Bank Frauds – Cyber and Non Cyber

By

CA. Nitant Trilokekar

Pointing & Hunting
FRAUDS

2018

# Banks under prompt correction list of RBI

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F R A U D S

1. IDBI Bank,

2. Indian Overseas Bank,

3. Bank of Maharashtra,

4. United Bank Of India,

5. Dena Bank,

6. Corporation Bank,

7. UCO Bank,

8. Central Bank of India,

9. Oriental Bank of Commerce

10. Bank of India.

Banks are assessed on three grounds– asset quality, profitability and capital ratios.

Capital Adequacy Ratio goes down to less than 9% and non-performing assets go up to more than 10%.
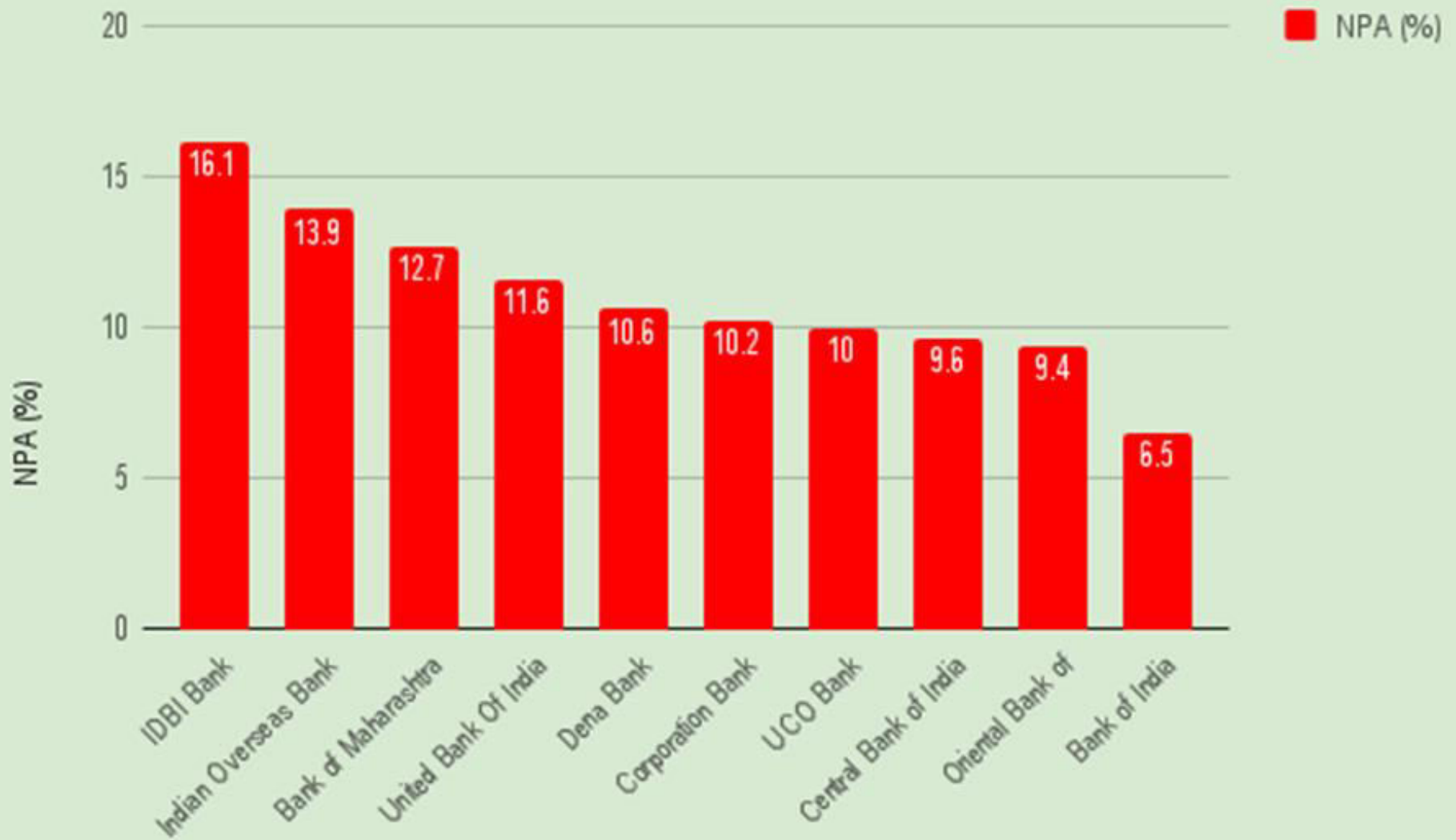
Why is NPA Discussion part of this seminar?

Banks lose Rs 1.6 crore every hour to cheating, forgery

BENGALURU: Every hour, Indian banks lose Rs 1.6 crore to just "cheating and forgery", one of the oldest methods of frauds which accounts for a little more than 60 per cent of all money lost by banks.

Experts say this points to a major vulnerability in the system resulting from lack of training, security frameworks and overall hygiene.

Such fraud basically involves obtaining loans using forged documents, or cheating banks by making false claims. Of the Rs 42,226 crore lost to 'cheating and forgery', 89 per cent (Rs 37,583 crore) was lost by public sector banks (PSBs), while private banks lost Rs 4,683 crore. The State Bank of India lost the most — Rs 5,743 crore — accounting for 15 per cent of money lost by PSBs.

RBI Classification of Frauds

DBS.CO.CFMC.BC.No.1/23.04.001/2016-17

In order to have uniformity in reporting, frauds have been classified as under, based mainly on the provisions of the Indian Penal Code:

a. Misappropriation and criminal
b. l breach of trust.
c. Fraudulent encashment through forged instruments, manipulation of books of account or through fictitious accounts and conversion of property.
d. Unauthorised credit facilities extended for reward or for illegal gratification.
e. Cash shortages.
f. Cheating and forgery.
g. Fraudulent transactions involving foreign exchange
h. Any other type of fraud not coming under the specific heads as above.

As regards cases under d) and f) above cash shortages resulting from negligence and fraudulent forex transactions involving irregularities / violation of regulations have also to be reported as fraud if the intention to cheat/defraud is suspected or proved. Notwithstanding the above, the following cases shall be treated as fraud and reported accordingly:

a. cases of cash shortage more than Rs. 10,000/-, (including at ATMs) and
b. cases of cash shortage more than Rs. 5,000/- if detected by management / auditor/ inspecting officer and not reported on the day of occurrence by the persons handling cash

Before that, lets see the COMMON STRUCTURE OF FRAUD

Structure of Fraud©

- The cycle of fraud has three steps.
- Each complete cycle of fraud addicts the perpetuator to come back for higher and higher stakes.
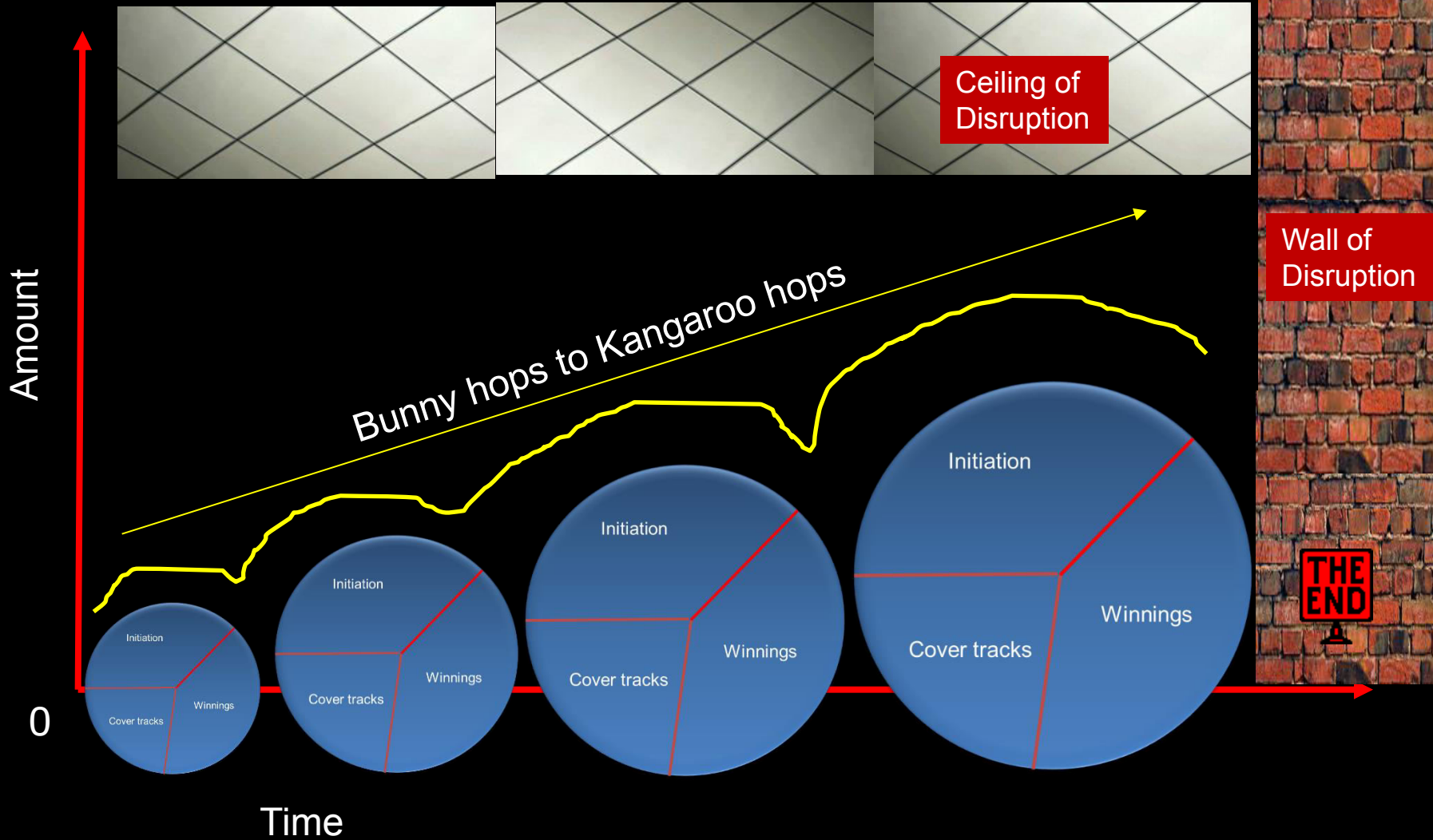- Perpetuator's winning streak is always disrupted.

The cycle of a fraud©

- Initiation/Loophole discovery
- Winnings
- Cover tracks

Perpetual motion trigger
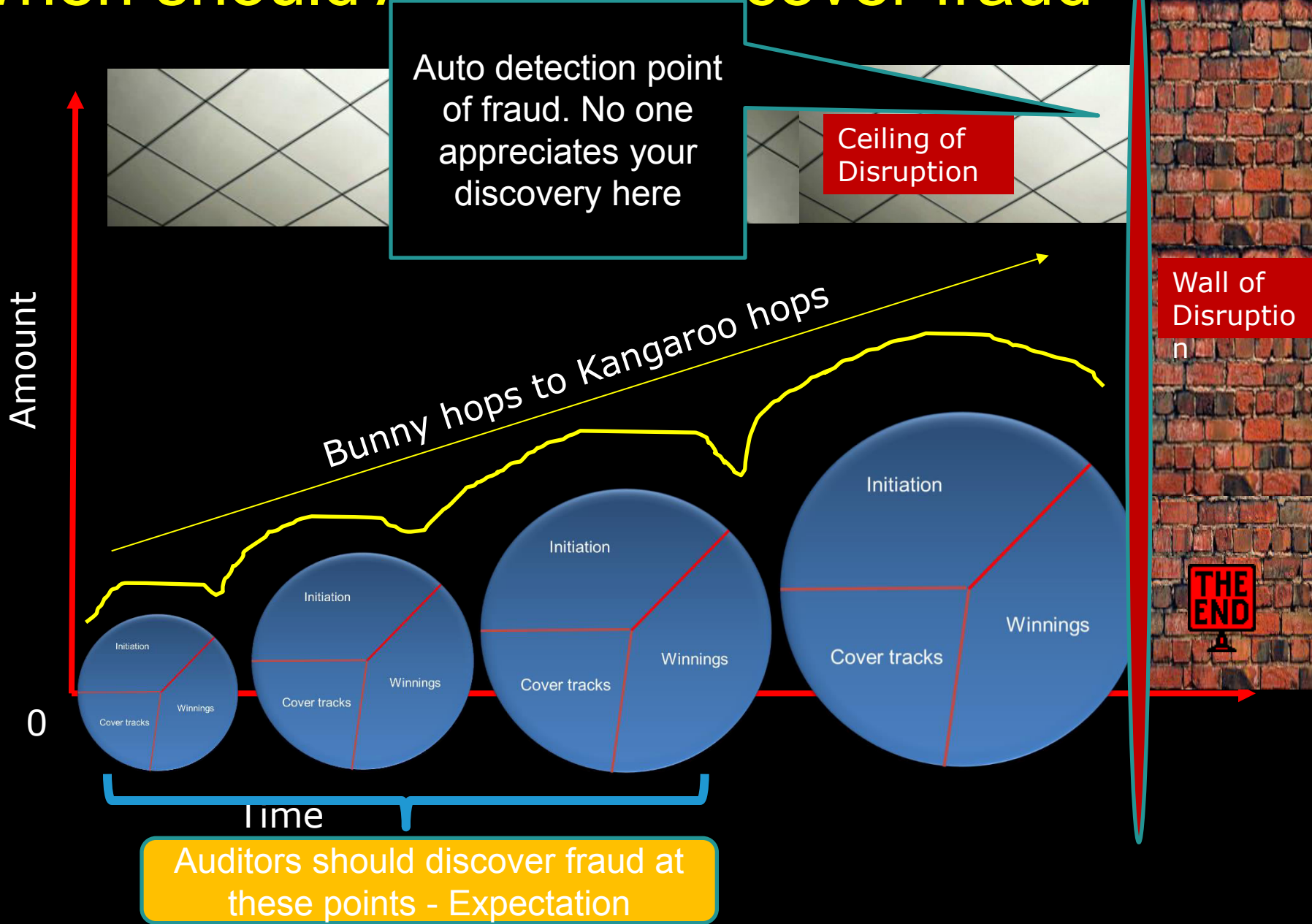
Greed
Cover
Addiction

Life cycle of a fraud©

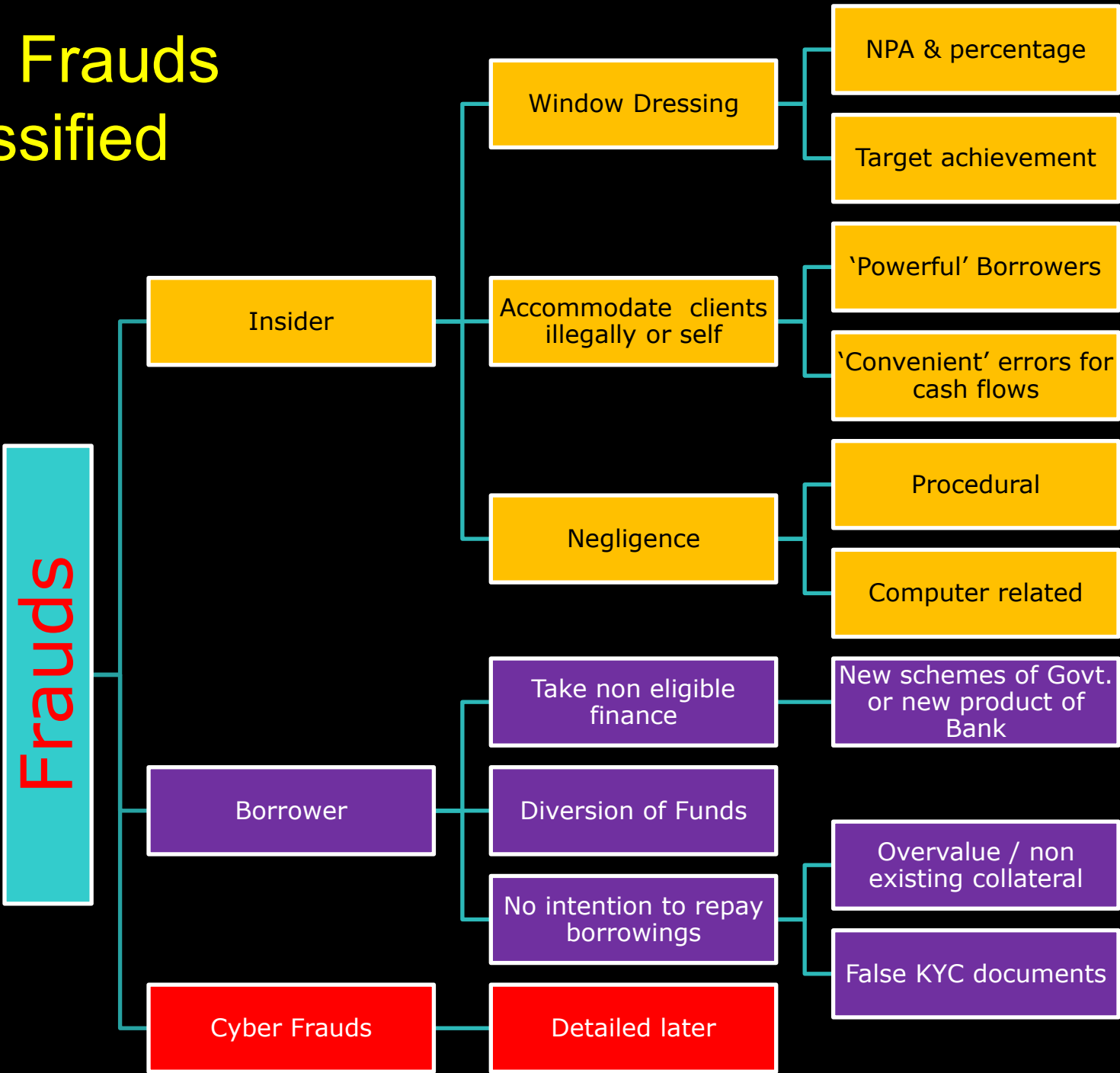# Mathematical / statistical aspect of the Fraud Cycle

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- Diameter of the cycle grows in geometric proportion
- Number of cycles is limited by wall or ceiling of disruption

Bank Frauds classified

Frauds

- **Insider**
  - **Window Dressing**
    - NPA & percentage
    - Target achievement
  - **Accommodate clients illegally or self**
    - 'Powerful' Borrowers
    - 'Convenient' errors for cash flows
  - **Negligence**
    - Procedural
    - Computer related
- **Borrower**
  - **Take non eligible finance**
    - New schemes of Govt. or new product of Bank
  - **Diversion of Funds**
  - **No intention to repay borrowings**
    - Overvalue / non existing collateral
    - False KYC documents
- **Cyber Frauds**
  - Detailed later
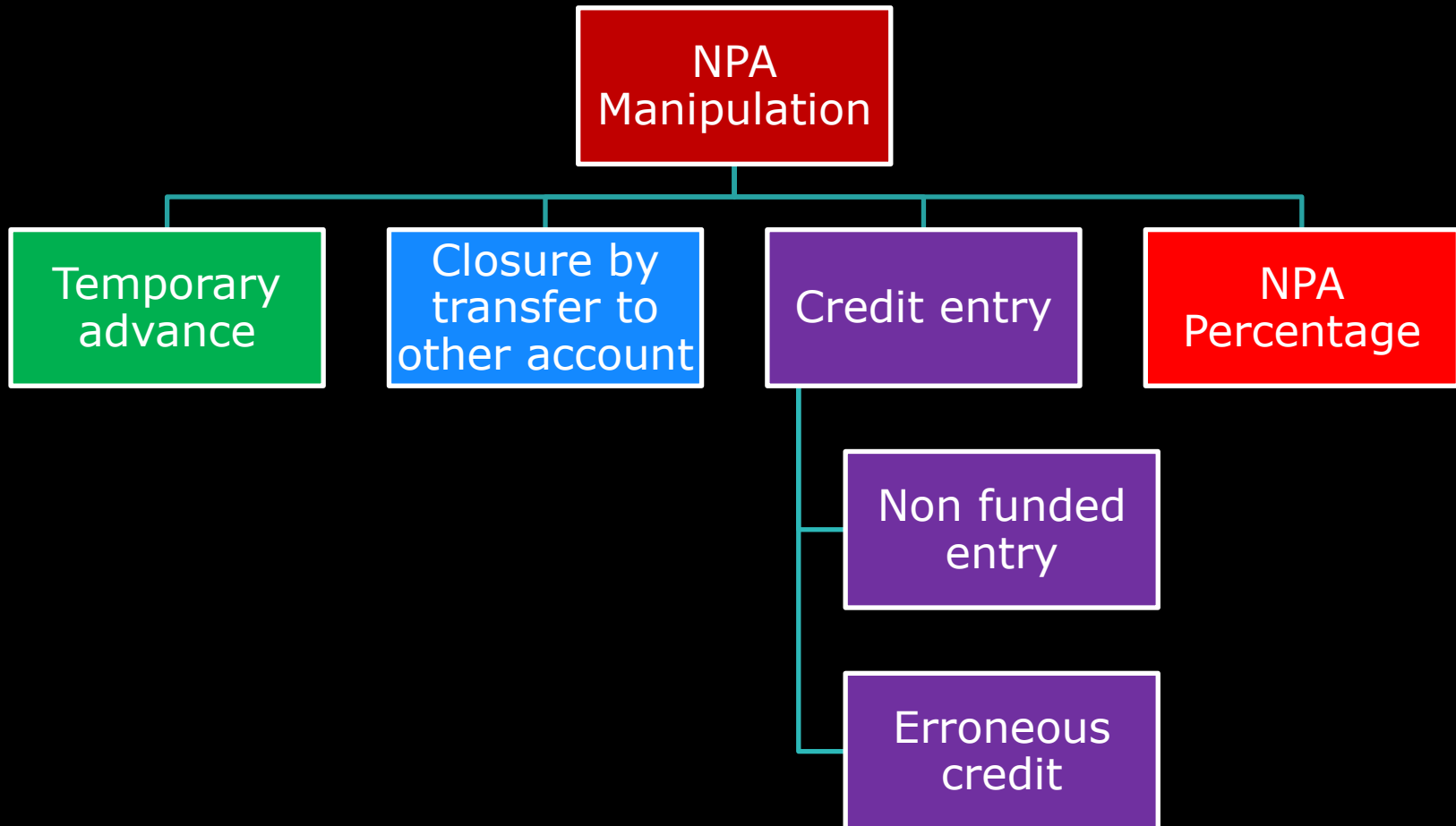
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Window Dressing

- Perpetuator: Internal
- Objective: Rating of Branch or Region
- Reality: NPA Status is just postponed
- Category: Manipulated through

     Computer

Window Dressing: Manipulating NPA Software

- NPA Software is tested and not subject to manipulation at branch level.
- Transaction level manipulation is only alternative.

```
                    NPA
                Manipulation
        ┌───────────┬──────────────┬───────────────┐
   Temporary    Closure by      Credit entry      NPA
   advance      transfer to                     Percentage
                other account        │
                                     ├── Non funded
                                     │     entry
                                     │
                                     └── Erroneous
                                           credit
```

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- Usually for Working Capital Advances exceeding limit nearly upto 90 days.

- Temporary advance period to cross year end.

- Repeated Temporary advance (Limit?)

- Seasonal Advance Abused/misunderstood

- Advance to Associate units to fund the loans

- Manager's discretion of 10% above S.L.

Transfer to New Account

- Dual Objective Achieved

  - New loans of higher amounts achieve target

  - Old loans are closed without NPA Increase

- Case discussed

Suggested measures to spot the Red Flags

- Ratio analysis

- New borrowal accounts have to be analysed.

- Check all – don't forget Bills purchased/discounted, LC issued, Letter of Understanding etc.

- New accounts opened by transfer from old account

NPA Manipulation
Bury deep in software the "error"

To me, mathematics, computer science, and the arts are insanely related. They're all creative expressions.

Sebastian Thrun

An innovator, entrepreneur educator, and computer scientist from Germany. He is CEO of the Kitty Hawk Corporation, chairman and co-founder of Udacity.

Migration audit now ignored

- What is Migration Audit

- Manual to Computerisation migration audit was done.

- Old application to new application is often ignored and restricted to Trial Balance.

- Sometimes the data does not have a trial balance.

- Migration between two existing application now being LINKED is never done.

Existing two systems linked

- User is a large public sector Bank.

- NPA provisions are done at H.O.

- For 5 years the Bank had application for provision calculation manually

- Sub-standard level was entered manually.

- 3 ½ years ago they linked it to the core.

- Substandard level is now auto determined after extensive testing over a year.

- Substandard levels are accurate after link.

- What can be the error?

Golden Rule of a
GOOD Systems Design

Design not for the majority of situations but 110%.

All existing exceptional situations must be considered as well as forecasted.

No-one can do this.

That is why we have the term TEETHING PROBLEMS

IRCTCs e-Ticketing Service
Electronic Reservation Slip

Lead Partner of Delhi 2010
Commonwealth Games

* This ticket will only be valid along with an ID proof in original. If found travelling without ID Proof,Passenger will be treated as without ticket and charged as per extant Railway rules.

Transaction ID: 0259356058	PNR No: 2412133992	Class: SL
Train No. & Name: 9020/DEHRADUN EXP	Date of Journey: 07-Oct-2010	Distance: 1366 KM
Date of Booking: 05-Oct-2010 09:10:14 AM	Date of Boarding: 07-Oct-2010	Quota: Tatkal
From: H NIZAMUDDIN(NZM)	To: BANDRA TERMINUS(BDTS)	Total Fare: Rs 473.00
Boarding: H NIZAMUDDIN(NZM)	Resv Upto: BANDRA TERMINUS(BDTS)	Adult: 1 Child: 0
Scheduled Departure: 21:55*		

* Departure time printed on the ERS is liable to change. New time table from 01-Jul-2010.

SNo.	Name	Age	Sex	Concession Code	Booking Status/Current Status	Coach No/Seat No/Berth
1.	Bharat Tripathi	17	Male		CONFIRM	S7/ 0036/ LB

* IRCTC Service Charge: Rs 10.00
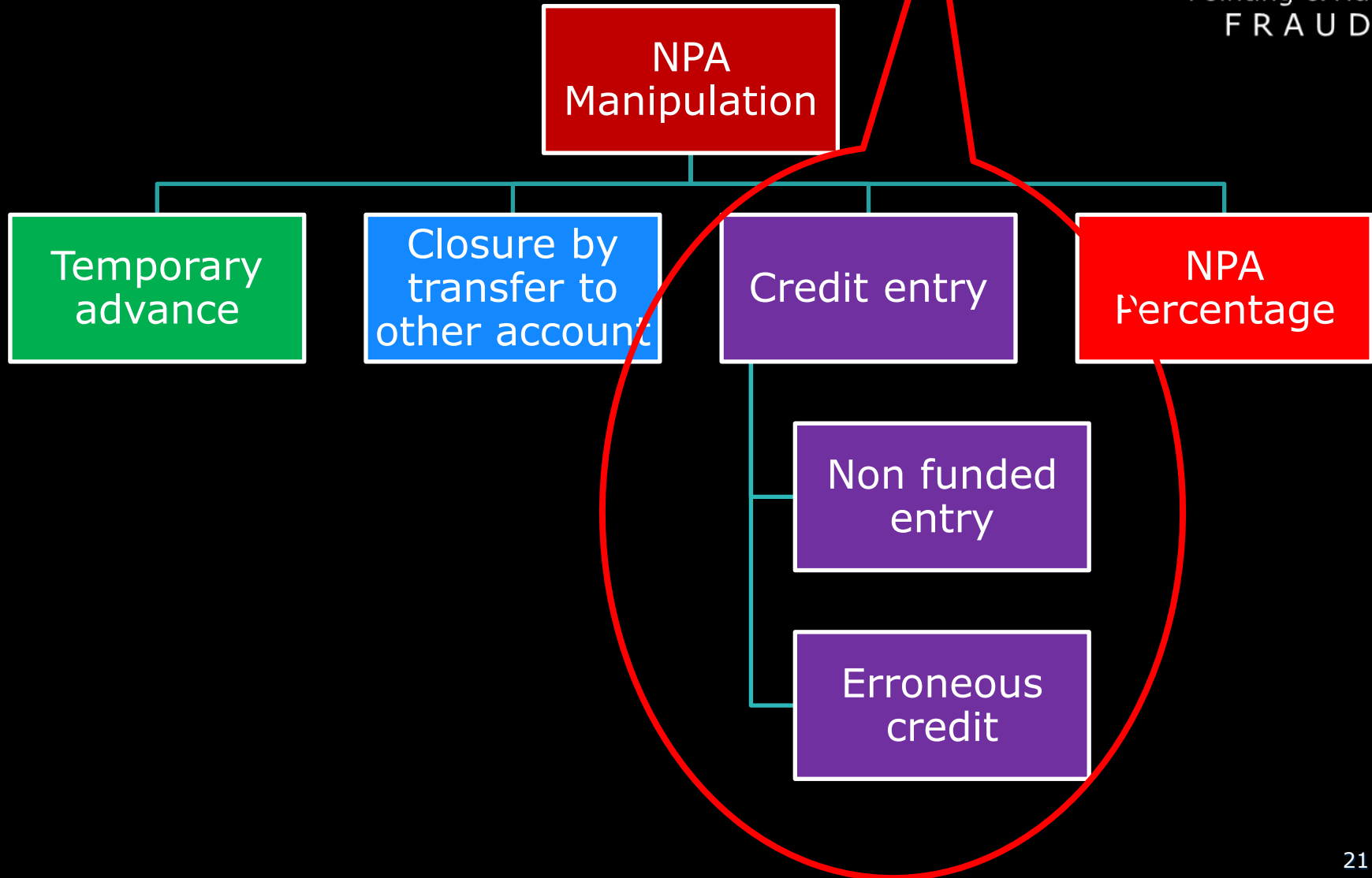
Credit Entry
Non Funded entry

■ Loan account closure (covered earlier)

■ CC account brought within limit

- Bill Discount etc. Careful on export finance.

- Transfer from another account (market borrowing usually same branch)

Suggested measures to spot the Red Flags

- CC Accounts overdrawn more than 80 days (Panic period starts here)

- *Casual* Bill Discount (no formal sanction)

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Export Credit -1

- Export Credit is short term working capital given to exporter to
  - Help Production
  - Help give credit to overseas buyer
- Banking Products
- Pre shipment – Packing Credit
- Post shipment – FBC, FBN etc.

Export Credit -2

- Packing credit is settled by FBC/FBN/FBP. This is a legitimate transfer entry.

- Reality of confusion
  - Day one – FBC request
  - Day four – FBP request
  - Alternative to get Currency conversion benefit, product of 'Rupee Advance against FBC'. (Only against FBC)

Case of huge revenue loss on Rupee advance against FBC

- Charges of Collection
  - Commission
  - Postage/Courier
  - Correspondent Bank charges

- Argument of Bank why commission was not collected (average bill Rs. 20 lacs)
- Loss estimated Rs. 2 crores p.a. in 1989
- Mostly casual bill collection
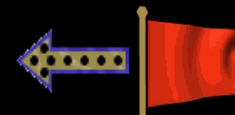
Erroneous Credit

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- Normally for Current or CC accounts

- Just to ensure cheques are passed

- Not possible after centralized clearing

- Restricted to cash credits
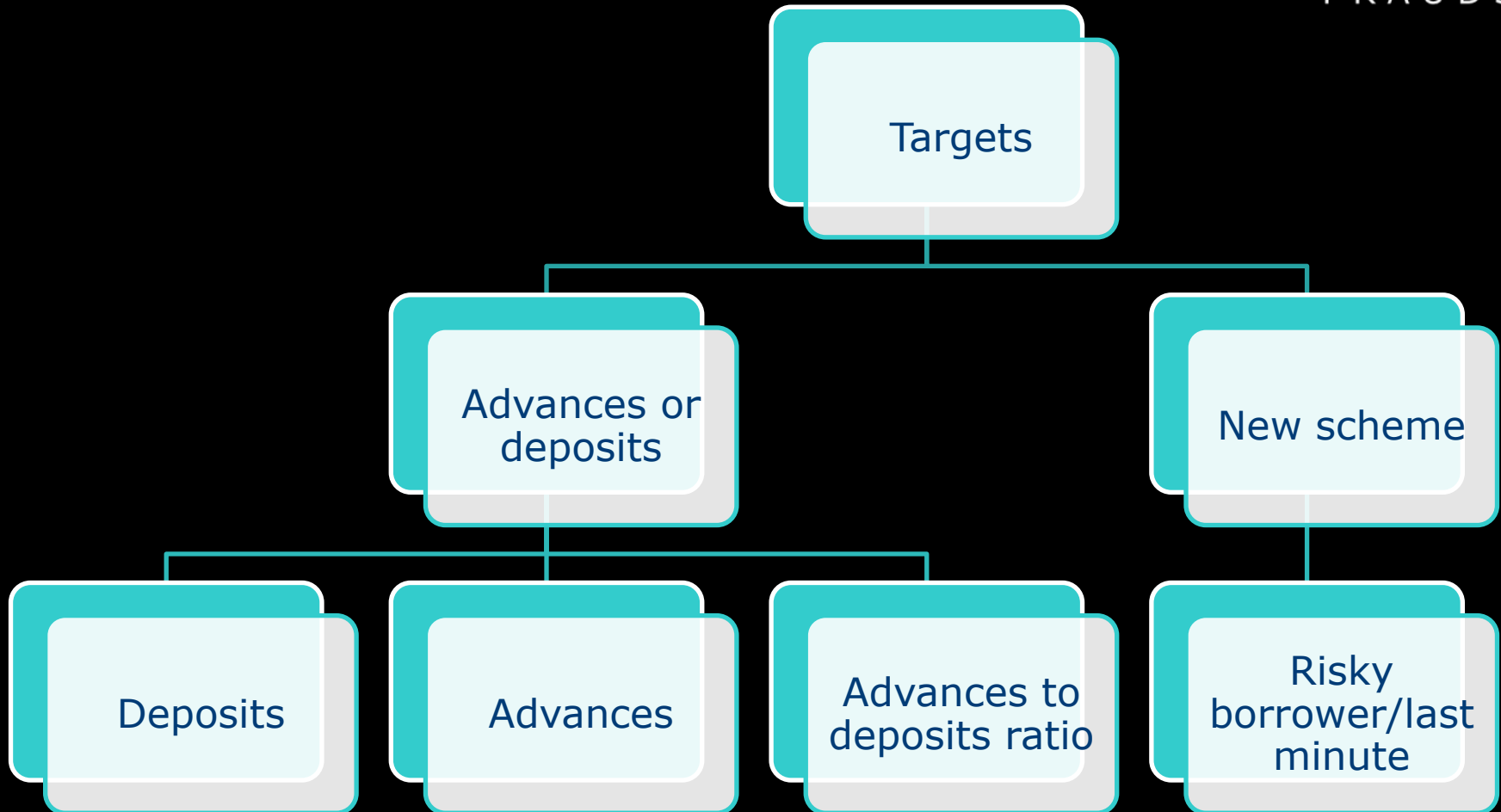
Suggested measures to spot the Red Flags

- Daily reports to observe error corrections

- Operator wise errors

- Exception reports are not useful

Window Dressing: Target achievement

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```
                        Targets
                           |
            +--------------+--------------+
            |                             |
     Advances or                      New scheme
      deposits                            |
            |                             |
  +---------+---------+              Risky borrower/
  |         |         |              last minute
Deposits  Advances  Advances to
                    deposits ratio
```

Window Dressing - Target achievement of Deposits

- Common every half year
- CA & SB account holders urged to keep balance
- Bulk Deposits (favours)
- Transfers from Old branch of Branch Manager
- Leveraged Deposits (election time)

KYC suspect in 100% of cases

Target achievement of Advances

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- Hurriedly given advances
- Priority sector categorization loophole
  - Agriculture advance in metro cities
- March disbursements are usually congenital NPA
- Gold Loan

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Window Dressing - Target achievement of Advances – New Scheme

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- Subsidised schemes of Govt.
- Incomplete Circular/guidelines
- Loan Melas of the past
- Non existing well (20 point programme scheme)
- Triparte agreements needed but not made
  - Truck Advances (Siddhi Vinayak Logistics)
  - Cobbler scam

Ineligible lending
Affordability
of installment

Priority sector
seduction

The cycle of Siddhivinayak Logistics Bank of Maharashtra scam

- Initiation/Loophole discovery
- Winnings
- Cover tracks

Perpetual motion trigger

Target Achievement
Priority Sector Advance

Borrower intention: Low
cost loan with same
advantage
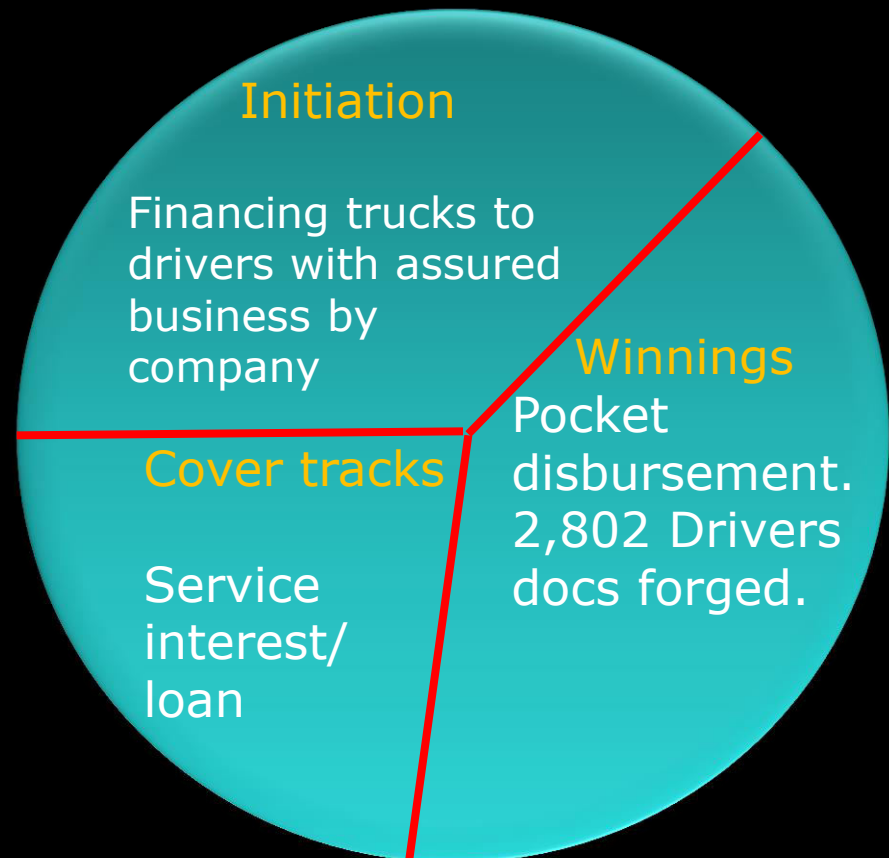
THE COBBLER SCAM

Location : Mumbai

Year of unearth: 1995

Damage : USD 600 million (Rs 1,000-crore)

Exploitation of : scheme that was floated by the Government of India meant to benefit the poor cobblers of Mumbai.
Modus Operandi : Float Several bogus societies of cobblers.

King pins: Saddrudin Daya, former sheriff of Mumbai and owner of Dawood Shoes, Rafique Tejani, owner of Metro Shoes, Kishore Signapurkar, proprietor of Milano Shoes, and Abu Asim Azmi, president of Samajwadi Party's Mumbai unit and partner in Citywalk Shoes.
Officials of : Maharashtra State Finance Corporation, Citibank, Bank of Oman, Dena Bank, Development Credit Bank, Saraswat Co-operative Bank, and Bank of Bahrain and Kuwait.

Ceiling of Disruption: Octroi Department – excessive concessions
In 1995, Sudhir Thakre, the joint registrar of the Cooperative Society for Mumbai division, ordered a survey of the registered societies.
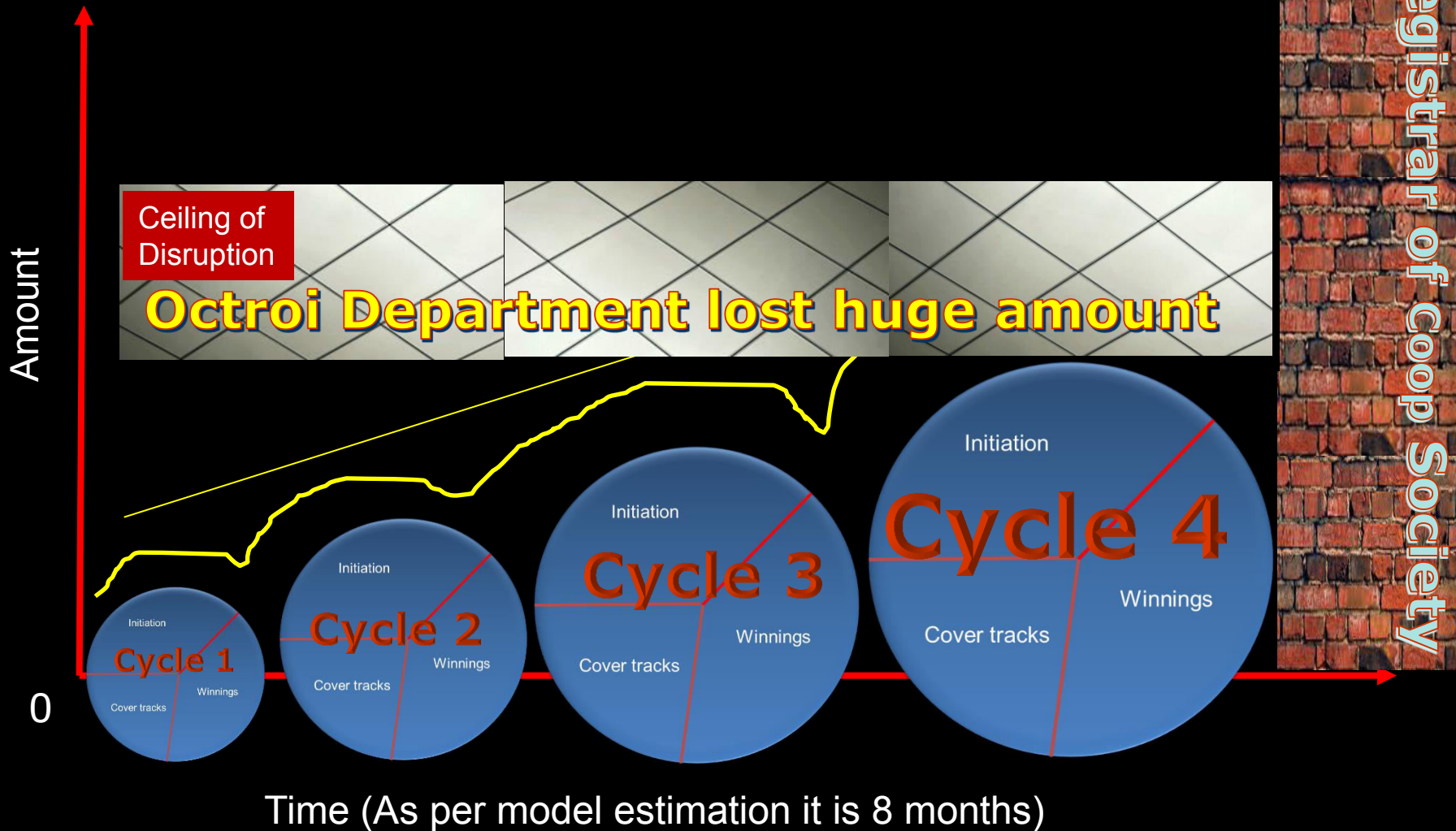
The cycle of cobbler scam
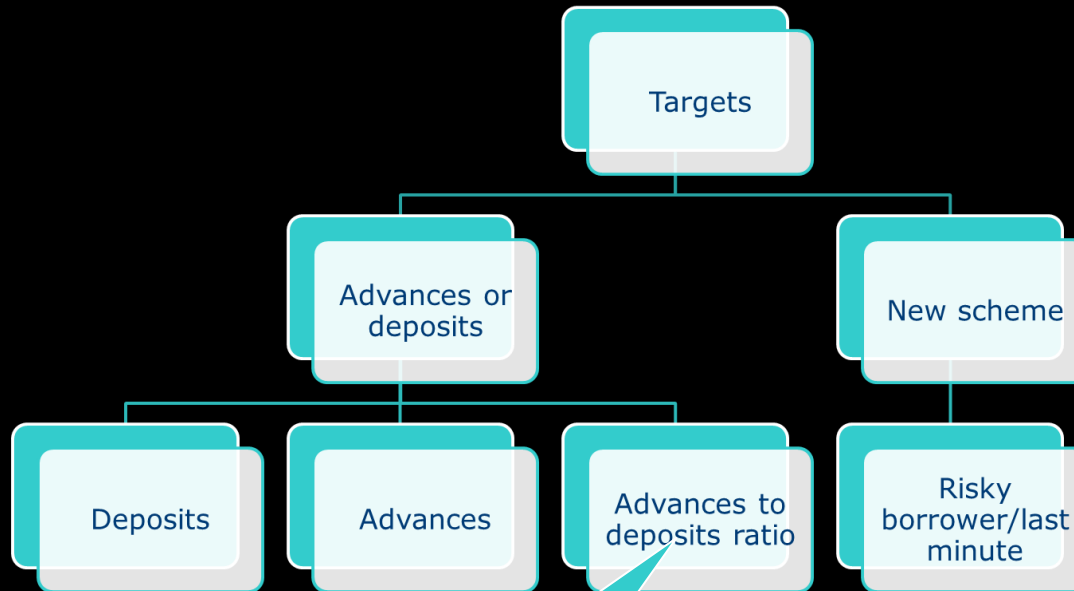
- Initiation/Loophole discovery
- Winnings
- Cover tracks
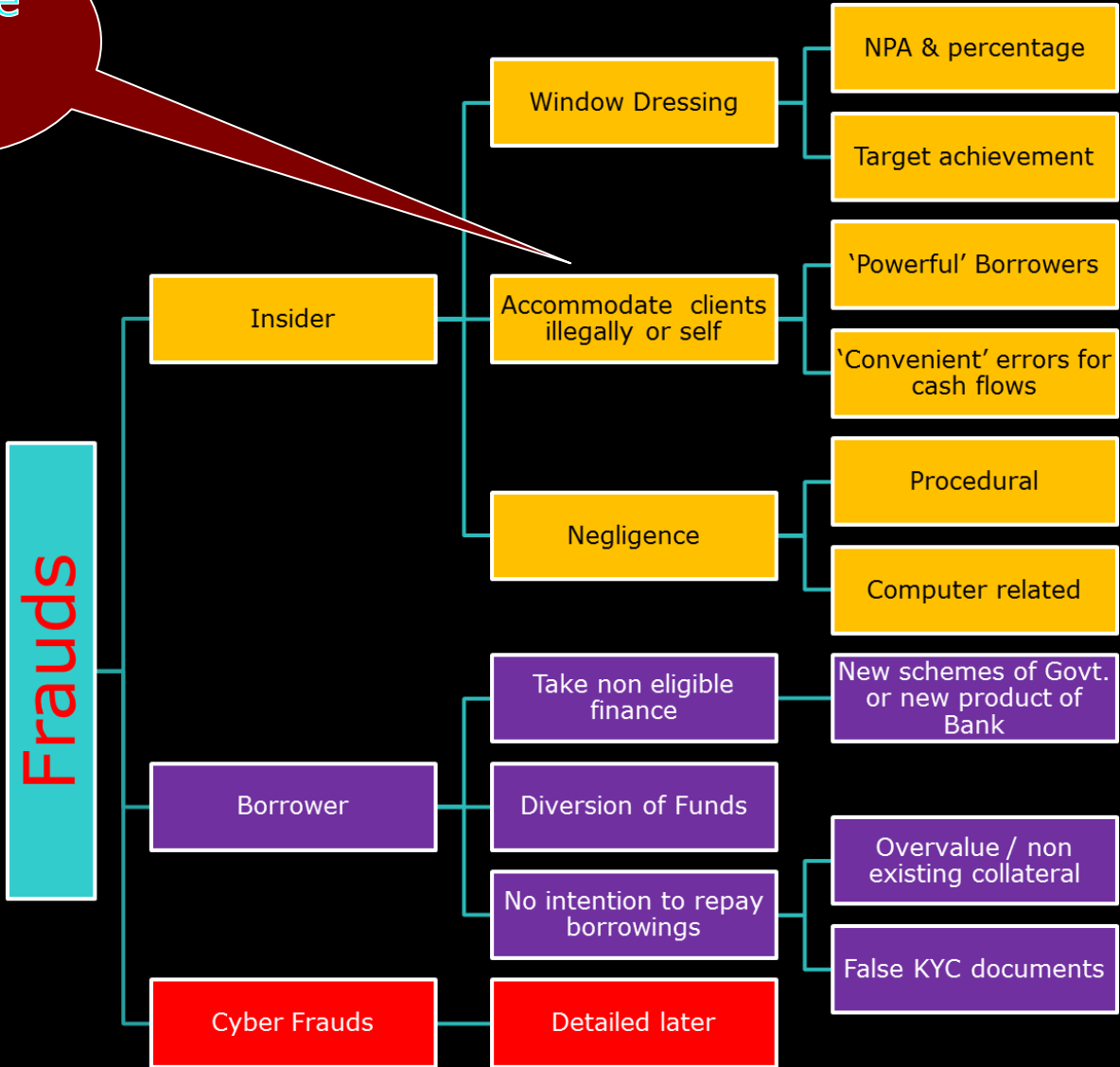
Perpetual motion trigger

Greed
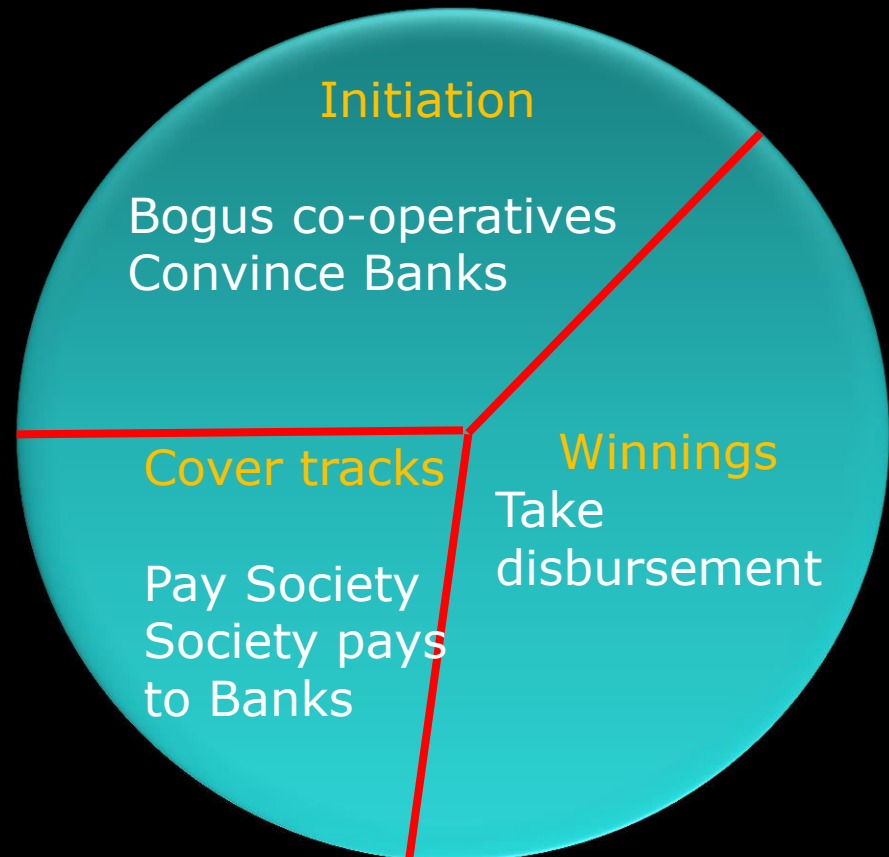
Insider perpetuated: Accommodation of client or self

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Objective		Accommodation	
Who benefits		Client	Self/Staff
How	Cash Fow adjustment	Debits pending	Plethora (See later slide)

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```
Self Help
(staff)
├── Cash
│   ├── Allowances
│   └── Loans & Interest rate
└── Cashier's abuse
    └── Market financing for self or others
```
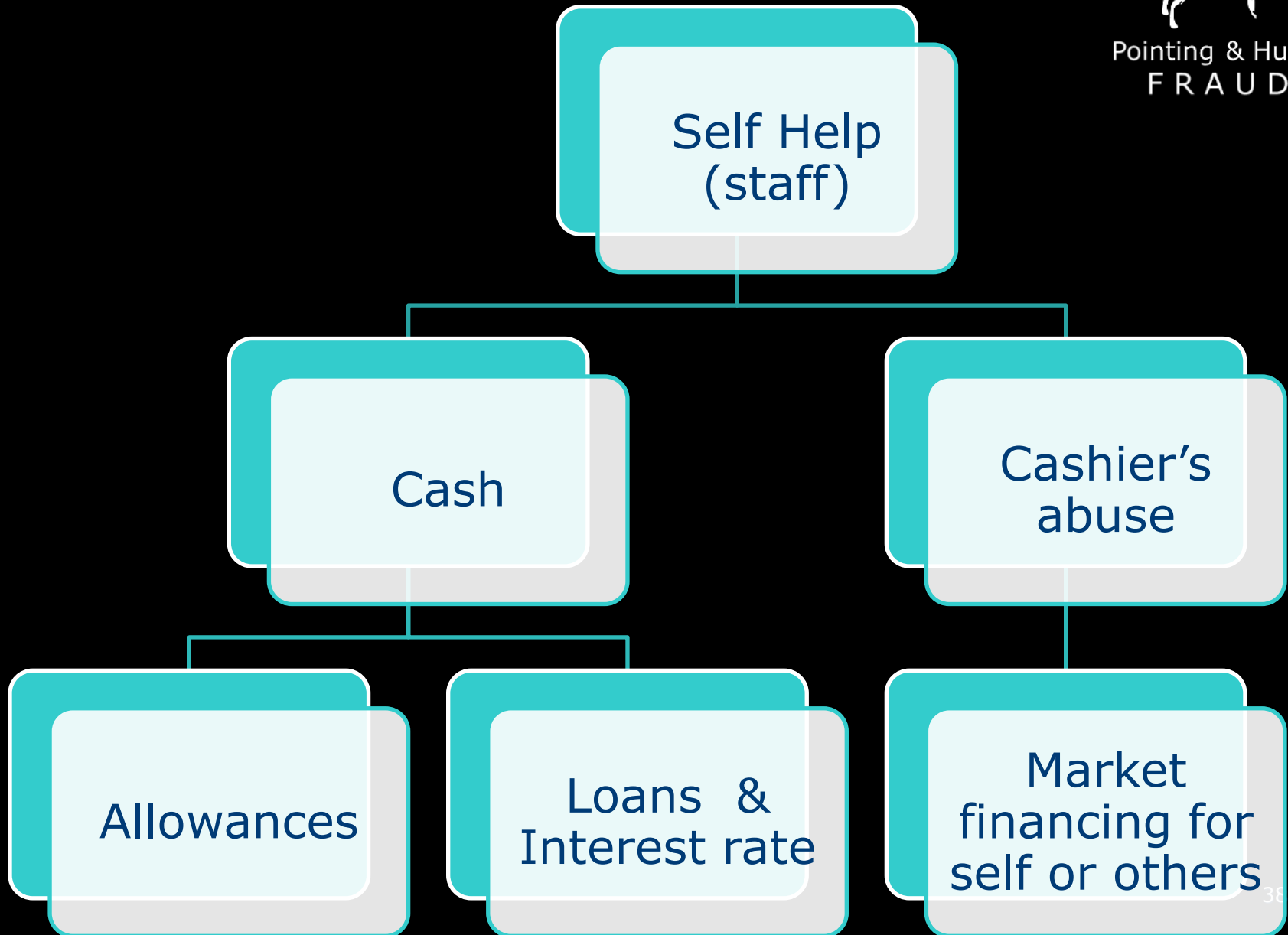
Insider perpetuated: Market financing by Cashier

Cashier takes charge at start of day. Hands over cash without entry to 'friend' waiting in queue.

'Friend' rushes to market to purchase goods at cash discount to sell

'Friend' returns the cash before end of day. Usually last person to enter branch.
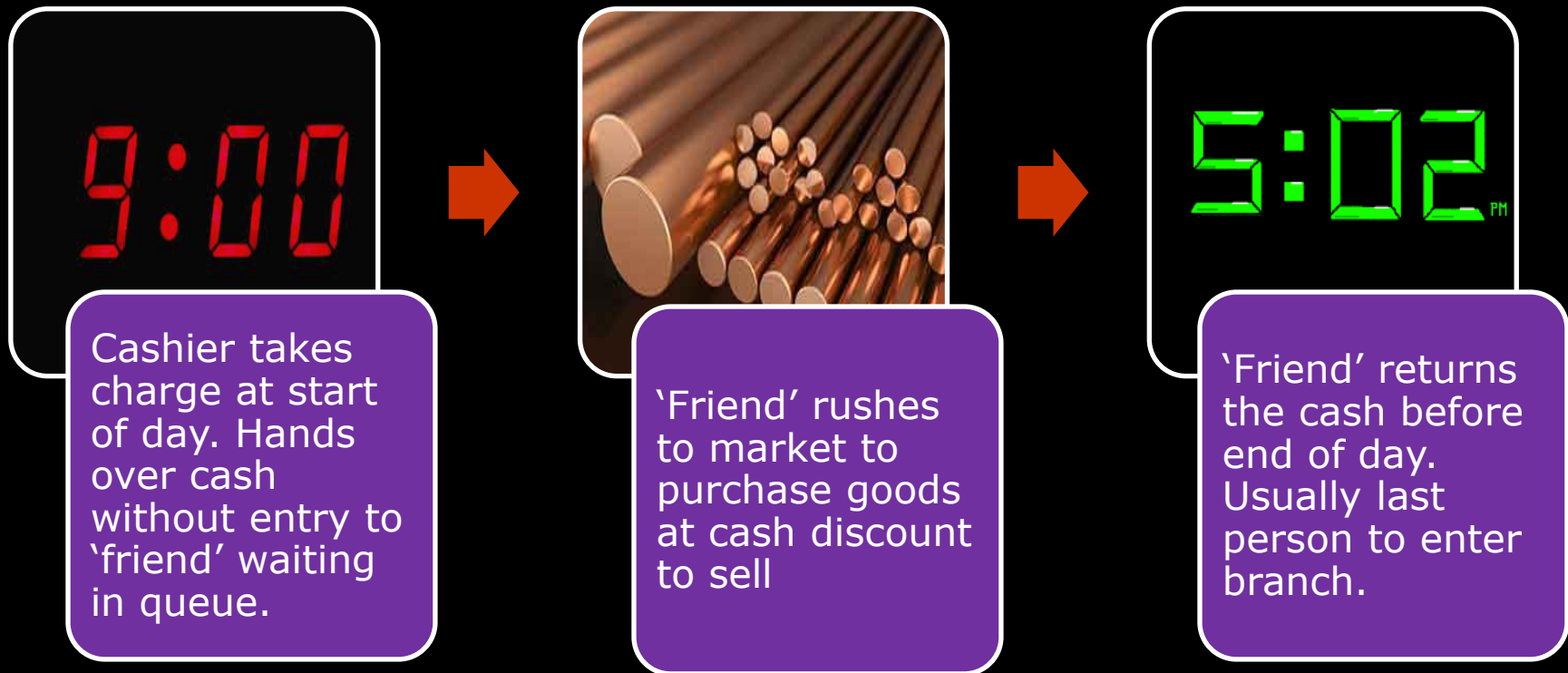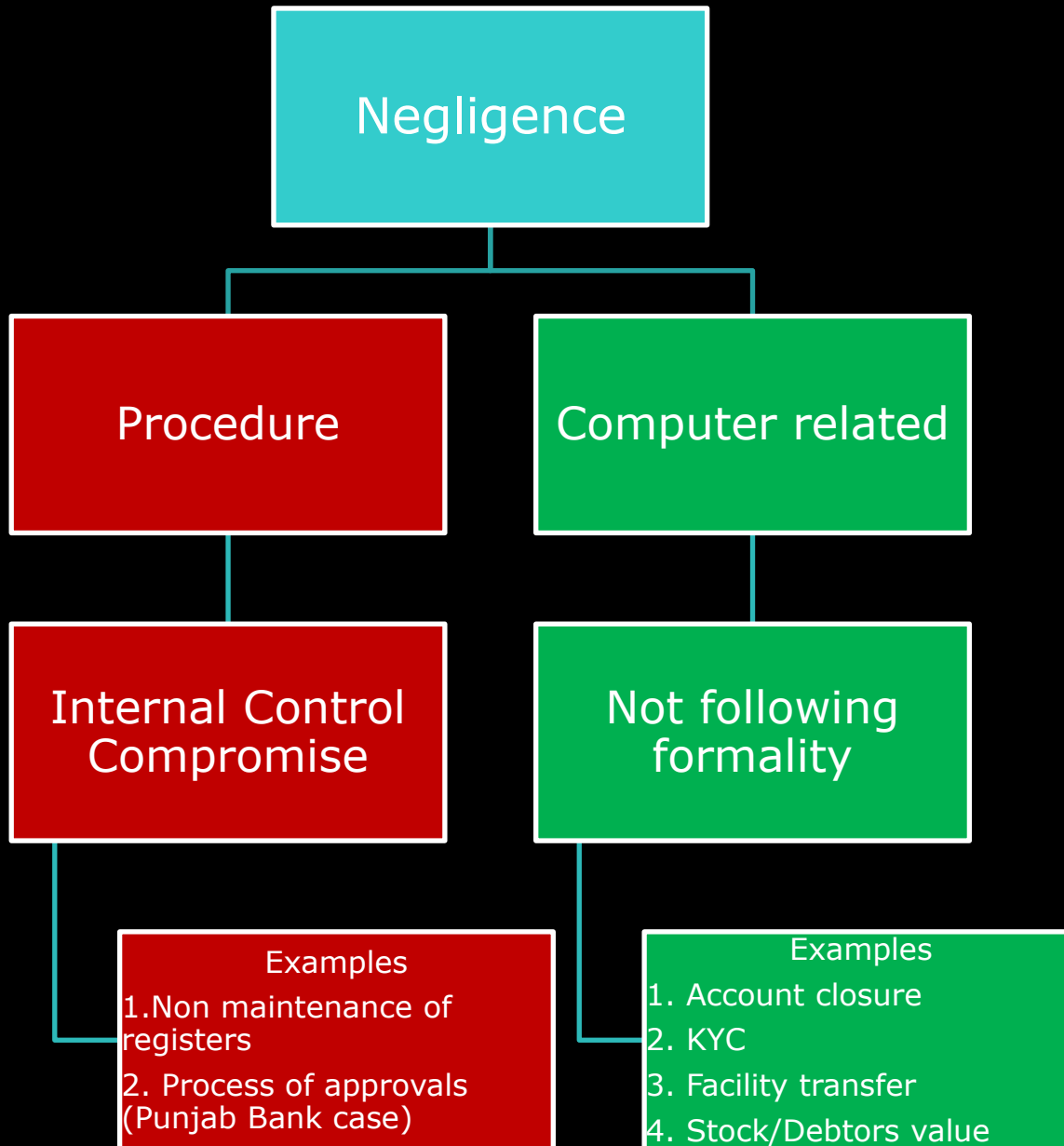
FE dealing procedure for error in deals struck (before Bank Transfers)

```
┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│ Bank strikes    │  →   │ Contracts are   │  →   │ Mismatch rates  │
│ deal with       │      │ exchanged at    │      │ demand          │
│ another dealer  │      │ end of day      │      │ settlement by   │
│                 │      │                 │      │ one committing  │
│                 │      │                 │      │ error           │
└─────────────────┘      └─────────────────┘      └─────────────────┘
                                                           │
                                                           ↓
┌─────────────────┐      ┌─────────────────┐
│ Cheque encashed │  ←   │ Fine paid by    │
│ by receiver     │      │ crossed cheque  │
└─────────────────┘      └─────────────────┘
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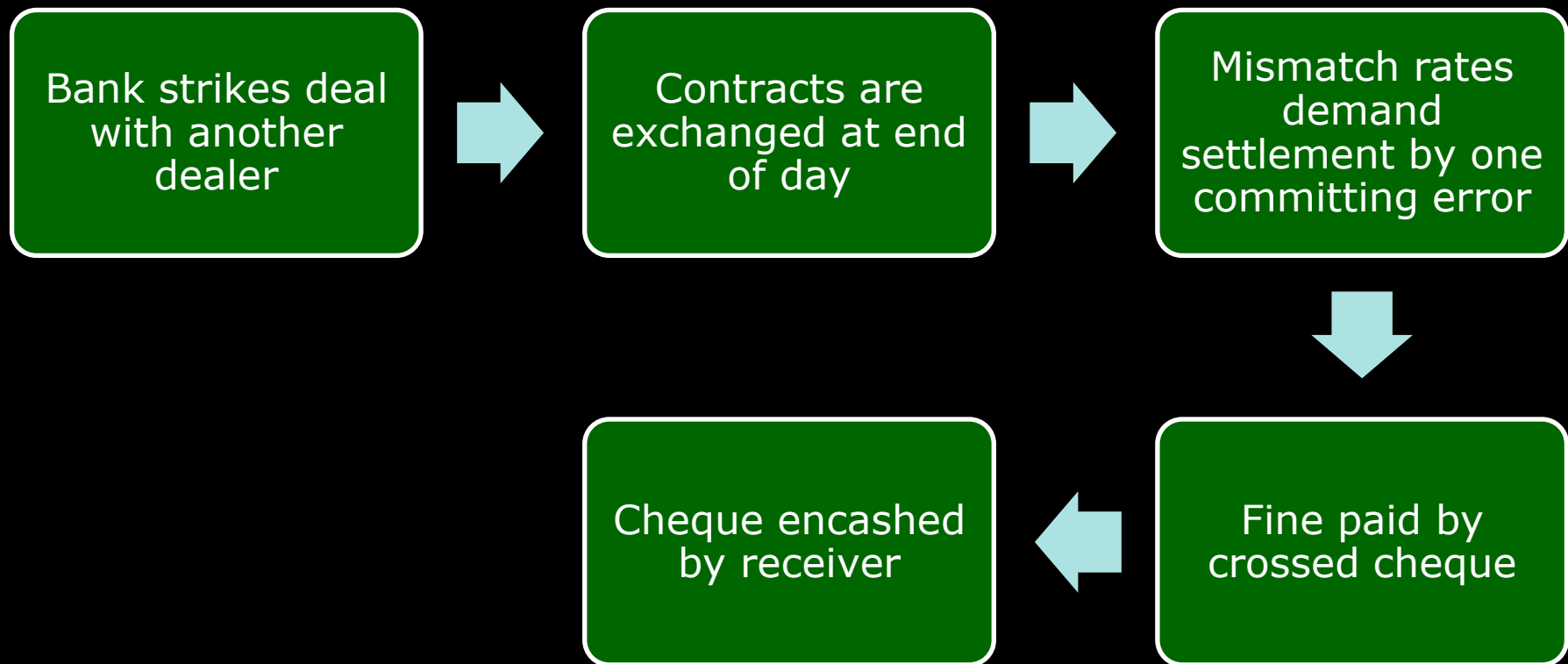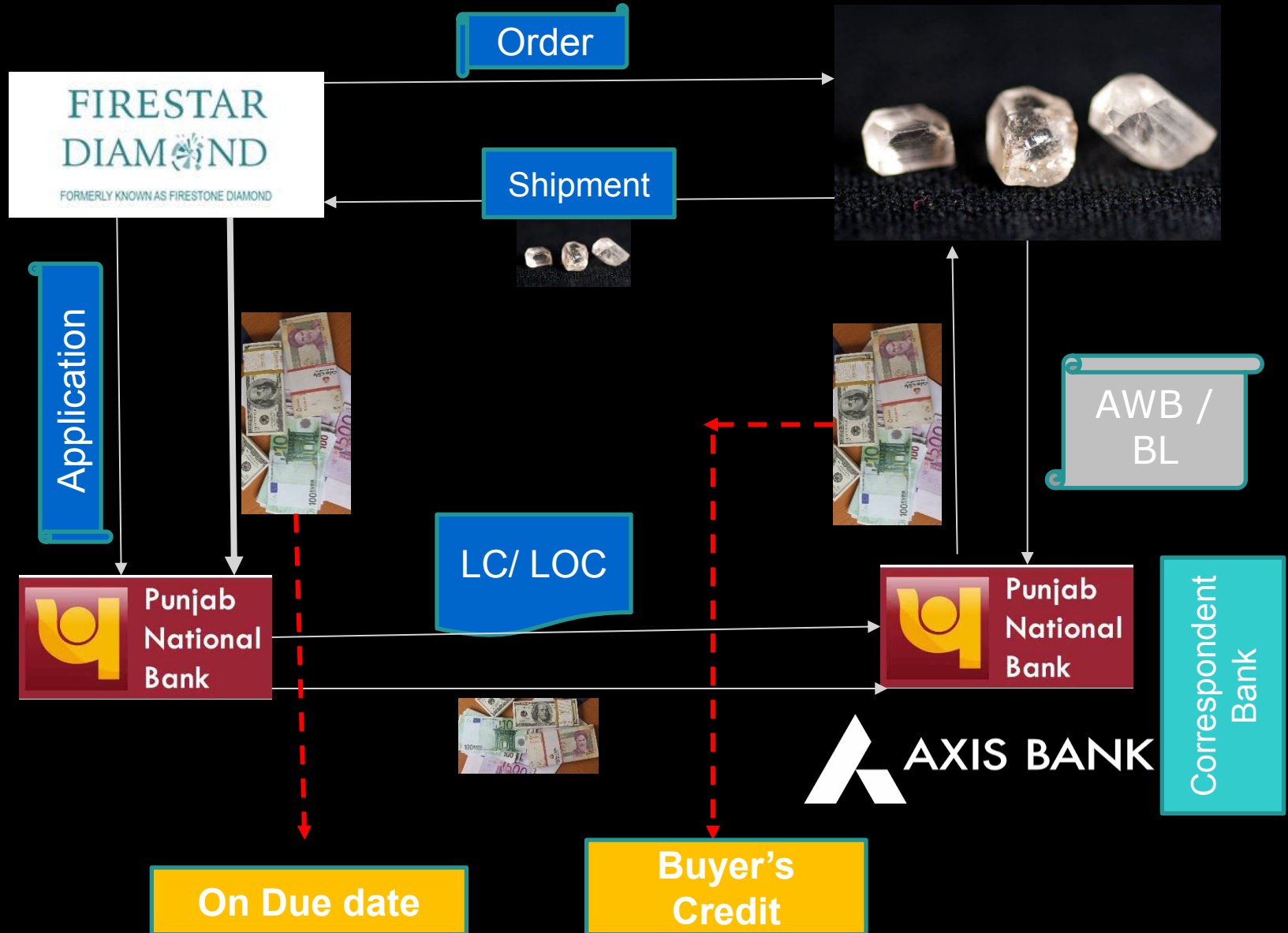
Where is the potential for fraud in this scenario?

Simple import Direct payment
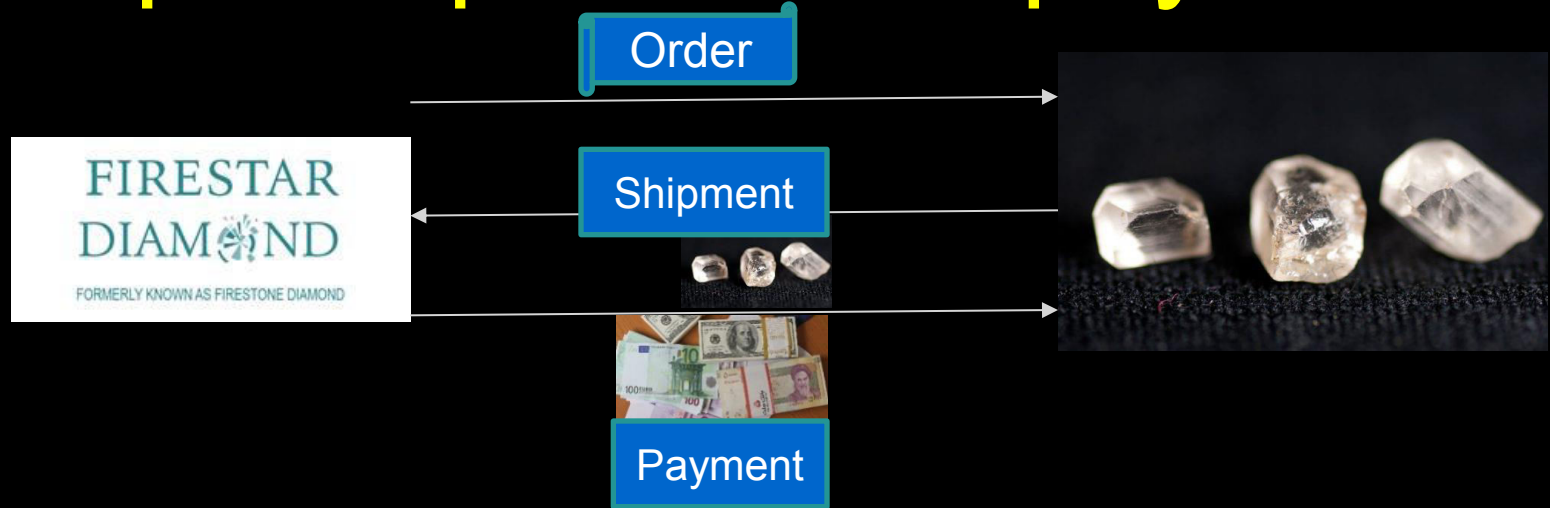
Standard Transaction

Procedure compromise in Punjab National Bank case

PNB Fort br sends thru SWIFT LOU to own br or correspondent

(AGM/GM level)

→

Own br or correspondent branch receives and acknowledges LOU

→

Acknowledgement is sent from overseas to HO which is to be confirmed.

(CGM/GM)

↓

Issues are settled

←

Nostro reconciliation is done by HO at monthly intervals

Where is the potential for fraud in this scenario?

45
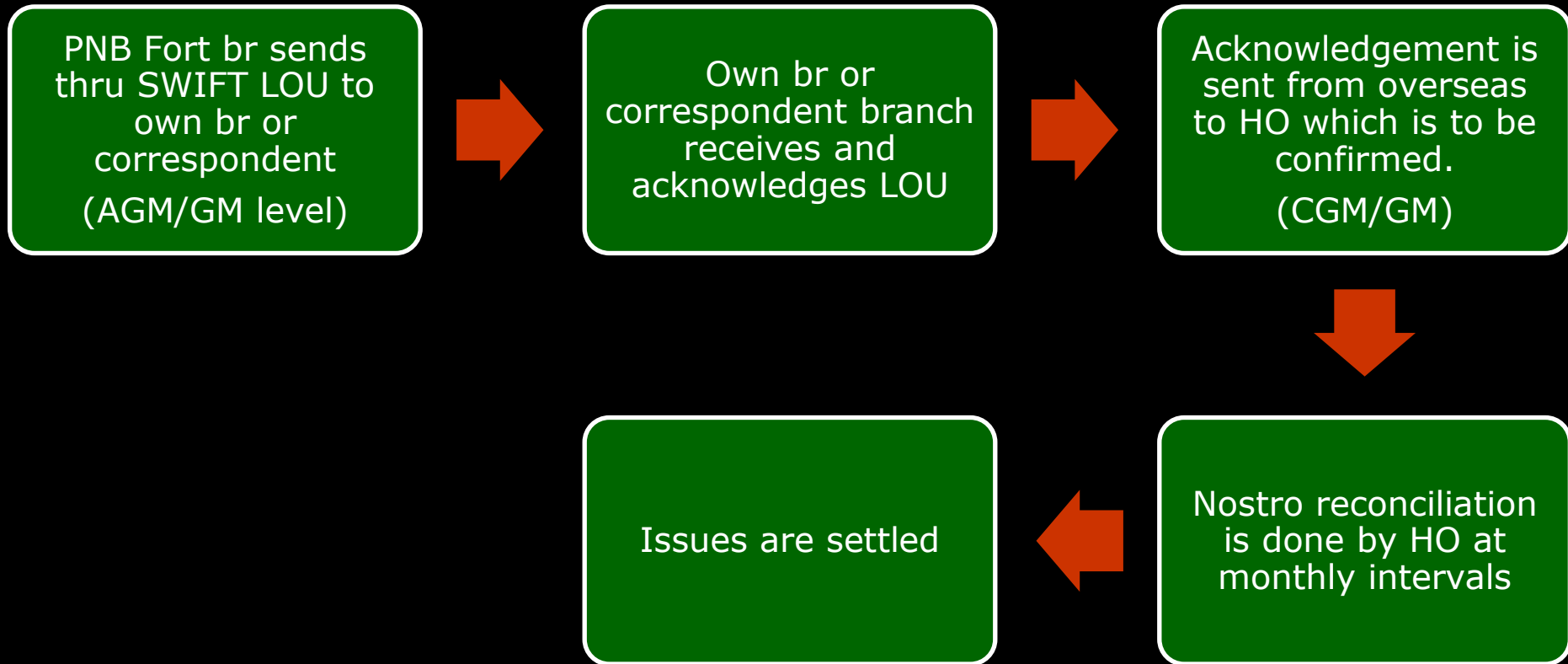
Who gets Import LC facility?

- Established importer
  - Import License in case items are not under OGL
- Sanctioned facility
  - Documentation will specify sanctioned facility
  - Sub limits
  - Margins
  - Approved items for import, Countries etc.
  - Inspection and project report analysis in process note
- Casual LC
  - Rarest of Rare cases
  - Given to existing borrowers
  - High Margin
  - Classified as High Risk

Before SWIFT

What is LoU?

Letter of Undertaking is a bank guarantee and is issued for overseas import payments. A bank, while issuing LoUs for a client (here Nirav Modi), agrees to repay the principal and interest on the client's loan **unconditionally**. When an LoU is issued it involves an issuing bank, a receiving bank, an importer and a beneficiary entity overseas. PNB officials allegedly used their access to SWIFT messaging system (used for overseas transaction) and verified guarantees given on LoUs without taking necessary sanctions. As a result, overseas branches of many Indian banks gave forex credit.

Bank Comfort Letter (BCL)

Date: (Day, Month, Year)
To:

To the Seller,,

This is to confirm that our mutual clients (namely) maintain a banking account with us and is in good standing with our bank.

At their instructions we, (full name of the bank), with full authority and mandate hereby confirm that the said client is ready, willing and financially able to initiate the process of purchasing of (requested product quantity) metric tons of Ordinary Portland Cement for the price of USD (price per metric ton) during the next (duration of contract) month(s) / year(s) and for the total value of USD (total contract value) subject to the seller, completing the Sales and Purchase Contract.

We, (buyer's bank), confirm our ability to issue in due course and after the signing of the Purchase Contract, required (type of Letter of Credit) Letter of Credit on behalf of our client and for the benefit of the seller, with full assurance for the full amount of the contract.

We certify that our client named above has sufficient funds and / or have credit facilities with our bank to complete the proposed transaction within the time period outlined in the above referenced contract.

Our client hereby gives authority to the seller to procure usual banker's references from our bank officer (full name of bank officer), whose direct phone number is ....

Yours truly

Signed by a senior level bank officer: ....
Full name of the signatory: ....
Designation of the signatory: ....
Clients' Name as written in account: ....
Account No / IBAN: ....
Bank Telephone No: ....
Bank's Fax No: ....
Bank SWIFT / Sort Code: ....
Bank stamp / seal: ....

Wire Transfer Cycle

1. Buyer provides bank with payment instructions & authorization to debit
2. Buyer's bank makes payment to seller's bank, OR
2(a) Buyer's bank makes payment to correspondent bank, who makes payment to seller's bank
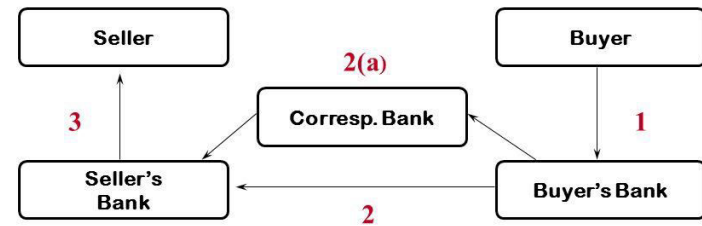3. Seller's bank credits seller's account

What is SWIFT?

When an LoU is issued, the message of credit transfer is conveyed to overseas banks through the Society for Worldwide Interbank Financial Telecommunication (SWIFT) system. This is a significant information as it gives the bank's consent and guarantee. To issue SWIFT, an official has to log in and fill up confidential information such as the account number and SWIFT code. It generally has three layers of security - a maker, a checker and a verifier within the core banking system before it is issued.

Letter of Credit must be paid except

- Expired LC

- Discrepancies

- Political or economic event

- Fraud/Injunction

- Insolvent Bank/Liquidated

The scam was started in 2011 and was detected in the third week of January this year, after which the PNB officials reported it

Pointing & Hunting

Nirav Modi's lawyer
Vijay Aggarwal

- "The entire matter was in the knowledge of the bank (PNB). The bank took a commission of crores of rupees but now it is not accepting it. It was a commercial transaction of the bank which is now being termed as a fraud,"

The 'ceiling' in the Nirav Modi scam

- Non payment of loans granted overseas

- One fraudulent LoU was issued on January 16, 2018

- PNB employee Gokulnath Shetty retired

- 100% cash margin for the LoU, to which the firms said that they had availed similar facility in the past

Auditor Deloitte rang alarm bells on Nirav Modi two years ago
(*The Sunday Express*)

Really?

"The holding company (Firestar International) and its subsidiary company incorporated in India did not have an appropriate internal control system for credit evaluation and setting credit limits for customers, which could potentially result in the respective companies recognizing revenue without establishing reasonable certainty of ultimate collection."

"did not have an appropriate internal control system for determination of net realisable value of the closing inventory."

After the report, Firestar International had informed shareholders that its board had "taken note" of the auditor's observation and "directed the management to further strengthen its policies and documentation process for setting credit limits for customers, credit evaluation and for determination of net realisable value of the closing inventory and, if required, seek advice from independent external industry experts for strengthening the policies and documentation process".

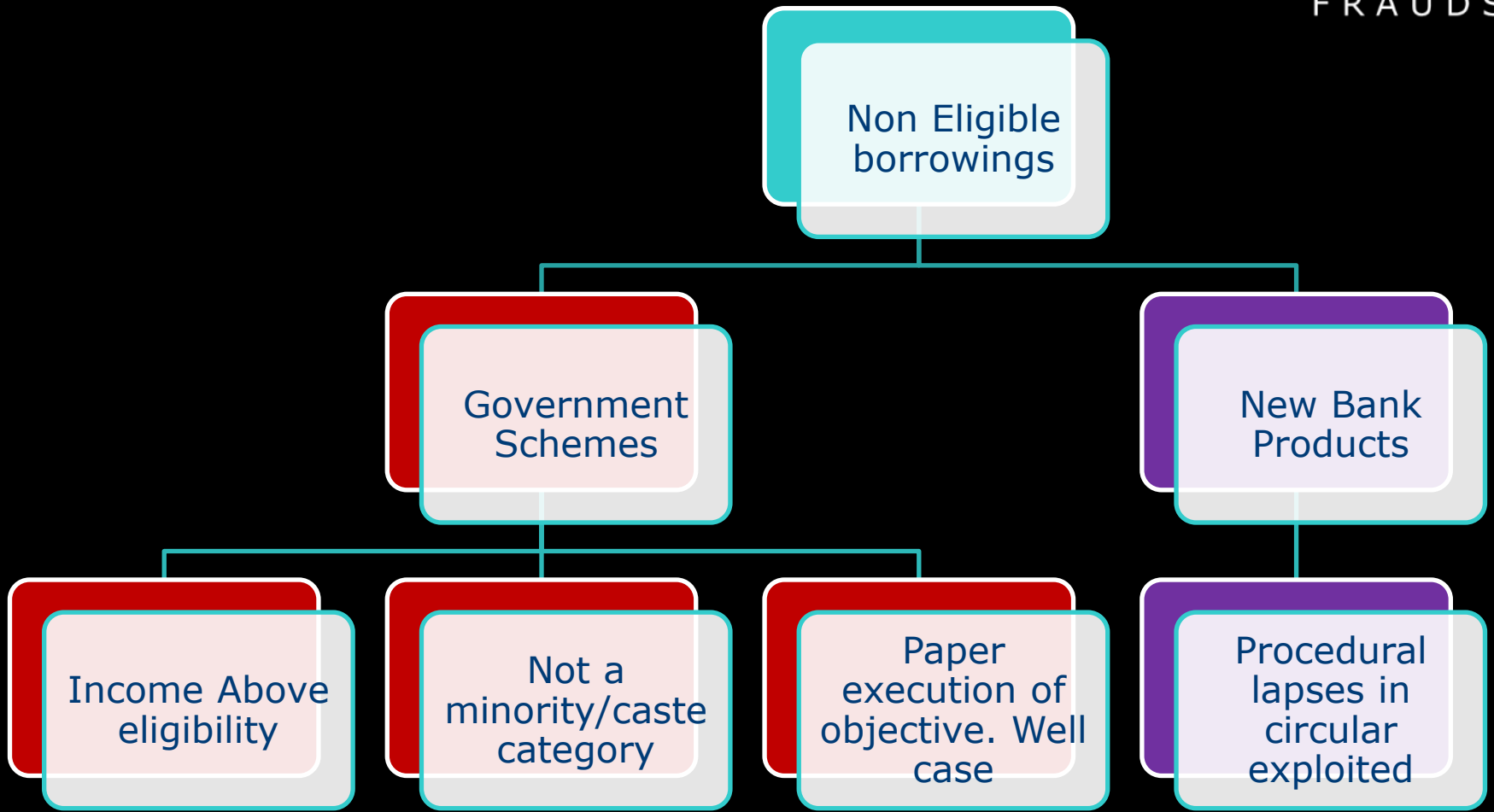How could any auditor determine red flags and then the fraud?
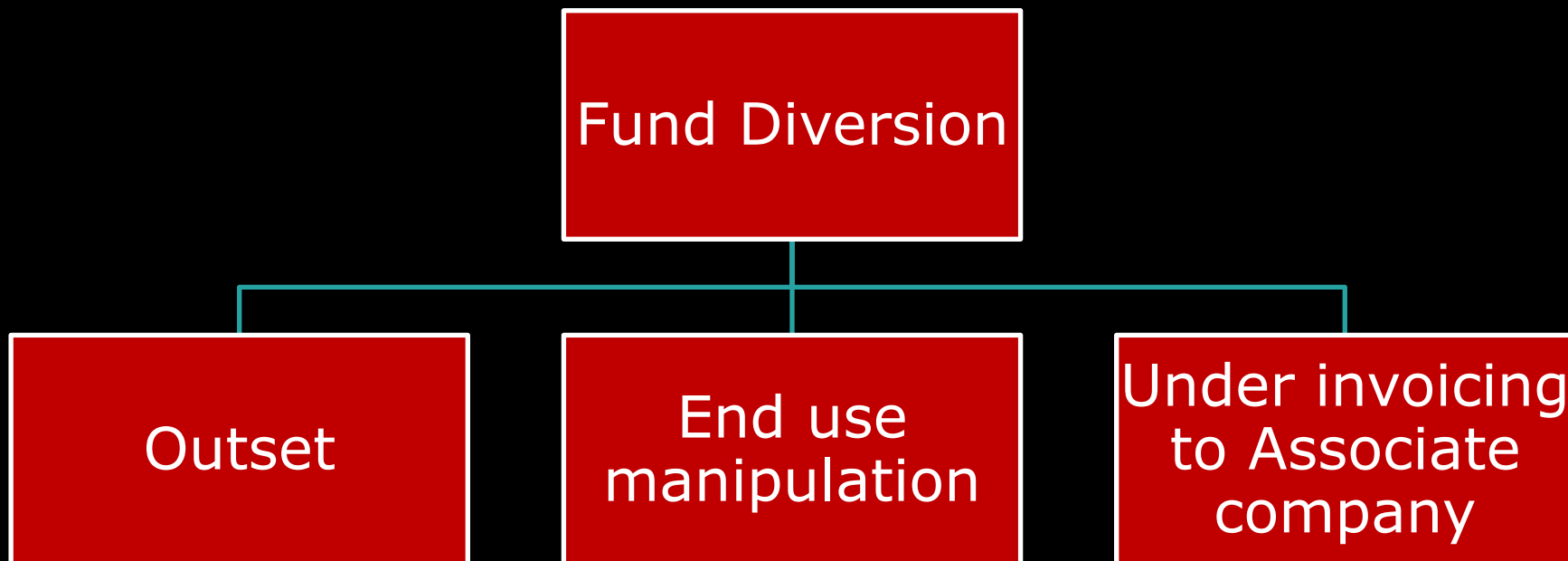
Category of Foreign exchange branches

Bank Branches

- Category C → No foreign exchange transactions → Business through category B branch. Mirror accounting
- Category B → FE business but no FE Dealing room → Use Nodal Branch or HO. Mirror accounting.
- Category A → FE Dealing room. Usually Nodal branch or HO

55
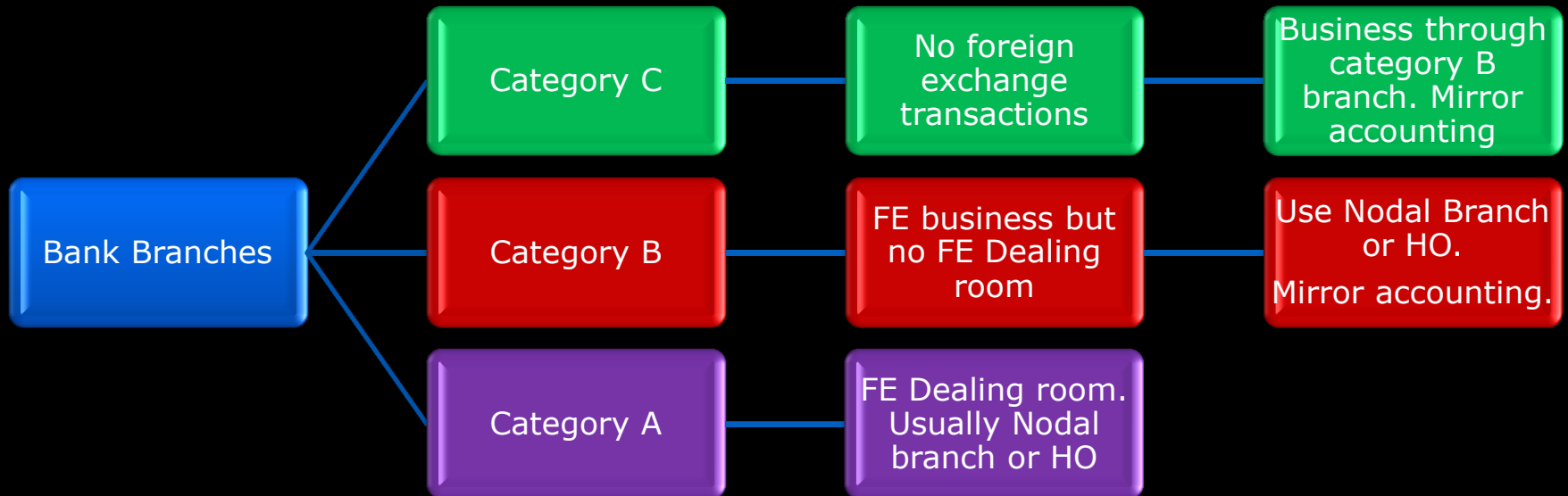
Borrower Perpetuated: Non Eligible finance

Borrower Perpetuated: No Intention to Repay (congenital NPA)

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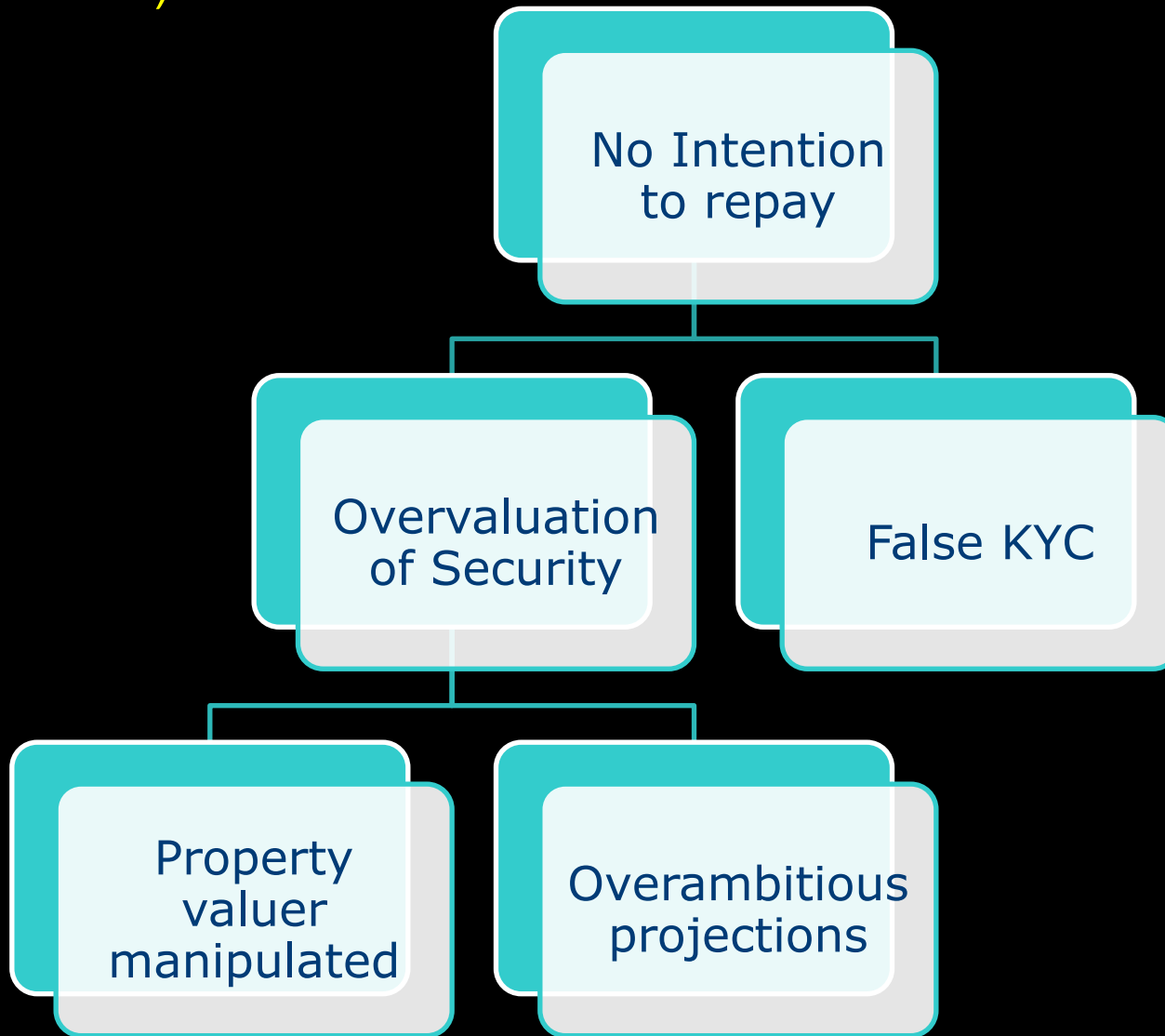
No Intention to repay

Overvaluation of Security

False KYC

Property valuer manipulated

Overambitious projections

ID Card Manipulation

Computer related frauds

Understanding CBS

Back-up server at DR Centre

Central Office

Application & Database servers at DC

Giga Switch

2 MBPS Connectivity

Central Giga Switch

Router

Links for Branches

128 Kbps(2)

Branches

256 Kbps(1)

64 Kbps

ISDN Backup

E1 Links

61
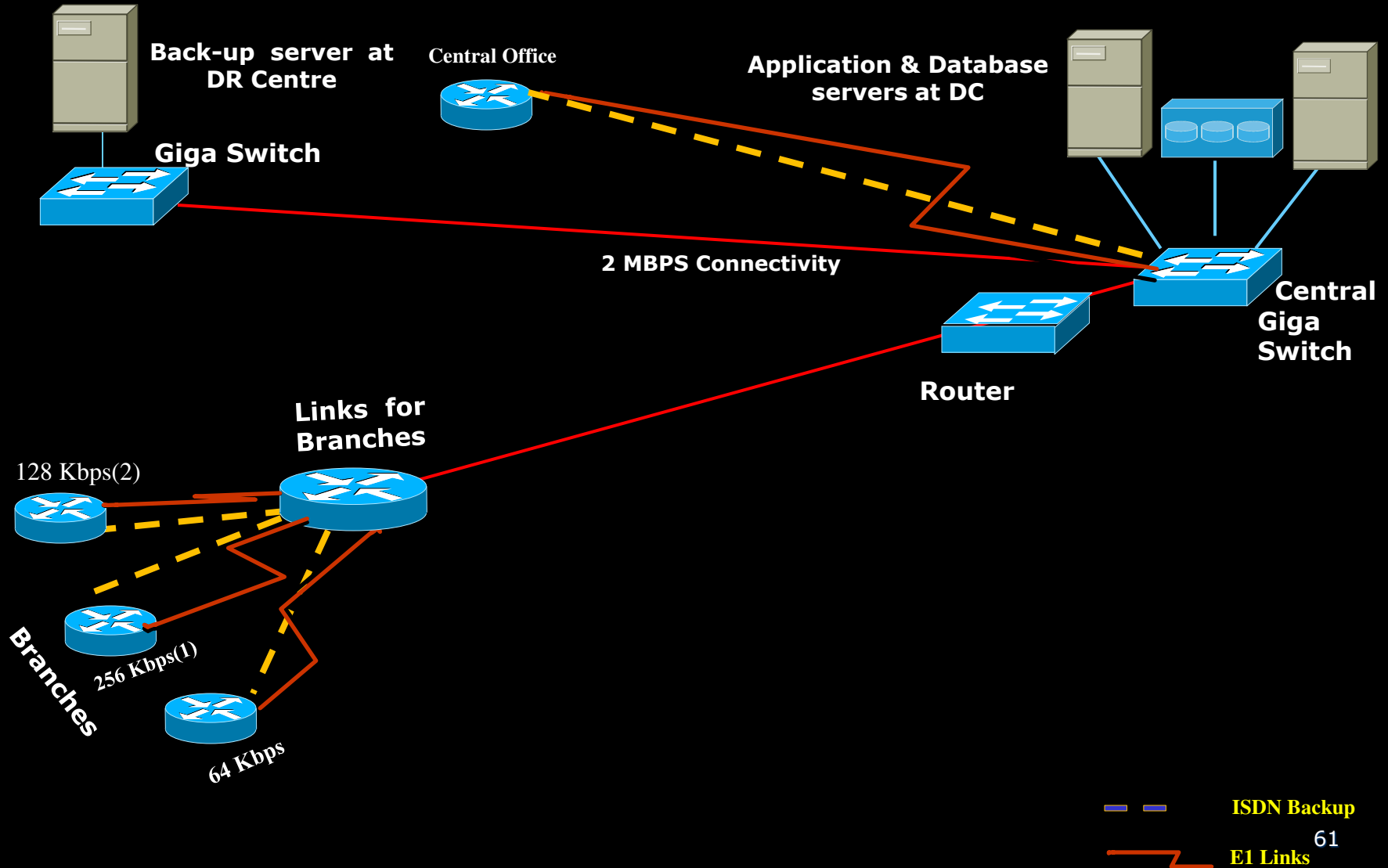
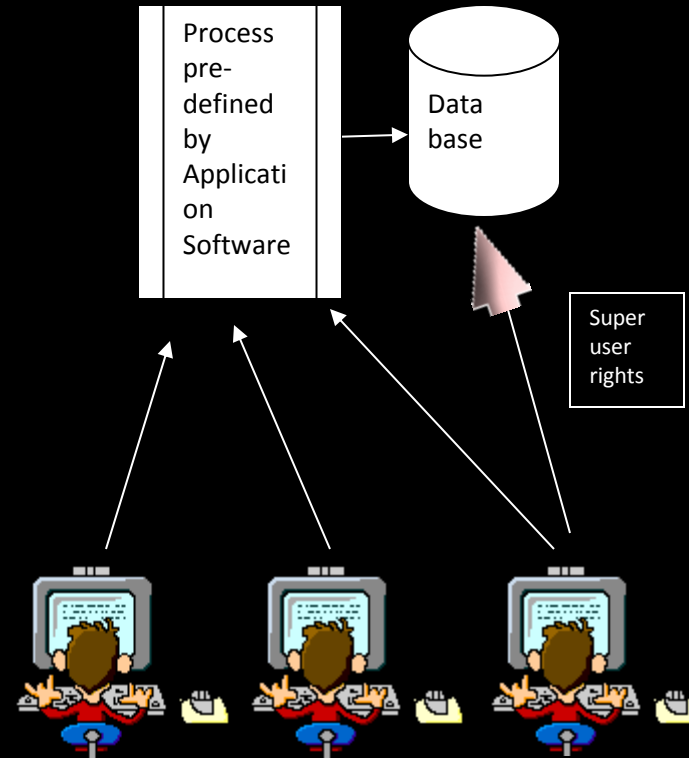# Access to back end

How normal user is prevented from direct access to database	How a super user can access database
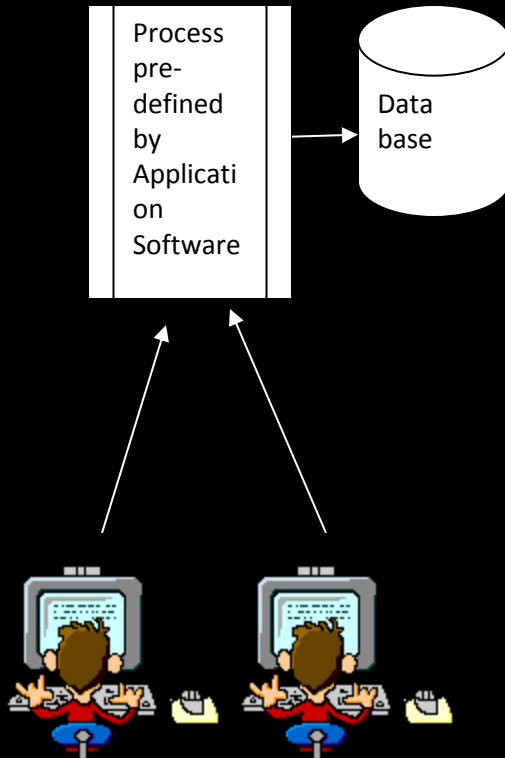
Opportunity Triggers

- Weak points
- Access to back end
- Opening balance adjustment authority

What should be your philosophy to detect fraud?

Set a thief to catch a thief ?

The thief is the artist. The policeman is only a critic…

Oscar Wilde

Watchdog or Bloodhound
or …………….

Approach to detect Frauds during Audit

F   Find the Red Flags

R   Review the Red flag transactions

A   Analyse them for abnormality

U   Understanding shared with Mgmt.
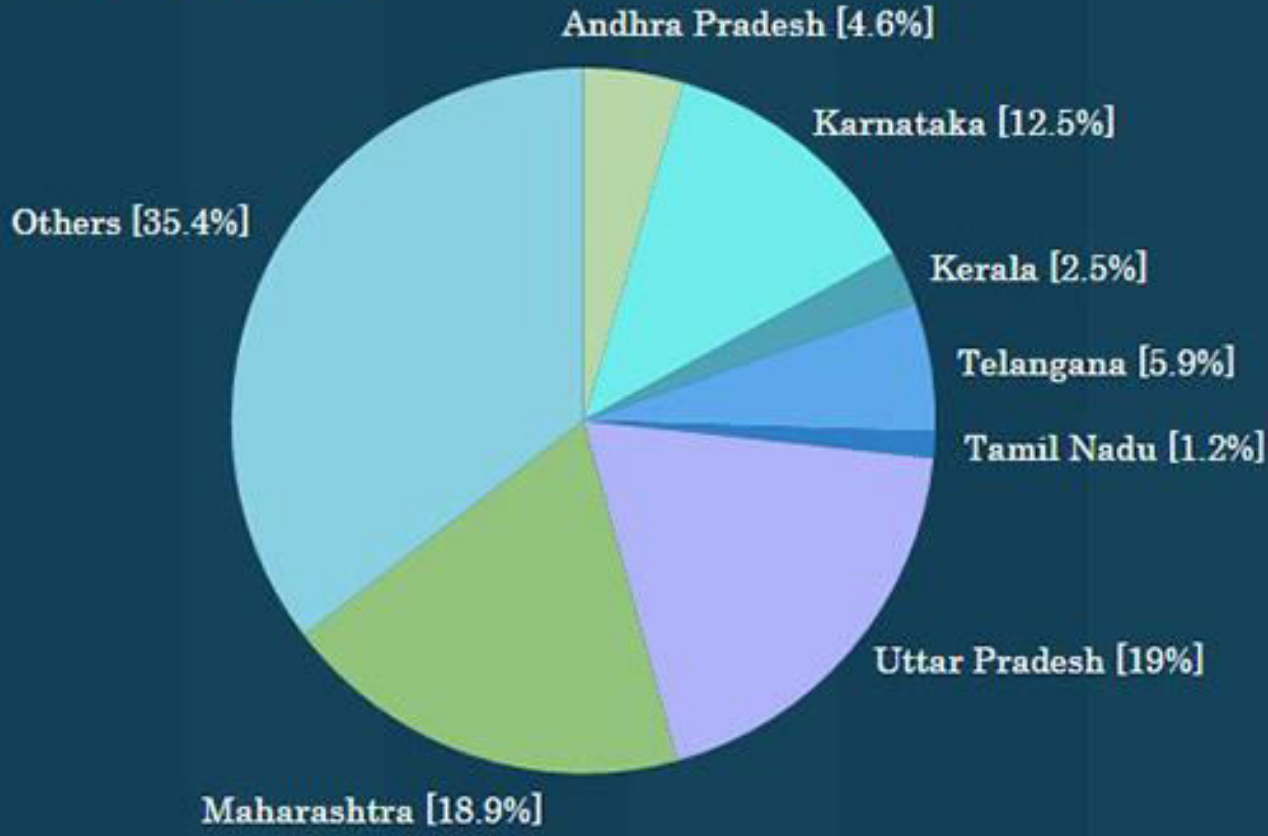
D   Document your findings
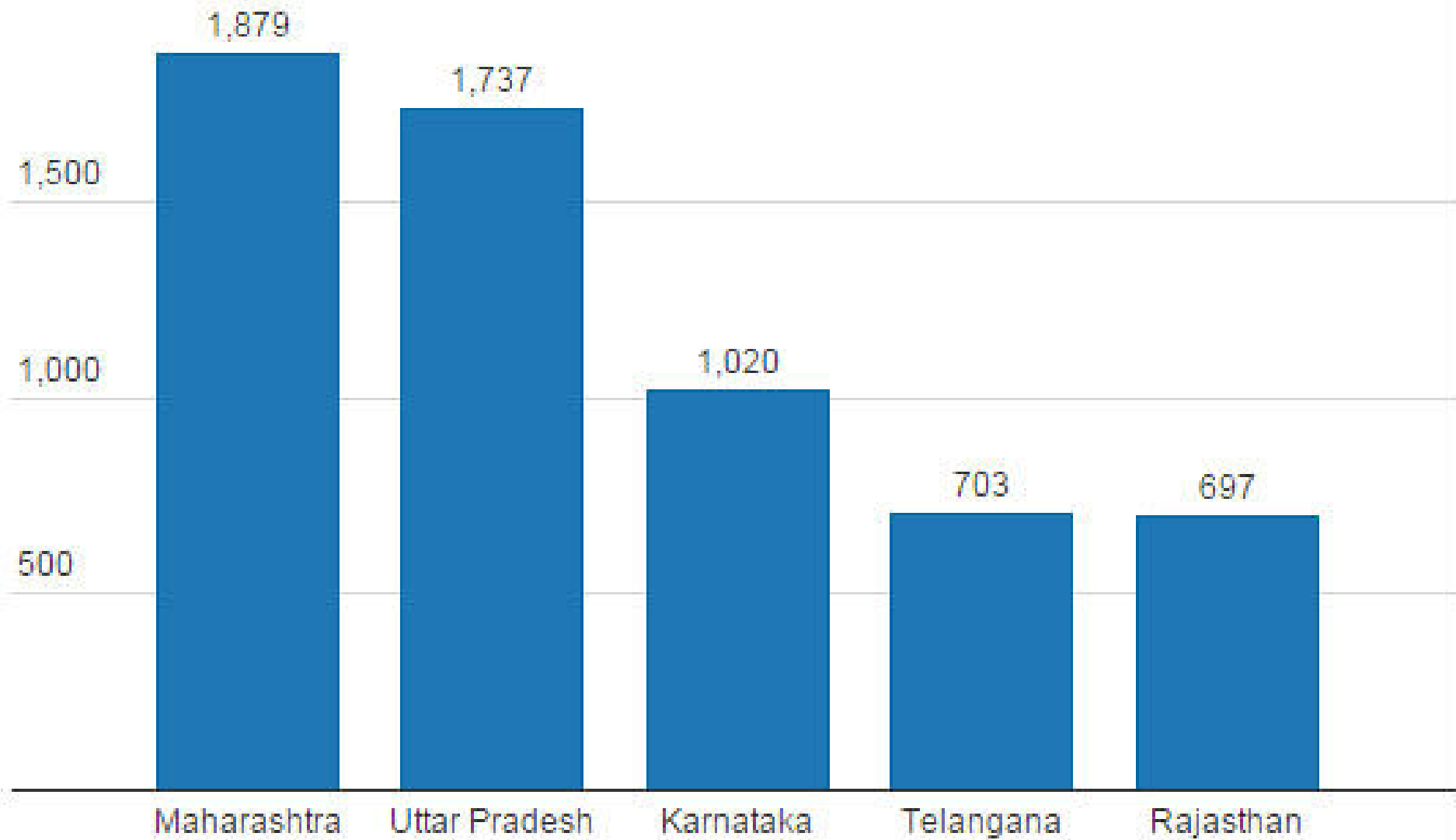
S   Statutorily report them

Karnataka tops cyber crime in South India

The NEWS Minute

Andhra Pradesh [4.6%]
Karnataka [12.5%]
Others [35.4%]
Kerala [2.5%]
Telangana [5.9%]
Tamil Nadu [1.2%]
Uttar Pradesh [19%]
Maharashtra [18.9%]

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Cyber Crime: Top Five States, 2014

India stands 11th in the ranking for Online Crime in the World, constituting 3% of the Global Cyber Crime.

Cybercrime: Top 20 Countries
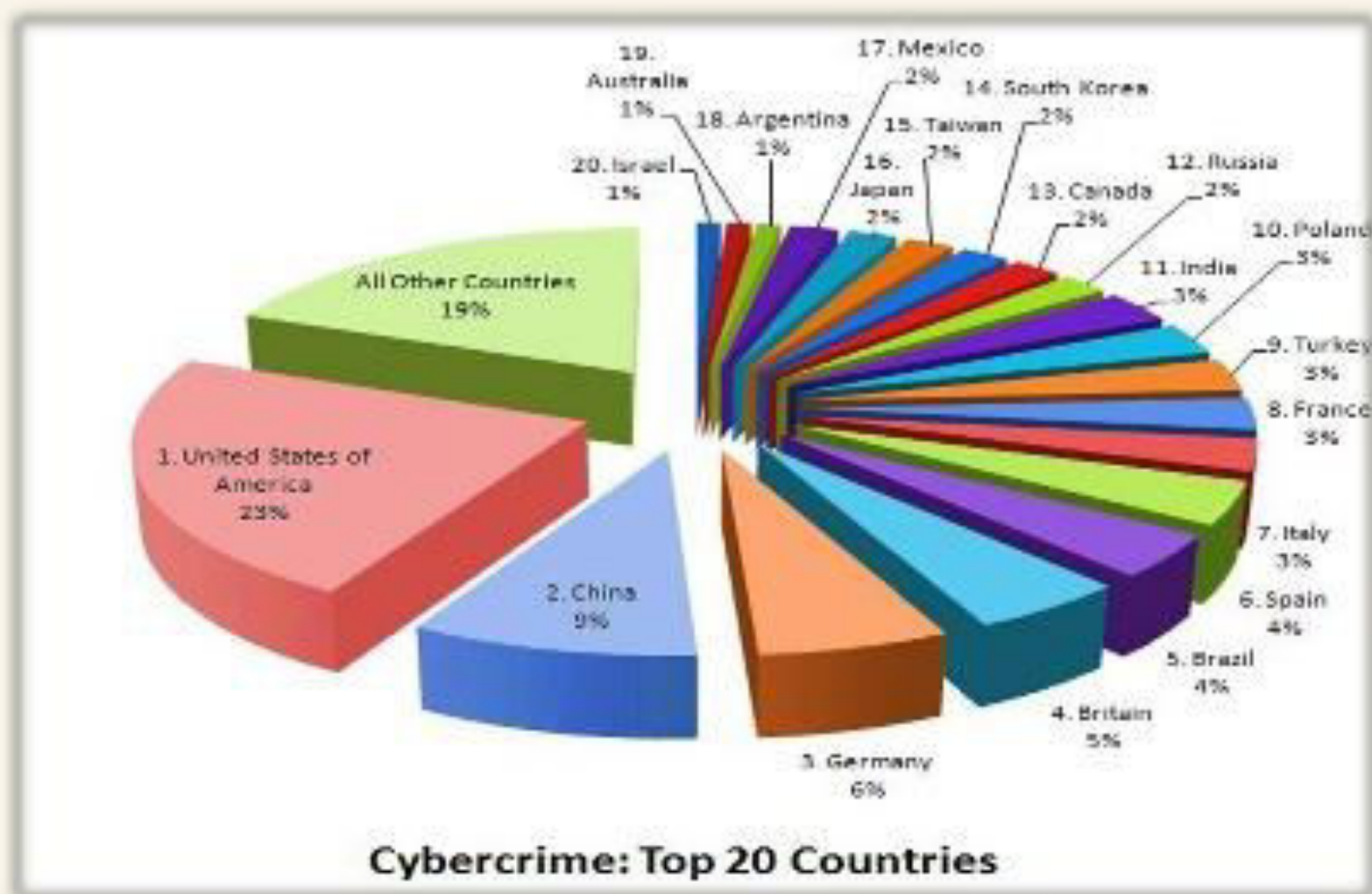
Cyber Crime In India

- ❑ The majority of cybercrimes are centered on fraud and Phishing,
- ❑ India is the third-most targeted country for Phishing attacks after the US and the UK,
- ❑ Social networks as well as ecommerce sites are major targets,
- ❑ 6.9 million bot-infected systems in 2010,
- ❑ 14,348 website defacements in 2010,
- ❑ 6,850 .in and 4,150 .com domains were defaced during 2011,
- ❑ 15,000 sites hacked in 2011,
- ❑ India is the number 1 country in the world for generating spam.

Bank of Maharashtra accounts lost Rs25 crore due to UPI bug, says NPCI

Corrective steps have been initiated and the process of recovering money from the 19 banks it has been transferred to is on, says NPCI MD and CEO A.P. Hota

Bank of Maharashtra lost Rs25 crore in one of the biggest Unified Payments

The bug in the UPI system allowed people to send money without having the necessary funds in their accounts.

How the fraud loop started	About 50-60 people in Aurangabad discovered this loophole, possibly through a trial-and-error method.
Disruptive ceiling	Reconciliation amount balooned
Culprit	Reconciliation was not done by Bank of Maharashtra on daily basis. Other Banks having same software did not report this error.

NPCI has learnt a lot from this episode.
"The learning from this is that we were not allowing any bank to join UPI unless they've a thorough reconciliation process and audited their package by the best of auditors."

Hacking:
It is a technique to gain Illegal access to a computer or network in order to steal, corrupt, or illegitimately view data.

Phishing: It is a technique to obtain confidential information such as usernames, passwords, and debit/ credit card details, by impersonating as a trustworthy entity in an electronic communication and replay the same details for malicious reasons.

Vishing: It is the criminal practice of using social engineering over the telephone system to gain access to private personal and financial information from the public for the purpose of financial reward

E-mail Spoofing: It is a technique of hiding an e-mail‟s actual origin by forged the e-mail header to appear to originate from one legitimate source instead of the actual originating source.

Spamming: Unwanted and unsolicited e-mails usually sent in bulk in an attempt to force the message on people who would not otherwise choose to receive it are referred to as Spam E-mails.

Denial of Service: This attack is characterized by an explicit attempt by attackers to prevent legitimate users of a service from using that service by "flooding" a network to disallow legitimate network traffic, disrupt connections between two machines to prohibit access to a service or prevent a particular individual from accessing a service.

ATM Skimming and Point of Sale Crimes: It is a technique of compromising the ATM machine or POS systems by installing a skimming device atop the machine keypad to Appear as a genuine keypad or a device made to be affixed to the card reader to look like a part of the machine.

Additionally, malware that steals credit card data directly can also be installed on these devices. Successful implementation of skimmers cause in ATM machine to collect card numbers and personal identification number (PIN) codes that are later replicated to carry out fraudulent transactions.