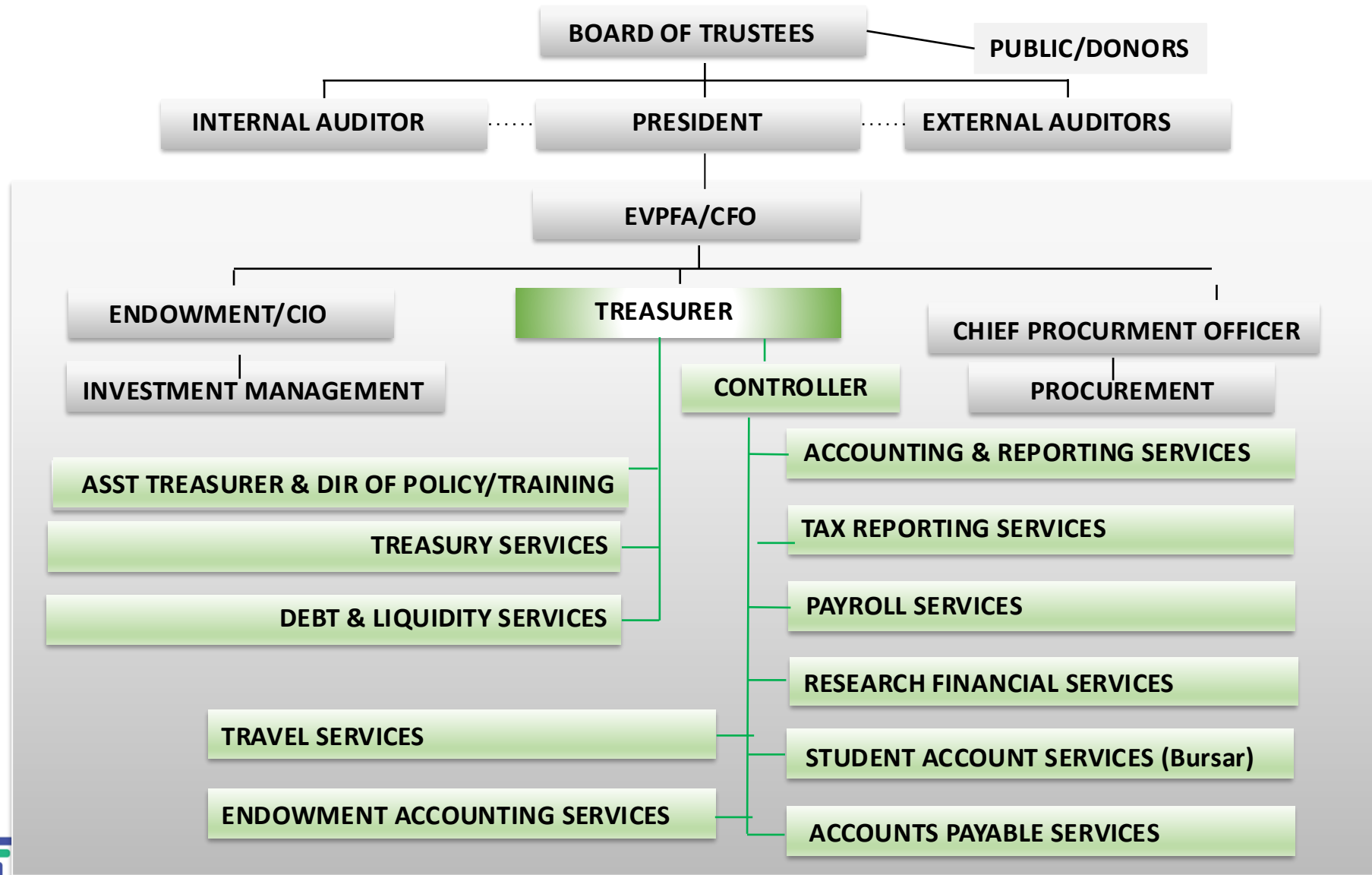
Typical Cash Management Model



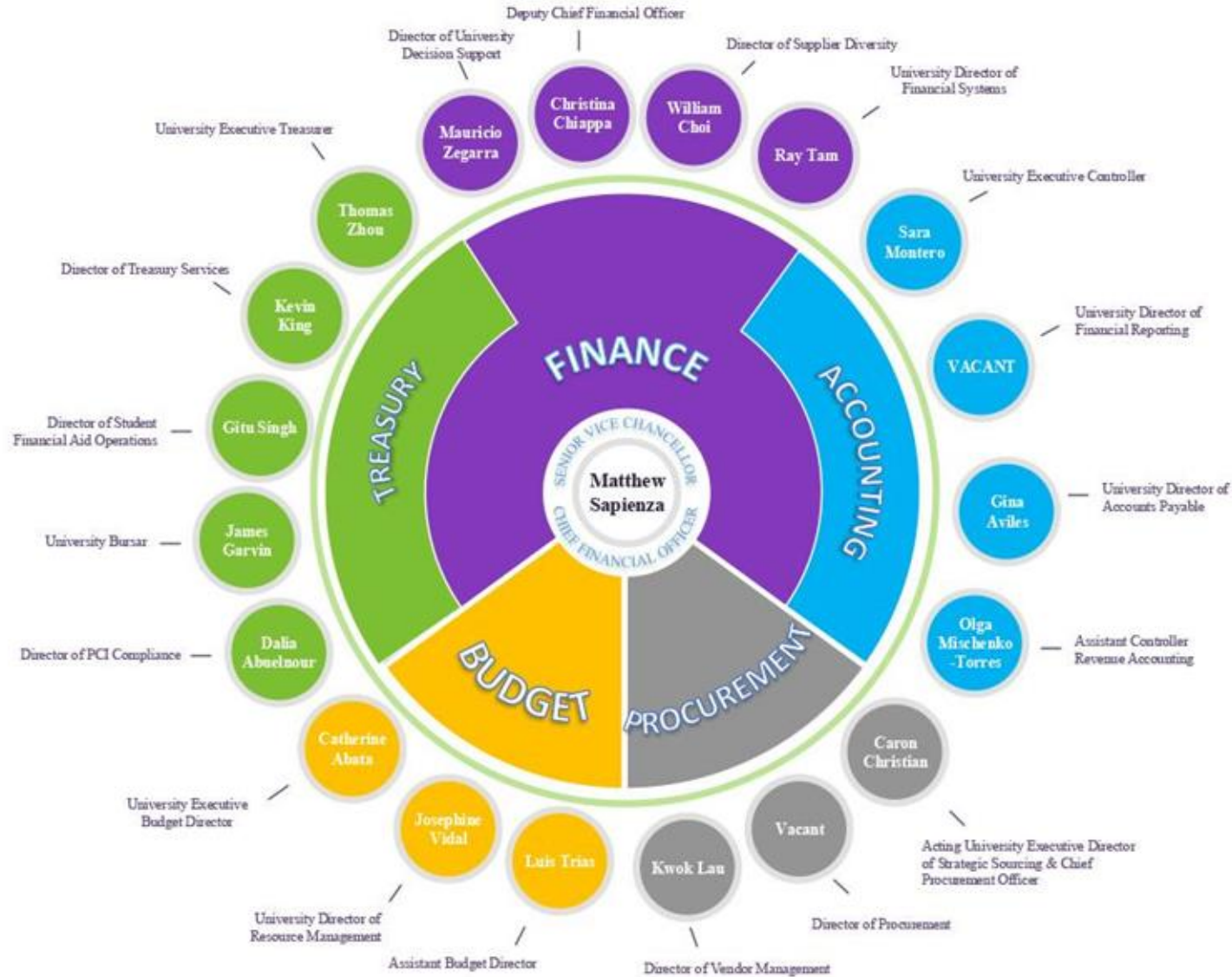
Where Treasury Fits in a University



Treasury at the University of Kentucky



Example: CUNY Finance Offices



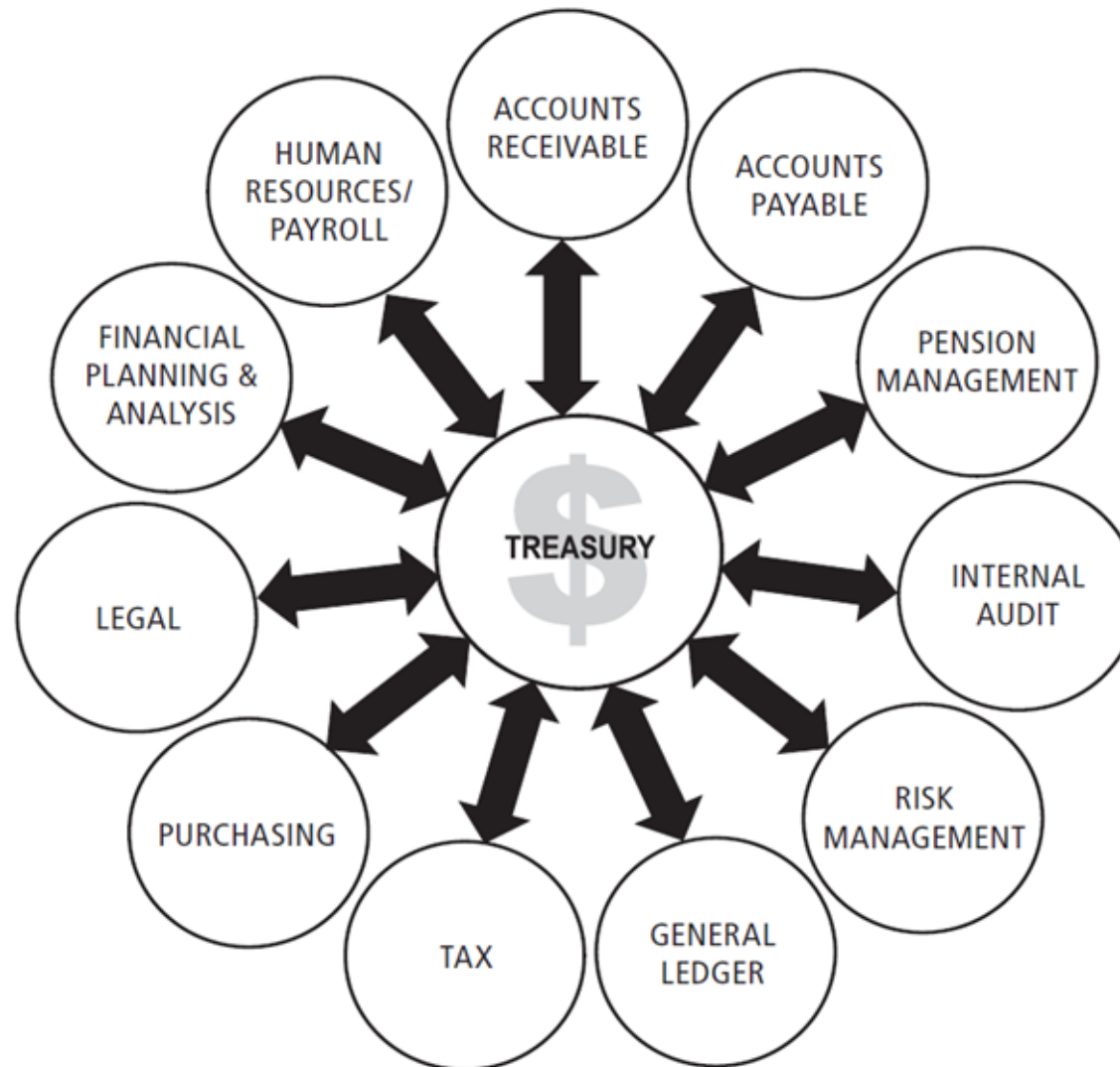
2026 CBMI Treasury Track

Which Area Do You Work?

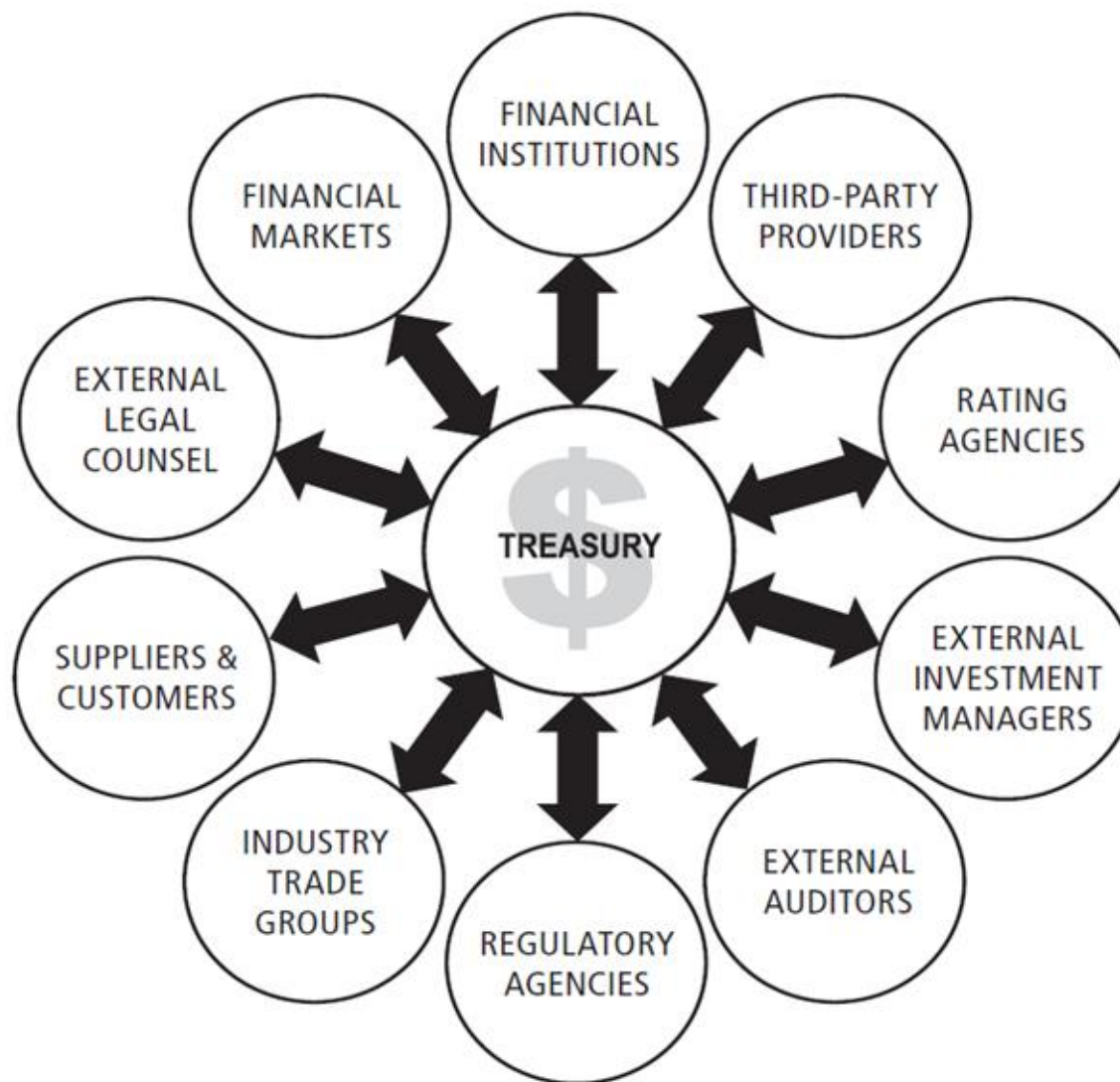
- a. Treasury
- b. Budget
- c. Procurement
- d. Accounting
- e. other



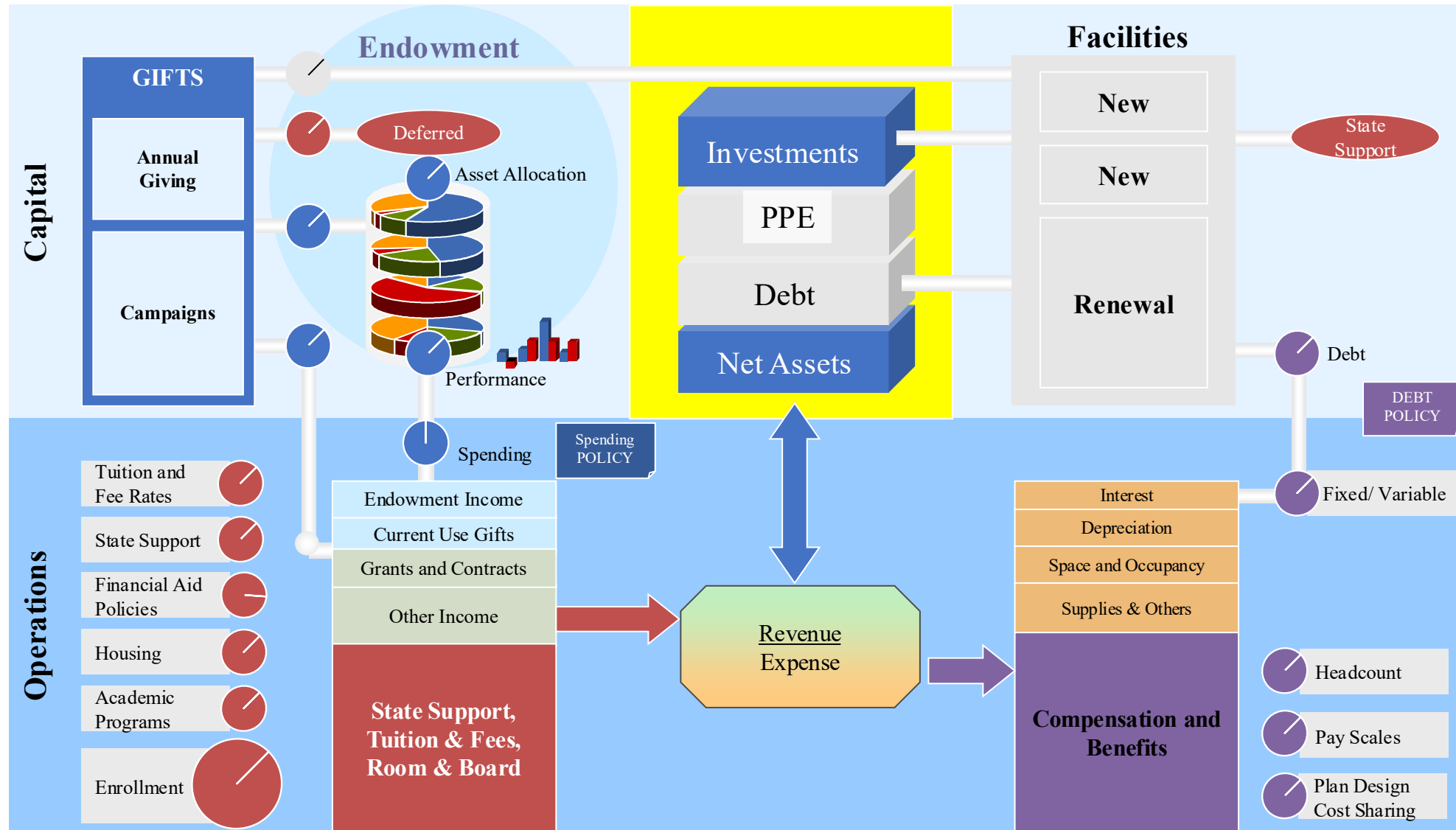
Treasury Collaboration - INTERNAL



Treasury Collaboration - EXTERNAL

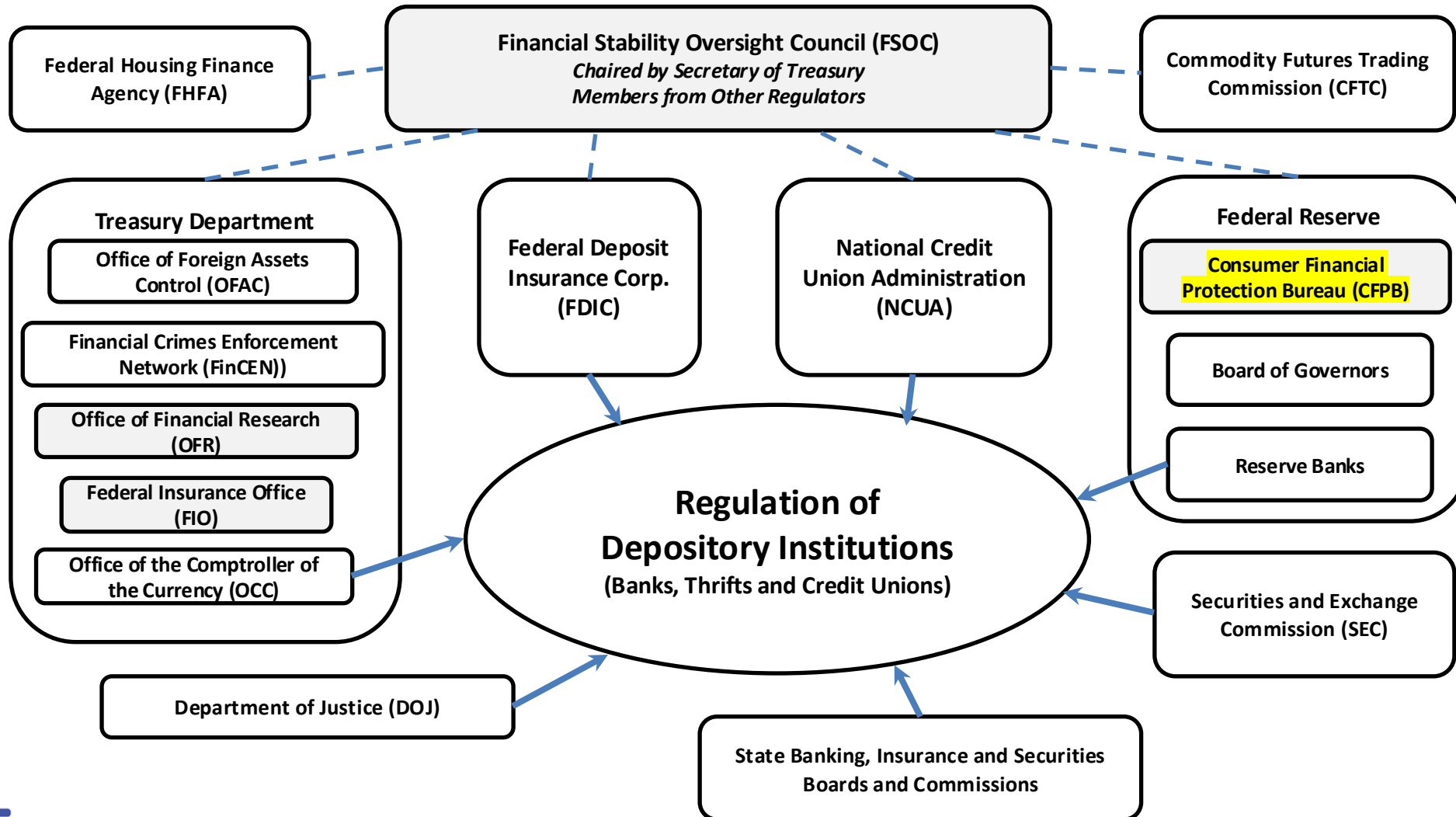


Financial Resources



The U.S. Financial System

U.S. Financial Regulations



U.S. Regulatory Environment



- History of Bank Regulations – 1907
- Federal Reserve - 1913
- Banking in the 1920's
- Impact of 1929 stock market crash
- Glass-Steagall Act (1933)
- Banking Deregulation (Gramm-Leach-Bliley Act – 1999)
- Financial Crisis of 2007-2010
- Banking Re-regulation (Dodd-Frank Wall Street Reform and Consumer Protection Act – 2010)
- Deregulation of Mid Size banks and Capital Requirements (2018)

Securities and Exchange Commission

- Registers public offerings of debt and equity
- Sets financial disclosure standards for corporations that sell securities to the public
- Requires companies with publicly owned securities to file quarterly and annual financial statements
- Regulates mutual funds and investment advisors
- Monitors insider trading



Payment Systems & Instruments Legislation

EFTA (1978)

- Customer rights, responsibilities and liability limits for non-wire EFTs

DIDMCA (1980)

- Deposit-taking Fed reserves
- Discount window
- Reduce/price float

E-SIGN (2000)

- Digital signatures legal status

Check 21 (2003)

- Substitute of image in clearing process
- Payment system efficiency

Bank Secrecy/Money Laundering Control

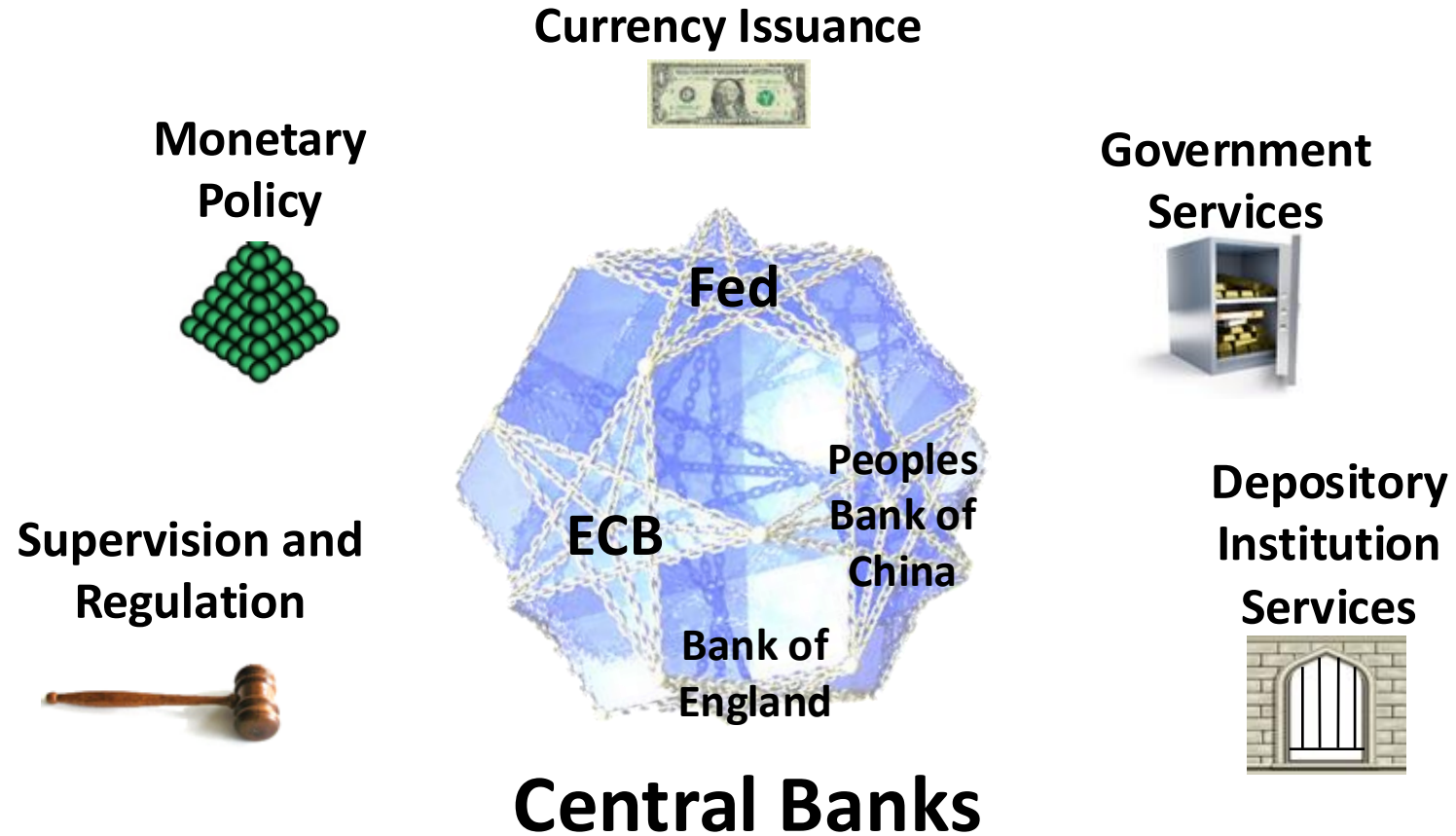
BSA (1970), MLCA (1986)

- Must report suspicious financial transactions
- Financial Institution defined broadly
- It is a crime to structure transactions to avoid reporting
- KYC

USA Patriot Act (2001)

- Non-bank Financial Institution obligations
- Foreign banks in US subject to US jurisdiction
- US banks: no foreign shell bank correspondent accounts
- US credit card operators cannot authorize foreign banks to issue or accept US credit cards without steps to prevent terrorist use
- Requires due diligence

Central Banks



U.S. Federal Reserve Bank

Background

- Federal Reserve Act of 1913
- Foundation for the current banking system
- All banks with national charter from OCC to become Reserve banks
- National check collection and settlement system

U.S. Federal Reserve Bank

Composition

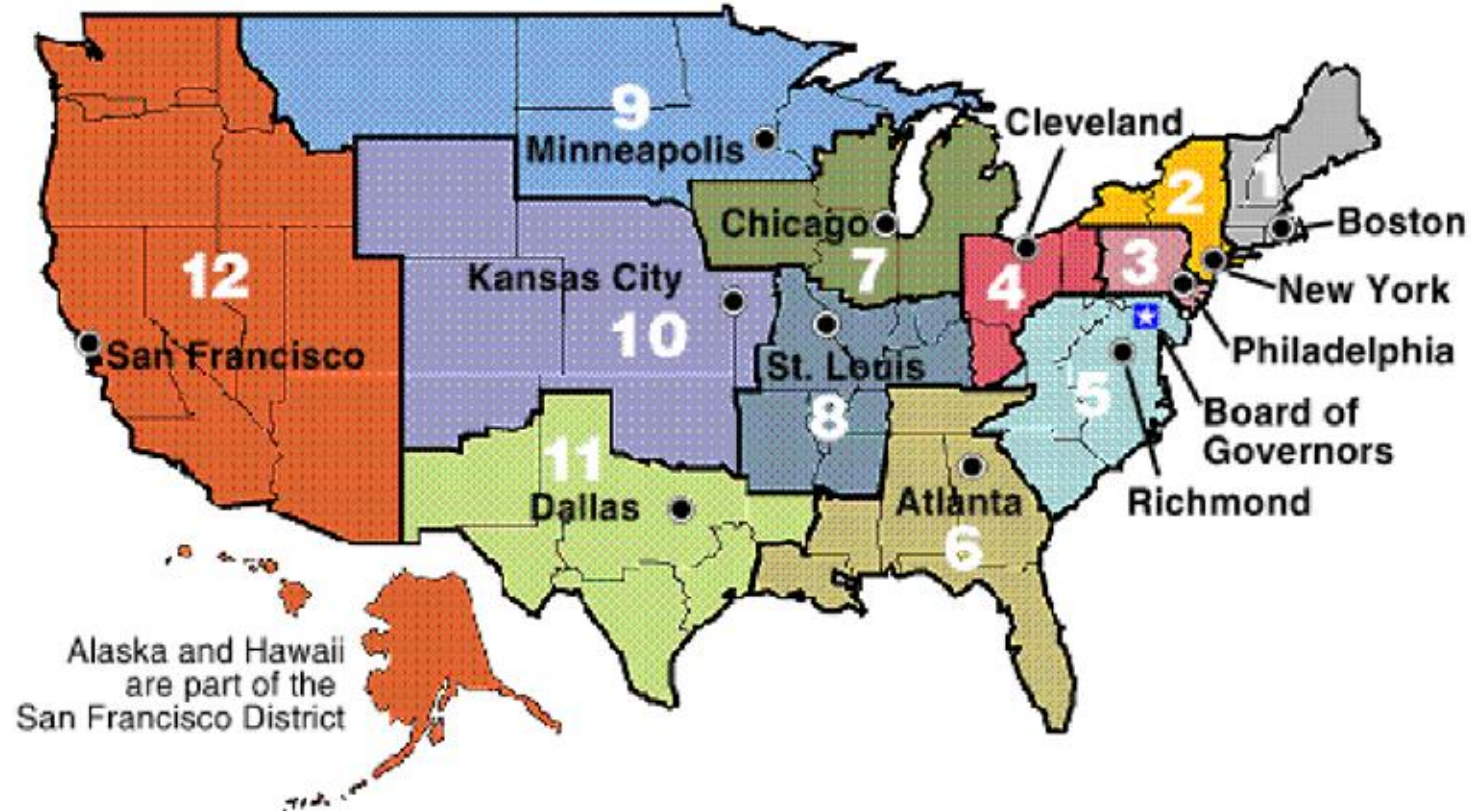
- Board of Governors
- Federal Open Market Committee (FOMC)
- Federal Reserve Banks
 - 12 banks and 24 branches

Principal Roles

- Monetary Policy
- Supervision and Regulation
- Government Services
- Depository Institution Services

U.S. Federal Reserve Bank

District Map

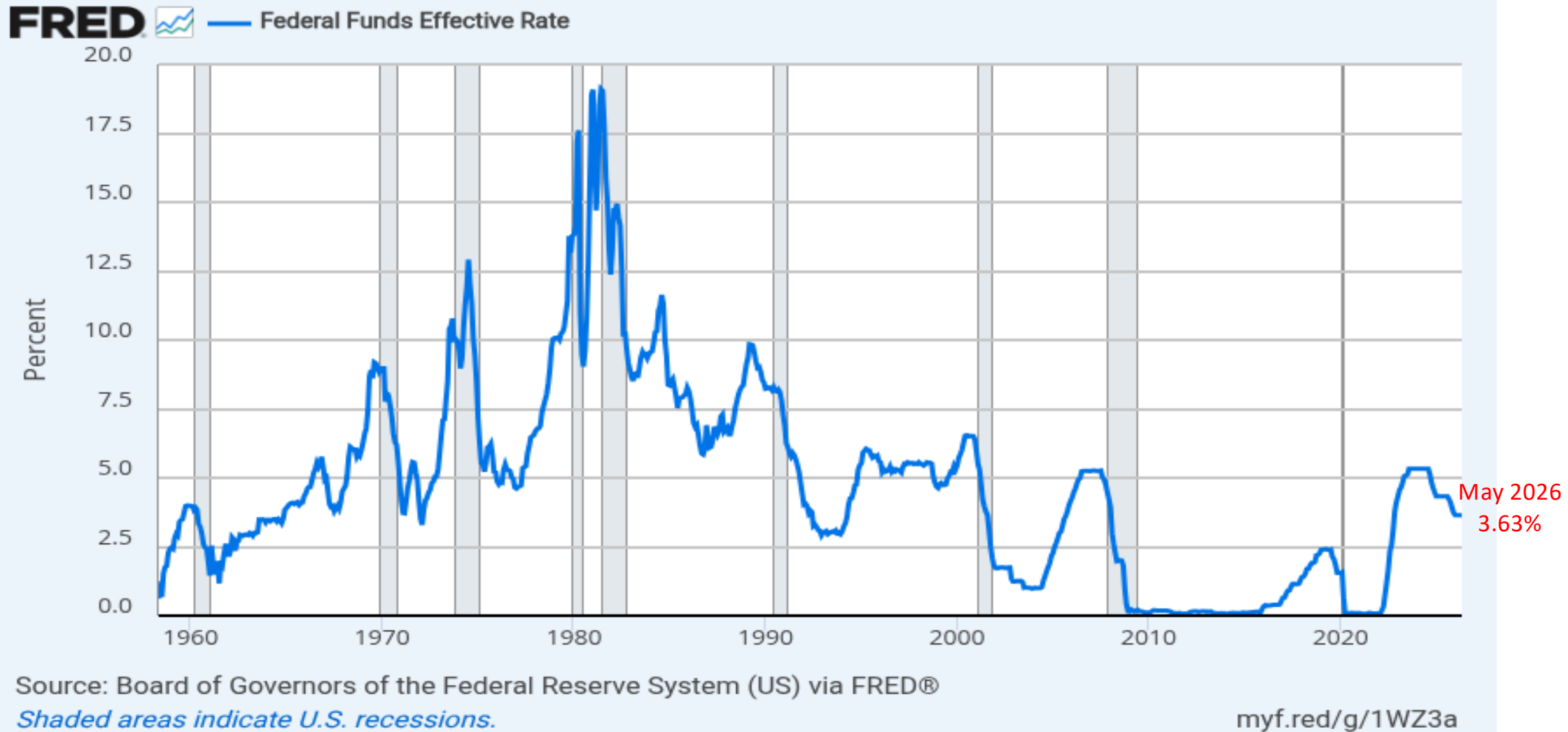


Monetary Policy at the Fed

- The Fed should conduct monetary policy in a way that:
 - Maximizes employment, promotes price stability and maintains moderate long-term interest rates
- Fed monetary policies influence the demand for, and supply of, credit at banks and other depository institutions
- Fed “Tools”
 - Discount rate
 - Reserve requirement
 - FOMC open market operations
 - Fed Funds target rate
 - Federal Reserve Balance Sheet
 - “Fed Speak”

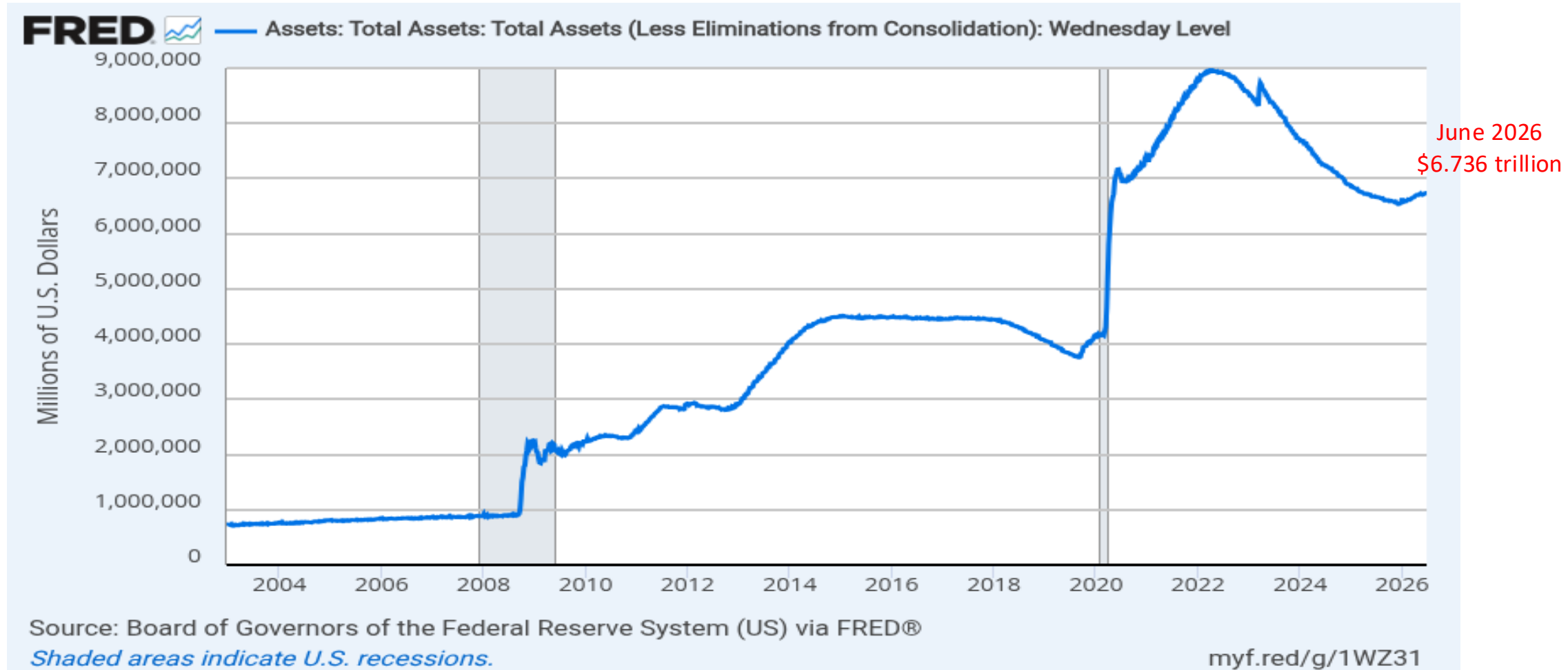


Historic Fed Rate Hikes



Fed Reserve Total Assets

2003 to present



Which is NOT a Central Bank Function?

- a. Monetary Policy
- b. Currency Issue
- c. Government Services
- d. Fiscal Policy
- e. Depository Institutional Services
- f. Supervision and Regulation



From Regulation to Navigation

Cash Management

Question

Do you deal directly with the school's
Financial Institution(s)?



Cash Management – Commercial Bank Services

Financial Institution Offerings

- Depository accts & transaction services
- Short-term lending & investments
- Foreign exchange (FX)
- Information reporting
- Direct Placement Debt
- Trade services
- Agent & fiduciary services
- Risk management
- Consulting



Other Financial Institutions

Savings & Loan Institutions

Credit Unions

Mutual Funds (MMFs)

Other Non-Bank FIs

Industrial credit/capital companies

Industrial banks

Captive finance companies

Factoring firms

Insurance companies

Pension funds

Consumer finance companies

Selecting The Right Provider

Historic Priorities

- Paper processing –Lockbox, deposits, etc.
- Controlled disbursement products
- Branches
- Transaction volume
- *Commodity based*

New Priorities

- Non-bank providers
- Card processing
- Technology ...Cloud
- Cyber security
- Non-traditional incentives...beware
- *Use consultant?*



Cash Management Collections

Receipts

- Currency and coin
- Checks
- Electronic Receipts
 - Automated Clearing House (ACH)
 - Wire transfer
- Payment, clearing and settlement systems
- Credit Card

How Universities Collect

What are different ways you accept payments on Campus?

- Self-Service via Web payments
 - ACH Debit (eCheck)
 - Credit Card
- Cashier Back-Office
- Mail via Lockbox or Drop Box
- In Person via Cashier's Window or Point-of-Sale (POS)



Collecting Funds Owed

Goals

- Collect receivables in a cost-effective manner
- Update receivables quickly and accurately
- Convert collections into available funds as rapidly as possible



"Do we we accept PayPal? We accept any method that pays, pal."

Sample US Business Check

ANYCOMPANY
1430 ANY STREET
ANYTOWN CA 90000

101

DATE _____

PAY TO THE ORDER OF: _____

e.g., 01-12 = Fed Reserve District

\$

_____ DOLLARS

ANYTOWN BANK
1000 BANKING WAY
ANYTOWN CA 90000

MEMO _____

⑈00000101⑈ 8 ⑈000024578⑈ 12457802⑈ ⑈0000000000⑈

Fed Office
Availability

Bank Location

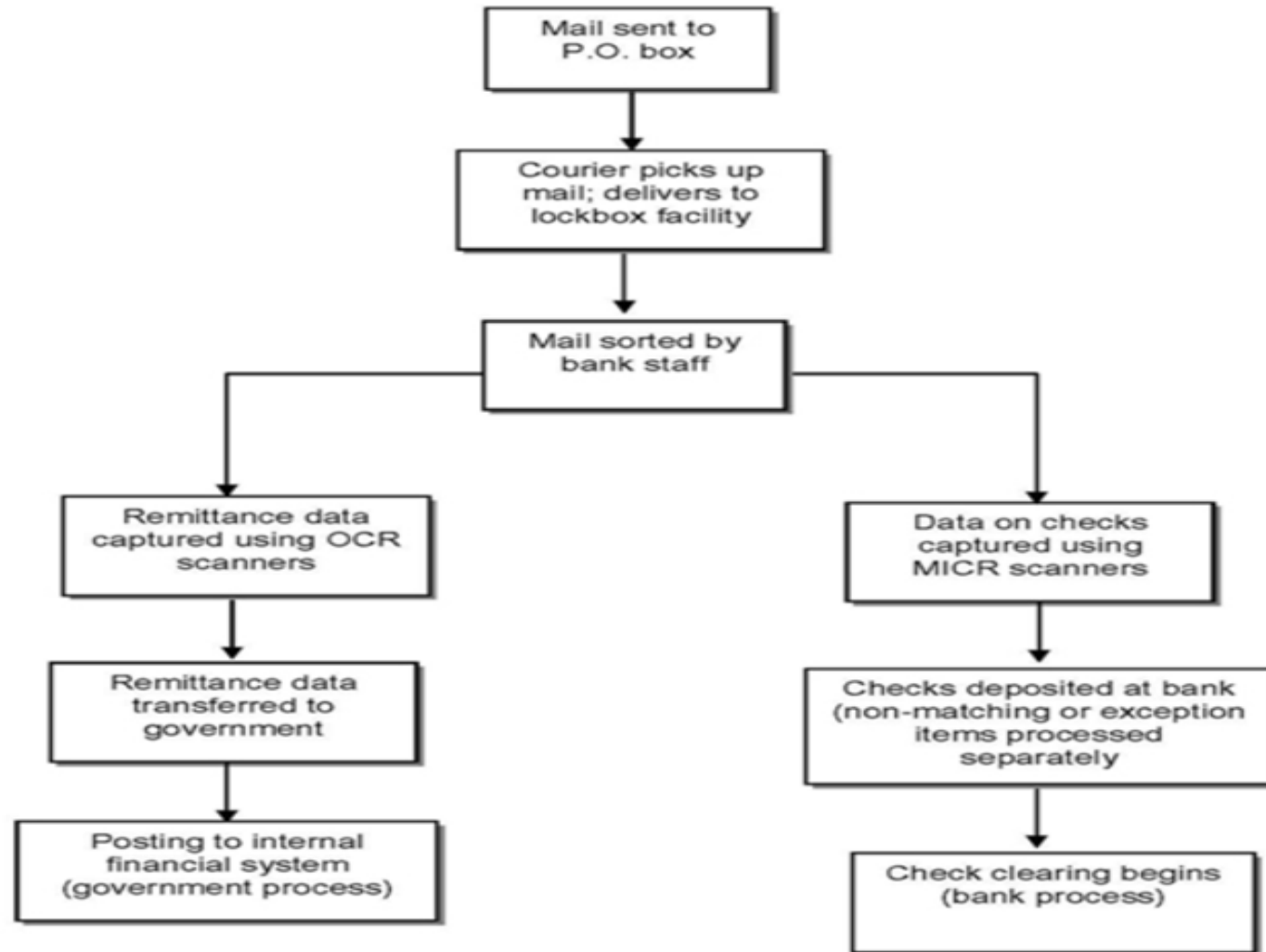
Check Digit

AUXILLARY ON-US	EPC	ROUTING/ TRANSIT	ON-US/ACCOUNT #/CHECK SERIAL #	AMOUNT
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Lockbox Advantages vs. Internal Processing

- Reduced mail and processing float time
- Improved access to remittance information
- Reduced risk and improved security
- Improved control and record keeping
- Uninterrupted service
- Scalability
- Proper segregation of duties

Lockbox Paper Check Collection

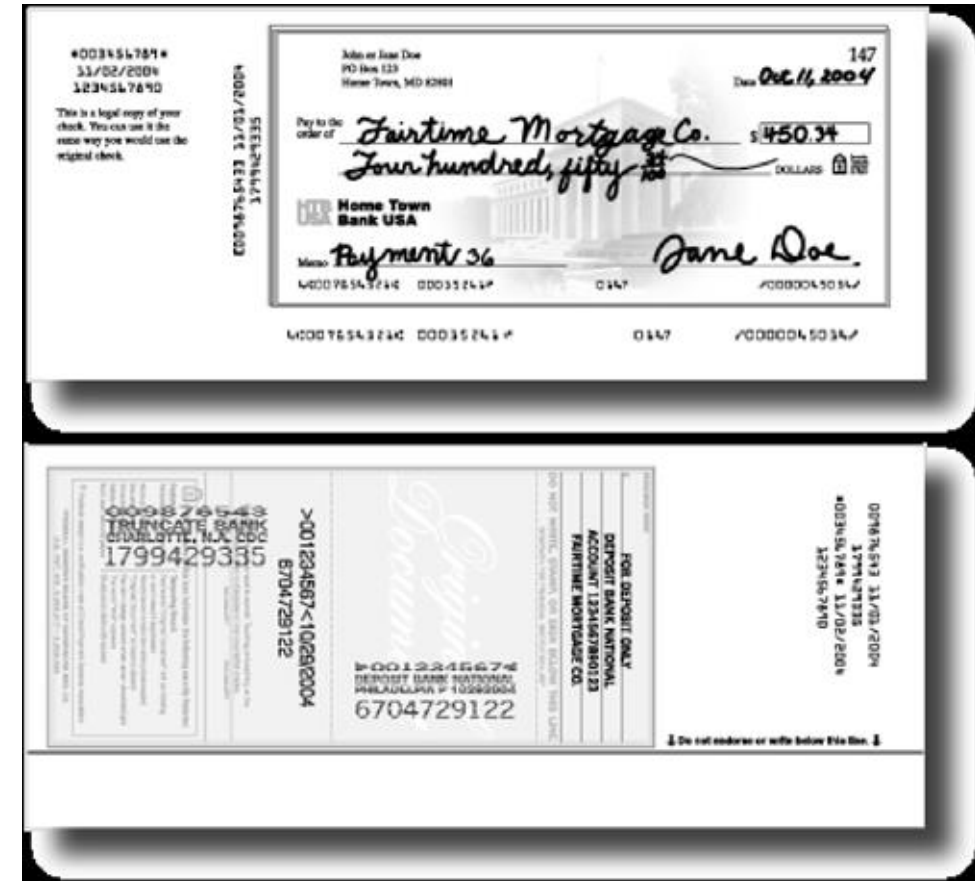


Local Paper Check Processing

Check Image Capture

Remote Deposit Capture

All positives on this service?



Local Paper Check Processing

Check Image Capture
Remote Deposit Capture
Mobile Deposit (Device)

Issues

- Retention
- Image Quality
- Device Connection
- Data Security
- Reconciliation



Electronic Receipts

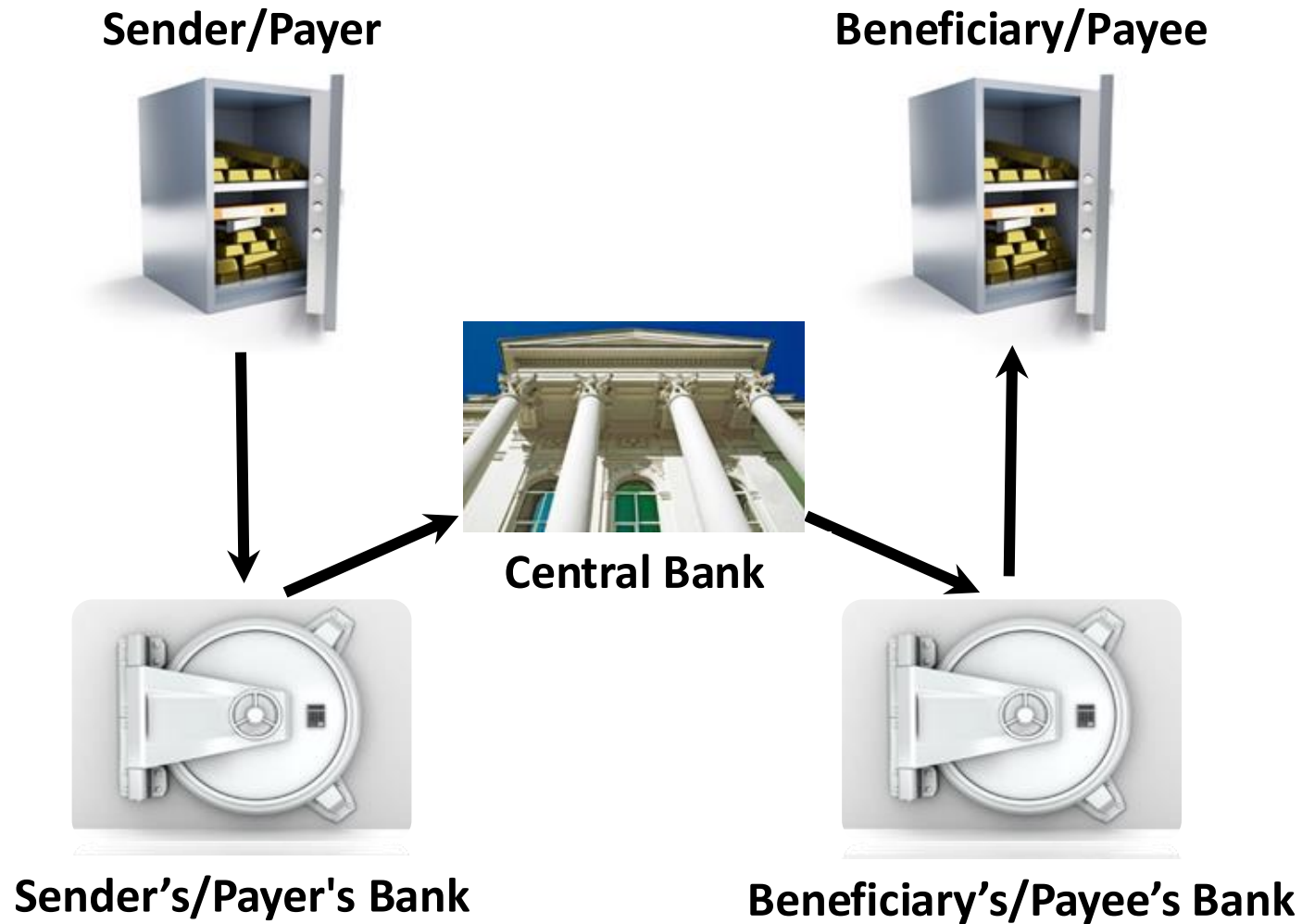
Electronic Collections

- Wire Transfer
- ACH
- Check Conversion
- Credit/Debit Card
- Campus Card

Non-Financial Institution Initiated Payments

- Crypto-currencies
- Peer-to-Peer Apps
- Digital Wallets

Wire Transfer Flow



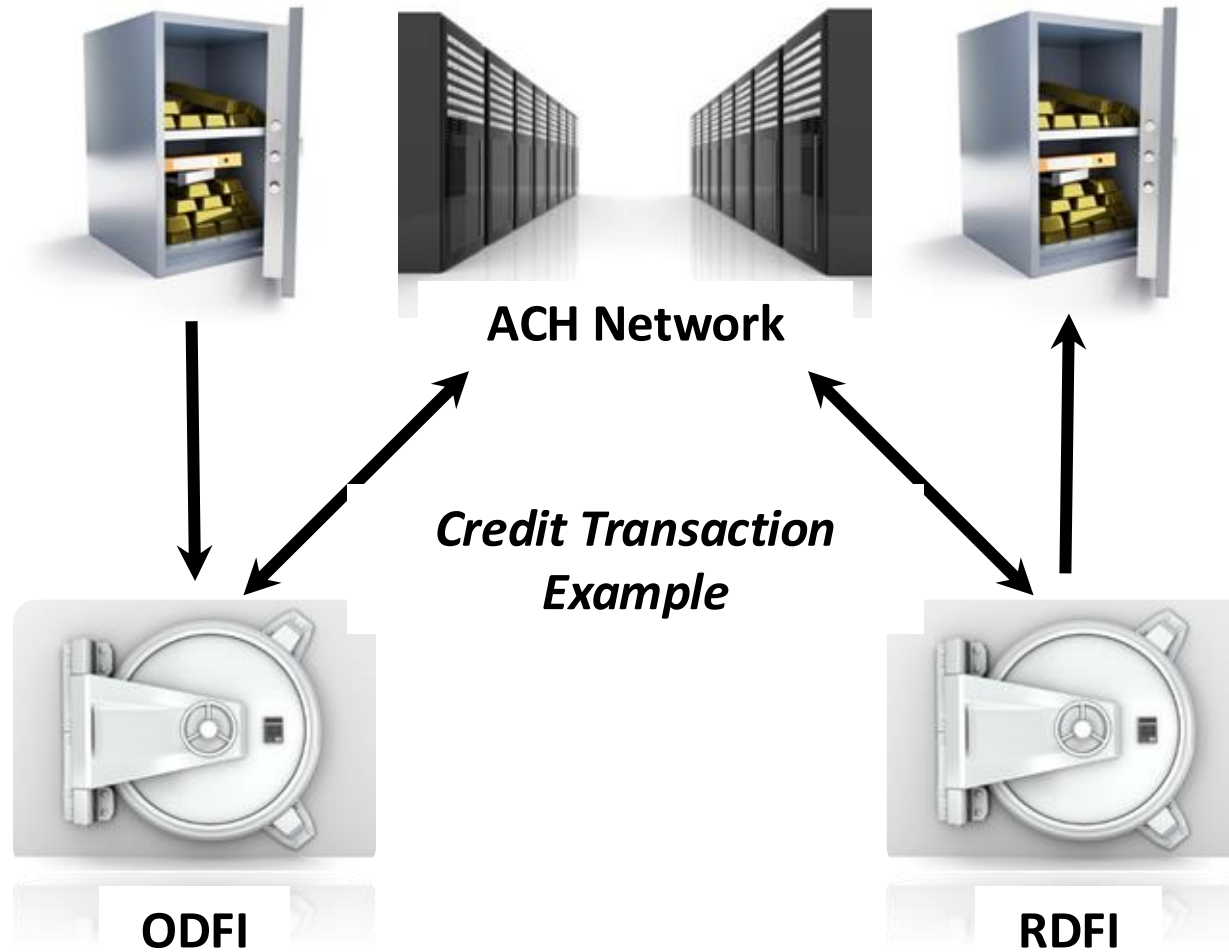
ACH Fundamentals

- Batch-process, store-and-forward system used for high-volume, low-value transactions
- Funds generally settled one or two business days after the file is released
- Same Day ACH transactions were only on-us transactions until September 2016
 - Limited to \$1,000,000 per single transaction
 - Must be submitted to the ACH network by 4:45 pm (Eastern time)
 - NOTE: Limit will increase to \$10,000,000 on September 2027
- Multiple formats: ARC, POP, BOC, TEL, WEB, CCD, PPD

ACH Transfer Flow

Originator (Payer)

Receiver (Payee)

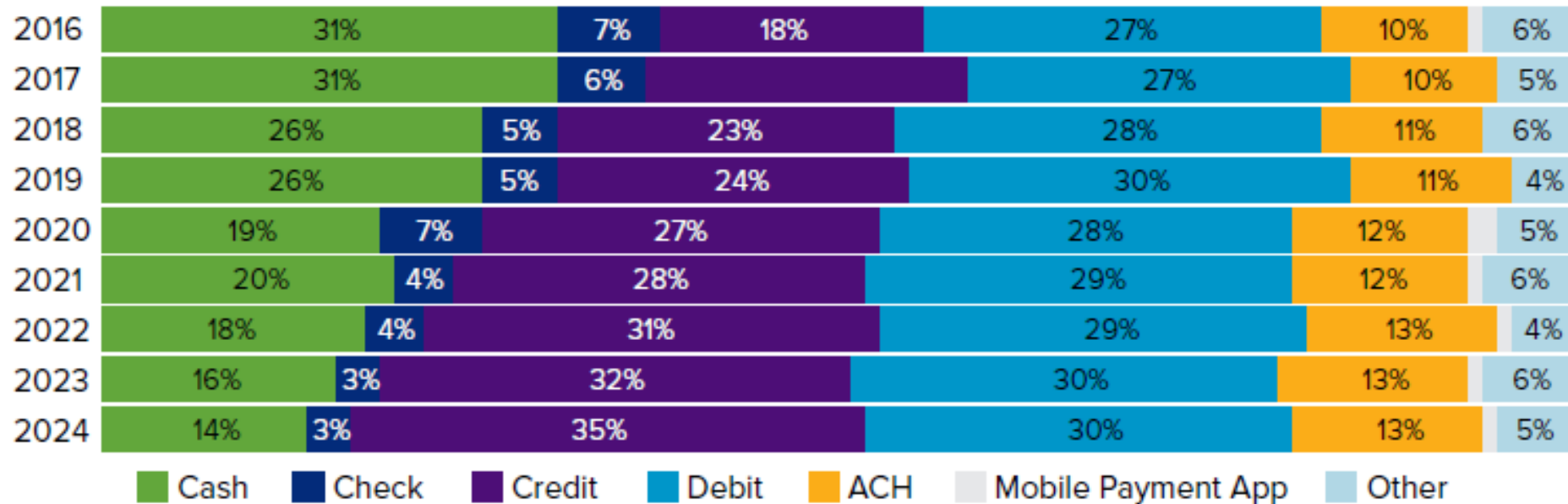


Types of ACH Systems

- Bacs (UK), ECG (Eur), SEPA (Canada), or ACH (US)
- Giro now ACH (Eur & Asia)
- Cross-border/Global ACH
 - International ACH (IAT)
- Batch processed
- Value dated
- Credits or debits
- Transactions
 - Payroll credits (Direct Deposit)
 - Pre-authorized debits
 - Debit filters and blocks
- More payment information

Payment Trends 2016–24

Figure 2: Share of payment instrument use for all payments

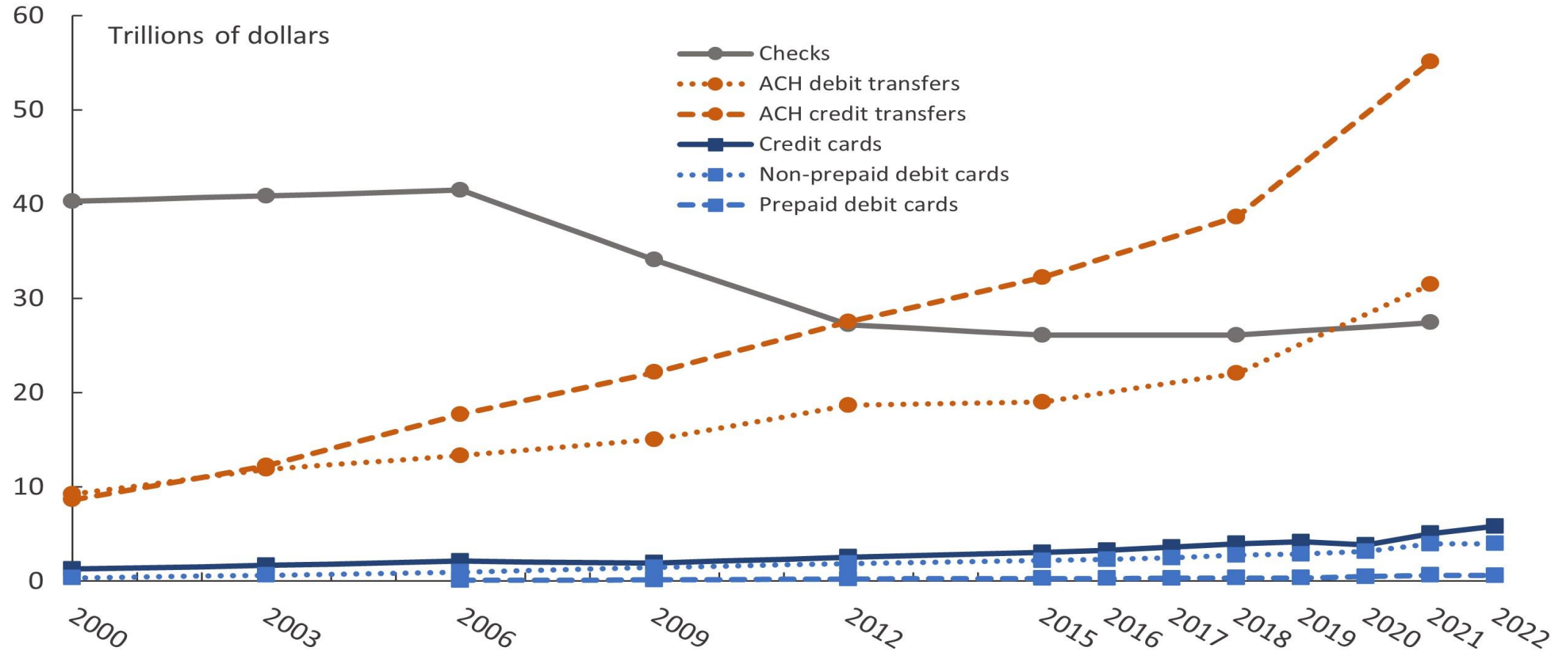


Note: All payments, including bills, purchases and person-to-person (P2P) payments.

Source: Survey and Diary of Consumer Payment Choice.



Trends in noncash payments, by value, 2000–22

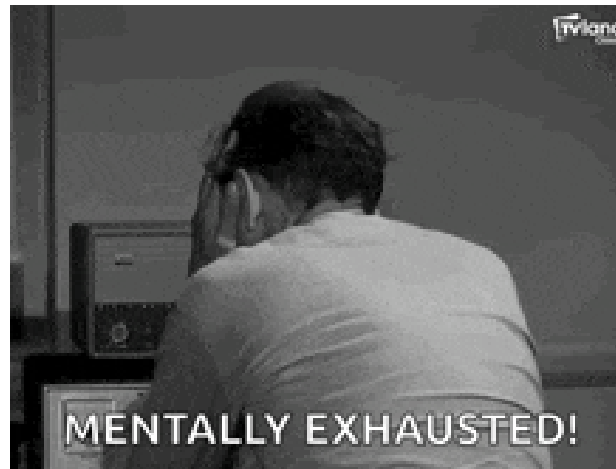


How Many NCAA Basketball Championships have the UK Wildcats won?

- a. None
- b. Two
- c. Eight
- d. Eleven
- e. Twenty



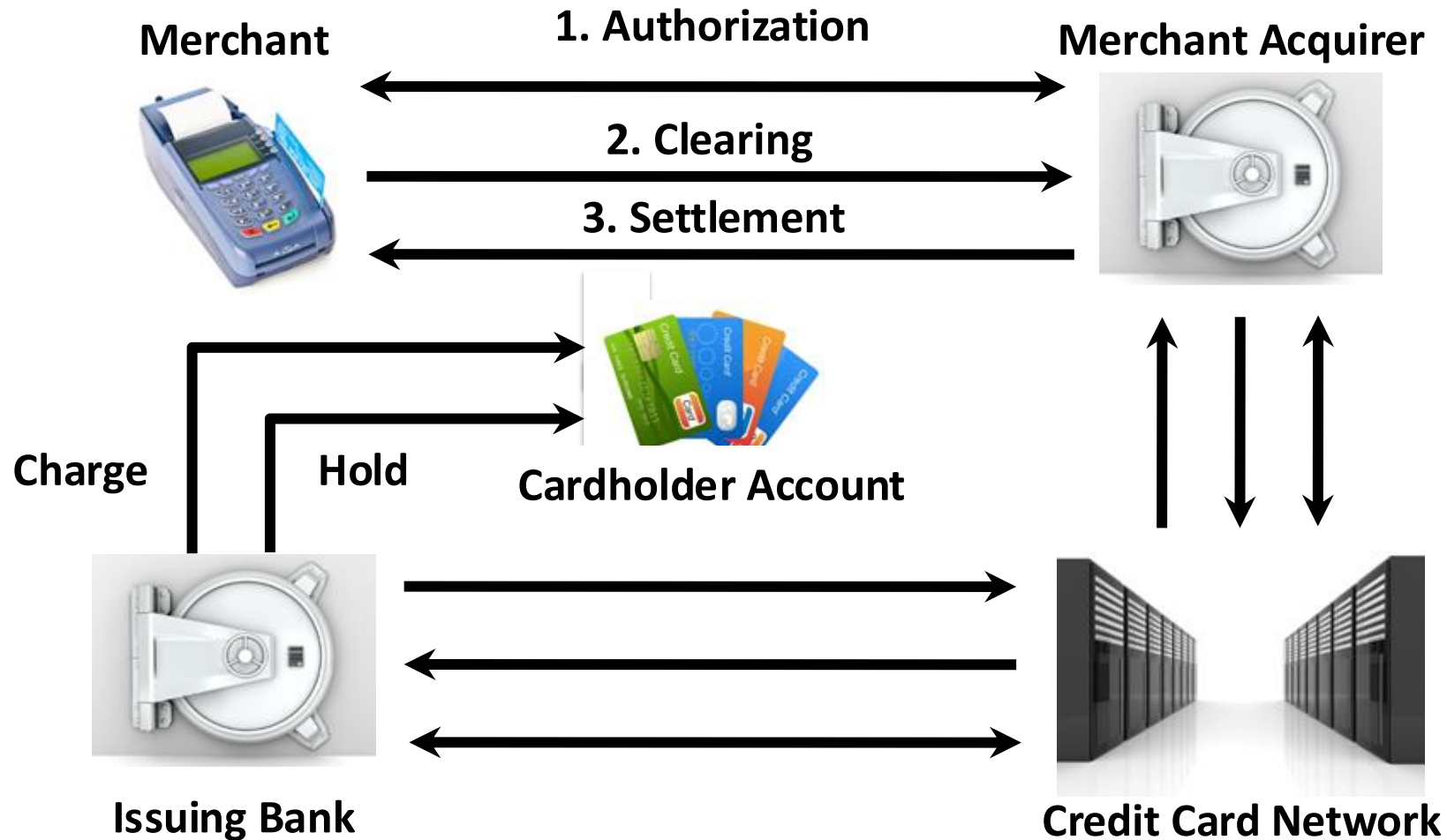
Let's take a break!



Card Payment Solutions

- Card Brands
 - Visa
 - MasterCard
 - Discover
 - American Express
 - China UnionPay
 - Japan JCB
- Where accepted
 - Open-loop
 - Closed-loop
- Participants
 - Cardholder
 - Card issuer
 - Merchant
 - Merchant acquirer
 - Acquiring processor
 - Issuer processor
 - Network operator

Credit Card Processing



Debit and Other Card Varieties

- Signature vs. PIN-based debit
- Purchasing
- T&E
- Fleet
- Ghost/Virtual
- Departmental
- Single-use
- Pre-paid/Stored Value
- Chip/smart (EMV)



Merchant Card Processing Fees

- Components
 - Interchange fees
 - Assessments
 - Processor fees or markups
- Bundled or “interchange-plus”
- Merchant discount
- Smaller merchants/low volumes = higher fees
- Fee & process audit can be fruitful

Payment Card Industry Data Security Standards (PCI DSS)

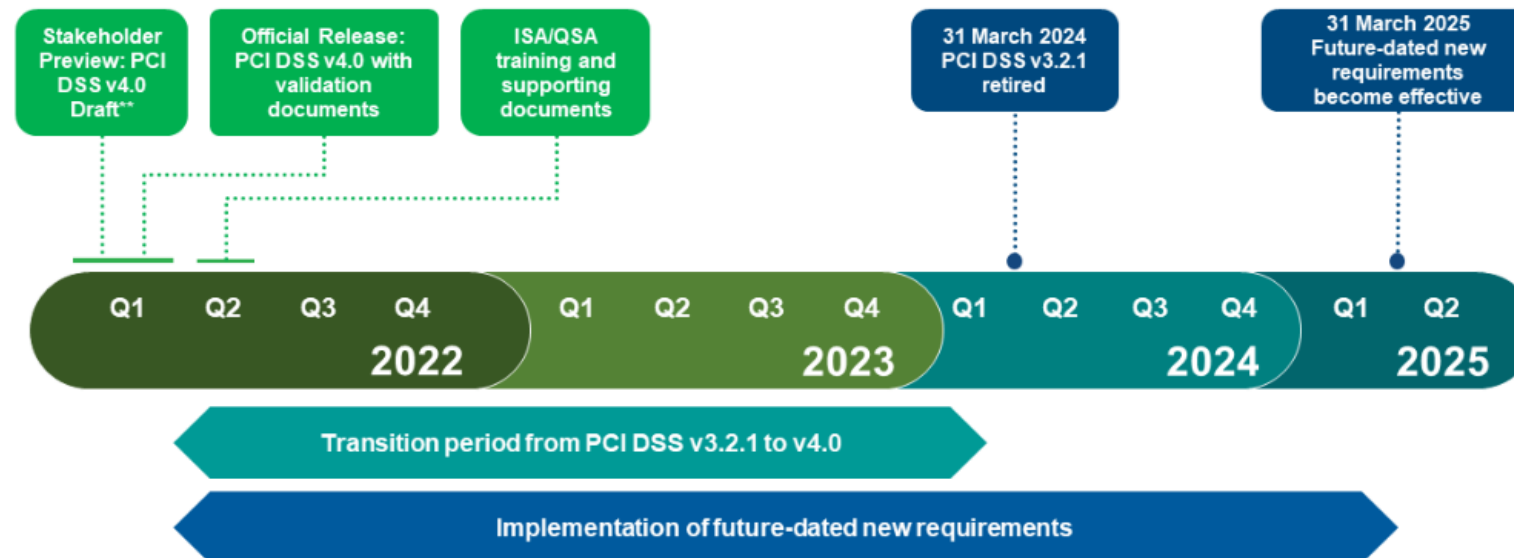
- Overriding Goal: Protection of “Cardholder Data” (CHD)
 - Primary Account Number (PAN)
 - Also addresses track data, security codes (CVV, CVC, etc.), PINs – AKA Sensitive Authentication Data
- PCI applies to anyone who processes credit card payments
 - “Store, process, or transmit” cardholder data
 - Service Providers – “includes companies that control or could impact the security of cardholder data.”
- There are 12 requirements outlined by the PCI Security Standards Council

PCI DSS Version 4.0

PCI DSS Version 4.0 was released in March 2022

- Becomes effective March 31, 2025
- Version 3.2.1 expires on March 31, 2024

PCI DSS v4.0 Implementation Timeline*



* All dates based on current projections and subject to change

** Preview available to Participating Organizations, QSAs, and ASVs

2026 CBMI Treasury Track

Where does PCI DSS Compliance fit in your Institution?

- a. Risk Management
- b. Treasury Management
- c. Information Technology
- d. Internal Audit



Disbursements

Priorities

- Time cash disbursements to maximize discount benefits and avoid early payments
- Minimize the cost of issuing and processing disbursements
- Know when large-dollar disbursements are going to clear and have cleared
- Maintain satisfactory controls

Disbursement Structures

- Standard Disbursement Account
- Controlled Disbursement
- Zero Balance Account
- Imprest Account (petty cash account, other)
- Outsourced Payables
 - Digital Payments (e.g. Venmo, Zelle, etc.)
 - Virtual Credit Card
 - ACH
 - Check

Focus on Controlled Disbursement

- Service providing same-day notification - early and mid-morning, of checks and ACH totals that will clear against the account later the same day
- Utilizes segregated routing number
- Provides timely and accurate clearing information for daily cash position determination
- Facilitates ability to minimize idle balances
- Cash position of University can be optimized

Best Disbursement Controls

Check Payments

- Reconciliation
- Segregation of Duties
- Positive Pay
 - Payee Positive Pay
 - Reverse Positive Pay
- Issue No Checks

Best Disbursement Controls

Automated Clearing House

- Reconciliation
- Segregation of Duties
- ACH Debit Filter
- ACH Positive Pay
- ACH Debit Block

Direct Deposit Benefits

- Eliminates need to write checks
- Eliminates storage of canceled checks
- Eliminates possibility of lost or stolen checks
- Eliminates need for reconciliation of checking account
- Reduces employee time lost due to depositing paycheck on payday
- Provides for timely payment to employees or students who are sick, on vacation, or out of town (study abroad)



Vendor Payments

Purchasing/Procurement Card

- Replacing paper-based Purchase Order
- Credit cards used by universities for the purchase of supplies, inventory, equipment, and service contracts
- Spending limits determined by the university
- Replaces the traditional time-consuming, labor-intensive, paper-based requisition process

Student and One-Time Payments



Athletes—generally prepaid cards with digital wallets so that students can simply use their phones



Research subjects – prepaid, one-time card payments, cash and check

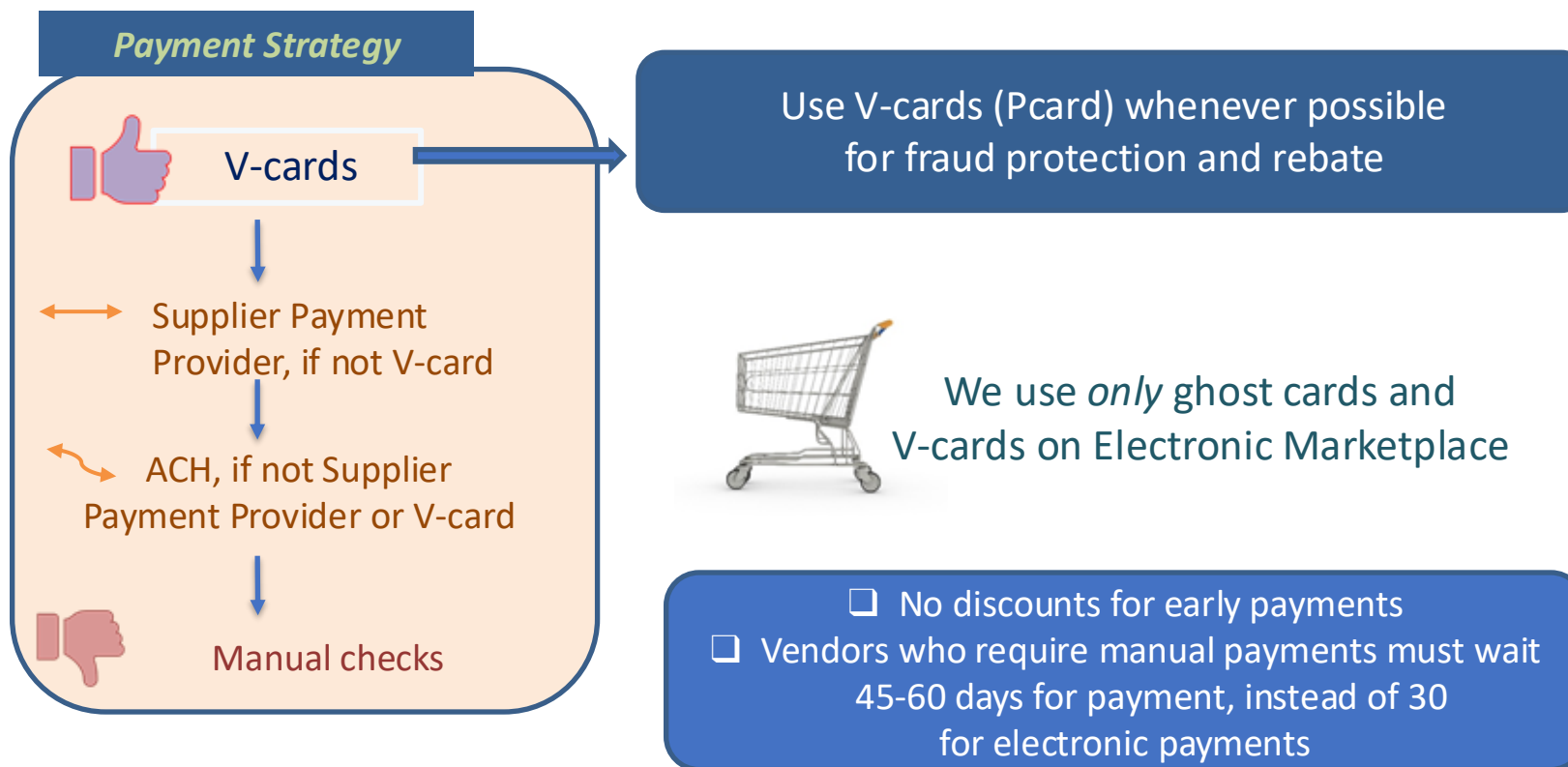


Student Clubs—student clubs generally are not an enterprise operated via the university's financial system



Cashier's/Bursar's Office manages all student financial services, working closely with the Office of Financial Aid

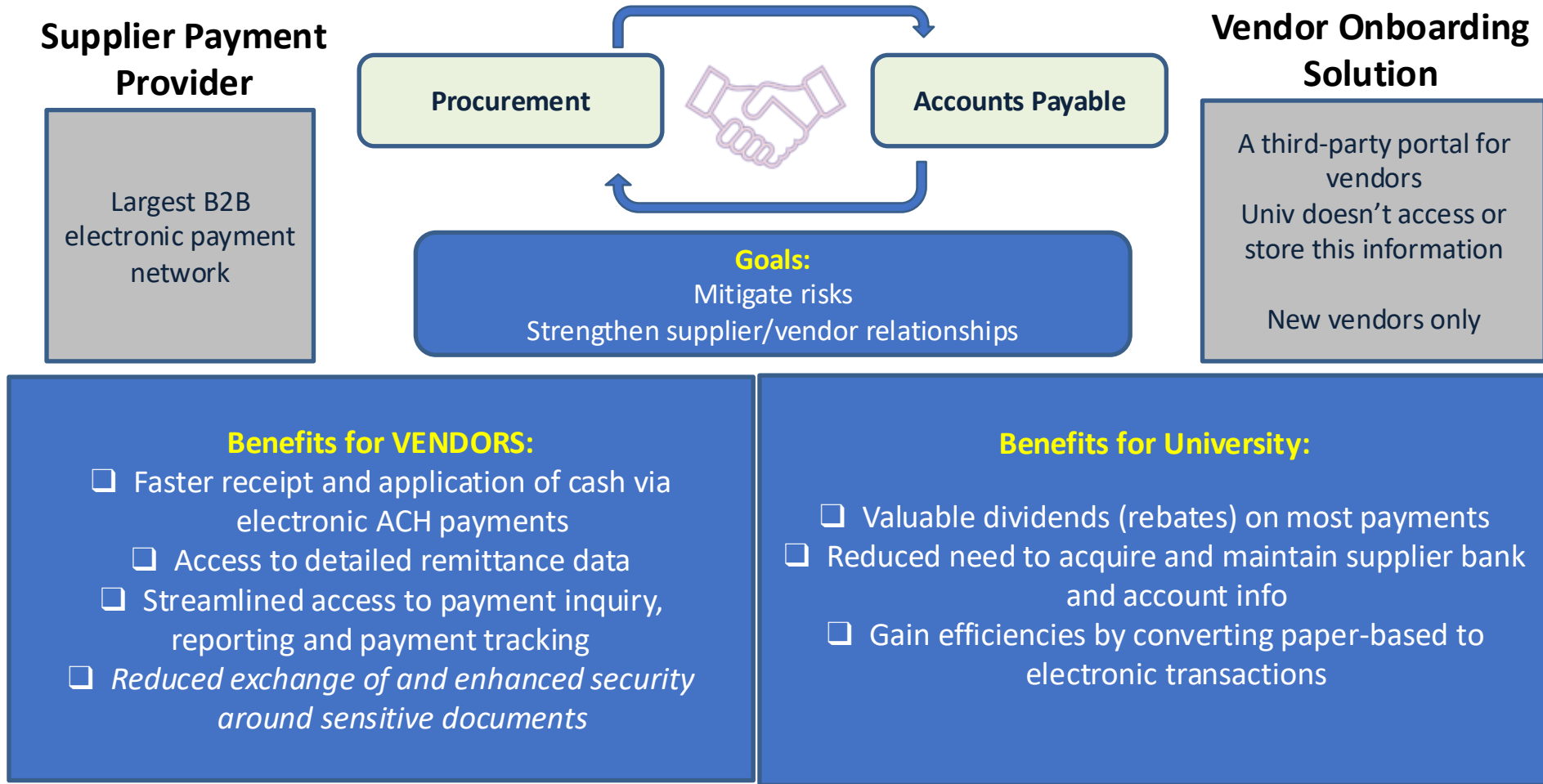
Sample Preferred Payment Strategy



ePayables

- Conversion of paper-based payments to electronic transactions.
 - ACH
 - Virtual Cards (V-cards)
- Match vendors to database of companies that accept or have a propensity to accept credit cards or direct deposit for accounts payable payments.
- Outsource remaining check payments to financial institution.

Sample Electronic Payment System



Digital Payment Networks

Payment	Network Size	Year Established	Receipt of Funds
	All U.S. bank accounts	1974	<i>Same Day ACH:</i> Within a few hours <i>Standard ACH:</i> 1-2 business days
	439 million active accounts	1998	<i>PayPal account:</i> Instant <i>Bank account:</i> 30 minutes for additional fee or standard 1-3 business days
	90 million active accounts	2009	<i>Venmo account:</i> Instant <i>Bank account:</i> 30 minutes for additional fee or standard 1-3 business days
	1,135 financial institutions; 75%+ of U.S. DDAs enabled	2017	Within seconds
	2,300 financial institutions; 80%+ of US check/savings accounts enabled	2017	Within in minutes*
	1,700 financial institutions	2023	Within seconds

*Enrollment required. Payments may arrive in minutes but may take up to three business days.

Is it a problem at YOUR school?

Payment Fraud

2024 Global Financial Crimes Report ~ Nasdaq

In 2023, fraud scams and bank fraud schemes totaled

\$485.6B in projected losses globally.¹

Federal Bureau of Investigations Internet Crime Report

Today's cyber landscape has provided ample opportunities for criminals and adversaries to target U.S. networks, attack our critical infrastructure, hold our money and data for ransom, facilitate large-scale fraud schemes, and threaten our national security.²

New Federal Trade Commission Data Analysis Shows Bank Impersonation is Most Reported Text Scam

FTC data spotlight highlights text scams, which accounted for

\$330 million in reported consumer losses in 2022.³

2023 Payments Fraud and Control Survey Report

Business Email Compromise (BEC) scams are still highly prevalent and are the root cause of payments fraud at a majority of organizations. Seventy-one percent¹ of companies were victims of payments fraud via email in 2022.⁴

¹ Nasdaq Verifin 2024 Global Financial Crime Report, January 2024. ² Federal Bureau of Investigations 2022 Internet Crimes Report. ³ Federal Trade Commission, "New FTC Data Analysis Shows Bank Impersonation is Most-Reported Text Message Scam," June 2023. ⁴ 2023 AFP® Payments Fraud and Control Survey Report, October 2023.

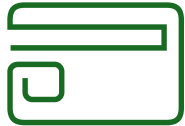
...however, criminals are shifting tactics with the change to digital.

Concerning increases in digital payments fraud



29%

Increase in instances of fraud at companies



10%

Increase in Commercial card fraud



45%

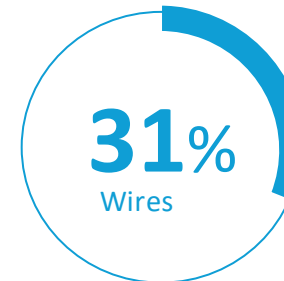
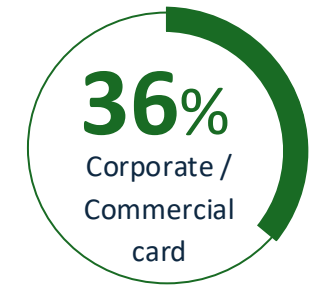
Of wire payments used during Business Email Compromise attempts



6%

Increase in fraud via ACH credits and Virtual Cards

Payment methods subject to fraud by type (Percent of Organizations)



Source: 2023 AFP Payments Fraud and Control Survey

Check Fraud: Safer ways to pay—Positive Pay and fraud protection services

Helping protect you against fraud



Altered and counterfeit checks

Positive Pay:

- Checks are compared with your issue file data
- Discrepancies are reported daily

Payee Name Verification:

- Payee line is digitally interrogated from the check image and compared with your issue file data
- Failed checks are visually inspected
- Non-matching items will be declined



Additional fraud protection measures

- Post No Check prevents all check debits from posting¹
- Reverse Positive Pay reports checks presented for payment on the previous business day; you review for discrepancies and instruct us to pay, return or adjust the dollar amount

63%

of organizations that reported experiencing attempted or actual payments fraud reported that attempts were by check

33%

of organizations used checks for B2B payments in 2022



60%

of survey respondents reported their accounts payable department as most vulnerable to being targeted by BEC fraud

Source: 2023 AFP Payments Fraud and Control Survey

¹Ideal for depository accounts or accounts disbursing electronic payments only

Who is Liable for Check Fraud?

UCC 3-103

- “Ordinary care” – the observance of “reasonable commercial standards” that prevail in the area in which the person is located with respect to business in which the person is engaged.
- Does not require the financial institution to examine each item if failure to examine does not violate the institution’s prescribed procedures and those procedures are commonly followed by other institutions in the area.

Who is Liable for Check Fraud?

UCC 3-405

- “Comparative negligence” – the risk would remain with the company (employer) if the bank exercised “ordinary care” in processing the check.
- In brief, employers are responsible for the integrity of their employees.

Who is Liable for Check Fraud?

UCC 3-406

- “Contributory negligence” – the risk would remain with the company if it fails to safeguard checks from forgery or alteration (by a “reasonable commercial standard”) and that failure to safeguard contributes to the forgery or alteration.
- In brief, the company could be responsible for the loss along with the financial institution.

Obligations Under UCC

- **Issuer** - Examine bank statements with reasonable promptness
- **Payee** – Employers responsible for fraudulent endorsements by employees
- **Depository bank** – Warranty of endorsement, signature authentication, information has not been altered, MICR encoding liability
- **Paying bank** – Return disputed items by the deadline

Commercial Check Fraud Defenses

- Positive pay
- Restrictive endorsements
- Secure check stock
- Utilize ACH whenever possible
- Prompt reconciliation of accounts
- Payroll/purchase cards
- Information verification software
- Deposit only accounts

Email Scam Responses Grow More Sophisticated

Business email compromise targets businesses and individuals responsible for initiating payments.

Survey respondents reported the following common BEC attacks:

40%

of companies suffered a financial loss due to BEC in 2022, a 5% increase from 2021

73%

used spoofed email addresses or websites to trick users into thinking they are interacting with a trusted source

57%

used a domain lookalike to confuse users into believing that they have reached a legitimate site

54%

of legitimate emails that were taken over by a fraudster

How organizations are defending themselves

88% of respondents implemented strong internal controls for payments initiated by email and increased end-user education and training on the threat of BEC.

A key mitigating control is the use of callbacks:

- Verifying payment instructions via a phone call
- Using a known & trusted number from a system of record

Best practices for protecting your organization:

validate account status and ownership information

use Positive Pay to verify the authenticity of checks

perform daily reconciliation of check activity

perform daily reconciliation of ACH debits

segregate accounts

Source: 2023 AFP Payments Fraud and Control Survey

Consider this...



What is your potential business impact of not actively mitigating fraud?



Fraud risk



Risk of non-compliance



Payments to unintended recipients



Loss of funds



Operational efficiency

Are you prepared to solve for these?

Cyber- Risk - Electronic

- Remote PC access – Remote Staff
- Wireless hacking – Phishing and Ransomware
- Keystroke logging/memory programs
- Initiating Wires
- Account Set up or changes

Electronic Fraud Defenses

- Personal firewalls
- Intrusion detection
- E-mail encryption
- Up-to-date anti-virus software
- Convert paper payments to electronic delivery
- ACH debit block
- Two factor authentication

Electronic Fraud Defenses (User)

- Protect your equipment
- Protect your work area
- Protect your password
- Protect your files
- Lock up storage media containing sensitive data
- Back up data regularly
- Report security violations religiously
- TRAINING
 - Simulations
 - Continuous education

Credit Card Fraud Defenses – Corporate/Merchant

- Use of Address Verification Service (AVS) (Beasley)
- PCI/DSS
- “SecureCode”
- Proper acceptance procedure at point of sale
- Visual inspection of card

Strategic Planning to Move Paper Payments to Electronic

- The right thing to do?
- E-payable conversion solutions
- Getting to 100% direct deposit of payroll
- Later issue dates for paper checks
- Re-evaluate in higher rate environments

Account Analysis Billing

A record of bank services including

- Account structures
- Transaction volumes
- Balances maintained
- Charges assessed
- Earnings credit allowances

Earnings Credit

$$EC = CB \times (1 - RR) \times ECR \left(\frac{D}{365} \right)$$

$$= AB \times ECR \left(\frac{D}{365} \right)$$

Where:

EC = Earnings credit

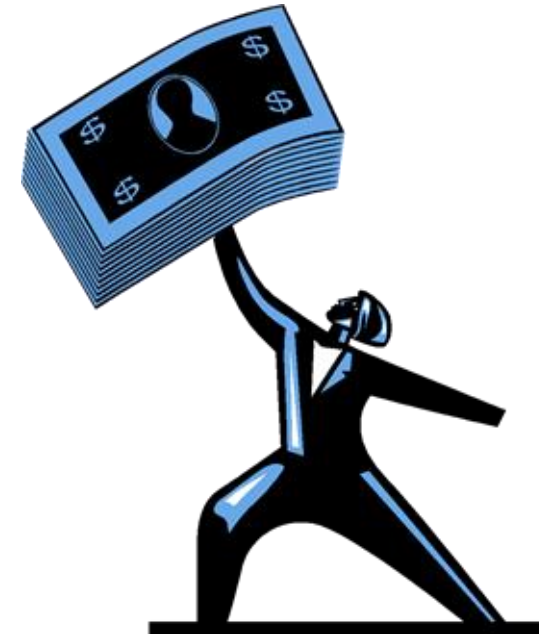
CB = Average collected balances

AB = Average available balances

RR = Reserve requirement

ECR = Earnings credit rate

D = Number of days in the month

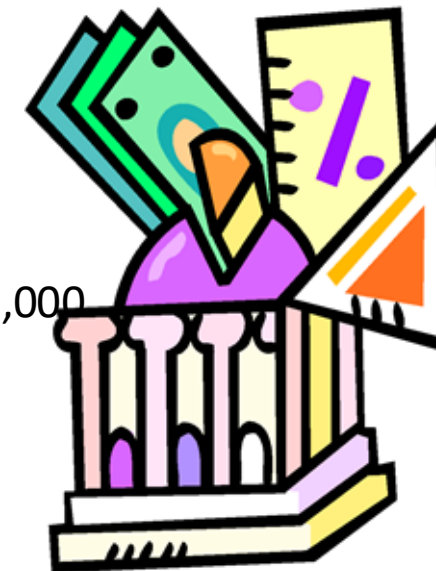


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Earnings Credit

Assume the following scenario:

Average ledger balance	\$250,000
Deposit float	\$ 30,000
Reserve requirement	10%
Earnings credit rate	5%
Service charges for the month	\$ 1,000
Days in month	30



Average Balance Calculations:

Average ledger balance	\$250,000
Less: Deposit float	<u>(\$30,000)</u>
Equals: Average collected balance	\$220,000
Less: Reserve Requirement	<u>(\$22,000)</u>
Equals: Average available balance	\$198,000

$$\begin{aligned}
 EC &= CB \times (1 - RR) \times ECR \left(\frac{D}{365} \right) \\
 &= \$220,000 \times (1 - 0.10) \times 0.05 \left(\frac{30}{365} \right) \\
 &= \$814
 \end{aligned}$$

Sample Analysis Statement

College and University Business Administration Treasury Management

Exhibit #10: Account Analysis Statement

ABC Bank—Corporate Banking Analysis

Global Manufacturing Company

1234 Main Street Anytown, Arkansas

Date: 7/1/2016

ECR: 100%

Relationship Manager J. Sellsmore

Company Contact: M Cash

Days in Month 30

Month Ending 6/30/2016

Balance Summary

Average Ledger Balance	\$658,987.50
Less: Average Float	-55,934.89
Average Collected Balance	\$603,052.61
Less: Reverse Requirement (10%)	-60,305.26
Average Available Balance	\$542,747.35
Less: Balance Required	-6,796,360.83
Net Available Balance	-\$6,253,613.48

Earnings Credit Summary

Available Balance for Earnings Credit	\$542,747.35
Earnings Credit Allowance	\$446.09
Less: Charge for Services	-5,586.05
Net Service Credit	-\$5,139.96
Service Charge Amount	\$5,139.96

Activity	Volume	Unit Price	Fees Required	Balance Required
General Account Service				
Account Maintenance Flat Fee	4	20.00	\$80.00	\$97,333.33
Depository Services				
Credits	94	0.25	23.50	\$28,591.67
Deposited Items	1,745	0.08	139.60	\$169,846.67
Return Items	15	2.00	30.00	\$36,500.00
Debits	1,598	0.10	159.80	\$194,423.33
Stop Payments	5	18.00	90.00	\$109,500.00
Lockbox Services				
Wholesale Lockbox Maintenance Fee	3	105.00	315.00	\$383,250.00
Item Processing Fee	486	0.40	194.40	\$236,520.00
ZBA Controlled Disbursement Services				
ZBA Maintenance	1	40.00	40.00	\$48,666.67
Controlled Disbursement Notification	1	45.00	45.00	\$54,750.00
Funds Transfer Services				
ACH Maintenance	1	55.00	55.00	\$66,916.67
ACH Items	145	0.12	17.40	\$21,170.00
Incoming Wire Transfers	24	7.00	168.00	\$204,400.00
Outgoing Wire Transfers	8	12.00	96.00	\$116,800.00

Treasury Analytics

- Excel Workbooks
- Dashboards
- Treasury Workstations
- Resource Planning Models

Does your Institution use a Treasury Workstation?

- a. Yes
- b. No
- c. I have no idea



Treasury Workstations

Functionality – Modules

- **Cash & Liquidity Visibility**
Consolidated view of cash across campuses, auxiliaries, foundations, banks, and currencies
- **Forecasting & Liquidity Planning**
Short- and long-term forecasts incorporating tuition, grants, payroll, debt service, and auxiliaries
- **Payments & Fraud Controls**
Centralized ACH, wire, RTP/FedNow, and international payments with approvals, audit trails, and fraud safeguards
- **Bank Account Management**
Central inventory of bank accounts, signers, and documentation; Bank fee analysis
- **Debt, Investments & Capital Oversight**
Tracking and reporting for bonds, loans, commercial paper, and investments supporting capital and liquidity decisions
- **Intercompany & In-House Banking**
Internal funding, netting, and settlements across campus units to improve liquidity efficiency
- **Accounting, Reporting & Controls**
ERP integration, treasury subledger, standardized reporting, strong security, and governance controls

Treasury Workstations

Cash Management – Daily Liquidity

CASH MGMT - Cash Management Worksheet

Worksheet ID/Description:		Operator:		Jane Doe	
		Date:		4/16/2026	
		Date Type:		Value Date	
		Show Amounts:		With Decimals	
Display Currency:		Local Account Currency			
User Code by Account		Bank Concentration - USO			
4/16/2026 (Th)		Est			
Opening Available Balance		26,103,468.98			
Opening Available (0040)					
ACH Deposits		5,851,866.41			
Check Deposits (Zero Day)					
Lockbox Deposits (Zero Day)		352.39			
Cash Deposits					
Other Credits, Returns &		429,522.43			
Lqdy & Invmt Activity - Incoming		764.38			
Incoming Wires and Book		15,480,588.54			
SAS Incoming ACH Payments					
Total Miscellaneous					
Total Cash In		21,763,094.15			
Total Cash Available		47,866,563.13			
Outgoing ACH Transfers		15,849,266.97			
Payroll ACH Biweekly and					
CDA Checks Paid		739,130.02			
SAS Outgoing ACH Direct					
Outgoing Wire Transfers		154,254.84			
Outgoing Vendor Wires					
Lqdy & Invmt Activity - Outgoing		0.00			
Dep Rtrns & Adjs - Outgoing					
Total Debits					
Total Cash Out		16,742,651.83			
Daily Cash Flow		5,020,442.32			
Ending Cash Balance		31,123,911.30			
Closing Available (0045)					
Current Available (0060)		31,123,911.30			
Target Balance		25,000,000.00			
Target Balance Adjustment		0.00			
Recommended Transfer		6,123,911.30			
FI Deal Types - Credits		764.38			
FI Deal Types - Debits					

Page 1

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This is sample data and not related to the University of Kentucky.



User Code by Account	Bank Concentration - USO
4/16/2026 (Th)	Est
Opening Available Balance	26,103,468.98
Opening Available (0040)	
ACH Deposits	5,851,866.41
Check Deposits (Zero Day)	
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Target Balance Adjustment	0.00
Recommended Transfer	6,123,911.30
FI Deal Types - Credits	764.38
FI Deal Types - Debits	

Pre-stage any known incoming or outgoing wires not yet received or processed

Due to the excess balance over the Target, this is the recommended amount to invest

This is sample data and not related to the University of Kentucky.

Treasury Workstations

Providers and Considerations

- Number of Financial Providers
- Domestic and International Programs
- Internal Bank Transactions (Loans and Assets)
- External Providers:
 - Kyriba
 - GTreasury
 - FIS
 - Rival
 - Trovata
 - General Ledger Add-ons (Workday)
 - Bank Products (BofA/JPM/Wells/PNC)

Resource Planning Tools

Financial Planning & Analysis

- Institutions utilize internal and external systems for planning/forecasting
 - Annual Budget
 - Financial Statements - Balance Sheet, P&L, Cash Flows
 - Credit rating & key financial/operating ratios
- Typical planning time periods
 - Annual Budget
 - Long-term forecasting - 3/5/10 years
 - Rolling forecasts
- External providers
 - Syntellis and other SaaS (Smartsheet)
 - ERP Tools

How many Financial Institutions does your Institution utilize?

- a. One
- b. Less than five
- c. Less than 10
- d. An unimaginable number
- e. I have no idea

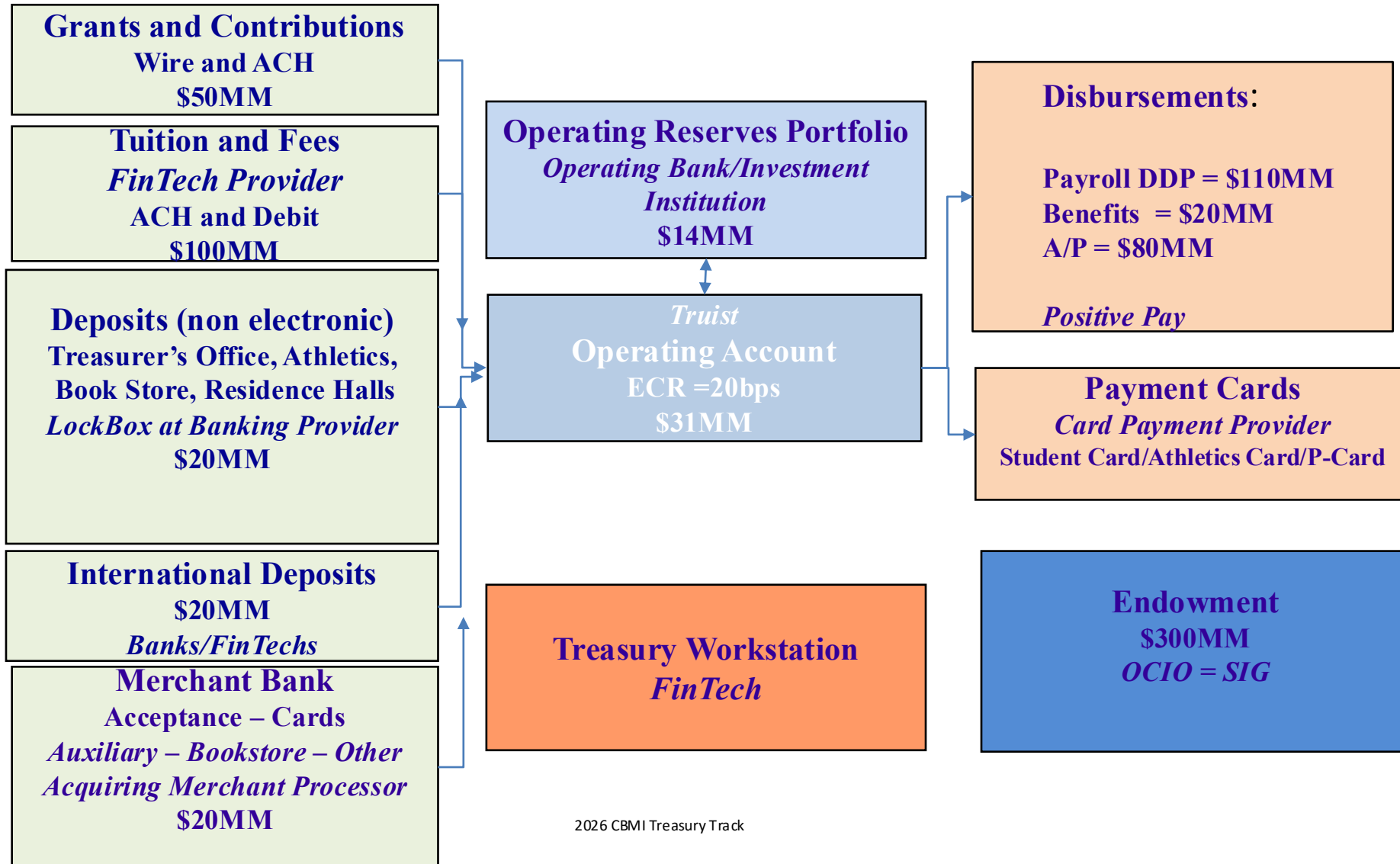


How many Financial Institutions is Optimal?

- Single financial institution model
 - Easier to manage
 - Ability to negotiate lower fees with bundling of services
- Multiple financial institution model
 - Best of Breed providers
 - Political considerations
 - Business continuity and redundancy
 - Maximize partnership investments (signing bonuses)

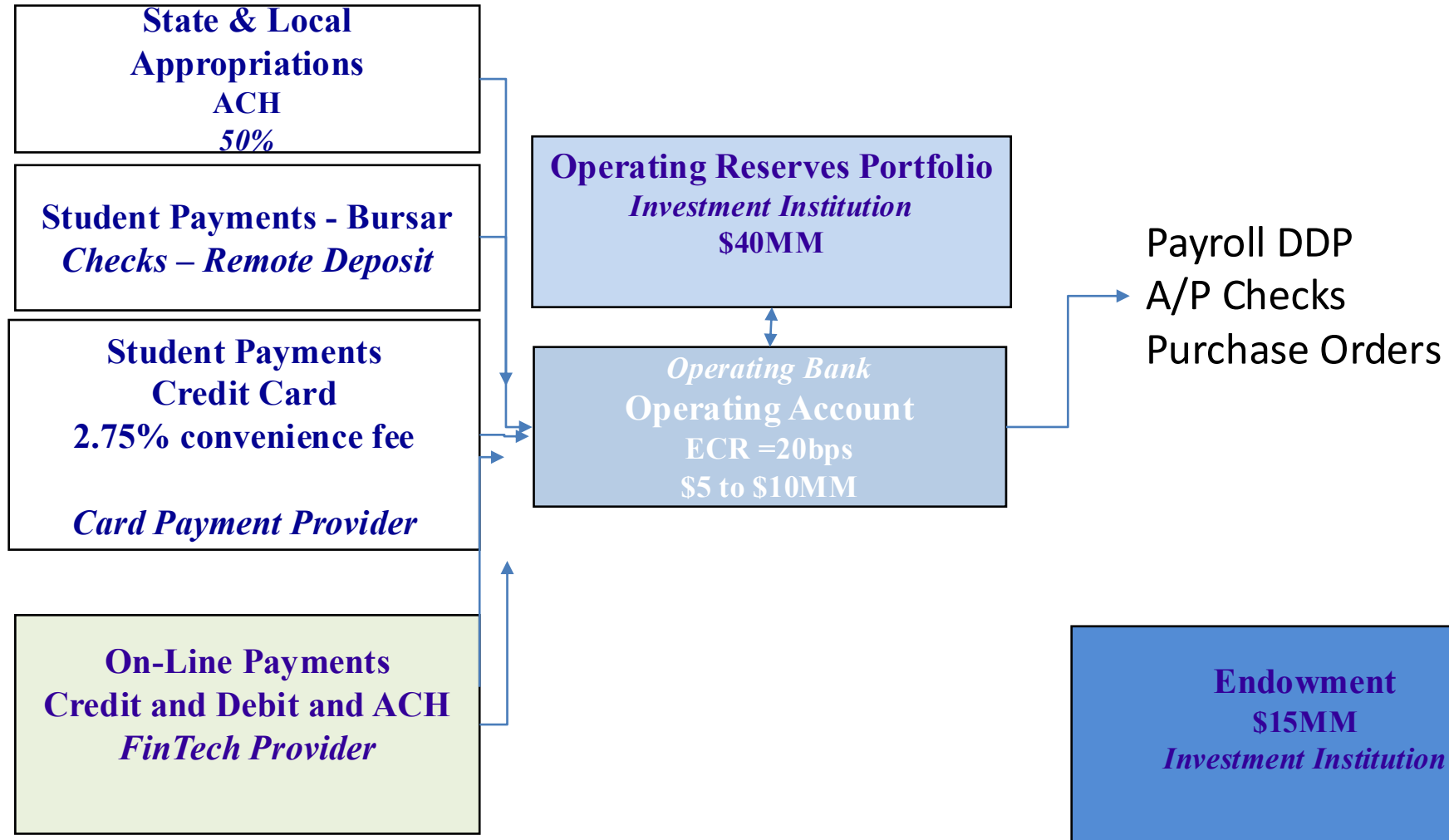
Large Private University

Banking and Investments -2022



Community College

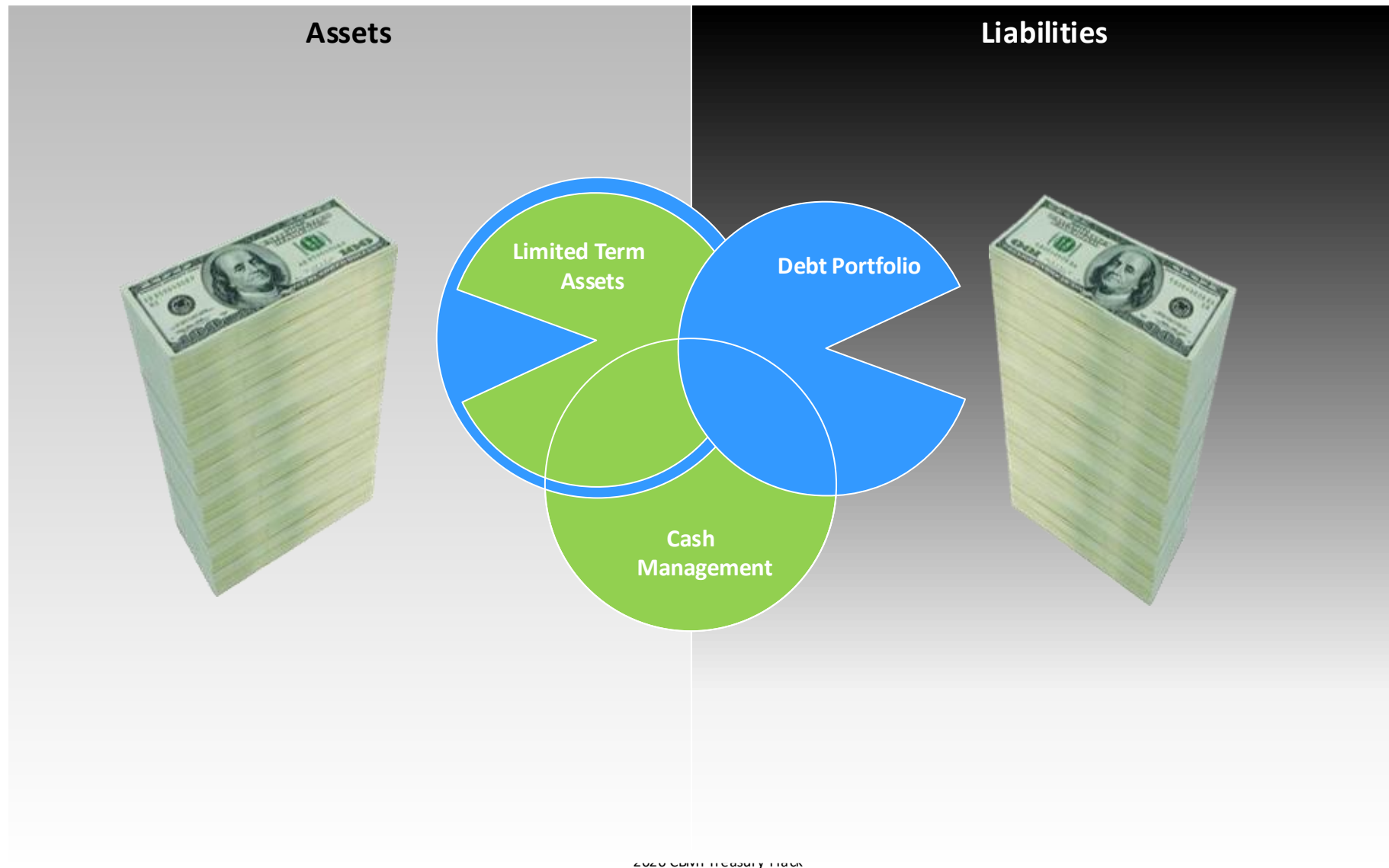
Banking and Investments -2022



Innovation in Financial Services

- 1950s Credit Cards
- 1960s ATMs
- 1970s Electronic trading – Exchanges
- 1990s eCommerce business models
- 2000s Mobile Wallets – Payment Apps - Online Lending Apps

Building Blocks of the Internal Bank



Does your Institution have an “Internal Bank”?

- a. Yes
- b. No

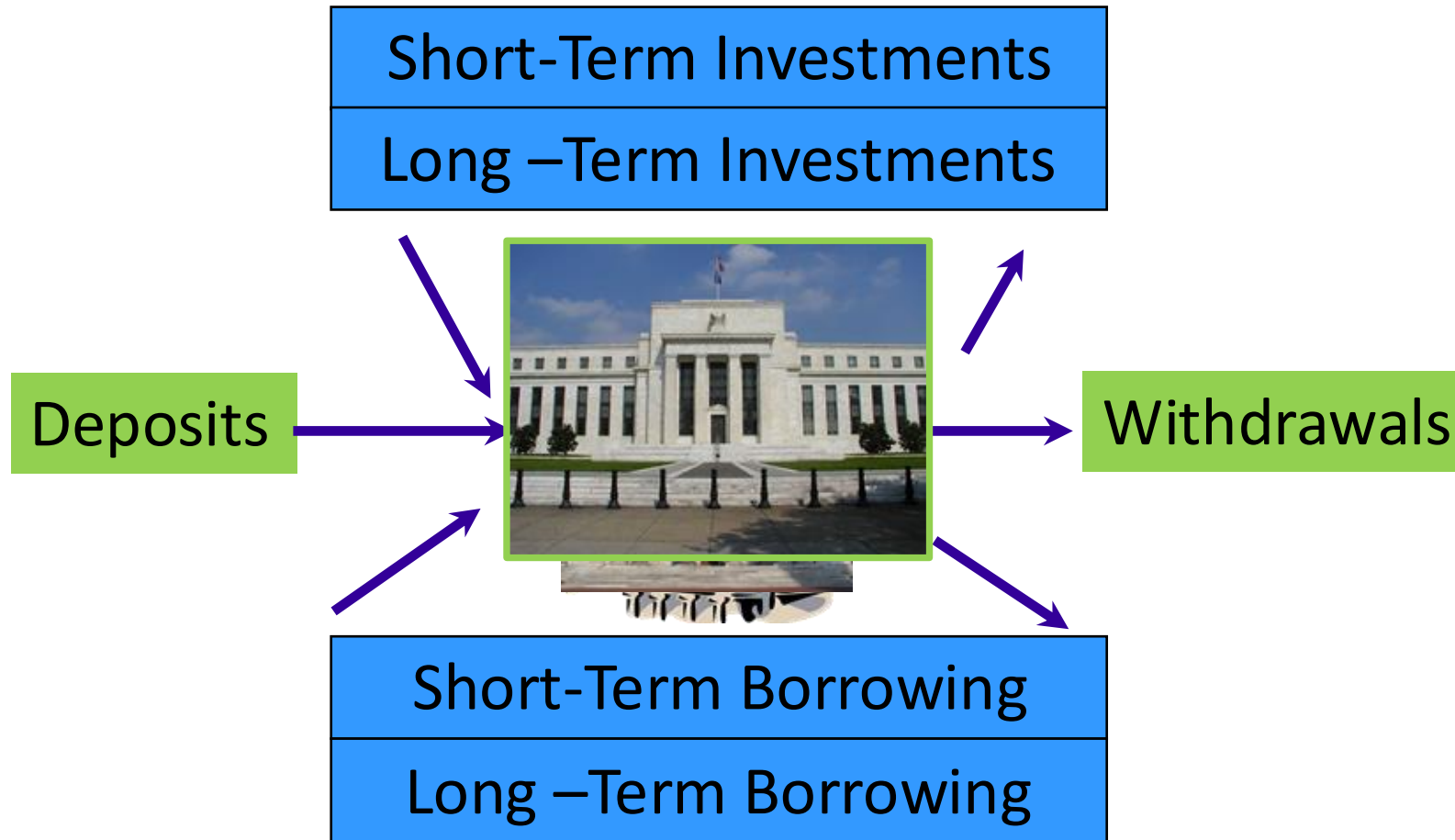


Asset Liability Management

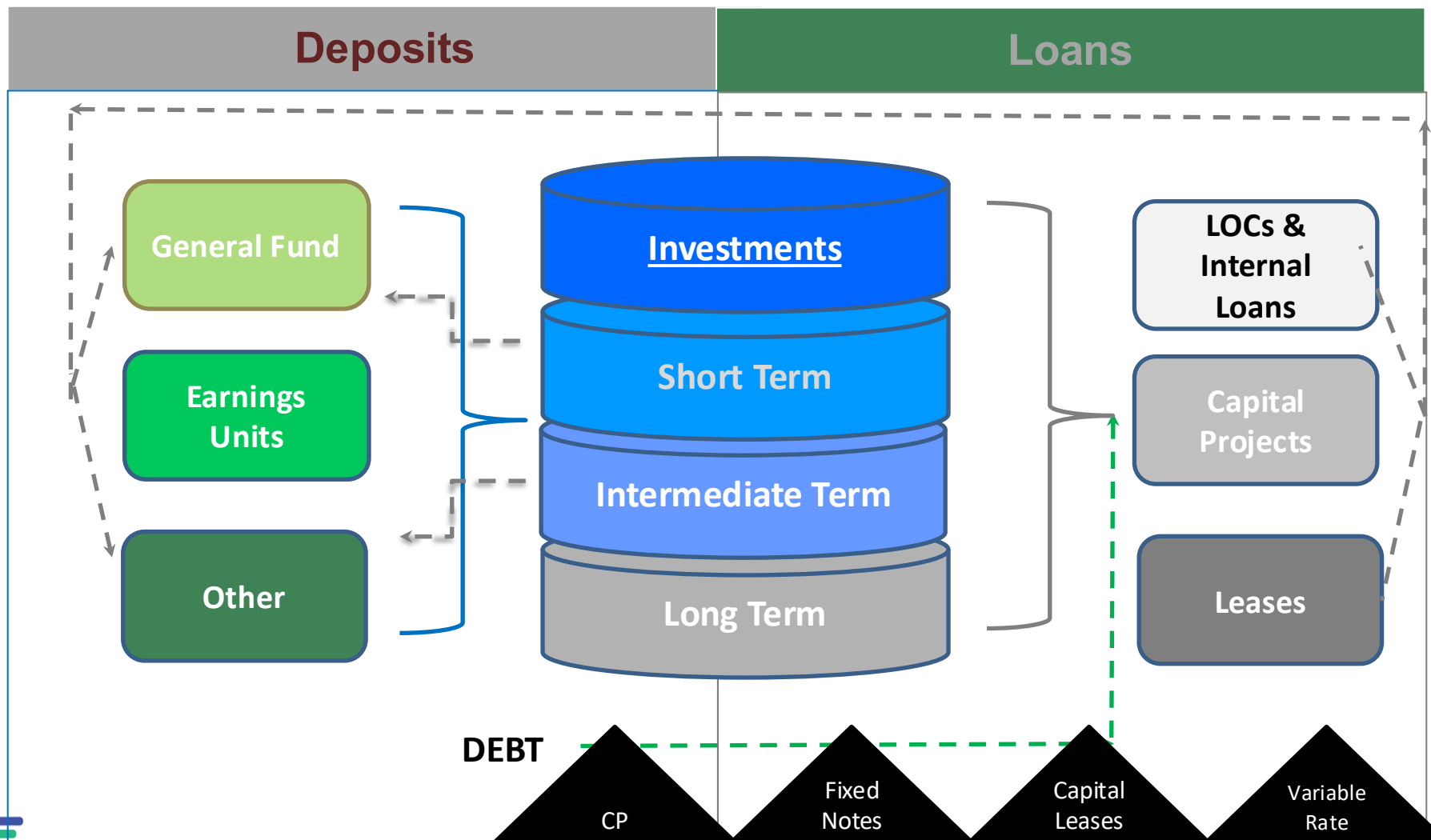
Link between how assets are borrowed and invested:

	<u>Assets</u>	<u>Liabilities</u>
• Short Term	Money Market Funds Repos, t-bills	Commercial Paper VRDB's
• Medium Term	MTN Intermediate Fixed Income	Leases Serial Bonds
• Long Term	Endowment	Serial Bonds Term Bonds

The School as a “Bank”



Internal Bank Funds – Sources and Uses



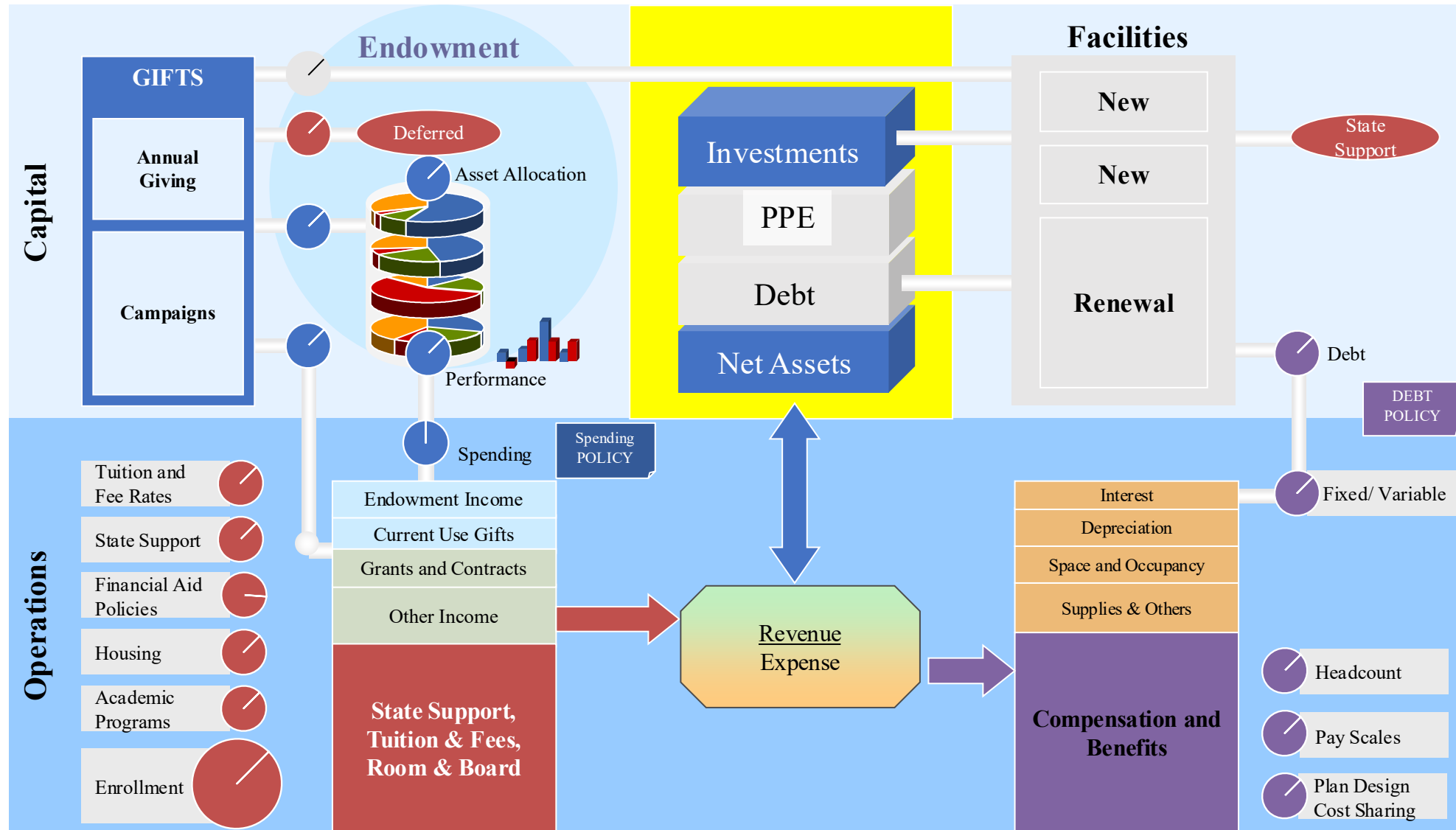
Goals of an Internal Bank

- Reduce levels of excess cash maintained at the unit level while maintaining liquidity for operating needs
- Increase the amount of cash available for short-term investment
- Establish consistent loan terms to all units through the pooling and blending of debt
- Generate higher levels of unrestricted resources
- Smooth the effects of capital markets on university operations.

Questions for Implementing an Internal Bank

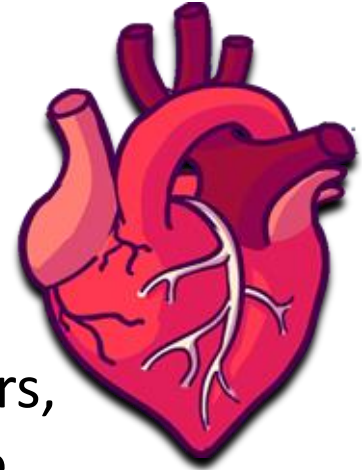
- How do you determine the size of initial capitalization of the bank?
- Do you issue bonds to capitalize the bank?
- How will the rating agencies react?
- Do you have a limit on how much you lend out annually?
- Can loans be for operating activities or just capital projects?
- Do you keep a certain amount reserved?
- If you already had outstanding internal loans, did you incorporate these into the internal bank or keep them separate?
- Are there different approval levels based on the size of the loan?
- Who has final approval? Treasurer, CFO, President, Board?

Financial Resources



Summary: The Financial Lifeblood of Higher Education

Treasury Operations is the “lifeblood” of a college or university because it ensures cash is available, protected, and flowing, allowing the institution to operate daily, manage risk, and deliver on its mission.



- **Keeps the institution running** by ensuring payroll, vendors, debt service, refunds, and operations are funded on time
- **Safeguards liquidity and cash flow** so funds are in the right place, at the right time
- **Protects the university** through strong internal controls, fraud prevention, payment security, and compliance
- **Connects strategy to execution** by translating budgets and plans into actual cash movement throughout the campus



Current Challenges/Regulatory Issues

- Remote work/Staffing
- Cyber Risk
 - Ransomware
 - Phishing attacks
 - Business Email Compromise (BEC)
 - Card Testing attacks
- Innovation/ FinTech
 - ACH Rule Changes
 - Payments – Digital, P2PE, 3rd party portals, Tokenization
 - Blockchain
 - Cryptocurrencies
 - Artificial Intelligence
- DEI/Anti-DEI Initiatives
- Athletics
 - NIL
 - "Urgent National Action to Save College Sports" Executive Order
- Regulatory Issues
 - Big Beautiful Bill impact
 - Cuts to Research Funding (NIH & NSF)
 - Compact for Academic Excellence in Higher Education
 - DOE Foreign Gift & Contract Reporting (Section 117)
 - Potential dissolution of the DOE
 - State laws/regulations
 - Bills regarding late payments
 - Cash Acceptance
 - State Governance tightening and Ideological Oversight
 - State Appropriations Cuts
 - Tenure Reform
 - Elimination of the penny

Where do you get information/education on Treasury Management?

- a. The Treasury Institute for Higher Education
- b. NACUBO
- c. AFP
- d. Popular Mechanics
- e. Other



Resources

The Treasury Institute for Higher Education

www.treasuryinstitute.org

The Payments Academy

www.thepmtsacademy.org

National Association of College and University Business Officers

www.nacubo.org

CUBA Treasury Management Chapter

Association for Financial Professionals

www.AFPonline.org

National Automated Clearing House Association

www.nacha.org



Thank you!