

# Challenges and opportunities for Audit in ERP environment with case studies

International training programme on Auditing of  
Extractive Industries

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# Scheme of Presentation

- Brief on audit
- ERP audit and its importance
- Need for data access
- What to be checked
- Challenges
- Opportunities
- Revenue recognition
- Inventory
- vendor balances
- Property, plant and equipment
- Customer orders and Customer balances
- Group discussion

# Brief on Audit

- Ensure effectiveness and performance of process and workflow in the system
- expression of opinion on financial statements
- Examine and evaluate financial records
- Compliance to applicable laws, standards, rules and regulations impacting accuracy and completeness of data
- Ensure competent, relevant and reasonable evidence to support audit judgment and conclusions
- examination of systems, operations, programmes, activities or organizations to ensure operating in accordance with the principles of economy, efficiency and effectiveness and also to ensure accountability and transparency
- Ensure data security along with all related controls (access-physical and logical, input and output, etc)

# ERP audit and its importance

- Process of testing and reviewing ERP functions to ensure its efficiency and data integrity
- Adequacy of individual modules in solving problems and streamlining the workflows
- Regularly to be audited to ensure that the system continues to deliver tangible solutions and results
- Ensure return on investment as cost cutting was the key objective of ERP

# Need for data access

- to ensure completeness and relevance of the system data and its security
- Ensure appropriate input, validation, output, logical access, physical access – controls in place
- Recording of all transactions
- Assess avoidance of manipulation of figures
- Ensure accurate valuation, calculation and measurement of transactions since measurement uniformly recorded across the system
- Evaluate Mapping of business rules, disaster recovery and risk mitigation and management plans

Read only Access to production/live system to independently extract data/reports

# What to be checked

- Data integrity including relational and referential integrity
- Physical and logical access
- Segregation of duties and configuration of roles and responsibilities
- Mapping of business rules
- Disaster recovery plans and risk mitigation process
- General ledger, Consolidation of accounts, revenue recognition, costing
- Purchases, Inventory and Trade payable
- Execution of contracts and Trade receivables
- Property, plant and equipment

# Challenges

- Novelty – especially in the fully implemented environment, due to lack of best practices, lack of motivation and information, economic development level, and perception of companies
- Risks in ERP environment – it could potentially impact integrity and reliability of financial transactions and data flow from it
- Audit objective - identify and assess the risks of material misstatement either due to fraud or error, at the financial statement and assertion levels

# Challenges

- To understand the business process and its control environment, including internal control framework
- Study the information systems environment relevant to financial reporting and communication
- Delayed information
- Parallel maintenance of ERP and legacy systems, complexity of systems, outsourcing
- Not fully automated and continuance of manual process



# Challenges

- Generally audit client have several Point of Sale outlets (POS) and hence systems at POS should have the latest price catalogue at the time of invoicing
- Say if different applications are involved and data is captured in different forms interfaces within systems eg payment gateway and front end software, may be off the shelf software or in house developed, had to be ported in the integrated ERP for financial accounting
- Info flow may be fully automated or partial, risk of non-compatible software, unauthorised users, system security breaches
- current automated environment, increases risk of any misstatement not being detected through substantive procedures. So audit should include auditing within and surrounding systems
- nature of business and volume of transactions
- Systems spread across globe and governed by law of land and its own policies

# ways to overcome challenges

- Capacity building – skilled manpower, skill development, training
- Knowledge sharing
- Team composition
- Familiarisation of client systems
- information gathered during the understanding phase of the IT environment is vital to plan out the audit strategy
- Recurring process – cost and time involved
- Working papers of previous audit team
- Observing the entries
- Audit trail

# Opportunities for Audit

- Knowledge gained
- Information at one place
- Ease of consolidation
- Comparisons of performances across globe
- Easy decision making
- Audit independence
- Ease of checking in automated process
- Segregation of duties and multiple levels of approvals
- Automated input and data validation controls
- Data security
- Templates to repeated checking and analysis process

# Revenue Recognition

**Biggest challenge for audit**

**Audit evidence may be too weak or vague to draw conclusion on validity of revenue claimed**

**lack of evidence in audit produces accurate result**

**Solution - conduct a substantive test for completeness on all revenue-related documents, such as sales invoices, to verify authenticity**

**In system to look for corroborative evidences from various other related modules**

# Revenue Recognition

**Risk in revenue recognition under construction contract**

**Process involved - Ship building construction**

**Hull, engineering, electrical, mechanical, equipment, weapon integration**

**Hierarchy of process – referred activity chart**

**Activity chart wherein activities are further sub divided sub activities, sub sub activities, so on and each activity and sub activities are prioritised; The predecessor and successor are defined and built into the activity chart**

**SAP – financials and material management; project software – activity definitions and project progress**

**Audit while reviewing revenue recognition under construction contract method, looked into the aspect whether revenue had been inflated to depict more profit**

**Challenges and opportunities - discuss**

## Contd...

What we did – adopted different methods

data extracted and verified with physical progress reports; activity charts – PERT charts

hierarchy of the process stages from other software

physical progress report of the ship building

customer monitoring committee reports

detailed break up of expenditure considered for revenue recognition

Test check of high value items – to assess the requirement of the items under which process, completion and status of the predecessor and successor of these activities, assessment of percentage of completion of each stage as agreed by the customer in the monitoring review meetings

Physical verification of the high value items which has been taken into cost for revenue

## Contd...

### **Audit results:-**

**High value items were merely drawn from stores for projects and kept in project stock with package intact**

**Material drawn without completion of previous process and predecessor activities and without actual immediate requirement for fitment/ installation in to the ship**

**Equipment drawn and taken in to expenditure without even the platforms required for placing the equipment were not even received**

**Materials were not utilised for the purpose for which it was intended to be utilised**

**Company had to go to Board and reverse the revenue**

# Integration issues

**Rule :-**Revenue recognition on travelled basis

**Analysis :-** Revenue data in SAP, booking data in different software

**Findings:-**date of travel not with in accounting period, variation in date of travel between revenue data and ticket data, huge manual entries

**Why :-** Date adopted from remarks field instead of date of flown, logic not built into, manual interventions

Revenue collection in one software and Finance in one software. Seamless automatic transfer of data not ensured, reconciliation issue aroused requiring manual intervention

**Impact :-**Financial data integrity





# Inventory

- Goods or stock held for resale
- Raw materials, spares, finished goods, work in progress, special tools, goods in transit
- Accounting as per applicable standards
- Back end accounting entry created
- Inventory classification and valuation
- compliance NRV or actual cost
- Usability and consumption pattern
- Confirmation closing stock, consumption
- Cost method followed
- Purchase journal entry
- 3 Es in inventory management

# constraints

- Not easy to identify fraud directly
- Inventory inaccuracies not identifiable
- Mislabeling
- Misidentification
- Manual or paper driven picking/rejection process
- Missing entries while drawing materials
- Omission of consumption or sales

# benefits

- Ease of data extraction or reports
- Visibility across the units/ depots/ outlets/ globe
- Price comparison
- Easily identifiable avoidable / excess procurement
- Get away with tedious manual process of data analysis
- Tools for data extraction, analysis and presentation/ reporting process

## Duplicate purchases – excess cost and idle inventory

**Rule** :- Inter units procure same materials, check availability

**Analysis** :- stock and purchases for a period of Company as a whole from ERP system

Earlier either such information had to be collected from each and every unit/ divisions, correlate, data from different system, make a single data file after data cleansing and then analyse

**Findings**:-Accumulation of inventory as purchases made even though stock lying with other units of the Company, same materials procured at different cost by different units without checking cheapest procurement by other units

**Why** :- Non-adherence to mandated process stipulated in purchase manual for checking of stock availability in the entire Company and comparison of previous procurement cost by the Company as a whole

**Impact** :-idle inventory, avoidable excess cost of procurement



# Manual interferences inventory

## Wrong valuation of inventory

- Review inventory details – material wise value and sale orders for which it is held
- To confirm valuation on NRV or actuals basis
- To select high value items for further scrutiny, the list was arranged in descending order based on value
- Highest valued item was a 'bolt'
- On further review at transaction and journal entry review, it was found that the item was overvalued due to data entry error
- Instead of entering exchange rate (eg. `60) to be considered for calculating the value of the transaction in the given field, data fed was the resulting calculated figure (`6000000 ie `60x\$1x100000 units). The material was valued at calculated figure (`6000000000000 ie `6000000x\$1x100000 units).



# Inflated inventory value

**Process** - Upto trial balance in system and financial statements prepared in Excel. Inventory valuation worked out in excel and manual entry passed into system

**Rule** – value at sale value or actual cost whichever is less

**Analysis** - Review WIP details – material wise value and sale orders for which it is held in excel sheet

## **Audit challenges and opportunities - discuss**

**Findings** - Working revealed manual error in fetching sale price and valuation on the incorrect sale price

**Why** – copy paste error in Excel

**Impact** - violated applicable standards, since over valued over and above the sale price due to adopting incorrect sales price

# Over valuation - inventory

- Review WIP details – material wise value and sale orders for which it is held
- To confirm valuation on NRV or actual basis
- high value items selected for further scrutiny and detailed workings for high value WIP project wise was taken up
- Working revealed after valuating the actual cost upto NRV, other costs were added below the line
- Wrong valuation of WIP and inflated to that extent
- violated applicable standards, since other costs were added over and above the NRV

## **Fresh Purchases despite stock availability**

**Rule :-** project specific procurement to be released as free stock on completion of project

**Analysis :-** stock and purchases for a period of Company as a whole

**Findings:-** Accumulation of inventory as purchases made even though stock lying under other projects for a long time

**Why :-** Non-adherence to mandated process stipulated in purchase manual to release stock on completion of project as free stock

**Impact :-** idle inventory and avoidable cost of procurement



# Liabilities

- Confirmation of liability
- Agreement terms to ensure that all known liabilities are accounted for
- Appropriateness of classification and accounting
- Certification audit – accounting aspects at each stage
- Performance/IT/compliance audit – purchases as per business rules/purchase manuals

# Unaccounted goods in transit

- Extract material received after end of the financial year and before cut off date for accounts closure
- Test check the purchase order terms for high value items
- Analyse whether to be accounted as GIT in line with the purchase order terms
- Under valuation of inventory and liability for payment
- violated applicable standards

# Property, plant and equipment

- Assets purchased for long term use
- Not likely to be converted quickly into cash
- Eg. Land, buildings, Plant and Machinery, equipments, furniture and fixtures
- Periodic depreciation (for tangible assets) or amortization (for intangible assets)
- Impairment write-downs (if the value of an asset declines below its net book value)
- Disposition (once assets are disposed of)
- Utilisation of PPE

# Link to other modules

- ✓ MM – purchase of assets, receipt of material
- ✓ Fin – payment, capitalisation, depreciation
- ✓ Forex – in case of capital work in progress

# PPE

**Wrong capitalisation date/ classification resulting in charging excess or short depreciation**

- **Extract asset register with capitalised date, classification, depreciation rate**
- **To confirm the entries – select sample assets based on general applied criteria (high value, assets added during the year, etc) for further scrutiny and detailed workings was taken up**
- **Relevant purchase files of purchase department as well as finance department was reviewed and found discrepancies in capitalisation date as that of installation certificate**
- **as well as classification of assets were also observed due to which wrong depreciation rate was applied to**

# Trade Receivables

- Customer (client or purchaser or buyer) recipient of goods or services
- An order (sale or supply) placed by the customer, sale order created in the system
- On delivery, receivables account is operated
- A balance owed to the entity by its customers
- Sales Entry – Trade Receivable dr to Sales
- Payment receipt entry – Bank dr to Trade Receivable

# Audit purpose

- Existence of debts
- Balance confirmation
- Receivables vis-à-vis sales, efficient collection process
- Valuation
- Assurance on realization
- Appropriate classification
- Appropriateness of classification and accounting in accordance with Accounting standards

# Trend of collection of dues

## Risk in rejections accounted as revenue

- Sales in r/o an item was recognised with customer acceptance, inspection report, acknowledgement of receipt at customer site
- As per these documents, sales accountal was correct
- Audit while reviewing trade receivables came across outstanding dues from the above customer pertaining to the same item
- Trend analysis of payment receipt pattern from the said customer flagged unusual pattern of outstanding since payment was settled regularly within short duration after delivery
- On enquiry about the outstanding and scrutiny of documents revealed that there were issues in these items and therefore rejected



# Credit policy

**Rule :-** Credit sales, remittance period, defaulters 2 defaults, notice and block credit

**Analysis :-** Outstanding dues

**Findings:-**Accumulation of debts, credit sales allowed even after 2 defaults

**Why :-** Non mapping of business rule, manual process

**Impact :-**Accumulation of dues

# Onerous contracts

Cost booked against a sale order / production order for WIP and other development/work order to be apportioned cost

Production order information from system

Sale order value

Audit analyse revealed non accounting of onerous contracts as per the standards

Impact – loss in the project

# Segregation of duties

**Rule** :- Initiate data entry, process/ data verification, authorise, approval, material receipt, inspection and acceptance, stock, roles and responsibilities

**Analysis** :- Purchase orders and Repair orders, stock corrections based on physical stock verification

**Findings**:-Initiated and approved, receipt by same user

**Why** :- No preventive control to avoid unauthorised entry of vital data

**Impact** :-Inventory holding, financial implication, manipulations, fraudulent purchases



# Sequence of events

**Rule** :- Purchases based on requirement, Air way bill/ invoice, gate receipt, inspection, acceptance, stock, payment, matching quantity in order and requirement as well as order and receipt

**Analysis** :- Purchase orders, Purchase requests, intra Company stock transfers

**Findings**:- PO quantity exceeded requirement, PO without Purchase requests, material receipt before order date, non-matching of intra transfers and receipts

**Why** :- Referential and relational integrity not ensured, logics not built in

**Impact** :- Inventory holding, financial implication, manipulations

# Referential integrity

**Rule** :-multiple production orders raised based on a sale order. On completion of sale, all corresponding production orders should be closed automatically

**Analysis** :- sale orders and production orders

**Findings**:-though sales completed, production orders remained open and manual process resorted to give effect of same during compilation of accounts

**Why** :- Referential integrity not ensured between sale orders and its related production orders which is essential to ensure integrity of data

**Impact** :- data inconsistency, incorrect valuation of raw material and manual intervention with underlying risk of incorrect data being processed and accounted

# Group discussion

A Company implemented SAP

while implementing decided to use only the Purchase and Sales Register as given by SAP

implementing team created customised reports for trade receivables aging statement

Financial statement maintained outside SAP in Excel

Now we the audit team are auditing second year of accounts

(i) Discuss audit challenges and way to overcome

(ii) we are given the task of testing the reports as part of the Audit of Financial Statements. Devise a testing strategy to test these reports

(iii) Assess risk and devise audit checks

# Group discussion

A Company use SAP for financial accounting

Tour and travel bills maintained in legacy system

Pay roll maintained in different legacy system

Monthly Push reports developed to transfer tour travel bill details to pay roll system for adjustments/ deductions. The reports needs to be run by the user to facilitate preparation of payrolls

Similar such arrangements exists for transferring data to SAP for financial accounting

Assess audit challenges, risk and devise audit checks and list lapses/ probable issues in such arrangements



Thank you